

KENTUCKY HORSE RACING COMMISSION
RACE DAY MEDICATION COMMITTEE

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TRANSCRIPT OF MEETING

NOVEMBER 14, 2011

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1 The foregoing meeting was held, pursuant to
2 notice, on Monday, November 14, 2011, beginning at
3 the hour of 10:00 a.m., in Room 169, Capitol Annex
4 Building, Frankfort, Franklin County, Kentucky,
5 Chairman Tracy Farmer presiding.

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8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

INDEX

DR. ALICE STACK 7

DR. RICK SAMS69

DR. MARY SCOLLAY 89

MATT IULIANO 93

DR. J. DAVID RICHARDSON 121

BILL CASNER 137

DR. ERIC PETERSON 153

WILLIE KOESTER155

CRAIG FRAVEL165

DR. SID GUSTAFSON 169

TERRY MEYOCKS 180

DR. DOUG BYARS192

RICK HILES 195

DR. THOMAS TOBIN204

KATHY GUILLERMO 210

ARTHUR HANCOCK220

LINCOLN COLLINS 229

NEIL HOWARD 239

MARTY MALINE242

DAVID ENGLAND 242

REPORTER'S CERTIFICATE245

1 MR. FARMER: We will call the meeting to
2 order. We have one of the members that is lost in
3 the big city of Frankfort. So I hope my direction
4 gets her here, Ms. Lavin.

5 Welcome to the first meeting of the Kentucky
6 Horse Racing Commission Race Day Medication
7 Committee. I am Tracy Farmer, the chair of the
8 committee. Other members of the Race Day
9 Committee are Betsy Lavin, who is lost. She will
10 be here, though. Alan Leavitt -- where are you,
11 Alan?

12 MR. LEAVITT: Here. Right here.

13 MR. FARMER: John Ward to my left. And
14 Dr. Northrop, and Dr. Yon.

15 And we have other members of our Commission.
16 Mr. Ned Bonnie. The Chair of our Commission who
17 is watching over all of this to see if I make a
18 mistake, Mr. Bob Beck. Wade Houston from
19 Tennessee. Maryville? Isn't that right, Wade?

20 MR. HOUSTON: Alcoa.

21 MR. FARMER: And Tom Conway. These are
22 Commission members.

23 Dr. Scollay invited over 30 industry groups
24 and interested organizations to speak. An agenda
25 for today's meeting was at the door when you

1 entered. I hope all of you have that. This is a
2 very divisive issue. Opinions vary widely. And
3 several invitees stated that their group has not
4 reached a consensus on the issue and thus declined
5 to speak.

6 This will be an information session. No
7 decisions will be made today. In addition, we
8 will be monitoring this issue in other racing
9 jurisdictions as part of the decision-making
10 process.

11 If you would like to submit written comments
12 on the issue, you may send them to my attention at
13 the Racing Commission. And my name is Tracy
14 Farmer. I am sorry if I didn't say that.

15 We will start with an educational session.
16 Dr. Scollay will introduce each of the speakers
17 for the educational session.

18 After the educational session, we will call
19 on the speakers listed in the order of the agenda.
20 Each of those speakers may speak for up to 10
21 minutes. As the chair, I have the discretion to
22 authorize the speaker to continue after the time
23 allotment. Committee members may ask questions of
24 a speaker. If an audience member would like to
25 ask a question, you may submit questions in

1 writing. Raise your hand and Marc or Jamie Eades
2 will get --

3 MS. UNDERWOOD: It will be Tim West.

4 MR. FARMER: Tim West? Okay.

5 -- will get to you and bring the question to
6 me. And with that, Dr. Scollay, I will turn it
7 over to you I think.

8 DR. SCOLLAY: Thank you.

9 Good morning and thank you all for coming
10 today. Our first speaker with Dr. Alice Stack.
11 Dr. Stack is a full-time researcher based at
12 Michigan State University's equine pulmonary
13 laboratory. She received her veterinary degree
14 from University College, Dublin, Ireland.

15 Following her degree training, she completed
16 an internship in the Dubai Equine Hospital and a 3
17 year clinical residency at Michigan State
18 University's Veterinary Teaching Hospital.

19 Dr. Stack is board certified in internal
20 medicine and is a diplomat of the American College
21 of Large Animal Internal Medicine. She is
22 currently working toward's her Ph.D. on the topic
23 of EIPH, exercise induced pulmonary hemorrhage
24 pathogenesis under the guidance of and mentorship
25 of Doctors Ed Robinson and Fred Derksen at

1 Michigan State University.

2 Dr. Stack, welcome.

3 DR. STACK: Thank you, Dr. Scollay.

4 Chairperson, members of the committee,
5 members of the audience, Dr. Scollay, I would like
6 to thank you all very much for giving me the
7 opportunity to speak to you today. I hope that
8 this session -- I should be on the floor here for
9 about 50 minutes or so. I hope that it is
10 educational. I plan to provide a succinct yet
11 thorough overview of exercise injuries pulmonary
12 hemorrhage based on peer review, scientific
13 information.

14 Dr. Scollay introduced my -- sort of my
15 background. I spent a lot of time thinking about
16 this condition. And it is one that is very close
17 to my heart.

18 I am, of course, speaking on behalf of the
19 more than just myself today. I would like to
20 mention and acknowledge my mentors; Dr. Derksen
21 and Dr. Ed Robinson at Michigan State University's
22 equine pulmonary laboratory. We, of course, have
23 some very generous funding sources that enable us
24 to continue our research into this important
25 condition. And we are building on a very

1 important and valuable work that was carried out
2 by other investigators in the past 25 years or so.

3 Can everybody hear me?

4 MR. FARMER: No.

5 DR. STACK: Is that better?

6 So the main take-away points that I would
7 like to get across to you today are the following.
8 And I hope that my explanations will lend some
9 weight to these statements.

10 First of all, exercise induced pulmonary
11 hemorrhage is common in race horses all around the
12 world. It is not a condition that has geographic
13 preferences. It is a condition, however, that
14 does result in significant pulmonary pathology in
15 horses and we will talk in some detail about that.

16 EIPH is a result of high capillary pressures
17 that are experienced by horses when they are
18 running due to high blood flow states in their
19 lungs. And it is also, we are coming to believe
20 and understand, exacerbated by a remodeling
21 process of pulmonary vessels.

22 Furosemide in relation to its effects on EIPH
23 reduces blood pressure in the lungs of horses. It
24 acts to reduce bleeding severity. But it does
25 not, by any means, completely cure the condition.

1 Exercise induced pulmonary hemorrhage is an
2 easy condition to diagnose. All right? The main
3 sort of techniques, if you would like, are firstly
4 and most simplistically recognizing the presence
5 or absence of frank blood, also known as
6 Epistaxis, of the nostrils of a horse after a race
7 or an exercise session.

8 The other 2 techniques that we commonly use
9 are tracheal endoscopy and bronchoalveolar lavage
10 or lung washing.

11 The numbers published about how many horses
12 are affected by this condition are certainly
13 reflective of what technique is used to diagnose
14 it. When we consider Epistaxis or the presence of
15 blood at a nostril alone, about .15 percent of
16 race starts are associated with Epistaxis balance.
17 Okay. These data were confirmed both in Japan and
18 the study from South Africa. And taking those
19 studies together, over a million race starts were
20 considered. And, again, .15, and in the South
21 Africa, .16 percent of race starts were associated
22 with frank Epistaxis.

23 Tracheal endoscopy is a relatively
24 straight-forward procedure to perform. It rarely
25 retires intravenous sedation. And as long as that

1 is a performed in the 30 to 90 minutes post race
2 or post exercise, the observer can very easily and
3 quickly ascertain whether or not a horse has got
4 blood in its trachea or main stem bronchi. And
5 they can also ascertain how much blood there is
6 and, therefore, get an idea or an indication of
7 how severe an episode of hemorrhage a horse may
8 have experienced.

9 When horses are scoped after racing, pretty
10 consistently and in a number of studies, between
11 60 and about 75 percent of horses have some
12 evidence of blood in the trachea after racing.

13 When Dr. Birks and other investigators in
14 2002 evaluated over 250 horses on 3 separate
15 occasions, they determined that every single one
16 of those horses was affected by exercise induced
17 pulmonary hemorrhage on at least one of those
18 days. All right.

19 And these data are very much mirrored in
20 studies that have been performed on standardbred
21 race horses as well.

22 Bronchoalveolar lavage or lung washing is a
23 slightly more invasive and involved procedure. It
24 does tend to involve intravenous sedation, et
25 cetera. It is very useful for somebody like

1 myself who works in a hospital and frequently
2 misses the 90 minute window after a race.

3 It provides very valuable information on
4 whether a horse has had a bleeding episode
5 historically. And we can actually still get very
6 good information on what a horse may have done in
7 races in the previous weeks or even months.

8 We make a diagnosis of pulmonary hemorrhage
9 based on the presence of 2 things in the lung
10 washings. These -- if can everyone see that
11 pointer? Is that okay? These are free red blood
12 cells, okay? And these larger blue colored big
13 cells are pulmonary macrophages, also known as
14 hemosiderophages. And their job, if you like,
15 they are the garbage disposal units of the lung.
16 They are breaking down these red blood cells into
17 breakdown products like hemosiderin. And these
18 black granules that you can see contained within
19 those cells is just that. They are hemosiderin
20 granules. Okay?

21 When horses undergo lung washes after racing
22 and training, about 90 percent of horses again
23 appear to be affected by exercise induced
24 pulmonary hemorrhage.

25 A very important question that has to be

1 answered is whether or not this condition has an
2 effect on racehorse performance. It was widely
3 believed that it did. But studies that were
4 performed in the '80s and '90s were of a
5 relatively small size. And they failed to come up
6 with consistent and conclusive results on that
7 question.

8 In 2005, however, Dr. Hinchcliff looked at
9 744 racing thoroughbreds in Melbourne, Australia.
10 First of all, he published a paper on a grading
11 scale that has become widely accepted and used by
12 practitioners. It is 5 point scale. Zero is a
13 horse that does not have evidence of blood in
14 trachea. And all the way up to a grade 4 where
15 about 90 percent of the trachea is covered with
16 blood.

17 When he used this grading scale on the 744
18 horses -- and as a side note, those horses were
19 not racing on Furosemide at the time -- he
20 determined that 412 of them had some evidence of
21 exercise induced pulmonary hemorrhage in their
22 lungs. And A lot of that was of a mild degree.

23 But those horses that either had no exercise
24 induced pulmonary hemorrhage were very mild. So
25 grade 1, EIPH, were actually 4 times more likely

1 to win their race. All right? They were twice as
2 likely to place. And they were about 3 times as
3 likely to win more money than had EIPH of grade 2,
4 3 or 4. Also those horses with exercise induced
5 pulmonary hemorrhage finished significant
6 distances behind the winner compared to those
7 horses without the disease.

8 I just want to point out some terminology
9 that I going to use for the rest of the talk
10 before continuing. This is obviously a cartoon
11 image of a horse's lung here. But I have included
12 it because it is oriented in exactly the same way
13 as the lung is oriented in the horse's chest.

14 So if you could imagine taking an x-ray of
15 this horse that we have down here of his thorax,
16 the lung sits in the chest just like that. This
17 is the right lung. Cranial lung tissue is that
18 nearest the horse's head. Dorsal lung tissue is
19 that nearest his back bone or spine. Caudal lung
20 tissue is that lung tissue nearest the horse's
21 tail. Ventral is nearest the ground.

22 And of particular interest to the condition
23 that we are discussing today is the caudo-dorsal
24 lung region. So that lung, that is really right
25 up there in the back top corner of the thoracic

1 cavity.

2 This diagram is also shaded like this for a
3 reason. It demonstrates for us the actual
4 distribution of blood flow within the horse's
5 lung, both at rest and during exercise. And it
6 indicates that the most blood is received by lung
7 tissue up here in the caudo-dorsal regions when
8 compared to cranial and ventral lung that actually
9 receives comparatively less blood per unit volume
10 of lung.

11 So now we want to talk a little bit about
12 whether or not this condition has an impact on the
13 horse itself.

14 It should be pointed out right now that EIPH
15 does not actually make horses systemically ill,
16 per se. These horses tend to have a good
17 appetite. They are not febrile, in other words,
18 they don't have a fever. They don't demonstrate
19 overt signs of pain.

20 And besides the presence of blood in their
21 airways, they actually don't tend to have clinical
22 signs that can be localized specifically to the
23 respiratory tract after an episode of bleeding.

24 That being said, exercise induced pulmonary
25 hemorrhage does result in significant pulmonary

1 pathology or deviations from normal. Studies that
2 address the pathologic features of this disease
3 have mostly been performed on thoroughbred
4 racehorses that have been retired due to severe or
5 career limiting exercise induced pulmonary
6 hemorrhage.

7 The main studies to mention was a big one out
8 of Hong Kong in the late '80s. We also looked at
9 some Singapore horses at our own laboratory in
10 2008. And we are currently compiling data on 10
11 horses that were donated from midwestern tracks
12 right here in the USA.

13 This image is just really is certainly taken
14 from a very severely affected horse. But I have
15 included it just to demonstrate some of the
16 features of the pathology of this disease. I have
17 tried to keep the orientation of the lung in a
18 similar manner and to the diagram that we looked
19 at.

20 The lung of interest here is the right lung.
21 All right. This is dorsal. Cranial here.
22 Ventral down here. And this is the caudo-dorsal
23 lung region. And I think you can probably all
24 appreciate that the most severely affected lung --
25 and I should first of all point out that normal

1 lungs should be a pale sort of salmon pink color
2 like this here. So the lung that is not normal
3 looking is mostly in the caudo-dorsal region of
4 this lung.

5 It is obviously discolored, it is black in
6 color. And that black, just to mention again, is
7 actually because of the hemosiderin or the
8 breakdown products of red cells that we discussed
9 in context of lung washings.

10 Left lungs are affected as much as right
11 lungs even though the right lung in the horse is
12 slightly bigger. And the lung tissue is not only
13 discolored, but if you were to palpate it with
14 your hands, it actually feels quite abnormal. It
15 feels thickened in places and somewhat rough or
16 tough and even sort of rubberized which is not
17 what normal lung tissue should feel like.

18 Like any disease, there are, of course,
19 gradations of severity. And these diagrams or
20 these photographs, I should say, have been
21 included to demonstrate that for you.

22 We have turned it 390 degrees just to confuse
23 you but this is now cranial lung, caudal lung,
24 dorsal lung to the left of all of these images.
25 Okay.

1 So with a normal lung, I don't know if you
2 can appreciate it on the screen there, but the
3 pleura surface is almost translucent. Okay. You
4 can see some big subplural vessels there. And
5 that is what we should be able to see on a normal
6 lung.

7 With mild disease, we start to see some
8 discoloration in the caudo-dorsal region. With
9 moderate disease, that discoloration becomes more
10 pronounced. And you can probably appreciate some
11 muckling here through the lung tissue. With
12 severe disease, the lung is much, much darker and,
13 again, would palpate abnormally.

14 It is not merely a disease of the surface of
15 the lung when those lungs are sliced through and
16 the tissue here is darker because it has been
17 preserved in formaldehyde. But with mild and
18 particularly with severe disease, you can
19 appreciate that these white areas of fibrosis or
20 scarring are distributed fairly evenly throughout
21 the entire lung.

22 I just want to show you some images taken
23 with a microscope and look at what those
24 pathologic lesions that I have shown you on the
25 whole lung look like under a microscope.

1 In the top left panel, okay, we have a slice
2 of normal tissue. And just to orient you, this
3 thicker, purple line along the top is the pleura
4 surface. So that's the outside of the lung. And
5 this vertical line is actually a septor dividing 2
6 compartments of the lung if you like.

7 And all of this white space represents
8 airspace and that's normal. That's what lungs
9 should look like.

10 On the right-hand side is a slice of tissue
11 taken from a horse that has got severe exercise
12 induced pulmonary hemorrhage. And what I would
13 like for you to appreciate is that the pleura
14 surface is fairly, dramatically thickened here.
15 It is maybe 4 to 5 times as thick as the pleura
16 surface in a horse that is not affected.

17 And, also, this septor or division between 2
18 areas of lung has become fairly dramatically
19 thickened as you can see with the arrows there.
20 Okay.

21 This process is known as fibrosis or common
22 terminology would be scarring. And it usually
23 happens due to an inflammatory process. We
24 believe that the inflammatory or inciting process
25 in exercise induced pulmonary hemorrhage is the

1 presence of red blood cells that are not contained
2 within blood vessels like they should be, but they
3 have actually leaked out into the tissue through
4 breaks in vessels that we will talk about later.

5 And in the bottom left of this panel, this is
6 a different stain on the same piece of tissue. It
7 is called a prussian blue stain. And in this
8 image, I just want you to know that blue is blood.
9 Okay. So anything that is stained in blue
10 actually is representative of blood that is being
11 broken down in the lung, blood that has leaked out
12 of blood vessels.

13 So there is clearly a lot of it.

14 This is an image of a remodeled vein. And we
15 are going to talk a little more about that right
16 now. Okay. So from the normal tissue, we are
17 going to zoom in on this little guy here, which is
18 a normal, very small interlobular vein. I just
19 want you to appreciate that the vein got a thin
20 wall here.

21 This is the wall around outside. And the
22 pinker color on the inside is the vessel lumen
23 that contains some red blood cells. The lumen is
24 the part that the blood actually flows through so
25 the center of a hose pipe if you like.

1 And this is a picture of an abnormal vein or
2 a remodeled interlobular vein. And I think you
3 can appreciate from the previous image, that this
4 wall has become dramatically thickened here. The
5 lumen in the middle doesn't contain blood cells in
6 this image. But the wall has really changed in
7 its appearance and has become dramatically
8 thicker, probably stiffer.

9 And it has done that by basically deposition
10 of collagen in the same fibrosis or scarring
11 procedure that we identified in the pleura and in
12 the septa.

13 And so more images of these vessels. This is
14 a different type of stain so just excuse the
15 switch in color scheme here. In this case, red
16 blood tells are actually stained black. Okay.
17 But what I want you to notice is that this black
18 wavy line around the outside actually denotes the
19 vein wall.

20 And if you compare the image on the left to
21 the image on the right, the center of the vessel
22 or the vessel lumen has almost completely
23 disappeared. That's the arrow pointing to it just
24 there. And instead of a nice thin vein wall and a
25 wide lumen, we have got all of this collagen

1 deposition and probably significantly altered
2 venous function as a result of that.

3 When we scored the legions that we have been
4 talking about now for a few minutes and added the
5 scores together, the most severely affected slice
6 could receive a top score of 15 and zero was
7 denoted normal tissue.

8 And when we combined averages on all horses
9 with EIPH that we looked at, just to reiterate the
10 point, we do see that the highest numbers are the
11 10's and the 8's and the 9's are again in this
12 dorsal-caudo region. So it is very much a disease
13 of a certain part of the lung.

14 That's really all I am going to talk about
15 pathology here this morning.

16 And if I have made these points and you can
17 take those points away today, then I have done my
18 job.

19 In summary, there are no overt signs of
20 disease, per se, in horses that have exercise
21 induced pulmonary hemorrhage. That being said,
22 the disease does cause significant changes to lung
23 tissue, changes such as fibrosis, blood or
24 hemosiderin deposition, some new blood vessel
25 formation, and venous remodeling.

1 Significant portions of both lungs are
2 affected.

3 Moving on from pathology, I want to talk to
4 you a little bit about why we think this disease
5 occurs. Okay. And to do that, we really need to
6 remember and always consider that the horse is
7 just an incredible athlete, absolutely unrivaled
8 in the animal kingdom. When I show figures like
9 these, these exercise physiology statistics if you
10 like, to human physiologists, they are astounded.
11 They think I am making them up.

12 Really, they cannot imagine that a mammal can
13 achieve these sort of figures.

14 And a couple of ones that I really want to
15 point out to you here, when the horse runs, their
16 heart rate goes from between 28 and 40 beats when
17 they are standing quietly up to almost 250 beats
18 per minute. That's a pretty impressive jump.

19 Their cardiac output, essentially the blood
20 that is being pumped out of the heart and into the
21 lungs, goes from a 30 to 45 liters per minute up
22 to a whopping 2 to 300 liters per minute being
23 pumped through the heart out into the lungs into
24 the rest of the body every minute.

25 And as a result of that increase in blood

1 flow, there have to be increases in blood pressure
2 correspondingly. And the ones that we are going
3 to talk much more about are those increases in
4 blood pressure within the vessels in the lung.

5 Okay.

6 So pulmonary blood pressures go from 30 over
7 or maybe 15 to 20. So that is systolic and
8 diastolic pressures. Up to 100 over 60. And
9 that's an incredible increase for the pulmonary
10 vessels.

11 And no other mammal experiences an increase
12 like that.

13 Some more anatomy unfortunately. I am sorry.
14 But we really can't continue unless I sort of run
15 through this.

16 I just want to point out that the lungs are
17 truly unique organs relative to the rest of the
18 organs in the body. So all of the blood that
19 returns to the right-hand side of the heart and is
20 pumped out again -- and remember that's between 2
21 and 300 liters a minute -- all of that blood goes
22 to the lung to be oxygenated before coming back to
23 the heart and then being redistributed amongst all
24 of the other organs in the body.

25 Okay. So the lungs get it all at once. And

1 the other organs get to divvy it up and cope with
2 more reasonable volumes at one time.

3 As a result of that, the lungs are just
4 absolutely stuffed full of the blood vessels.
5 They are a giant ball of blood vessels. These are
6 casts taken from -- actually from human lungs.
7 But belief me, horse lungs look just the same.

8 In these photographs, white represents
9 airway, red represents artery, and blue represents
10 vein. And just to reiterate that when you are
11 talking about a sequence of blood vessels, we go
12 from big arteries to smaller arteries, to tiny
13 capillaries that drain into slightly smaller veins
14 and, again, back into much bigger veins.

15 That is always the sequence; artery,
16 capillary, vein.

17 We zoomed in on some of these airways and
18 blood vessels here. Every airway has got an
19 artery and a vein associated with it. All the way
20 out to the periphery of the lung. And believe it
21 or not, these tiny little guys here aren't even
22 the capillaries that we are going to spend some
23 more time talking about. Okay. The capillaries
24 are just tiny.

25 These are actually good-sized blood vessels

1 here.

2 So I want to zoom in on those capillaries
3 because they are really the site of action when we
4 are talking about exercise induced pulmonary
5 hemorrhage.

6 This photograph was taken with a very
7 powerful microscope, an electron microscope. And
8 what we are looking at is cross section across the
9 wall between 2 airspaces in the horse lung. So
10 this is air up here. This is air down here.

11 And what I want you to appreciate is that
12 when you cut across that wall, it is just, again,
13 absolutely chocked full with blood vessels. These
14 are capillaries and there is 1 here, 2, 3, 4, 5,
15 6, et cetera. You get the idea. The division
16 between airspaces is a wall of blood vessels.

17 These are actually pictures of little
18 individual red blood corpuscles here or red blood
19 cells. This is a cross sectional image of just
20 one of those capillaries. It is only big enough
21 for 3 of those blood cells to stack up on top of
22 each other. It is really, really tiny.

23 Okay. This the blood vessel wall which is
24 significantly thinner than even one red blood cell
25 as you can appreciate here. That wall is actually

1 three-ten thousandths of a millimeter thick which
2 is pretty tiny by anyone's standards.

3 And that structure, believe it or not, is
4 exposed to really, really high pressures during
5 exercise. And it is, therefore, probably not
6 surprising that a number of those capillary walls
7 fail during exercise as a result of those high
8 blood flow and high blood pressures that horses
9 are experiencing.

10 I am going put some numbers on those
11 pulmonary pressures because they are really
12 integral to this disease. Please excuse the
13 simplicity of this diagram. Horses obviously have
14 one heart. But the right in the heart and the
15 left are represented in separate boxes here.

16 So this is our horse, our galloping horse,
17 with obviously lots of muscles and other organs
18 that require oxygenated blood. The de-oxygenated
19 blood returns from those muscles into the right
20 heart, goes to the lung where it goes into
21 pulmonary arteries, the pulmonary capillaries that
22 we have now looked at, drains into pulmonary
23 veins, and returns to the left heart.

24 I just want you to consider this graph for a
25 second.

1 This experiment has been really repeated by a
2 number of investigators over the years. And the
3 data always come back looking very, very similar.
4 I included this particular experiment because I
5 just want to point out that horses without and
6 horses with exercise induced pulmonary hemorrhage
7 all experience similar intravascular pulmonary
8 pressures.

9 It is not a case that those horses bleed --
10 that those horses that bleed are experiencing
11 higher pressures. This is an exercising horse
12 thing. Okay.

13 And those pressures, when we consider the
14 pulmonary artery pressures, are actually
15 approaching 100 millimeters of Mercury. When we
16 put that onto our little diagram here, this is
17 where the pressures are. Okay.

18 So coming from the right heart into the lung,
19 we have 96.5 millimeters of Mercury. When we
20 consider the venous pressures, which are also
21 called pulmonary artery wedge pressures -- that's
22 just based on the way that the experiment is
23 performed but believe me these are venous
24 pressures -- those are in the range of about
25 70 millimeters of Mercury.

1 And, again, we are just going to put that on
2 our little diagram. So 70 millimeters of Mercury
3 here returning in the pulmonary veins into the
4 left-hand side of the heart.

5 When you have these 2 figures, you can
6 calculate the pulmonary capillary pressure. And
7 that ends up being in the region of 80 plus
8 millimeters of Mercury. And I just want to remind
9 you how thin-walled and how fragile those
10 capillaries are that are experiencing pressures of
11 this magnitude.

12 So we now need to talk about a phenomenon
13 known as capillary stress failure which has become
14 widely accepted as the most likely cause and
15 source of pulmonary hemorrhage in these horses.

16 Dr. West, in 2003, looked at 3 horses that
17 had exercise induced pulmonary hemorrhage. He
18 performed pulmonary capillary ultrastructure scans
19 on those horses. And he found that their
20 capillary walls, as everyone had suspected, were
21 indeed disrupted.

22 The capillaries had ruptured in places. And
23 it was from here that the red blood cells were
24 leaking into the lung interstitial or lung tissue
25 and into the airways which is why we were seeing

1 blood in the main stem airways, in the trachea and
2 sometimes out the nose of these exercising horses.

3 Here is some images from that paper.

4 On the left we have an un-ruptured capillary.
5 Okay. So this is intact. If you compare that on
6 the right, the capillary wall -- I am just
7 outlining it here with the pointer. Okay.

8 And here on the right is where the capillary
9 has ruptured. And these red blood cells with
10 asterisks have escaped into the airways and into
11 the pulmonary tissue surrounding that capillary.

12 And Dr. Birks later on in the '90s,
13 determined that horses actually have -- despite
14 how thin-walled they are -- relatively strong
15 pulmonary capillaries compared to, for example,
16 rabbits and dogs. And it actually took pressures
17 in excess of 75 millimeters of Mercury to cause
18 significant numbers of breaks in those
19 capillaries.

20 But if you remember from the previous slide
21 we're right in that zone. Okay. Our capillaries
22 are seeing pressures and the 18-plus millimeters
23 of Mercury, which is what it took in an
24 experimental setting to rupture horse pulmonary
25 capillaries.

1 I would like to mention a little bit more the
2 role of venous remodeling.

3 Veins are supposed to be really quite
4 relaxed, thin-walled, and very easy to distend
5 type structures. That's their job. They collect
6 blood. So the blood pools back into them. They
7 expand. And they distribute it in a nice,
8 organized way back to the heart.

9 But veins that see increased pressures
10 routinely, tend to remodel themselves as a
11 protective mechanism. Okay. So if they didn't
12 remodel and they were seeing these really elevated
13 pressures all the time, they themselves would be
14 susceptible to rupture. And that would, because
15 veins are much bigger the capillaries, a venous
16 rupture itself could be a much more harmful to the
17 horse and ultimately even catastrophic.

18 So venous remodeling is a protective
19 mechanism.

20 It is reported in lots and lots of other
21 species. This is the first time we are talking
22 about it in horse lungs. And, just to remind you
23 again, these are the capillaries and the veins of
24 interest here on the right-hand side. This is a
25 remodeled vein. This is a cartoon of a remodel

1 vein.

2 But I would like to just use this analogy if
3 it helps me get my point across of somebody
4 standing on a garden hose. All right? So this is
5 a -- the garden hose is our blood vessel network
6 within the lungs. So artery again leading the
7 capillaries. And this gentleman, not so
8 carefully, placed his foot over the vein or of the
9 venous part of our hose pipe. Okay.

10 In doing that, he is really emulating venous
11 remodeling. Okay. He is squishing down that part
12 of the hose pipe. He is causing the flow through
13 that to become much slower. And he is also
14 correspondingly as you can imagine, causing an
15 increase in pressure back up the hose pipe. In
16 our case, back up in the capillaries.

17 Okay. So high pressures due to exercise
18 coupled with venous remodeling or stepping on the
19 hose pipe all combine to give us lots and lots of
20 capillary rupture. And that, in turn, is what we
21 end up with when we diagnose our horses with
22 exercise induced pulmonary hemorrhage.

23 This is the same concept really just put into
24 some pictures. If you can follow this, then
25 hopefully we are in good shape and I have done my

1 job for this morning.

2 The exercising horse experiences increased
3 intravascular pressures, increased blood flows, in
4 particularly in the caudo-dorsal region of the
5 lung which is where we have our disease process.
6 This pressure coupled with some venous remodeling,
7 stepping on the hose pipe if you like, causes
8 capillaries to rupture.

9 The blood leaks out, both into the airways so
10 we can diagnose the condition and into the
11 surrounding lung tissue, so it gives us lots of
12 the fibrosis type procedures -- processes that I
13 mentioned at the start of the talk.

14 So that's EIPH. That's what we know about
15 it. That's what happens in a horse's lung. It
16 clearly isn't it good thing. It is causing some
17 pathology. It is causing the horses to perform
18 less successfully, et cetera.

19 Therefore, we want to treat it. Okay. So a
20 lot of effort, a lot of time and money, has gone
21 into the developing medical interventions and
22 other interventions, indeed, against EIPH to see
23 if we can at least reduce the disease.

24 Unfortunately for a lot of effort and a lot
25 of great minds on the topic, we have really only

1 had moderate success. I think that's fair to say.

2 The only medication that we have now with
3 proven efficacy against exercise induced pulmonary
4 hemorrhage is Furosemide known in some circles as
5 Lasix. And, in particular, as Salix for
6 ourselves. The mechanism of action of that
7 drug -- I mean it was developed because it is a
8 looped diuretic. So its mechanism of action is
9 actually on the kidneys.

10 It prevents sodium reabsorption by the kidney
11 and in doing so, it increases urine flow. And,
12 therefore, increases urine losses by the body.

13 It reduce the blood volume temporarily. It
14 also acts to reduce blood pressure in the lungs.
15 And it does cause temporary weight loss in animals
16 or humans that have been administered Furosemide
17 just due to straight up water losses. Okay.

18 Other actions that may be of interest and are
19 probably worth investigating further is that
20 Furosemide actually has some actions on smooth
21 muscle in the body. It does dilate airways in
22 horses. Its performance enhancing effects, such as
23 they are, though, are not believed to be related
24 to this effect on the airways.

25 It has only been proven to work in horses

1 that have existing disease, such as heaves. And
2 our average exercising thoroughbred with normal
3 lungs, their airways are maximally dilated. So
4 adding a pharmacologic bronchodilator at that time
5 really gets us no more benefit.

6 Okay.

7 The dilating of veins may be of interest
8 because in other species, at least, it has
9 actually proven to be specifically a pulmonary
10 venous dilator. So if we could get that guy to
11 take his foot off the hose pipe and maybe dilate
12 the veins a little bit, that may also be a
13 beneficial effect and prevent some back pressure
14 build up in the capillaries.

15 Back to pressures. It is a very similar
16 looking graph to the one I showed you earlier.
17 But this time we are evaluating some control
18 horses here and then some horses that receive
19 Furosemide. We are considering 4 speeds; rest if
20 you can call that a speed, 10 meters per second,
21 13-meters per second, and I believe -- it has
22 gotten cut off here. I am sorry.

23 So rest is blue. Yeah. 10, 13 and then 14
24 and a half meters per second in the last graph
25 there which is a fast gallop, okay. And what I

1 want you to appreciate is that the pulmonary
2 artery pressure in control horses at top speeds
3 when you compare it to those horses that have been
4 administered Furosemide, is significantly higher.
5 Okay.

6 So Furosemide causes, on average, about a
7 10 percent drop in pulmonary arterial pressure in
8 the region of between 8 and maybe 11 millimeters
9 of Mercury in these horses.

10 To remind you again, we know that bleeding is
11 associated with pressure. So if you just consider
12 this graph, along the X axis on the bottom here,
13 we have some pulmonary arterial pressures. And on
14 the Y axis going up here, these little triangles
15 mark how many red cells can be retrieved from
16 horse's lungs.

17 So at pressures of 10, 20, 50, 60, 70, we see
18 that these red cell numbers are staying around the
19 same. Okay. They are hovering around this line
20 here. You are always going to get a few back.
21 That's normal. But the numbers don't really
22 increase until we get past the tipping point here
23 at about 90-plus millimeters of Mercury.

24 Then the red cell numbers really take off and
25 get quite high.

1 What I would like to you consider is that
2 perhaps with the administration of Furosemide,
3 those unmedicated horses that have higher
4 pulmonary artery pressures sort of stay on this
5 side of the tipping point. And those medicated
6 horses stay on this side and perhaps have less
7 capillary ruptures, experience less pressures,
8 and, therefore, less red cells can be retrieved
9 from their lungs.

10 So the question has been and asked for many
11 years whether or not furosemide is indeed
12 effective against this condition that we are all
13 very concerned about.

14 A number of studies were performed to sort of
15 try and answer that question. I just want to talk
16 about one of those studies here because I think
17 the picture sort of tells a thousand words. I
18 apologize that it has come out so dark there.

19 This is just a blank file here, a horse that
20 was not exercised. And this basically are the
21 cells that they retrieved again from that horse
22 that underwent a lung washing. Okay. These
23 horses here, or these vials I should say, from
24 horses that did not receive Furosemide. So the
25 control horse had no intervention and just

1 exercise. His lung washing was red. All right.

2 That horse that wore only a nasal strip, his
3 lung washing was still red, albeit slightly less
4 red. And those horses that received Furosemide,
5 whether or not they wore a nasal strip, had
6 relatively clear looking lung washing when those
7 cells were re-suspended again. Okay.

8 Dr. Hinchcliff -- you will recognize his name
9 again -- but in 2009, he really definitively
10 answered the question, is Furosemide effective
11 against EIPH.

12 I was to point out some aspects of that study
13 because it really was an excellent and
14 well-executed study. He performed a randomized,
15 placebo, controlled blinded crossover field trial.
16 If you are going to do a study, this is what we
17 are all aiming for. Okay. We don't all have the
18 resources necessarily to do that.

19 But that is the most water-tight design that
20 you can possibly come up with. 167 racing
21 thoroughbreds competed for prize money in South
22 Africa. And they raced over turf and raced to the
23 rules of the local jurisdiction.

24 He comprised race fields of between 9 and 16
25 horses. They raced twice. The same horses raced

1 one week apart, okay, and they are over varying
2 distances. All horses went out wearing the same
3 weight under the same jockey. They started from
4 the same position. And they all wore identical
5 tack. So he really tried to keep things as
6 consistent as he could between races. And the
7 reason was that half the horses on the first day
8 went out having received 500 milligrams of
9 Furosemide 4 hours before they raced.

10 And the other half went out having received
11 just saline. They even went so far as to die the
12 saline a little bit so it looked like Furosemide.
13 Because the people that were administering the
14 drug had to be blinded as to whether or not those
15 horses had received it because they where the same
16 people that were then performing the video
17 endoscopy and judging the severity of exercise
18 induced pulmonary hemorrhage.

19 So he went out to answer the question, is
20 Furosemide effective? And determined very
21 conclusively that Furosemide is, indeed,
22 effective.

23 In short those horses that received the
24 placebo, that received saline, were between 7 and
25 11 times as likely to have EIPH of grade 2, 3, or

1 4 than those horses that received Furosemide.

2 Okay.

3 And just in summary, those horses that
4 received the placebo, 80 percent of them had some
5 evidence of exercise induced pulmonary hemorrhage
6 in their trachea after racing. And those same
7 horses that received Furosemide on the opposite
8 week, only 55 percent of those horses had some
9 evidence of exercise induced pulmonary hemorrhage.

10 Again, it is not a cure. But it is hard to
11 argue that it didn't help in this case.

12 It is known that Furosemide causes racehorses
13 to perform better. Okay. In 2000 or, excuse me,
14 in 1999, over 22,000 race starts were considered
15 right here in North America. And it was
16 determined that those horses that received
17 Furosemide before racing, raced faster,
18 finished -- placed more often, and won more money
19 than those horses that did not race on Furosemide.

20 What we do not know at this time is whether
21 or not the effect of Furosemide on racehorse
22 performance is actually due to its effect on EIPH.
23 I just want to make that clear. We know
24 Furosemide reduces EIPH severity and incidents.
25 We know that horses race better on Furosemide.

1 Nobody has made the connection and it is a
2 very difficult thing to prove. And that's why it
3 hasn't been done yet.

4 The next couple of slides are designed to be
5 thought-provoking. I sort of wanted to put
6 everything I have spoken to you about today in a
7 little bit more of a perhaps a meaningful sense.
8 And, you know, these statements are sort of up for
9 discussion if you like.

10 What we do know is that exercise induced
11 pulmonary hemorrhage increases with age, probably
12 not that the horses are getting older. It is that
13 we have had them in training for longer. All
14 right. And the pathologic changes that I
15 described at the start of the lecture do appear to
16 become cumulative.

17 So they start in the mild disease right at
18 the very back of the lung. But they spread and
19 become more severe and move up the lung over time.

20 Vascular pressures we know increase with any
21 exercise bout. Therefore, we could call exercise
22 if you would like a high pressure event or an HPE.
23 Okay.

24 Races themselves actually account for
25 relatively few exercise bouts that a horse might

1 perform in its lifetime or in a year. So if, for
2 example, a horse starts out 6 times a year but
3 gallops between 2 or 300 times a year, therefore
4 we could say that racing actually only represents
5 2 percent or a little bit more of all high
6 pressure events.

7 Therefore, that being said, it cannot be
8 argued that race day medication rounds would
9 actually have limited effect on disease
10 progression if we are only talking about a small
11 number of exercise bouts. And that effect of the
12 round could be even less if the horses are still
13 trained on Furosemide.

14 That being said, we know that horses work
15 very hard when they race. They are arguably more
16 excited on race day. And do a combination of
17 these factors make race day conditions actually
18 the most ideal for bleeding. That on an average
19 work day, they are not as pumped up. They are
20 maybe not working as hard, et cetera.

21 And does the Furosemide mediate a vascular
22 pressure drop off of about 10 percent plus or
23 minus the other effects of Furosemide. These
24 effects may be enough to limit the magnitude of
25 that race day bleed. Dr. Hinchcliff already

1 proved that eliminating race day Furosemide is
2 going to result in -- I should say that he didn't
3 prove it, but he proved its effect on EIPH.

4 Therefore, we can say that eliminating race
5 day Furosemide is a likely to result in more
6 severe bleeds on race day. It is hard to argue
7 that.

8 But what we don't know at this time is
9 whether or not the effect of a medication, what
10 effect that might have on disease progression. We
11 just don't know that at this time.

12 And that sort of concludes the scientific
13 part if you like of my talk. I do have a little
14 international perspective on the condition. I am
15 clearly not from around here. So Dr. Scollay
16 asked me to maybe address condition in other
17 international jurisdictions.

18 But just let me iterate, my take-away points
19 are that exercise induced pulmonary hemorrhage is
20 common in racehorses around the world. It results
21 in significant pulmonary pathology. It is a
22 result of high capillary pressures that the horses
23 experience when they are exercising due to high
24 blood flow states.

25 We are coming to understand that it is

1 exacerbated by remodeling of pulmonary veins.

2 Furosemide acts to reduce blood pressure in
3 the lungs of exercising horses. It does reduce
4 bleeding severity. It does not eliminate or cure
5 EIPH.

6 Does the committee have any questions for me
7 at this time?

8 MR. FARMER: Any commissioner that have any
9 questions? Dr. Scollay, have your next witness
10 ready.

11 Dr. Yon?

12 DR. YON: I wanted to know if your studies
13 have looked at the oxygen saturation of the horse
14 in terms of being normal versus those with
15 moderate fibrosis of the lung versus severe
16 fibrosis?

17 DR. STACK: That's a very good question and
18 it is not one that we have answered get.

19 It is difficult to imagine that horses with
20 disease progression that you mentioned right up to
21 severe fibrosis would not have limited pulmonary
22 function as a result of that. I don't have those
23 data available.

24 What makes horses a little tricky to evaluate
25 in that respect is that, again, they are very

1 unique amongst other animals. But they all become
2 significantly hypoxemic when they run. And so you
3 are already dealing with a technically hypoxemic
4 animal. And when they become hypoxemic, they sort
5 of do that in a fairly broad range. So I think we
6 actually would need a lot of horses to ascertain
7 whether or not degrees of fibrosis are associated
8 with pulmonary function.

9 DR. YON: You could do that at rest without
10 having to do any exercise. I mean --

11 DR. STACK: Oh, I understand. That's a very
12 good point.

13 I don't know this for a fact. I would
14 suspect. The lungs have got such enormous reserve
15 capacity. Because, for example, people do well
16 with only one lung or with perhaps lobectomies.

17 I would suspect that the standing horse, even
18 with significant fibrosis, would actually have
19 similar oxygen saturation figures to a horse with
20 normal lungs.

21 DR. YON: The other question I have and then
22 I will be quiet.

23 In humans, at least there are other chemicals
24 that are now being looked at to reduce pulmonary
25 artery pressure. Viagra is one of them.

1 DR. STACK: Uh, huh.

2 DR. YON: Has anybody looked at any of those
3 chemicals in horses?

4 DR. STACK: Sildenafil has been evaluated.
5 That is the Viagra type drugs. And other drugs
6 that have similar effects.

7 The difficult thing about -- and I don't want
8 to sort of lose people -- but if you dilate
9 pulmonary arteries only, you actually end up
10 dumping a lot more blood into the capillaries.
11 And that in itself could be less beneficial.

12 So what we think personally at Michigan State
13 is that we actually need to work on dilating the
14 veins a little so that there is a bigger drain
15 than actually dilating the arteries and putting
16 more pressure -- putting more blood into the
17 capillaries that we believe will be detrimental.

18 And one study I would like to mention is that
19 when nitric oxide was administered to horses, the
20 main effect of that drug, it does reduce pulmonary
21 arterial pressure. It does dilate pulmonary
22 arteries. And those horses actually ended up
23 having more severe hemorrhage than horses that
24 weren't treated with the drug.

25 So that's sort of a -- we really want to be

1 super specific with our pharmacotherapeutics and
2 really target them to a certain part of the
3 vasculature and that is difficult.

4 MR. LEAVITT: I have a question.

5 DR. STACK: Sure.

6 MR. FARMER: Go ahead, Mr. Leavitt.

7 MR. LEAVITT: In a practical sense, I think
8 you explained to us but I wasn't sure of the
9 answer.

10 DR. STACK: I speak very fast.

11 MR. LEAVITT: If you train a horse, every
12 time you work him on Salix and then you withhold
13 the Salix on the day that he races, will that
14 horse bleed more, less, or the same as a horse
15 that has not been trained on it?

16 DR. STACK: That a very, very good question.
17 And unfortunately it is one that I cannot answer
18 because those data don't exist.

19 And what we would like to know is whether
20 chronic use of Salix in training actually slows
21 down some of the pathologic changes that we
22 discussed at the start of the lecture. If we knew
23 that, then it could be argued that training on
24 Salix is beneficial. And that the few times that
25 the horse races -- it may be less applicable to

1 standardbreds that race more -- but when the horse
2 races, not racing on Salix would be less of a
3 issue for the horse.

4 But unfortunately that's also conjecture.
5 And I cannot answer that question directly. I am
6 sorry.

7 MR. LEAVITT: And this, along the practical
8 lines, if you were racing the horse and you
9 withheld water from him for 8 or 10 hours -- I
10 have heard in the orient they will withhold water
11 for 24 hours. They don't use Salix but they do
12 that -- will that have pretty much the same effect
13 as the Salix will?

14 DR. STACK: In some aspects. Okay. So if
15 you administer Salix, they urinate more. They
16 lose water. But what I think has to be considered
17 is the time frame. Okay. So if we are talking
18 about water deprivation over 8 to 24 hours gives
19 the body a lot more time to redistribute water
20 between differently compartments; so from within
21 cells, outside cells, et cetera.

22 And a chronic water deprivation of that
23 duration at least in human athletes and other
24 species is not beneficial. And the other side
25 effects besides just the weight loss and the frank

1 water loss I believe are contrary to a horse's
2 best interest.

3 MR. LEAVITT: Thanks.

4 MR. FARMER: Any other questions?

5 MR. WARD: Just for clarity right here, just
6 for clarity purposes, I think you said there was
7 300 liters of blood that pass through the lungs,
8 is that right?

9 DR. STACK: Yes.

10 MR. WARD: Converted to American style
11 gallons?

12 DR. STACK: Oh, I am sorry. I went a little
13 bit European on that. So I usually use a factor
14 of 4. So about 70 to 80 even up as high as 90
15 gallons of blood going through the lungs every
16 minute.

17 MR. WARD: So that's about a 1 and a half, 55
18 gallon drums every minute.

19 DR. STACK: Yeah. Yeah. It is pretty
20 amazing. Sorry about the European. Stayed metric
21 on it.

22 DR. YON: What is the total volume that a
23 horses has of blood?

24 DR. STACK: So a horse's blood volume is
25 about 8 percent of its body weight. So if you

1 take an average 500 kilogram -- sorry --
2 1100-pound thoroughbred, about 40 liters. So they
3 are cycling it really, really, really fast. With
4 a heart rate of 250, they can do that, you know.
5 It just flies around.

6 MR. FARMER: Any other questions?

7 DR. NORTHROP: You made the comment, if I
8 understood you right, as far as the performance
9 enhancing of Salix. If the horse was not a
10 bleeder, there was no performance enhancing.

11 DR. STACK: I didn't make that comment,
12 actually.

13 I said that those horses that received Salix,
14 the bleeding data wasn't really included in that
15 study. It was just whether or not a horse
16 received Salix. Okay. And those horses raced
17 faster, won more money, et cetera, than horses
18 that did not race on Lasix or Salix, excuse me.

19 Whether or not the horse was a bleeder was
20 not addressed in that study. And, therefore, we
21 can't say unfortunately that the effects of Salix
22 on performance are due to its effect on --

23 MR. LEAVITT: I was under the impression --
24 which may be doesn't go with what you just said
25 which means I was wrong -- that every horse, when

1 he is stressed as hard as he is stressed in a
2 race, does bleed, EIPH, to some degree.

3 There are none that have none of it.

4 DR. STACK: That's correct.

5 And I think that my next couple of slides
6 will maybe address that. Because instead of a
7 terminology thing a little bit, when we talk about
8 bleeders, depending on where you are from, some
9 people are talking about Epistaxis. Some are
10 talking about grade 3 and 4.

11 And if you really get down to it correct,
12 nearly all -- almost all horses bleed to some
13 degree. It is whether or not we see
14 manifestations of that and we interpret upper
15 airway, including the trachea manifestations of
16 bleeding, as an indication of a more severe
17 episode.

18 That is what is assumed. Okay. But it
19 likely depends on other things like rate of
20 transport from the back of the lung and other
21 factors. So that is -- it is sort of a
22 terminology thing, I think, when we talk about
23 bleeders.

24 DR. YON: I thought that you said that
25 depending on the grade of bleeding, that is if

1 they had a zero or a one, those horses were more
2 likely to win, place, be in the money. And they
3 all benefited with from Lasix.

4 Did I misunderstand what you said?

5 DR. STACK: They all did, yeah. They all
6 did.

7 DR. YON: But the more they bled, the more
8 damage to the back of the lungs and the lower the
9 performance?

10 DR. STACK: I think we are talking about 2
11 different studies.

12 DR. YON: Okay.

13 DR. STACK: Yeah.

14 The Hinchcliff study in South Africa did not
15 address whether those horses that received Lasix
16 had less EIPH. He did not publishing whether or
17 not those horses finished, won more money, et
18 cetera. He likely has those data. But I believe
19 when he has been asked about that, the study was
20 not designed to answer that question. And,
21 therefore, he will not use performance data from
22 the South Africa study to make the link between
23 EIPH, performance, and Furosemide. It is sort of
24 the triangle if you like.

25 MS. LAVIN: In the South African study, do

1 you know how long in front of the racing the Salix
2 or Lasix was given?

3 DR. STACK: 4 hours.

4 MS. LAVIN: Consistently?

5 DR. STACK: Yeah.

6 And those horses that received Salix,
7 everybody had their water pulled at 4 hours. So
8 what Dr. Hinchcliff actually reported in that
9 study was that although the horses that received
10 Salix lost about 12 kilograms on average, those
11 horses that received saline also lost 6 kilograms
12 of body weight.

13 He did weigh the horses.

14 MR. FARMER: Anyone else? Dr. Scollay, you
15 ready with your next --

16 DR. SCOLLAY: Actually, I believe Dr. Stack
17 has got a few more slides on management of EIPH in
18 international situations where race day Furosemide
19 is not an option.

20 MR. FARMER: Okay. Go ahead.

21 DR. STACK: It won't take too long.

22 I really just want to reiterate the fact that
23 EIPH is a ubiquitous disease. All right. It
24 affects horses worldwide. And a number of the
25 studies that I mentioned in the first part of my

1 talk, they are from all over the world.

2 So we have got the Hong Kong Jockey Club in
3 the late '80s. Singapore, Japan, Australia, and
4 right here in North America. And that's just a
5 few of the studies.

6 So this is not a problem that is unique to
7 certain regions. And I would like to point out
8 that the data I am about to present were actually
9 compiled for a questionnaire that was sent out
10 before the international summit in Belmont this
11 year. I don't actually know who to credit for the
12 compilation of the data. But all respondents were
13 basically race day officiators in their respective
14 jurisdictions.

15 And what came back from that study is that it
16 is widely known that Furosemide use is really
17 limited to North American racing jurisdictions
18 with the exception of may Uruguay as far as I
19 know.

20 And just to go back to your point,
21 Mr. Leavitt, what constitutes a bleeder really
22 depends a little bit on where you hail from. And
23 really in general most people consider a bleeder
24 as a horse that presents with Epistaxis or blood
25 at the nostrils. So Australia, Bahrain, Cyprus,

1 Japan, Malaysia, Singapore, United Arab Emirates
2 and Uruguay all record bleeding episodes as horses
3 that have Epistaxis.

4 If Hong Kong, just as a point of interest, if
5 horses don't perform to expectation or appear to
6 fade during a race, those horses are also scoped.
7 And horses with grade 3 or grade 4 exercise
8 induced pulmonary hemorrhage undergo some
9 restrictions in terms of their training and racing
10 in the following weeks.

11 MR. LEAVITT: Can I ask something here?

12 DR. STACK: By all means.

13 MR. LEAVITT: At least in harness racing,
14 very, very few horses bleed from the nostrils.

15 DR. STACK: Right.

16 MR. LEAVITT: And the bleeding that is bad
17 for them that keeps them from racing well is, for
18 want of a better term, a laymen's term, lung
19 bleeding. So that if you are only -- if you are
20 only considering horses that bleed from the nose,
21 you are just scratching the surface.

22 DR. STACK: A very, very valid point.

23 And I would also like to point out at this
24 time that you don't to have grade 4 exercise
25 induced pulmonary hemorrhage in your trachea to

1 present with Epistaxis or horses with very severe
2 tracheal bleeds are not presenting with Epistaxis.
3 And also not all horses with grade 4s do bleed
4 from the nose. So there -- a grade 2 can bleed
5 from the nose. A grade 1 can bleed from the nose.

6 So we are dealing with 2 different techniques
7 that don't necessarily directly marry up. And you
8 are right. Much, much less, about .15 percent, of
9 horses that race present with blood in the nose.

10 MR. LEAVITT: Right.

11 And the bleeding, the lung bleeding, is
12 picked up by a scoping after within 15 or 20
13 minutes after the horse has been stressed. That
14 is what determines horses that must get Lasix.

15 Well, they all will benefit from what you
16 said.

17 But the degree of problem that they have got
18 from the EIPH has nothing to do really with
19 whether they bleed from their nostrils or not. It
20 is what you see in the lungs.

21 DR. STACK: Agreed. Absolutely agree.

22 This was really to get at how people regulate
23 it. Okay. So this is their sort of the post race
24 definition if you like of bleeding.

25 And based on these jurisdictions that impose

1 sanctions and bounds on whether or not a horse can
2 train and race, but it is only on -- I think a
3 trainer, it would be in his or her best interest
4 to take scoping data into account. But in terms
5 of the regulators, they deal only with Epistaxis
6 for the largest part.

7 MR. LEAVITT: So if a country -- I think you
8 had Australia there.

9 DR. STACK: Uh, huh.

10 MR. LEAVITT: 1 and a half percent of the
11 horses bleed from their nose.

12 DR. STACK: Even less.

13 .15.

14 MR. LEAVITT: So based on that, someone
15 speaking for Australian racing would take -- we
16 don't need Salix. Our horses are not bleeders.

17 But that is inaccurate.

18 DR. STACK: You are absolutely right. So the
19 definition of bleeder, I think, always needs to be
20 laid right out there. And I think anyone that
21 deals with race horsing in Australia knows well
22 that more horses bleed than those presented with
23 Epistaxis.

24 But in terms of their regulations, that's
25 what the regulators want to know about whether or

1 not an Epistaxis happens. And then that horse
2 gets, for example, a 3 month bout in racing. And
3 has to race for a thousand meters in the presence
4 of the stewards and is scoped, et cetera, after
5 that. So --

6 MR. LEAVITT: Thank you.

7 DR. STACK: No problem. You make a very
8 valid point.

9 And the bounds that various jurisdictions
10 impose on horses in terms of, in some cases
11 training and racing vary from 21 days up to 3
12 months. Some will impose the bounds on the events
13 of a second bleed happening. Those bounds are
14 often longer.

15 And in 3 jurisdictions in particular,
16 compulsory retirement from racing for life is
17 enforced on horses that bleed for a third episode
18 in Hong Kong, Malaysia and Singapore.

19 In terms of epidemiology -- and this is just
20 to reiterate your point, Mr. Leavitt -- all
21 respondents were asked how many horses they
22 believe are directly affected by regulations in
23 their respective jurisdictions.

24 And they all reported bleeder or Epistaxis
25 rates of much less than 1 percent. And they also

1 estimated for those that responded, that forced
2 retirements due to EIPH and EIPH only were, again,
3 much less than 1 percent.

4 Most of those jurisdictions questioned to
5 report bleeding episodes to the public. And it is
6 their perception that both their regulations and
7 public reporting of bleeding episodes do not
8 impact upon field size and wagering if it is legal
9 in those countries.

10 MR. FARMER: I just --

11 DR. STACK: I just have a little -- sorry.

12 MR. FARMER: Go ahead.

13 DR. STACK: I have a little disclaimer for
14 this slide.

15 I am not endorsing or promoting the use of
16 any of these practices. To be honest with you,
17 some of them I can't even explain from a
18 scientific perspective. Okay. But this is -- and
19 again, they are not necessarily representative of
20 how many people do these things.

21 But a number of practices are employed to try
22 and manage EIPH in jurisdictions that cannot use
23 Furosemide on race day.

24 Furosemide is commonly used in training. And
25 this is really a little bit region -- definitely

1 trainer, somewhat veterinary dependent. But that
2 is a common practice. I spoke to a number of race
3 track practitioners in the United Arab Emirates.
4 Also in Ireland. And a number of respondents on
5 the survey also said that trainers will routinely
6 train horses on Lasix.

7 Other drugs that are used in training and
8 perhaps in some cases on race day are
9 bronchodilators. We talked a little bit about
10 their limitations. Kentucky Red is certainly used
11 in Dubai. Corticosteroids. Vitamin C and other
12 Bioflavonoids. Dembrexine which is butalycin.
13 DMSO. Antibiotics are fairly popular. Estrogen
14 based drugs in some cases.

15 Intravenous dextrose. And then some
16 non-specific herbal supplements, the details of
17 which were never really related to me despite my
18 asking. But I do believe that some have them have
19 some diuretic properties.

20 Routine endoscopic monitoring, again to go
21 back to our point, is often employed by trainers.
22 And they sort of cite that as making decisions
23 about whether or not to train a horse on
24 Furosemide for example.

25 Training intensity modifications are made

1 particularly when heat or humidity or air
2 pollution states change.

3 Also in Hong Kong, in particular, they cited
4 a special concern when the temperature drops very
5 suddenly there. Water deprivation is practiced.
6 Figures of between 6 and 8 hours were reported to
7 me. 24 hours is talked about. Nobody directly
8 said that to me. But certainly 6 to 8 hours was
9 relatively common practice.

10 People obviously act to treat both upper and
11 lower airway abnormalities as quickly and as
12 efficiently as possible because they can impact on
13 the severity of the horse's bleeding episodes.
14 And then rest for varying periods -- rest period
15 of varying length are also adopted.

16 These are other factors that various horsemen
17 and veterinarians have sort of related to me as
18 things that they perceive to have an effect on the
19 exercise induced pulmonary episodes. In
20 particular, air pollution in Dubai -- I am talking
21 mostly about sand storms, those urban environments
22 such as Hong Kong, Singapore, Dubai -- there is a
23 lot of construction there. People do believe that
24 that has an effect on horse's airway health, et
25 cetera.

1 Temperature changes, both up and down. In
2 particular, high humidity conditions. Airway
3 health and infection. Certainly I found in
4 Ireland that was cited very often as being
5 something that they wanted to control.

6 Barn stabling and air quality, keeping horses
7 in air conditioned stalls and then racing them in
8 high humidity conditions, for example, people
9 perceive as a problem.

10 There is always sort of the argument that it
11 is a condition that is being bred into horses.
12 And that horses that race on Lasix shouldn't be
13 allowed to go to the breeding shed. There is no
14 scientific data to support that contention
15 whatsoever.

16 It is a disease of horses that are getting
17 older. And more horses that travel over jumps,
18 particularly in Ireland and the UK for example,
19 bleed than the younger flat racing horses.

20 And they are really a sort of a very short
21 summary of some of the information that I received
22 from other parts of the world.

23 Are there any questions?

24 MR. FARMER: Let Tom. Then you, Ned.

25 MR. BONNIE: Okay.

1 MR. CONWAY: A continuation of the points
2 that Alan was making, the other jurisdictions that
3 ban horses; the second time, lifetime ban, and so
4 forth, is that based upon the discovery of
5 bleeding through the nose? Or are they scoping?

6 MS. SPECKERT: All Epistaxis. Third
7 Epistaxis episode results in a lifetime ban from
8 racing.

9 MR. CONWAY: So really they are just banning
10 the horses that bleed through the nose? They
11 don't know about the other 98 percent whether they
12 bled internally or not?

13 MR. FARMER: Ned?

14 MR. BONNIE: I am interested in or the use of
15 Lasix as relates to performance. And you have
16 spoken with respect to some of those issues.

17 And there is information out there incidental
18 which says that Lasix improves the performance of
19 horses by reducing the edema in the larynx, et
20 cetera.

21 And that's unrelated to EIPH.

22 DR. STACK: Absolutely.

23 If that is the case that it effects the
24 larynx, certainly upper airway abnormalities such
25 as a, you know, a paralyzed larynx or a displaced

1 soft palate will increase exercise induced
2 pulmonary hemorrhage severity.

3 And so if indeed Furosemide can reduce the
4 laryngeal edema, it is feasible to sort of
5 extrapolate that by improving airflow by just a
6 little bit like the nasal strips so at points of
7 constrictions such as the nostrils and the larynx,
8 if you can make those a little bit wider, that
9 performance enhancement could be achieved through
10 that.

11 I just can't speak to it because I am not
12 familiar with those data.

13 MR. BONNIE: Has anybody -- has any scientist
14 worked on that?

15 DR. STACK: Looking at Furosemide and
16 larynxes specifically?

17 MR. BONNIE: Just the -- yeah -- the edema in
18 the airways as a factor and the use. Because
19 90 percent of the horses that are running in
20 Kentucky and elsewhere in the United States are
21 getting -- are getting Lasix, Salix.

22 And one might conclude from that, since all
23 horse are not bleeders, that some trainers are
24 giving and veterinarians are giving that drug to
25 affect performance unrelated to the EIPH issue.

1 DR. STACK: I think that is something -- it
2 is potentially why there is a general --

3 MR. FARMER: Excuse me just a minute.

4 Ned, turn your --

5 MR. BONNIE: Now it is on.

6 DR. STACK: Should I just reiterate the
7 question and you can tell me if I am on the right
8 track.

9 So Mr. Bonnie was asking me the question
10 whether or not the effects of Furosemide on
11 performance could be related to things other than
12 exercise induced pulmonary hemorrhage. Because,
13 as he points out, not all horses are severe
14 bleeders.

15 I think that is something that is very
16 possible. It is also probably the main reason
17 that nobody has stepped forward and made the link
18 between all 3; EIPH, Furosemide, and performance.
19 Okay.

20 In terms of the larynx, I am not aware of
21 anybody that is working on that specifically. But
22 I know work out there does exist about the
23 relation between -- relationship between weight
24 loss and performance, et cetera.

25 So it is likely that it is drug that has

1 multi-factorial effects. I just can't speak to
2 any scientific data about the larynx specifically.

3 In principal what you suggest is true. If
4 you can make points of narrowing in the airway
5 wider, it will improve airflow. And directly it
6 could actually even improve EIPH by reducing sort
7 of some of the pressure swings on the capillary
8 walls that I showed you.

9 But that's a whole other sort of departure in
10 terms of an explanation.

11 MR. BONNIE: Thank you.

12 DR. NORTHROP: And I was just going to kind
13 of make a statement.

14 Anecdotally, I have never used Lasix to
15 improve the function of the throat. I don't see
16 how it would improve the function of the throat.

17 If it did remove laryngeal edema, I wish I
18 had discovered that 20 years ago with the
19 pharyngitis cases that we fight with. So I have
20 the real problem with the sudden performance
21 enhancing over the last couple of years effect of
22 this drug. I feel it is very inappropriate mainly
23 because we, as veterinarians on the racetrack and
24 most trainers, use the smallest dose we can use
25 for just the opposite reasons.

1 So now all of a sudden that it is this great
2 performance enhancing drug that it is labeled, we
3 would be giving horses 10 cc's every time. But
4 we're not. I mean we try to get our minimum dose
5 in the state of Kentucky is 3 cc's.

6 Our goal is to get every horse at 3 cc's
7 because of the not performance enhancing
8 properties of it.

9 And in Ned's case with throat function, I
10 think what you said. And a backward correlation
11 would be, we know bad throated horse bleed more
12 prominently. So we do everything we can to
13 prevent the bleeding.

14 And as far as fixing the function of the
15 throat, I don't know of a legal medication out
16 that there that we can do that with.

17 DR. STACK: Point well taken. And I agree
18 with what you say.

19 MR. LEAVITT: I know I am beating this to
20 death. But my understanding of what we have heard
21 today is that you cannot say some horses do not
22 bleed. Some horses do not suffer from EIPH,
23 period.

24 It is my understanding that every racehorse
25 does have some degree of it, right?

1 DR. STACK: That's fair.

2 MR. LEAVITT: Thank you.

3 MR. FARMER: Doctor, you want to continue
4 with, Dr. Scollay, with your other presenter?

5 MS. LAVIN: I just have a quick question.

6 I was interested to know if there were any
7 statistics that any horses that bleed through
8 Lasix. Was that part of any of the studies?

9 DR. STACK: Not to my knowledge.

10 MS. LAVIN: But you do acknowledge that that
11 is a problem?

12 DR. STACK: Oh, absolutely. That's why I
13 would really sort of like to reiterate the point
14 that Furosemide does not cure exercise induced
15 pulmonary hemorrhage.

16 We think it has effect on the lung that
17 reduce the likelihood or perhaps the number of
18 capillary breaks, et cetera. But that's all we
19 know. And horses do, indeed, not all respond
20 equally it would appear.

21 Thank you.

22 MR. FARMER: Any other questions?

23 Dr. Scollay?

24 DR. SCOLLAY: Thank you, Dr. Stack.

25 Our next presenter is Dr. Rick Sams. Dr.

1 Sams is the director of HFL Sports Science, the
2 official laboratory of the Kentucky Horse Racing
3 Commission.

4 Dr. Sams served as director of the analytical
5 toxicology laboratory at the Ohio State University
6 from 1978 through 2006. And the Florida Racing
7 Laboratory at the University of Florida from 2006
8 through 2010. He was a member of veterinary
9 medicine faculty at Ohio State University from
10 lieu 976 through 2006. And at University of
11 Florida from 2006 to 2010.

12 He has mentored numerous graduate students
13 and has pursued an active research program with
14 emphasis on the pharmacokinetics of drugs in
15 animals, particularly horses.

16 He has served as a member of the drug testing
17 standards and practices committee of the
18 Association of Racing Commissioners International.
19 And has been a technical adviser to the racing
20 medication and testing consortium since its
21 inception.

22 Dr. Sams is a member of the American Chemical
23 Society, the American Society of Mass
24 Spectrometry, International Association of
25 Forensic Toxicologists, the American Association

1 of Pharmaceutical Scientists, and the American
2 Academy of Veterinary Pharmacology and
3 Therapeutics.

4 Dr. Sams, welcome.

5 DR. SAMS: Thank you.

6 Mr. Chairman, members the committee,
7 Dr. Scollay, and guests, thank you very much for
8 inviting me to make this presentation this
9 morning.

10 Dr. Stack has already discussed many of the
11 aspects of Furosemide and its effects on the
12 lungs. My emphasis is going to be a bit
13 different. I am going to focus on the effects of
14 Furosemide on the kidneys, how it produces its
15 diuretic effect. And, therefore, I will address
16 the effects of Furosemide on the detection of
17 other substances that may be administered in
18 conjunction with Furosemide.

19 The goals of the presentation are to discuss
20 what it is, what does it do, how does it do it,
21 what effects it might produce on the horse, and
22 what effects it has on the detection of other
23 substances.

24 I am going to include other so-called loop
25 diuretics in the discussion. They are known as

1 Bumetanide, Ethacrynic Acid, and Torsemide. The
2 reason I include those is that they have all been
3 encountered in test samples collected from horses,
4 particularly in those racing jurisdictions in
5 which Furosemide is not permitted. And, in fact,
6 Bumetanide is allowed in one racing jurisdiction
7 in the United States.

8 Other substances that are sometimes referred
9 to as adjunct medication, such as Aminocaproic
10 Acid and Tranexamic Acid are fibrinolysis
11 inhibitors. They will not be a subject of my
12 presentation.

13 There are anti-hemorrhagic agents,
14 specifically Carbazochrome which is known locally
15 as Kentucky Red, and Etamsylate. Again, those
16 substances will not be the subject of the
17 presentation.

18 So let's start our discussion with regard to
19 the so-called loop diuretics. And as in the case
20 of Dr. Stack's presentation, we need to talk about
21 a little bit of anatomy. The functional unit of
22 the kidney is the glomerulus. And the glomerulus
23 is located right here. It receives blood from the
24 systemic circulation. And the blood flow to the
25 glomerulus in the horse at rest is about

1 12 milliliters per minute per kilogram of body
2 weight.

3 So in a normal sized horse, it is receiving
4 about 6 liters of blood per minute. A whole lot
5 of blood is flowing to the glomeruli -- there are
6 millions of these units in the kidney. I have
7 shown one here for purposes of illustration.

8 About 15 percent of that total blood flow a
9 filtered here at the glomerulus. And the water
10 and the electrolytes and the dissolved substances
11 begin their flow through these tubules that
12 constitute the nephron. And as the fluid flows
13 through this Loop of Henle, water and electrolytes
14 are reabsorbed.

15 And at the outlet end of the nephron, more
16 than 98 percent of the fluid that entered at the
17 glomerulus has been reabsorbed. And it is through
18 this mechanism that mammals, including the horse,
19 eliminate waste products.

20 And given that the flow into the glomerulus
21 is as high as it is, it remarkable that the urine
22 flow rate out at the end of the nephron is merely
23 .05 milliliters per minute per kilogram of body
24 weight. In other words, virtually all of the
25 water has been reabsorbed.

1 And so when we look at this functional
2 diagram of the nephron, it illustrates where
3 various diuretics exert their effects.
4 Collectively the loop diuretics interfere with
5 transport of various ions in this region of the
6 kidney. And by inhibiting the reabsorption of the
7 ions, the reabsorption of the water that is within
8 that nephron is diminished.

9 And as a consequence, urine flow rate
10 increases dramatically.

11 Urine flow rate at the peak of diuresis is
12 about 50 times normal the urine flow rate. And
13 the horse produces 10 to 20 liters of additional
14 urine during the period of Furosemide induced
15 diuresis.

16 So what is Furosemide?

17 Well, we have already referred to it as a
18 high ceiling loop diuretic. It was originally
19 marketed as Lasix. And more recently has been
20 marketed as Salix. It is available in both oral
21 and perineural products. And the first used in
22 horses was reported from the late 1960s. And
23 using the methods that we use in the laboratory,
24 it is readily detected in both blood and urine
25 samples.

1 Chemical structure is shown over here. And
2 an important feature of Furosemide is this group
3 right here. It is a carboxylic acid group. And
4 that group is ionized at physiological PH. And
5 that is important in terms of the elimination of
6 Furosemide.

7 Furosemide was synthesized in the early
8 1960's. And it was -- it entered human trials in
9 1963. And was very rapidly approved for use in
10 human medicines. And it was one of the most
11 effective agents for the treatment of hypertension
12 in people. It was approved officially for use in
13 people in July of 1966.

14 The veterinary product, which is restricted
15 to injectable forms, was introduced by Hoechst in
16 1967. And when Intervet purchased Furosemide from
17 Hoechst, they had to rename it. And they chose
18 Salix because of its similarity to the word Lasix.

19 The injectable preparation of Lasix was
20 approved first in 1967. It was the first
21 injectable diuretic that was approved for use in
22 horses. And it was approved specifically for the
23 treatment of pulmonary congestion, treatment of
24 edema, pulmonary edema. Veterinarians who I have
25 spoken to from who practiced veterinary medicine

1 back in this era say that Lasix was a miracle drug
2 in terms of its ability to treat pulmonary edema.
3 And the horses that were adversely affected showed
4 much marked improvement within 15 to 30 minutes
5 after administration of Lasix.

6 The pioneering work on the diuretic efficacy
7 of Lasix in horses was performed by Dr. Marvin
8 Beeman of Littleton, Colorado and others.

9 By the late 1960, Furosemide or Lasix was
10 being administered, pre-race, to horses as a
11 preventative for EIPH. The earliest use of
12 Furosemide in horses is attributed to
13 Dr. Harthill. And Lasix was allowed under the
14 permissive medications programs that were widely
15 adopted in the mid 1970's.

16 Use of Lasix was often indicated in the
17 racing program. And at that time, the dose, the
18 route of administration, and the time of
19 administration of Lasix were not regulated or
20 standardized.

21 The pharmacology of Furosemide is such that
22 there is a dose dependent diuretic effect. It is
23 characterized by a very rapid onset and short
24 duration. As I mentioned earlier, Furosemide
25 decreases the reabsorption of water in the

1 tubules. And thereby causes the increased
2 excretion of electrolytes and water. One of the
3 effects -- one of the consequences of the
4 alteration in electrolytes in the blood is that
5 Furosemide produces a mild metabolic alkalosis
6 that is characterized by increase in bicarbonate
7 and total carbon dioxide in the plasma.

8 It has been observed by a number of
9 investigators that the total diuretic effect is
10 increased after IM administration compared to IV
11 administration.

12 The Furosemide is rapidly cleared by renal
13 mechanisms. It is extensively bound to plasma
14 proteins. It is characterized by a small volume
15 of distribution, coupled with the rapid clearance
16 result and a very short half life of about an hour
17 or so.

18 Furosemide isn't extensively metabolized and
19 it is excreted rapidly in the urine. That
20 carboxylic acid group that I referred to earlier,
21 that group that is totally ionized, the
22 physiologic PH, means that Furosemide is excreted
23 into the urine. It is not reabsorbed. And,
24 therefore, it passes rapidly into the urine sample
25 and is therefore rapidly excreted.

1 This shows the effect of repeated
2 administration of Furosemide. First dose was
3 administered here at zero time. And this plot
4 shows the urine flow rate in milliliters per
5 minute. And at peak diuresis which occurs, in
6 this particular case, within 30 minutes after
7 administration of the drug. The peak urine flow
8 rate is about 240 milliliters per minute. That is
9 about 50 times the normal rate of urine production
10 in the horse.

11 And over that period of time, 8 liters -- a
12 little over 8 liters of urine was eliminated.

13 That administration was followed later, 2
14 hours later, by another dose of Furosemide. And
15 in that case, about 6 liters of urine were
16 excreted. No access to water was permitted during
17 the course of this experiment. These studies were
18 reported by Professor Tobin. The administration
19 was at a dose of 1 milligram per kilogram or 500
20 milligram dose to a 500 kilogram horse.

21 This plot shows the effect of Furosemide
22 administration at various doses on the urine
23 specific gravity. As you are all aware, the urine
24 specific gravity has been used to monitor the
25 dilution urine samples collected from horses. And

1 you can see that initial values of urine specific
2 gravity in this particular study which was
3 reported by Dr. Tobin are in the range of 1.030.
4 And you can see that in all cases, there was a
5 very rapid decrease in urine specific gravity.
6 The key figure that is used for regulatory
7 purposes is this specific gravity of 1.010. We
8 often refer to this as 1010. And you can see that
9 within a very short period of time after
10 administrative of these doses ranging from a very
11 small dose to a large dose of 4 milligrams per
12 kilogram, that urine specific gravity falls very
13 quickly and then returns fairly rapidly toward
14 pre-administration values.

15 The effect of this Furosemide induced
16 diuresis on the detection of other substances has
17 been examined by a number of investigators, some
18 of the pioneering studies in that regard were
19 performed by Professor Tobin.

20 One of the earliest plots that I saw dealing
21 with the effect of Furosemide on the detectability
22 of another substance is this one.

23 This shows the concentration of Pentazocine
24 in the urine sample. It is a logarithmic scale so
25 it is somewhat distorted from what we would

1 normally see. And this axis is time. And these
2 are 1 hour, 2 hours, 3 hours, and 4 hours after
3 the administration of Furosemide.

4 And the concentrations shown here on this
5 line without Furosemide are the normal urine
6 concentrations that one would see when no
7 Furosemide has been administered in conjunction
8 with the Pentazocine. And these are the
9 concentrations that were observed in the study
10 when Furosemide was administered.

11 And you can see that the concentrations of
12 Pentazocine in these sample are substantially
13 lower than the corresponding concentrations in the
14 untreated horse. In fact, at peak diuresis, which
15 is reflected in these low concentrations here, the
16 difference between the concentrations without
17 Furosemide and those with Furosemide is again
18 about 50 fold. Illustrating the effect of about
19 50 fold increase in urine flow rate on the
20 detectability of substances.

21 Out here at 4 hours at the end of the
22 experiment, there was still a slight difference
23 between the untreated and the treated urine
24 concentrations of Pentazocine. So when we look at
25 the characteristics of substances that cause them

1 to be affected by Furosemide administration, it is
2 clear that the effect is primarily on those drugs
3 that are polar and those drug metabolites that are
4 polar.

5 Because what is going on here is that these
6 substances are not typically reabsorbed. And if
7 they are not reabsorbed in the normal case, they
8 are merely diluted by the increased urine volume
9 that is produced during the Furosemide induced
10 diuresis. So those substances are diluted by the
11 maximum effect on them is about 50 fold due to the
12 50 fold increase in urine volume.

13 It is just dissolving them in a bigger volume
14 of water than is the normal case.

15 Another example of that is shown in this
16 particular slide. It is a little bit busier. But
17 what is plotted here is the concentration of an
18 acepromazine metabolite in urine. And this is the
19 time in hours. And what one sees here is that
20 there is a very dramatic decrease in acepromazine
21 metabolite concentrations due to the diuretic
22 effect of Furosemide.

23 That effect returns quite rapidly and by less
24 than 5 hours after administration there is no
25 difference, no statistically significant

1 difference, between urine concentrations in the
2 Furosemide treated horse compared to the
3 non-treated horse.

4 Again, this effect is just what we would
5 expect because the acepromazine metabolite is not
6 normally reabsorbed in the kidneys. And,
7 therefore, it is merely diluted in that larger
8 volume of urine that is produced during Furosemide
9 induced diuresis.

10 This one is a bit different in that this
11 reflects the urine concentrations of procaine.
12 And this plot is the procaine excretion rate as a
13 function of time after procaine administration.

14 And what one sees here is the urine excretion
15 rate of procaine in the absence of Furosemide in
16 this particular plot. And then in the case of
17 Furosemide administration, there is a dramatic
18 increase in the excretion rate of procaine as a
19 result of Furosemide administration.

20 Again, this is explained by the fact that
21 under normal circumstances, procaine is reabsorbed
22 in contrast to those -- to the acepromazine
23 metabolite and the Pentazocine metabolite,
24 procaine is normally reabsorbed.

25 And the diuretic effect of Furosemide causes

1 a decreased concentration radiant. And as a
2 consequence, procaine that is normally reabsorbed
3 and conserved and not eliminated in the urine, the
4 driving force for reabsorption is eliminated
5 during the period of intense diuresis. And,
6 therefore, the procaine is not reabsorbed. It is
7 eliminated in the urine.

8 And so in contrast to those polar substances,
9 lipophilic substances like procaine that are
10 normally reabsorbed, undergo a short period during
11 which their excretion from the body is increased.
12 So one of the questions that we ask is, is there
13 an effect, then, of Furosemide administration on
14 the body burden of these substances? Are they
15 eliminated more rapidly when Furosemide is
16 administered in conjunction with them?

17 The studies that we have done and the studies
18 that we have reviewed have said, yes, in fact,
19 there is a bit of an increase in the excretion
20 rate of these substances. But for most of these
21 substances, and all of the ones that we have
22 looked at, renal excretion which is what we are
23 talking about here represents a very small part of
24 the total mechanism by which the drugs is
25 eliminated. Metabolic clearance is a much more

1 significant factor in the elimination of these and
2 other substances.

3 And a small increase in renal clearance has a
4 very small effect, if any, on the total clearance
5 which is dominated by metabolic clearance.

6 So, yes, we can see the effect by an
7 increased rate of excretion in the urine. But
8 overall we can't measure -- we can't detect a
9 change in plasma concentration of procaine, for
10 example, by administering Furosemide to the horse.

11 I have repeated this slide showing the
12 specific gravity. And what I wanted to share with
13 you is what a group of us, beginning in the late
14 1970's, began to observe in the samples that were
15 being submitted to the laboratory. And that was
16 that we saw urine samples that were clearly
17 dilute.

18 The normal urine sample is a yellow to
19 amber-colored solution. And we were receiving
20 samples in the laboratory that had absolutely no
21 color. The samples looked like the water in this
22 picture.

23 And when we looked at the relationship
24 between the color and the administration of
25 Furosemide, we found that all of those were

1 associated with Furosemide administration. I
2 remembered during that time period, there were no
3 regulations with regard to when Furosemide could
4 be administered, by -- the route by which it was
5 administered, or the dose at which it could be
6 given.

7 And as a consequent under those unregulated
8 conditions, we saw urine samples that were
9 collected during that period of intense diuresis
10 submitted to the laboratory for testing.

11 And so several of us, including Dr. Soma,
12 Dr. Malin, individuals at the Pennsylvania
13 laboratory and others, brought these issues to the
14 attention of the regulators primarily at the
15 National Association of State Racing Commissioners
16 in the early 1980's.

17 And at the 1983 convention, the RASRC voted
18 to prohibit the use of Furosemide in racing. A
19 several racing commissions adopted that
20 recommendation.

21 As a result of a number of studies and
22 negotiations that took place, it was decided to
23 allow Furosemide in those racing jurisdictions but
24 now only under very strictly controlled conditions
25 that involved administration by the intravenous

1 route only, by controlling the dose to within 100
2 to 500 milligrams in most racing jurisdiction, and
3 by allowing the administration of Furosemide only
4 4 hours or more before race time.

5 We have demonstrated in a number experiments
6 that when the dose, the route, and the time of
7 administration were regulated and controlled, that
8 the urine samples submitted to the laboratory no
9 longer showed evidence of diuresis. And,
10 therefore, under those conditions, there were no
11 effects, no significant effects, on our ability to
12 detect drugs and their metabolites in the samples
13 that were collected from a Furosemide treated
14 horses under these regulated conditions.

15 The other aspects of the regulation were that
16 the specific -- if the specific gravity was less
17 than 1.010 and the plasma or serum concentration
18 was greater than 100 nanograms per milliliter,
19 that there would be a violation of the Furosemide
20 or Lasix administration.

21 What I have plotted here is a histogram that
22 shows urine specific gravities in samples that we
23 receive in the laboratory here. These are
24 submissions within the last year. And you can see
25 that there were no samples with a specific gravity

1 less than 1.012. There weren't any below the
2 regulatory limit of 1.010.

3 The general shape of this curve is
4 essentially that that we see from horses that have
5 not been administered Furosemide.

6 The mean value in this plot is somewhere here
7 around 1.025. And that is what one typically
8 observes in post-race samples collected from
9 horses that have not been treated with Furosemide.

10 So this plot represents data from 635
11 consecutive urine samples that were submitted to
12 the laboratory. These are all from thoroughbred
13 racing. Furosemide was confirmed in all of these.
14 The lowest value measured were a few that were
15 less than 1.012. No values were less -- equal to
16 or less than 1.010.

17 And as far as I am aware, there have been no
18 violations in Kentucky thoroughbred racing from a
19 combined violation of the urine specific gravity
20 rule and the elevated Furosemide in serum
21 concentration rule.

22 There are a number of other diuretics -- loop
23 diuretics. Bumetanide is one most often used in
24 those jurisdictions in which Furosemide is not
25 permitted. Bumetanide was fairly widely used in

1 the U. S. in the 1980's after the rule changes
2 with regard to Furosemide. And I think that that
3 was a result of fact that it is on a milligram per
4 milligram basis more potent than Furosemide.

5 It doesn't produce a greater diuresis. It
6 just takes a lower dose to produce the diuretic
7 effect. And, therefore, for a while, it was not
8 detectable. So it was used as a means of
9 circumventing the restrictions on Furosemide use.

10 It is rapidly eliminated. And under today's
11 conditions, readily detected.

12 Another one that was used during that period
13 was Ethacrynic Acid. Again, it was used in those
14 racing jurisdictions where Furosemide was not
15 allowed. It is readily detected today. And all
16 samples are tested for the presence of Ethacrynic
17 Acid.

18 Torsemide is another one of the more potent
19 on a milligram per milligram basis loop diuretics.
20 And it was first reported from horse urine in the
21 early 2000's.

22 So, in conclusion, Furosemide is widely used
23 in race horses under controlled conditions in the
24 United States. Uncontrolled use of Furosemide
25 results in profound effects on drug concentrations

1 but negligible effects on drug concentrations in
2 blood.

3 The effects on drug detection are largely
4 eliminated when Furosemide dosing is tightly
5 controlled. Samples received in the laboratory
6 are checked for adherence to Furosemide dosing
7 restrictions. And evidence for compliance, as I
8 showed you, is excellent.

9 The adjunct medications that are permitted in
10 Kentucky under the current conditions are readily
11 detected and do not interfere with post-race test
12 procedures. And other race day medications are
13 readily detected.

14 Thank you very much.

15 MR. FARMER: Thank you, doctor. Any
16 questions from the commissioners?

17 DR. YON: I have one.

18 MR. FARMER: Go ahead, Dr. Yon.

19 DR. YON: I wanted to ask you about the slide
20 analyzing the effect on the serum.

21 In terms of the handling of lactic acid that
22 is produced from severe exercise, is that
23 alkalization at all effective in increasing
24 performance because of neutralizing lactic acid
25 faster.

1 DR. SAMS: The short answer is, I don't know.
2 The studies out of California have clearly
3 shown that there is a relationship between
4 pre-race TCO2 concentration and performance. And
5 so very small differences in TCO2 have -- are
6 associated with improved performance at least
7 based upon order of finish from those data in
8 California.

9 So there may be an effect. I don't know that
10 it has ever been examined directly.

11 DR. YON: Okay. Second aspect of
12 alkalization.

13 Does that in any way interfere with machine's
14 ability to analyze for chemicals? In other words,
15 if the PH shifts a little bit, will it make it
16 harder to detect certain substances?

17 DR. SAMS: No, it doesn't. Because we add
18 buffers to the blood sample in order to extract
19 substances from them. And we overcome whatever
20 underlying PH value the sample has.

21 So there isn't an effect in that respect.

22 DR. YON: Thank you.

23 MR. WARD: Dr. Sams, just to put it down on a
24 lower level here. In your lab in the state of
25 Kentucky, does Lasix create a masking effect?

1 DR. SAMS: None whatsoever.

2 MR. WARD: Thank you.

3 MR. FARMER: Any other questions?

4 Dr. Scollay?

5 DR. SCOLLAY: This is a little awkward
6 because I am introducing myself as a speaker.

7 Is it okay if I do it from up here?

8 MR. FARMER: Certainly.

9 DR. SCOLLAY: Thank you.

10 In deliberating on the issue of the
11 administration of race day Furosemide, this
12 committee will consider both science and opinion.
13 There may be instances where science and opinion
14 do not agree. Fact and opinion can and do differ,
15 and both still warrant your consideration.
16 However, when facts are misstated, or opinions are
17 misrepresented as fact, a correction or
18 clarification is required.

19 Such is the case with these assertion that
20 the use of Furosemide increases the risks of
21 fracture. This assertion has come to my attention
22 repeatedly over the last few months and so I felt
23 the need to do some homework on it.

24 Over the last few months, public statements
25 have been made and also directly communicated to

1 myself and other individuals that the use of
2 Furosemide is associated with catastrophic injury,
3 as Furosemide causes calcium depletion and
4 increased bone fragility.

5 This has been offered as an explanation for
6 the difference in the reported incidence of
7 fatality between North America and international
8 racing jurisdictions.

9 Investigation suggests that this assertion
10 is based on an extrapolation from studies on the
11 chronic use of Furosemide in humans and that no
12 data exists to support the assertion of fracture
13 causation in the racehorse.

14 Furosemide is used in human medicine for the
15 treatment of, among other things, primary
16 hypertension and chronic pulmonary hypertension
17 often secondary to congestive heart failure. In
18 these patients, Furosemide is administered
19 anywhere from 1 to 4 times daily over a period of
20 months to years.

21 This daily use of Furosemide over time has
22 been shown to result calcium depletion and
23 increase bone fragility, particularly in geriatric
24 patients.

25 When Furosemide is used in patients with

1 osteoporosis, the risk of hip, wrist, and
2 vertebral fracture, the fracture sites most
3 commonly associated with pathologic fracture due
4 to osteoporosis, is increased by as much as 3.9
5 fold as reported in one study.

6 As I was unable to locate any published work
7 on Furosemide, osteoporosis, and fracture
8 incidence in the equine, I contacted Dr. Sue
9 Stover of the University of California Davis. I
10 am sure you all know her name. She is
11 internationally recognized for her work on the
12 pathogenesis of fracture in the racehorse. And
13 she provided me with the following.

14 This is a quote.

15 In my experience, fractures are associated
16 with focal, small, localized regions of
17 osteoporosis, secondary to remodeling of damaged
18 bone tissue in a local region. For example,
19 stress fracture or stress remodeling in long bone
20 and subchondral locations. These foci of
21 osteoporosis are commonly located within a region
22 of sclerosis.

23 And I could argue that a drug that caused
24 osteoporosis would likely cause generalized
25 osteoporosis, as Furosemide does in human

1 patients. And thus focal osteoporosis and
2 sclerosis would be rare in that circumstances.

3 I don't have evidence that racehorses that
4 die from catastrophic fracture have generalized
5 osteoporosis. When we use racehorse bones as
6 normal controls for other studies, I have not seen
7 evidence of generalized osteoporosis. In fact,
8 racehorse bones, even derived from racehorse that
9 sustain a catastrophic fracture, are generally
10 denser and stronger than those of non-racehorses.

11 That's all I have got.

12 MR. FARMER: Any questions?

13 DR. NORTHROP: I just wanted to add one
14 comment.

15 In Europe I know a lot of horses are trained
16 on Lasix every time they breeze. And that tends
17 to not support the theory out there that it -- it
18 is because we don't use it race day when they also
19 use it commonly, just not for the actual race.

20 DR. SCOLLAY: Well, in looking at the human
21 literature, it really referenced geriatric
22 patients and people with existing osteoporosis
23 already. And that this -- the use of Furosemide
24 and another loop diuretic that I cannot recall --
25 high ceiling loop diuretic that I can't recall the

1 name of -- they were advised not to use it in
2 patients with osteoporosis.

3 But, again, most of those are geriatric
4 patients with multi-organ disease unlike the
5 racehorse.

6 MR. FARMER: Any other questions from
7 members?

8 Here is the game plan. We will go through
9 down to Bill Casner and then we will take about a
10 30 minute break. And they have lunch down in the
11 cafeteria. And then we will come back and finish
12 the witnesses.

13 And then anyone that wants to speak that is
14 not registered, please see Tim West and register
15 to speak at the end and we will continue.

16 Now our next -- Matt Iuliano with The Jockey
17 Club. Good to have you here, Matt.

18 MR. IULIANO: Thank you, Tracy.

19 Hopefully this will not be quite as deep
20 sledding as the previous 2. Those were very good
21 presentations on the science of Lasix.

22 Thank you Chairman Farmer and fellow
23 committee members. We applaud the Kentucky Horse
24 Racing Commission for taking a leadership position
25 to address this very important topic today in

1 assembling this group.

2 For the health and safety of our human and
3 equine athletes and for the integrity of the
4 sport, The Jockey Club's long-held position is
5 that all horses should only compete when free from
6 the influences of medication.

7 We have heard a number of arguments this year
8 supporting the continued use of Salix on race day.
9 All tracing their roots to the efficacy of Salix
10 for treating the symptoms of EIPH or exercised
11 induced pulmonary hemorrhage as Dr. Stack
12 explained. And we would agree the science is
13 well-settled. Salix is efficacious for treating
14 the symptoms of EIPH.

15 Research conducted in South Africa
16 demonstrated Salix improved the average score used
17 to diagnose EIPH by a little over one-half of 1
18 point on a scale from zero to 4.

19 This is a good science. The Grayson Jockey
20 Club Research Foundation provided a portion of the
21 funding for this project. And we think it
22 essentially forecloses further research into the
23 efficacy of Salix.

24 And if medication regulations were based
25 solely on efficacy, we think the argument would

1 end here. But when it comes to the task before
2 racing's regulators to create rules promoting fair
3 competition, the analysis does not with efficacy.
4 If it did, how do we avoid opening the floodgates,
5 permitting all medications into racing on the
6 basis of efficacy alone.

7 That's where the effect of a medication on
8 fair competition enters into the analysis.

9 Typically regulatory thresholds and
10 administration guidelines for medications are
11 established to minimize the chances of exerting
12 effects upon fair competition. All medications
13 except for Salix, that is.

14 And what does the science tell us about the
15 effects of Salix on fair competition as Dr. Stack
16 reviewed? I will touch upon a few.

17 Science has demonstrated that horses treated
18 with Salix have significantly greater chances of
19 finishing in the money, earning more purses, and
20 improving their finish times by as much as 3 to 5
21 lengths. Science has also demonstrated that Salix
22 has a mild alkalizing effect, as Dr. Sams pointed
23 out, on the blood just like the colloquial
24 reference to a milkshake.

25 Such changes to blood delay the onset of

1 fatigue as Rick explained and extend performance
2 beyond natural limits.

3 When compared to international race testing,
4 the effect of Salix in blood is enough to require
5 our labs to account for the presence of Salix by
6 modifying the test for an illegal milkshake.

7 Science has also demonstrated that Salix
8 causes a horse to shed up to 30 pounds of water
9 weight. And at least empirically, when considered
10 in the context of weight loss associated with a
11 race, probably more like 80 to 100 pounds.

12 Improving finish possessions, faster running
13 times, and earning more purse money, Salix
14 certainly appears to have all of the attributes of
15 performance enhancement when administered to
16 horses 4 hours prior to a race. Arguments that
17 these effects are not performance enhancing but
18 rather performance enabling are self defeating by
19 what the rules implicitly admit.

20 Horses receiving no therapeutic benefit are
21 still permitted Salix to afford them access to its
22 other affects, its performance enhancing effects.

23 From the science, we can deduce the
24 population of starters likely contains at least 3
25 distinct segments; horses that bleed and benefit

1 from Salix, and horses that don't bleed and
2 benefit from Salix, and horses that elect to avoid
3 Salix all together.

4 And when you consider how horses respond
5 differently to Salix treatment if at all, this
6 would seem to create a lot of topography on a
7 playing field that is supposed to be level.

8 So with that science as a backdrop, I would
9 like to turn to a little more familiar territory
10 for us. And that is data.

11 I apologize for the size of this. This goes
12 back to 1991. But these data from Equibase show
13 the remarkable increase in the use of race day
14 medications to treat EIPH since 1991. And here
15 are those same numbers with Kentucky isolated over
16 on right.

17 The costs embedded in these figures from
18 Salix treatment are extraordinary.

19 If an average of \$25 for each administration
20 is used, the administration of Salix in 2010 would
21 account for approximately \$9.9 million of added
22 financial burden to owners. If we consider all of
23 the science collectively, arguably 65 percent of
24 horses are not effected by EIPH in the first
25 place. This would mean at least \$6.5 million was

1 spent last year for Salix treatment of horses
2 having no therapeutic need.

3 Despite this enormous financial burden, given
4 the effects of Salix on performance, it is
5 completely understandable that few owners would
6 ever ignore the open invitation implicit in the
7 regulations and forego its use. Doing so would
8 extend a competitive advantage to their
9 competitors.

10 This would appear to be the case when 20 of
11 27 horses imported from countries where Salix is
12 prohibited were treated with Salix on the day of
13 their Breeder's Cup race.

14 But what is the actual incidence of EIPH in
15 the population and what are its consequences? As
16 Dr. Stack mentioned, at the international
17 medication summit in June at Belmont Park,
18 Dr. Brian Stewart representing the Hong Kong
19 Jockey Club, presented statistics on Epistaxis,
20 which is bleeding observed from the nostrils.

21 And here are those statistics from the U. S.,
22 Great Britain, Australia and Japan. Notably, the
23 US statistics with Salix are comparable to our
24 international colleagues without it. Granted it
25 is Epistaxis. Both before and after the 1994-95

1 time period, which is generally accepted as when
2 the last U. S. jurisdiction approved the use of
3 Salix, other data that was presented at the summit
4 indicated that withholding Salix would not force a
5 large proportion of runners into retirement due to
6 their inability to compete without it.

7 In 10 years of data from Hong Kong,
8 nine-tenths percent of racehorses were
9 compulsorily retired due to bleeding observed from
10 the nostrils. When horses retired because of EIPH
11 were added in, and as Dr. Stack mentioned, the
12 horses that faded are subjected to follow-up
13 examinations which often include endoscopy, 2.4
14 had percent of the population of racehorses were
15 retired.

16 And similar statistics have been reported
17 from Australia, Japan and Great Britain.

18 And with the incidence of sudden death from
19 EIPH-related issues reported in Hong Kong as 2
20 horses in 5 years, the evidence also contradicts
21 the assumption that withholding Salix will imperil
22 our horses to sudden death on the racetrack. None
23 of the international jurisdictions reported
24 medical issues related to cumulative injury of the
25 respiratory systems due to the absence of Salix on

1 race day.

2 I leave you with just one last set of data
3 and that is what do our customers think.

4 Is medication one of the issues limiting our
5 opportunities to attract new customers and grow
6 the sport? This past spring, The Jockey Club
7 commissioned McKinsey & Company to study our
8 industry and develop recommendations for creating
9 sustainable growth.

10 One of the trouble figures is that our sport
11 is losing fans at an alarming rate; 4 percent per
12 year. Unchanged, we could be faced with a fan
13 base approximately two-thirds the size of today's
14 by the year 2020.

15 More troubling is that our fans are much more
16 likely to recommend sports ahead of thoroughbred
17 racing to their friends. And the sentiments that
18 are expressed by fans of other major league sports
19 provide us with a pretty good weathervane for
20 thoroughbred racing. Fans are basically becoming
21 more and more intolerant of performance enhancing
22 drugs in the sport they love to follow.

23 Our customers -- excuse me -- our policy
24 makers and even those who do not follow racing,
25 all share several common perceptions about our

1 medication policies.

2 First -- well, I will just highlight it up
3 here. But first as among one of the top 3
4 concerns facing our sport and as out of synch with
5 other sports, as something we don't take very
6 seriously, and people do not distinguish whether a
7 treatment is, quote, good for the horse. And
8 finally that if we continue on this path, we will
9 eventually invite other forms of regulation.

10 So with medication consistently appearing in
11 the top 3 concerns expressed about horse racing,
12 clearly we need to reverse these perceptions if we
13 are going to reposition this sport to attract fans
14 that are necessary to sustain long-term growth.

15 Many countries the world over maintain
16 successful racing programs without Salix. And
17 more country are well on the way to returning
18 their racing programs and their breeding programs
19 to a foundation where heart and ability the horse,
20 combined with the skill of the rider, all
21 coordinated by the partnership of the trainer,
22 vet, and owner, determines the outcome of the race
23 without medication's influences.

24 As the Hambletonian Society demonstrated two
25 decades ago and as the Breeder's Cup and TOBA's

1 graded stakes program will soon prove, successful,
2 thriving racing programs are possible without the
3 use of Lasix on race day.

4 We have all of the science we need. And we
5 have all of the data we need. What we remains is
6 a well-controlled, progressive elimination of
7 Salix beginning with 2 year olds to study the
8 affects upon racing's key business metrics.

9 And, again, we thank the Kentucky Horse
10 Racing Commission for your leadership in studying
11 race day medication. We encourage all industry
12 stakeholders to participate in the development of
13 rules and penalties to transition towards
14 eliminating the use of medications on race day.

15 The swift ban of anabolic steroids a few
16 years ago demonstrated what is possible when this
17 industry works together. For the stewardship of
18 the horse, the sport, the public confidence, and
19 the business of thoroughbred racing, that same
20 spirit of cooperation and a sense of urgency is
21 essential today.

22 Thank you.

23 MR. FARMER: Thank you. Any questions?

24 DR. NORTHROP: Yes.

25 MR. FARMER: Dr. Northrop, you start.

1 DR. NORTHROP: I have got 2 questions.

2 You made reference to horse racing is the
3 only sport that allows medication on race day so
4 to speak, performance day. I believe in the NFL
5 they can have a cup of coffee. They have can have
6 NSAIDS. They can even have Lasix if they want.

7 DR. YON: Even a growth hormone.

8 DR. NORTHROP: Yeah. So I don't think that
9 is a very good analogy.

10 And my second part is is The Jockey Club
11 prepared to take the lead in making this a
12 nationwide ban? Because that's the -- not that I
13 am for this at all. But if it is not nationwide,
14 I think you are going to destroy many states,
15 including Kentucky. We couldn't survive if we are
16 the only state to ban Lasix.

17 And The Jockey Club, I would think, is the
18 only group nationalized enough to take the lead in
19 this.

20 MR. IULIANO: 2 things we have done, Dr.
21 Northrop.

22 First of all on the issue of performance or
23 the issue medications on the day of the
24 performance itself, the statistics on the NFL,
25 major league baseball, and things of that sort are

1 customer perception statistics.

2 And that is there is a growing intolerance
3 among customers with the use of medications. And
4 unfortunately the customers do not distinguishing
5 between whether it is a drug, whether it is a
6 therapeutic medication, or whether it is a cup of
7 coffee in the morning.

8 Whatever it is, they do not make that
9 distinction. And the fan base has become very
10 intolerant of it. And it is something that we
11 heard loud and clear.

12 The second issue on Jockey Club leadership,
13 we amended our rules in August in which we have
14 now implemented a -- certain sanctioning
15 provisions for individuals who are found to have
16 repeatedly violated medication rules in racing
17 jurisdictions. We have actually got 2 provisions
18 that are built into it. One that captures the
19 so-called Class 1 and Class 2 medications
20 according to the RCI classification system.

21 And then another one that captures everything
22 thing else provided those were repeat offenses
23 within a 365 day period.

24 So from the stand point of what we can do, we
25 are taking as many steps as we can. Now are we

1 prepared to stand out in front? We are prepared
2 to take a leadership position on this. But we
3 absolutely understand how imperative this is that
4 it is a collaborative effort. If we don't have
5 everyone on board with this initiative from the
6 start, it is a very difficult -- it is a difficult
7 transition to the rest of the nation.

8 DR. NORTHROP: But isn't this our biggest
9 problem? In my opinion, one of our biggest
10 problems in racing is the lack of central uniform
11 drug rules, penalties, across the line. And I
12 would hope that The Jockey Club could help --
13 Jockey Club -- could help get us more uniform.

14 MR. IULIANO: Yeah.

15 Well, we had done one other thing I neglected
16 to mention is -- and we announced it at the round
17 table conference. We sat down with a number of
18 racing regulators; regulatory veterinarians, sat
19 down with down with chemists as well, testing
20 chemists. And we took the best racing rules. I
21 shouldn't say we took the best. We took all of
22 racing's rules. We threw them into a pile. And
23 we went through and sorted that into what was
24 considered to be by the group that worked on this
25 as the best set of medication rules that we have.

1 We published that out there on the Internet.
2 It is available actually at Jockey Club dot com.
3 And we have even put in a toggle so to speak for
4 Lasix. We realize that Lasix is an issue that is
5 being addressed now by progressive groups such as
6 the Kentucky Horse Racing Commission.

7 The racing medication rules do not call for
8 the ban. But it allows the flexibility in the
9 language that those types of medications and the
10 structure of it as well allow those types of
11 medications to be easily considered and either
12 classified as something that is prohibited and or
13 something that is permitted on race day.

14 MR. FARMER: Alan?

15 MR. LEAVITT: I have a couple of comments
16 about your comments.

17 When you said a horse that's been treated
18 with Salix will lose 80 to 100-pounds, I think
19 that is totally erroneous. The figure I have
20 heard is 25 to 30. 20 to 25. There is a huge
21 difference between that and 80 and 100.

22 As far as the level playing field with Salix,
23 salix is available to everyone that runs a horse.
24 In fact, in your business, virtually every horse
25 is running on it. So you do have a level playing

1 field. It is not something that is available to
2 the few and the mighty and not everyone else.

3 You, I think, said, that not every horse
4 needs to be treated because they don't have EIPH.
5 I think Dr. Stack answered that. That every horse
6 does to some extent. Now the countries that you
7 referred to -- I am sorry to be going this long --
8 but where they didn't have a problem. Dr. Stack
9 showed us on her slide. They are talking about
10 nostril bleeding. They are not talking about EIPH
11 which is a curse of horse racing.

12 So I totally don't take their figures as
13 being very representative.

14 You used the word fans. I am not sure what a
15 fan is. Maybe somebody who watches Yankees on TV.
16 But the basis of horse racing is betting. The
17 betters -- my nephew, Seth Rosenfeld is director
18 of HANA, the bettor's organization. And he polled
19 every director. And they said they had no problem
20 whatever with Lasix.

21 All they wanted to know was when a horse came
22 off it, when a horse came on it. But to say that
23 we are losing business because of that.

24 And, finally, I am a director the
25 Hambletonian Society. You made it sound as if we

1 have openly banded Salix. We inherited this ban
2 on Salix from God knows when, 70's or so. We
3 continue to keep it in. But we also own the
4 Breeder's Crown, which is the equivalent of the
5 Breeder's Cup. We have never considered putting
6 that into the Breeder's Crown or any of the other
7 races that we are involved with.

8 And to say that Salix is this huge problem
9 that is keeping people out of the sport, getting
10 rid of owners and all, Salix is not a problem. It
11 is EPO. We should be sitting here talking about
12 that. I don't know about you. But I race a
13 stable of horses. And I have for more than 50
14 years.

15 Right now EPO is the problem. It has nothing
16 to do with Salix. And that's what I have to say.

17 MR. FARMER: That's a long question. I hope
18 you --

19 MR. IULIANO: If you would like me to take
20 them in turn, I would be happy to. Or we could do
21 it off-line. It is however you would like.

22 The Hambletonian Society banded it in 1991.
23 And the comments that I have made are reflective
24 of Tom Charters, obviously that you are aware of.
25 Very successful. Has not looked back.

1 The second issue I think you raised -- and I
2 am kind of taking them in reverse order. I am
3 sorry. I am going to go from memory here. The
4 2.4 percent retirement, that's not related to EIPH
5 from Hong Kong. Hong Kong actually has a rule
6 that allows their -- a segment of their regulatory
7 authorities who are occupied by vets, Dr. Stewart
8 was one of them, to flag horses that, quote,
9 under-perform. And in those horses that
10 under-perform, they pull them off the track. They
11 subject them to further examination which includes
12 endoscopy. And they will make an assessment.
13 They actually take the rules and bifurcate them.

14 They have Epistaxis related retirements. And
15 they have EIPH related retirements.

16 When you look at the Epistaxis, it is
17 nine-tenths of a percent. When you look at those
18 horses that under-perform that they then pull off
19 the track, subject to a medical examination, they
20 look for bleeding according to -- I think it would
21 fall into the scale of somewhere in the 2 to 3
22 range. And they follow up with those horses now
23 doing mandated workouts, mandated training. And
24 they continue to monitor their progress.

25 If they don't show improvement, that's when

1 they are retired. So when you take the
2 nine-tenths percent of runners and you add the
3 EIPH runners to it, you get to 2.4 percent.

4 So I think what is implicit in the stats --
5 and, again, we are reporting the stats, not trying
6 to opine on them -- but what's implicit in the
7 stats is the risk of EIPH to a horse not being
8 able to compete does not appear to be as severe in
9 these other jurisdictions as what we have heard it
10 would be if this were to occur in the United
11 States.

12 And that's really the only issue. And we do
13 agree with Dr. Stack that there is lot of areas
14 within here that still needs to be researched.
15 And we think that's a very fertile ground for
16 research.

17 We funded a lot of research into Lasix and
18 into lung pathology. Frankly, we think the
19 research is done. We have looked at it. We were
20 actually very intrigued by the South African
21 research.

22 We have talked with Dr. Morley about the
23 possibility of looking at the data in terms of its
24 performance effects because it is beautiful 2 by 2
25 factorial. They have got -- or multiple

1 factorial. They have got all of the grades of
2 EIPH and they have all of the racing performance
3 as well.

4 And as Dr. Stack indicated, the project
5 really wasn't sufficiently big enough in order to
6 study that.

7 Your other issue. Fans.

8 On the slides, the fans are defined as those
9 people who are actively involved and follow the
10 sport. So when you look at a football fan and
11 what a football fan does, it those that are
12 actually engaged and follow.

13 The horse racing fan was limited to not only
14 those folks who follow it on a casual basis, but
15 those folks who attended races at least I think
16 the metric was 5 or 7 times in a year at least.
17 And that they do actively bet. They know the
18 jargon. They know the lingo. And they bet.

19 MR. LEAVITT: But that's inaccurate, too.
20 Because the people who are doing the betting don't
21 come to the track once in 10 years. They are all
22 betting electronically.

23 So to say that we are losing people that come
24 or don't come to the track, those are not the
25 people that make the business go. It is at

1 bettors. And they are not coming -- well.

2 MR. FARMER: Any other questions? Tom. And
3 then you, John.

4 MR. CONWAY: I understood you to say that
5 early on in your discussion that 65 percent of the
6 horses are not effected by EIPH.

7 MR. IULIANO: Uh, huh.

8 MR. CONWAY: I have heard here today from
9 other witnesses, and I have heard continuously
10 that all horses bleed.

11 Are we talking about the degree of which they
12 are effected? Are you saying that 65 percent of
13 the horses don't bleed through the nostrils? Or
14 are you saying that 65 percent of the horses don't
15 bleed at all?

16 There is big difference.

17 MR. IULIANO: Right. Right. And we accept
18 that.

19 What that is statement is in the context of
20 that statement and the printed remarks will show
21 is 65 percent of the horses are not affected by
22 EIPH. And what that means is it is really -- and
23 you if you look at that sentence ahead of it -- it
24 says if you look at the science kind of
25 collectively, and there are 2 really outstanding

1 papers that are done. They both share similar
2 authors. One as Dr. Stack mentioned was a 2009
3 paper by Hinchcliff in South Africa.

4 The other one was where they looked at how
5 does bleeding affect performance? And I think it
6 was the 700 -- I am off the top of my head -- 700
7 horse or so. Then they did a very thorough
8 analysis where they said, let's look at this
9 zeros, the 1's, the 2's, the 3's, and the 4's.
10 And let's compare their performance to each other
11 within the groups.

12 And what they found is that when you take the
13 ones and the zeros, you can call them a group.
14 And you could call that group of horses, even
15 though a 1 may have evidence of EIPH, its
16 performance is not affected.

17 Now, I am not a physiologist in terms of this
18 respiratory physiologist. But to me that says if
19 you have got an issue where you are looking for
20 rules of competition and you are looking at issues
21 that affect competition. And if that line has
22 been drawn scientifically between the one and the
23 2 as becoming affecting or affecting competition,
24 to me that's the area of focus.

25 When you add those up, there were 65 percent

1 of the horses in the South African study who would
2 not have been affected because of their EIPH
3 symptoms.

4 MR. CONWAY: Again, other jurisdictions don't
5 scope near as much as we do. Other jurisdictions
6 are banning horses based on nostril bleeding and
7 not on scoping them.

8 So we assume that all horses or a vast
9 majority of horses bleed. I would like to know
10 what your basis is for saying that 65 percent of
11 them are not affected by EIPH? If they all suffer
12 from it, how do we get to the degree that you say
13 are not affected.

14 Are there studies out there that I can go to?

15 MR. IULIANO: Yes, there are.

16 MR. CONWAY: Well, let me just finish by
17 saying one thing.

18 I got a phone call. And I participated in
19 your survey from The Jockey Club. And it
20 really -- I don't mean to take this personally --
21 but it wasn't much of a survey. It asked me did I
22 approve of a ban on all race day medications.

23 That, in essence -- and I tried to question
24 the surveyor. But I kept getting those 2 or 3
25 questions. It was lacking.

1 MR. IULIANO: Right.

2 Now there were 3 surveys that were conducted
3 as part of the McKinsey report. And the survey
4 that I quoted was one that has, I think, a little
5 over 1500 respondents in it.

6 The 2 follow-up surveys which were conducted
7 by a P. R. -- it was actually a public policy and
8 strategy firm out of Washington D. C. restricted
9 their calls to, quote, policy makers. And it is
10 likely that you were the target of that.

11 Those results did not feature into the report
12 that's formally memorialized as the McKinsey
13 report. They were more interested in looking at
14 the fans and what the customers --

15 MR. FARMER: Mr. Ward?

16 MR. WARD: Yeah. I just want to -- I am big
17 on clarity so I am trying to figure out where your
18 organization comes down.

19 As I take it, where does your organization
20 stand on horses bleeding? I mean I take it you
21 are saying that the majority of horses do have the
22 effects of pulmonary hemorrhage during high levels
23 of exercise?

24 MR. IULIANO: I think what we can say is that
25 science would show that there are -- the majority

1 of horses' racing performances are not materially
2 compromised by symptoms of EIPH.

3 MR. WARD: That's not what I asked you.

4 I asked does The Jockey Club believe that the
5 large majority of horses that are under exercise,
6 extreme exercise conditions, show the effects of
7 some type of pulmonary hemorrhage?

8 MR. IULIANO: Oh, that they show some types
9 of effects?

10 MR. WARD: In other words, are they affected
11 a some level of pulmonary hemorrhage?

12 MR. IULIANO: Absolutely. The science is
13 definitive. I think the number is when you get
14 down into the 1's, it is probably 80 percent.

15 MR. WARD: Okay.

16 My next question would be, after hearing all
17 of the testimony or some of the testimony today,
18 is there another medication you know of besides
19 Salix that helps control pulmonary hemorrhage in
20 the horses?

21 MR. IULIANO: Not that I am aware of.

22 MR. WARD: Okay. And I guess the third
23 question is, that your organization is against any
24 race day medication.

25 MR. IULIANO: Yes.

1 MR. WARD: Thank you.

2 MR. IULIANO: Yes.

3 DR. NORTHROP: I have a follow-up to his
4 questions.

5 MR. FARMER: I want to get one in here
6 somewhere.

7 DR. NORTHROP: You are the boss. Go ahead.

8 MR. FARMER: No. Go ahead.

9 DR. NORTHROP: You are basing your 65 percent
10 number of not effecting performance mainly on the
11 Hinchcliff study?

12 MR. IULIANO: Right.

13 DR. NORTHROP: And so that is not considering
14 that was only 2 races? And that is not
15 considering the progression of the disease that
16 Dr. Stack mentioned?

17 MR. IULIANO: Well, let me take those 2
18 questions and separate them.

19 It is the Hinchcliff study, but not the one
20 that was in South Africa. It is the Australian
21 study published in 2005 where they looked at the
22 effects of EIPH on performance. Had 700 horses
23 involved.

24 And the way that study arose, it was very
25 definitive in its conclusions. If it was a zero

1 or a one, you could not draw separation -- you
2 couldn't separate those as a group. But you could
3 separate those from the 2's, 3's, and the 4's.
4 And it was in terms of in the money and in the
5 purse monies and things of that sort.

6 So --

7 DR. NORTHROP: And how many races did they
8 look at each horse?

9 MR. IULIANO: I would be happy to supply the
10 final paper to you. But I would have to look at
11 again, Dr. Northrop. I don't recall.

12 DR. NORTHROP: Okay.

13 MR. IULIANO: But it is considered one of the
14 seminal -- it is actually -- at least it is
15 considered in the scientific community as one of
16 the seminal papers. Because it was the first
17 one -- they had the foresight to look at trying to
18 assess the nuances the between the grades.

19 And what does that actually do to running
20 performance.

21 MR. FARMER: I have one question.

22 Being a breeder, I want to know. And maybe I
23 should have asked Dr. Stack this. The long-term
24 effect of Salix or the these drugs on the horse,
25 will they deteriorate say 10 years? If we

1 continue using this, will our breed get weaker and
2 the European breed get stronger by not using this?
3 Or do you all have any definitive research on
4 that.

5 DR. STACK: (Nodding no.)

6 MR. IULIANO: We don't have any definitive
7 research.

8 There was a paper that emerged at the EIPH
9 summit. I think you might remember this, Dr.
10 Northrop. It came out of South Africa, too. It
11 was an animal scientist-geneticist who actually
12 published the paper. And I believe he promptly
13 passed away. And the paper, unfortunately, didn't
14 get a lot of traction. It was published I think
15 in a South African animal genetics journal. And
16 he looked at a number of races in South Africa
17 where they -- where he found a definitive pedigree
18 connection between the level of EIPH and it may
19 have been Epistaxis. I would have to go back and
20 read it.

21 The short answer is, I don't know if there is
22 a lot of science out there other than that paper.
23 And it was in a peer review journal. And it did
24 indicate that there was paritability associated
25 with EIPH.

1 It did indicate that there were particular
2 sire lines, I think, was another conclusion that
3 came out of that that was tied.

4 But as an organization, we have not opined on
5 it officially, Tracy. We have not come out and
6 said anything one way or the other on it. You
7 know most of our rules or at least most of those
8 issues we leave to the market. We let the market
9 make its decisions in terms of, you know, breeding
10 decisions and things of that sort.

11 DR. NORTHROP: And that South African study,
12 I don't think it was ever peer-reviewed, was it?
13 It was very questionable whether it was
14 peer-reviewed.

15 But it was mainly hereditary. It was not
16 long-term health of the horse.

17 MS. LAVIN: I would like to just point out
18 that everybody keeps bringing up the European
19 rules and so forth.

20 They use Salix and Lasix regularly other than
21 race day. So I think, you know, we need to keep
22 that in mind at all times. We are not the only
23 ones using Furosemide. It is being used all over
24 the world. What we're addressing here is not
25 using it the one day that the horse runs. Period

1 and end.

2 MR. FARMER: We thank you very much, Matt.
3 And now we will have Dr. Richardson and I see him.
4 He is the guy.

5 DR. RICHARDSON: Okay to go? All right.

6 My name is Dr. J. David Richardson. And I
7 appreciate the opportunity to represent the
8 Thoroughbred Owners and Breeders of America and
9 its graded stakes committee as this committee,
10 your committee or your commission, considers this
11 most important issue.

12 I am practicing thoracic, vascular and
13 general surgeon and live and practice in
14 Louisville. I have done research on Furosemide or
15 Lasix or Salix, whatever you want to call it, and
16 its effect on the human lung and on the human
17 vascular. So I do think I do understand some of
18 the physiology involved.

19 And so I appreciated Dr. Stacks comments in
20 that regard.

21 I have also owned and bred horses in Kentucky
22 continuously since 1975. I serve as secretary of
23 TOBA and chair the American Graded Stakes
24 Committee.

25 As you may know, in August of 2011 at our

1 meeting of the American Graded Stakes Committee,
2 we proposed a pilot project -- and I will
3 emphasize that, it was a pilot project -- in which
4 horses performing in graded stakes for 2 year olds
5 would run free of medication, including Furosemide
6 and adjunct bleeder medications.

7 The committee has been talking to racing
8 commissions in the jurisdictions that hold 2 year
9 old graded stakes since that time in an effort to
10 implement a race day medication ban in those
11 select races in 2012.

12 The committee's plan -- our committee's plan,
13 the graded stakes committee's plan -- is to gather
14 data from the 2 year old graded stakes races which
15 hopefully would be run without race day
16 medication, without Salix. And that is really
17 what we are talking about. And to assess the
18 impact of this policy in late 2012 and policy in
19 2013.

20 I would stress that is the only
21 recommendation of the graded stakes committee at
22 this time, that is 2 year olds in graded stakes.
23 And it is the only one that has been endorsed by
24 our actual TOBA board. We did not believe, as a
25 committee that older horses that had raced on

1 Furosemide should be forced to withdraw from that
2 in order to -- that drug in order to race in
3 graded stakes. But believe that the 2 year old
4 graded stakes races where horses participating
5 would not have had a prior form established or, I
6 guess, potential they could have had one race or
7 whatever. But at least didn't have established
8 form in long- standing group of races would be a
9 good place to start with our pilot project.

10 Before recommending that that plan be
11 implemented for 2 year old graded stakes, the
12 committee considered several issues, each of which
13 I will briefly note, although they are not
14 necessarily in terms of importance.

15 The first I would stress would be that we
16 tried to look a good bit at data. I would hasten
17 that add -- and this is off-line. It wasn't in my
18 remarks. But in listening to all of the back and
19 forth about data, I am reminded the Twain quote
20 about lies, damn lies, and statistics that you can
21 use data anyway you want to use it.

22 And we looked at it perhaps somewhat
23 differently than maybe others would have.

24 But we did review data from countries that
25 raced free of Furosemide as well as the South

1 African study that was released in June of
2 '09 that we have heard referred to several times.

3 We would note that the incidence of clinical
4 bleeding, and that is primarily Epistaxis or
5 bleeding from the nostrils, in Hong Kong is really
6 very low. And it is very hot and very humid there
7 for those of you who have been there. And they do
8 race Lasix free.

9 I would also note that in Hong Kong, nearly
10 every sub-standard performance also does get a
11 regulatory endoscopic examination. So the notion
12 that they don't know what's going on in terms of
13 the exercised induced pulmonary hemorrhage I think
14 is erroneous. I think they would have very good
15 data and probably frankly much better than ours.

16 I won't go through all of those numbers
17 again. I had planned to. But you have already
18 seen them twice today.

19 But if you look at those and compare those to
20 Equibase charts for Epistaxis, there is really no
21 difference around world that you can see.

22 I think we would suggest that that provides a
23 good indicator that racing medication free does
24 not cause terrible harm in terms of terrible
25 bleeding to the horse. And could add integrity.

1 The Hinchcliff study from South Africa,
2 again, has been frequently referenced by Lasix
3 supporters as a reason to use that drug on
4 medication day. And supporters would quickly note
5 those who are pro-Lasix that 80 percent who were
6 not treated bled.

7 However, the statistics that is less
8 publicized is that 55 percent or so of the treated
9 horses also bled. And that most of the bleeding
10 really was very low at a fairly low level, one or
11 2. And if you look at the study -- I wish I had
12 Dr. Stack's slides back up -- but if you looked at
13 the 3's and 4's, there really wasn't much of that
14 in either group.

15 And I think that needs to be noted.

16 So our point of our committee was, that as
17 Dr. Stack has certainly indicated, that this drug
18 is not a cure all panacea. And, in our opinion,
19 should be considered modestly effective at best
20 with, again, approximately 25 percent of the
21 racehorses used in the study receiving the
22 therapeutic benefit from treatment.

23 Now, the committee concurs that perhaps more
24 data need to be done before one could draw
25 concrete conclusions. But we feel that our graded

1 stakes committee recommendation on race day
2 medication in 2 year old graded stakes would be a
3 good place to start.

4 So that's to the data point.

5 Second point in terms of grade stakes
6 caliber. Our graded stakes discussions are
7 different, I think, and we have to bear that in
8 mind, from races held in other types of races
9 perhaps claiming races and what not. And we are
10 not opining at all on whether horses running in
11 \$5,000 claiming races should or should not be on
12 Lasix. We have no opinion on that.

13 Individuals might have opinions. But we have
14 no committee opinion and certainly no further
15 recommended opinion.

16 Graded stakes, though, we would submit are
17 meant to represent the best of breed. And graded
18 black type races should be awarded to horses that
19 are completing under the same circumstances. Does
20 the horse that earns black type while racing with
21 medication have the same natural ability or
22 deserve the same level of recognition as the horse
23 that earns graded black type while racing without
24 it?

25 The American Stakes Committee does not,

1 again, plan to take a position at least at this
2 time with respect to the use of race day
3 medication in non-graded races. But, again, it
4 would only affect those racing at the highest
5 level and all and those that potentially will be
6 impacting our breed for years to come hopefully.

7 With a recent announcement by Argentina,
8 Brazil, Chile and Peru that they were prohibiting
9 the use of race day Furosemide in grade 1 and 2
10 races, North American venues are now the only
11 jurisdictions permitting race day Lasix.

12 Thoroughbred breeding and racing is an
13 international business. And, boy, you only had to
14 be at Keeneland here this past few weeks to see
15 that. I mean it is an international business.

16 One only need to look at the Breeder's Cup as
17 an example of that.

18 Horses are shipped around the world to
19 compete. And that leads me I guess to our third
20 point which is the importance of international
21 standards in grading races.

22 Now there have been some suggestions by
23 international racing authorities that American
24 horses that run on Lasix should not, underline,
25 should not be granted international black type for

1 sales catalogs simply because they are running on
2 medication which are not permitted in other
3 jurisdictions.

4 The potential damage to our breeding industry
5 in Kentucky would be catastrophic and no one in
6 this business should dismiss that threat. There
7 is a need for uniformity in international grading
8 standards. If one wishes to breed to a stallion
9 or buy a top mare, it is important at some level,
10 I believe and our committee believes, that we have
11 uniform quality standards.

12 It is interesting. I have talked to a lot of
13 trainers, and I include Rick Hiles who is a friend
14 of mine and who has really beat me up a lot on
15 this, but a lot of other trainers include some
16 that allegedly I employ who don't seem to
17 understand the importance of this or they dismiss
18 the threat or just seem to fail to understand the
19 implications of the importance of having
20 international standards in what is now an
21 international product.

22 But we believe, as a committee, that the
23 potential damage to our breeding industry in
24 Kentucky would be catastrophic if it were to occur
25 that we were not allowed to have international

1 black type because of race day policies that are
2 now outside the norm of the rest of the world.

3 And then fourthly, an incident that
4 Mr. Iuliano mentioned in his remarks. And that is
5 the public perception.

6 Our committee felt that we could not ignore
7 the public perception problem that exists because
8 American races are not medication free. This is
9 particularly important for graded stakes which are
10 really our most visible races in our sport. So we
11 do believe that it is imperative to the future of
12 our sport that racing, at least at the highest
13 level and in the graded stakes, should be one that
14 are ultimately conducted free of medication.

15 I will note that our committee are not
16 supposed of ivory tower types. These are not
17 uninvolved people. These horse owners and
18 breeders who have major -- and I would emphasize
19 major -- financial, emotional, and historic
20 interest in our sport and in our industry.

21 We all have skin in the game to use the
22 phrase that has become so popular now.

23 Additionally, we have major racing
24 secretaries on the committee that represent the
25 jurisdictions from around our country. They need

1 horses to fill their race cards every day. And
2 they certainly understand I think both sides of
3 these issues.

4 Our firmly committee believes that any
5 changes regarding the use of race day medication
6 must be made in concert with racetracks and
7 regulatory agencies. And would include these in a
8 variety of states for the reasons I think that
9 Dr. Northrop probably alluded to in that I think
10 is would be very hazardous for one jurisdiction to
11 go alone.

12 So, hopefully, we will all work in concert to
13 try to at least get this moved.

14 On the other hand, we felt, as a committee,
15 that there had been a lot of -- to use another
16 phrase of the day -- kicking the can down the road
17 on this issue, waiting for somebody else to do it.
18 And we felt that at least with 2 year old graded
19 stakes, that was a place to start to see if we
20 could get some reasonable information about
21 whether or not these things were really going to
22 make a difference, both pro and con, in the terms
23 of the way these things were use.

24 So again in closing, let me re-emphasize,
25 what we believe to be is the reasonableness of our

1 committee's approach. Our goal is to move the
2 process beyond the discussion phase to action on
3 the issue. We do not believe it would be fair or
4 right to withdraw Furosemide from older horses
5 that raced on medication so they could compete in
6 graded stakes.

7 But we do believe that banning this drug in 2
8 year old graded stakes races where the horses
9 participating would not have prior form
10 established under the use of race day medication
11 would be a good start.

12 Finally, it important to note again that our
13 recommendations apply to the only 49 two year old
14 graded stakes -- I think they are in 4 states --
15 that will be conducted in 2012. That's the only
16 recommendation at this point in time from the
17 American Graded Stakes Committee, the only one
18 fully endorsed by our TOBA board.

19 We certainly realize this is a complex and
20 divisive issues as Chairman Farmer alluded to in
21 his opening remarks.

22 But we recommended this, we thought, as a
23 reasonable first step to study the problem. Mr.
24 Chairman and committee, we thank you very much for
25 the opportunity to make these remarks.

1 MR. FARMER: Thank you, Dr. Richardson. Any
2 questions? Mr. Ward?

3 MR. WARD: Here we go to clarity again. Your
4 position seems to be very clear.

5 DR. RICHARDSON: Yeah.

6 MR. WARD: Does your position mirror that
7 position of The Jockey Club?

8 DR. RICHARDSON: I am not a member of The
9 Jockey Club --

10 MR. WARD: I am trying to figure out which
11 umbrella, whether it is a piece of the pie or
12 whether everybody is talking the same way.

13 DR. RICHARDSON: John, I think The Jockey
14 Club's position it strikes me has been abundantly
15 clear. And you have been at those round tables
16 longer than I have probably and I have been going
17 for along time.

18 The Jockey Club has been against race day
19 medication for years. And I think they still are.

20 Our position is a much more narrow position.
21 I mean we are the American Graded Stakes
22 Committee. We don't have anything to do with what
23 this body does with \$5,000 claiming races,
24 allowance races, maiden special races. That is
25 outside our purview.

1 We may have individual opinions about those.
2 But as a committee, all we can do is talk about
3 grade stakes. And what we were suggesting I think
4 is very clear. It a baby step to see what
5 happens.

6 My view is, if you want my personal view,
7 John, is that the earth isn't going open up and
8 swallow us all up if we got rid of Lasix across
9 the board, frankly. But certainly I don't think
10 we are going to see much catastrophic things
11 happen if we get rid of it in 2 year old races and
12 then see what happens.

13 If, on the other hand, bad problems happen, I
14 mean, you know, who knows how things will go. We
15 just have to see.

16 But that's our point.

17 MR. WARD: The other part. If your vision
18 comes true, then I would like to see that the
19 horses that perform in these graded races,
20 post-race, go under a thorough examination by
21 somebody like Dr. Stack. And from top to bottom,
22 from winner to last place, and get some useful
23 data about equines running without the use of race
24 day medication.

25 It is something we don't know. We only know

1 a fraction of it. If we are going to -- I didn't
2 want to say this word -- but if we are going to
3 potentially sacrifice some of our best 2 year
4 olds, let's figure out what they -- if pulmonary
5 hemorrhage was the problem in the placings and in
6 the performance, if the winner was a non-bleeder
7 or a grade one and the horse that ran last was a
8 grade 3, and it stacks up in between, I think
9 that's very valuable information.

10 So I wish we would act. Your proposal
11 strikes a good note with me. It is just let's get
12 some science from it.

13 DR. RICHARDSON: John, I don't know that we
14 as a committee could force everybody to scope
15 their horse again. You know I have probably done,
16 oh, I don't know, thousands of endoscopies in
17 people.

18 I have been present, I bet you, in 500 with
19 horses. I like to do it. As you know, I have
20 probably spent more time on the backside of the
21 racetracks than a lot of trainers do. At least
22 some I know. So I do understand the way this
23 goes.

24 I am amazed at how, when people put scopes
25 down horses, what they will say they see,

1 especially if they don't know who I am. And when
2 you are talking about, well, that's about .5 on a
3 scale of 1 to 5 you know. Have you ever seen a .5
4 or had a vet talk about a .5? I have.

5 And so you have got to remember, in biologic
6 systems, and there is a bell shaped curve that --
7 and so animals respond to everything differently.
8 And the notion that by giving everybody
9 Furosemide, 3 cc's let's say or 10 or 5 or pick a
10 dose, that they are going to all respond
11 differently and create a, quote, level playing
12 field, is just frankly not true.

13 The committee, you know, do what you want to
14 do.

15 But I mean, I do think you should, in my
16 opinion as a person that knows a little about
17 those things, I don't think that's true either.

18 MR. FARMER: Dr. Northrop?

19 DR. NORTHROP: I am on the AAEP racing
20 committee, vice-chair of that.

21 And one of the discussions that I have had
22 with several members is -- and I am asking you if
23 you all discussed this -- is putting horses in 2
24 different classes. Treating one group of horses
25 differently than the other.

1 Because I, as a veterinarian, try to treat
2 the \$5,000 claimer as well as I treat the Grade I.
3 I try to do that every single time.

4 Did that come into your thinking at all how
5 we are classifying now into non-stake horses and
6 stake horses and let's treat the 2 groups
7 differently?

8 DR. RICHARDSON: No. I mean, yes and no.

9 I have heard Dr. Scollay give a talk at the
10 KTA meeting and all in which I think she opined
11 that creating 2 classes -- and I don't want to
12 misstate what you said, Mary. But I thought it
13 was very -- I thought it was an effective way of
14 saying something that, from a regulatory
15 standpoint, having 2 different ways of dealing
16 with animals could present problems.

17 Does that characterize maybe what you
18 thought?

19 DR. SCOLLAY: Both regulatory and as a
20 veterinarian and an ethical issues if we have got
21 separate standards of care, I find that
22 problematic.

23 DR. RICHARDSON: Sure. That's that huge
24 problem. Just because you have money and, you
25 know, you are not supposed to be treated

1 differently than poor people in this country.

2 And so I understand that issue, Foster. But
3 that really again is outside of the purview of
4 what we can deal with.

5 DR. NORTHROP: Right.

6 MR. FARMER: Any other questions? Thank you,
7 doctor.

8 DR. RICHARDSON: Thank you.

9 MR. FARMER: And Bill -- Mr. Casner. And
10 after Mr. Casner, we will take a 30 minute break.
11 We will be back here and go at it again. Or I
12 should say Bill.

13 MR. CASNER: My name is Bill Casner. I am an
14 owner. I am an ex-trainer. I am a member -- I am
15 a board member of TOBA. Board member of the
16 Breeder's Cup. And a I am an HBPA member. And I
17 am not representing any of these groups.

18 I am here strictly representing myself as an
19 owner.

20 I think it is safe to say that my stance on
21 this issue is probably contrary to many people's
22 in this room. But my allegiance is to the horse
23 and to the industry. So I am willing to take the
24 hits.

25 All of us are a product of our experience.

1 And I would like to experience -- I would like to
2 speak to what I have experienced with and without
3 Lasix.

4 After graduating from college, I was a career
5 racetracker until I was 31 years old. And for 6
6 of those years, I trained a stable of claimers in
7 the '70's. I only say this because I want to
8 speak to the fact that I am someone who has
9 depended on the performance of my horses for my
10 living.

11 During my 6 years as a trainer, Lasix only
12 started to become a medication that was permitted
13 in a few jurisdictions. Chicago allowed it the
14 last year I was there in 1979. Very few horses
15 ran on it at that time.

16 A horse had to have been witnessed to by the
17 state vet to have bled from his nose before he
18 could run on it. At that time, I only had one
19 horse that ran on it. All of the rest ran without
20 it. Everyone in that era, including myself, had
21 their horses on a 2 week run schedule. And you
22 ran back the following week if the race came up in
23 the book.

24 The goal was 18 to 24 races a year. Horses
25 did just fine on that schedule. We trained

1 lighter and ran more often.

2 In the 6 years I trained, I only had one
3 horse that visually bled from the nose. Of
4 course, this was a mare before the advent of the
5 flexible endoscope. So we didn't know if horses
6 were bleeding or not. And obviously they were.

7 But the bottom line, horses ran more often,
8 and they ran just as true to form as horses do in
9 this era. The data shows that horses today
10 average 6 races a year. In that era, they
11 arranged 11 to 12.

12 During that earlier era in the '70s, we had 3
13 Triple Crown winners in a span of 7 years. Since
14 the inception of Lasix, we have not had one. It
15 has been 33 years. Why is that? Could there be a
16 correlation?

17 You hear a lot of people saying that 3 to 5
18 races -- 3 races -- or 3 race in 5 weeks is too
19 demanding on the horses and that the races should
20 be spread out. But it didn't seem to bother
21 bother Affirmed, Secretariat, or Seattle Slew.

22 I wanted to understand what impact of Lasix
23 was on my horses. So I bought 2 sets of scales;
24 one for the horses running in California and one
25 for the horses on the east coast. I have always

1 felt that a set of scales was one of the most
2 useful tools available in evaluating a horse's
3 condition.

4 We have installed scales in every barn at
5 WinStar. And it was used on a regular basis to
6 weigh foals, yearlings, brood mares, and horses in
7 training. And I feel weighing horses is a window
8 to their health.

9 Eoin Harty trains my horses. And we have had
10 numerous conversations about Lasix and its
11 therapeutic benefits and its potential side
12 effects. And it is a cold hard fact that every
13 medication has side effects along with its
14 therapeutic benefits. If you don't believe me,
15 just listen to the commercials on television and
16 you will hear a string of side effects listed with
17 every medication. And you wonder why people would
18 even want to take these medication.

19 Eoin comes from a European background. He
20 trained horses in Dubai for Sheikh Mohammed. He
21 trained Well Armed to win the Dubai World Cup and
22 was an assistant to Bob Baffert when Silver Charm
23 won it.

24 So running horses without Lasix was not new
25 to him.

1 I asked him what he thought of trying our 2
2 year olds this year without it. He said he was
3 certainly game to try it. After putting the
4 scales in his barn, weighing horses has become
5 routine with the assistant trainers. It is just
6 not my horses. It is all their horses.

7 Here is what we have experienced with the
8 weights of horses running with Lasix and the 2
9 year olds running without Lasix.

10 Horses running on Lasix, generally 3 to 5
11 cc's that are weighed the morning after a race,
12 will have lost anywhere from 16 to 100 pounds.
13 And, yes, I want to repeat that. 100 pounds.

14 We shipped a filly last July from Keeneland
15 to Arlington Park to run and we weighed her before
16 putting her on the van. She is a big Tiznow filly
17 and she was given 3 cc's pre-race. She won the
18 race. Cooled out. Drank several buckets of water
19 between the race and the time she was put on the
20 van at 4 o'clock in the morning.

21 She got to Keeneland at 10 a.m.

22 Brian Ange, Eoin's assistant, stepped her off
23 the van and walked her across the scales. And she
24 was 100 pounds lighter. She gained it back, but
25 it took her 2 weeks. This was the most a horse

1 lost that we weight. Most will lose anywhere from
2 16 to 50 pounds when weighed the morning after.

3 We have always heard that horses will urinate
4 up to 25 pounds pre-race, which may be accurate.
5 But Lasix continues to have a diuretic effect
6 post-race. And combining it with stress of the
7 race and a hot day, you can lose a heck of a lot
8 more than 25 pounds.

9 The literature says that IV Lasix lasts 2 to
10 4 hours with IM lasting 6 hours. And I want you
11 to think about this. If a horse drinks 2 and a
12 half buckets of water say after a race, a bucket
13 after he cools out and maybe another bucket and a
14 half when he goes into the stall, if you translate
15 that at 8 pounds a gallon, that is right at
16 100 pounds of water that that horse has consumed.

17 But yet 100 pounds of water is still not
18 enough to hydrate these horses to their previous
19 weights.

20 The time it took for these horses to recover
21 the weight lost was anywhere from 5 days to 2
22 weeks. Remember this was on Lasix dosages of 3 to
23 5 cc's. It is not uncommon for horses to be
24 administered 10 cc's of Lasix. And it would be
25 very interesting to track the weights of those

1 horses.

2 And what about the 2 year olds that have run
3 without Lasix?

4 We have started 3. Granted, a very small
5 sampling. They have run 6 times with a win, 2
6 seconds, and 2 thirds. One of them was third in
7 the Grade One Champaign, beaten a neck to Alpha
8 for second. We have weighed the 2 year olds the
9 morning after their races. And their weights have
10 been virtually the same. No weight loss. And
11 they all scoped clean.

12 And I want to repeat that. No weight loss.
13 And they all scope clean.

14 Perhaps we start to understand why trainers
15 this era have put their horses on a 4 to 5 week
16 race schedule. The term bounce was one that was
17 coined by the sheets guys in the mid-90's to
18 describe a non-effort after a horse ran a big
19 race. This term was not around in an earlier time
20 when horses ran often because they could.

21 Trainers then are no different than trainers
22 now. They figure out how much time each
23 individual horse needs between races. In the days
24 before Lasix, trainers had no problem running
25 their horses every 2 weeks and sometimes back the

1 next week.

2 I looked up the race records of Goldikova, So
3 You Think, of Frankel, of Lonroe -- Lonroe is
4 fixing to come over here. But all top European
5 horses, every one of these horse is on a 2 week
6 race schedule. And several of them ran back the
7 following week.

8 We are all certainly familiar is
9 Conquistadore Seattle who won the Met Mile by 7
10 lengths and came back in 6 days and won the
11 Belmont Stakes by 14 lengths. Citation ran 9
12 times as 2 year old. As a 3 year old, he ran 20
13 times in the space of 39 weeks winning 19 races
14 and one second. That is an average, of course, of
15 1 start every 2 weeks.

16 Of 29 races before the end of his 3 year old
17 career, he won 27 of them and had 2 seconds.
18 These are just 2 of the great ones. We can go on
19 and on listing the campaigns of so many great
20 horses that ran often and ran big.

21 But I really want to ask this question. Do
22 any of us in this room truly believe that those
23 horses in an earlier era could have done that,
24 done what they did, if they had been given Lasix
25 pre-race and worked on it?

1 And I can bet you one thing. If Citation
2 were around today and he was in any trainer's
3 barn, 99 percent of them would be running him on
4 Lasix.

5 While I was doing my due diligence on Lasix,
6 I went to the manufacturer's website. And here
7 are the side effects that were listed. Feeling
8 weak, drowsy, restless, or dizzy. Fast or uneven
9 heart beat. Muscle pain or weakness. And this is
10 the most interesting potential side effect. Easy
11 bruising or bleeding.

12 Could -- and I am just asking the question
13 and science needs to explore this -- could chronic
14 use of Lasix contribute to breeding? Just asking
15 the question. I understand that side effects are
16 not always demonstrated, but sometimes they
17 obviously are or they wouldn't be listed. And I
18 am not going to stand up here and tell you that I
19 am more holy than the next guy.

20 In my partnership at WinStar, we have won the
21 Kentucky Derby, the Belmont, the Travers, the Dom,
22 the Haskell and many other major stakes races.
23 And all of those horses ran on Lasix.

24 I did win the Dubai World Cup without Lasix
25 with a horse that won by 14 lengths and ran the

1 biggest race he had ever run in his life. The
2 fact is that I have been no different in my
3 opinions that most every other owner and trainer.
4 It wasn't until I started weighing horses that I
5 really began to understand how much it had to be
6 stressing these horses metabolically. When we
7 understand how much fluid these horses are
8 actually losing, we begin to figure out why it
9 takes them so long to recover from these races and
10 why we see horses heat stroking on a hot day.

11 In my effort to educate myself, I have read
12 everything I could about the drug and its effects.
13 I have read the clinical trials that show an
14 increase in bone fracture. And, yes, this was in
15 older human patients.

16 But the fact is, it did affect bone
17 metabolism. And that is something that needs to
18 be explored. Could it have been peeded, the
19 laying down of calcium by the osteoblasts. We
20 don't know that. But it is certainly something
21 that needs to be explored.

22 The other conversation I had was with a
23 medical pathologist. And he was telling me how
24 much potassium is drained intracellularly when
25 Lasix is employed. And he also stated how

1 difficult it was to restore those intracellular
2 levels of potassium. It is something that -- it
3 is easily fleshed out. But it is very slow to be
4 replenished. So when you have horses that are on
5 chronic Lasix usage, this becomes a downward
6 cascade of potassium loss.

7 And we could go on and on. But when it is
8 all said and done, there is one reason above all
9 the rest why we have to wean our horses of this
10 medication. The world has changed since Y2K. The
11 world no longer has any tolerance for medication
12 in the world of competitive sports. The World
13 Anti-Doping Agency, WADA, of which the
14 International Olympic Committee, IOC, is a member
15 lists Lasix as a banned medication due to its
16 alleged use as a masking agent for other drugs.

17 It don't matter if it does or it doesn't. It
18 is perceived as a masking agent and that's the
19 reality.

20 Most trainers and vets believe that Lasix is
21 performance-enhancing. And it doesn't matter if
22 it is or it isn't. It is perceived as such as.
23 And that's the reality. There is zero tolerance
24 by the public for medication in sports. Some
25 people in America view it as abuse to animals.

1 And that is absolutely a crying shame because
2 every one of us in this room knows how well our
3 horses are cared for. They are the best cared for
4 animals on the planet.

5 But perception is reality.

6 I have learned one very important thing in
7 business. If you do not have a vision of the
8 changing landscape in your business, you are
9 destined for decline and eventual failure. I
10 don't think there is anyone in this audience in
11 this room that would argue with the fact that our
12 industry is in decline. The medication issue is
13 but one of our many problems but it is an
14 important one. And it is something we can
15 control.

16 I believe that the path that has been charted
17 by the American Graded Stakes Committee and the
18 Breeder's Cup of banning race day meds, aka Lasix,
19 on 2 year olds of 2012 is the right way to go. We
20 need to do it incrementally. We need to ratchet
21 it up. And we need to see what happens.

22 No doubt most trainers are going to be
23 terrified to have Lasix taken away from them. It
24 has become so much of the pre-race ritual that
25 they cannot imagine a horse being able to run

1 without it.

2 I can tell you right now it is not going to
3 wipe out their livelihood. We owners are going to
4 keep providing horses for trainers to train.
5 Trainers will become better at managing the
6 environments that these horses have to live in.
7 Vets will become better in managing the underlying
8 pathology that leads to bleeding. The horses will
9 run just as good as they did in an earlier time.
10 And they will recover more quickly and run more
11 often. And the sky will not fall.

12 Thank you.

13 MR. FARMER: Any questions?

14 MR. LEAVITT: Yes.

15 Two observations. You were talking about how
16 horses in days of old ran so many times. There is
17 a French website that I was turned on to that
18 analyzes European racing. And the latest year
19 that they have figures for was 2009.

20 According to that, American thoroughbreds
21 averaged 6 races a year. European -- and that
22 includes Ireland and England -- average 5. And
23 they are doing that -- that is without their
24 Lasix. And one other thing which maybe is beside
25 the point here.

1 But in harness racing, a number of our fast
2 class horses race on Lasix. And they come back
3 and race week after week. And they race
4 consistently. So we don't find that it takes them
5 anywhere near this tremendous long time to
6 recover. Now, maybe our horses are different.

7 But that's the reality for me.

8 MR. CASNER: Well, I am well aware of the
9 European statistics. They don't have as long a
10 campaign as our horses do. But, you know, I think
11 you can look at the horse. You can look at him.
12 I will tell you what. Look at the horses the day
13 after when they don't run on Lasix.

14 Boy they are -- every one of them is in the
15 tub. Man, they are bucking and playing. Again, I
16 want to caution. This was a statistically small
17 sample on these 2 year olds.

18 But when you put a horse on a set of scales
19 and you see that they have lost 100 pounds. And
20 you take a look at them. And then you watch them
21 behave after that race when they are lethargic,
22 when they are picking at their feet and
23 everything, you know that this has to be a
24 metabolic challenge to these horses. You know, it
25 is what it is.

1 So -- but, again, you know, I mean we can
2 argue both sides of it. But the bottom line, as I
3 said, I feel it comes down to what our changing
4 landscape in America is. And I think there will
5 be a time in pro football one of these days that
6 they are going to start probably limiting the
7 medication on these professional athletes.

8 But the difference is is they are humans.
9 And people -- the public really doesn't care what
10 humans do to themselves. They can get into a
11 boxing ring and they can beat their heads in and
12 they don't worry about that.

13 But you do it to an animal, and they
14 become -- they get up in arms. So I think that is
15 one thing that we have to truly understand. If we
16 are going to resurge as an industry and we are
17 going regain the confidence of the public, then we
18 are going to have to do everything in our power to
19 make sure that we have an image as an industry
20 that is not abusive to our horses and we are going
21 doing the right thing for him.

22 MR. FARMER: Well, one more question, and we
23 have to go or they are going to cut our cafeteria
24 off. You want to ask your question?

25 DR. NORTHROP: Just a personal question.

1 If one of your 2 year olds that you are not
2 going to run on Lasix does bleed, are you going to
3 consider running him back on Lasix or putting him
4 on Lasix?

5 And the second part of the question is, are
6 you working any of your 2 year olds on Lasix?

7 MR. CASNER: We are not working them on
8 Lasix. And the older horses, we are not working
9 on Lasix either.

10 Yeah, the older horse, they are continuing to
11 run on it and everything. It has been
12 established. But those horses don't work on it.
13 They can work five-eighths without it. And that,
14 for me, probably is one of the problems. When
15 they work on it week in and week out, I think
16 that's where you get the metabolic challenge. I
17 think that's where you start to see these horses
18 decline physically.

19 Maybe other trainers haven't seen that. But
20 that's our experience.

21 MR. FARMER: We will take a 30 minute. Thank
22 you, Mr. Casner. And we will take a 30 minute
23 break and be back here.

24
25

1 * * *

2 LUNCH BREAK

3 * * *

4 MR. FARMER: Everyone get ready. We are
5 ready to start again.

6 Our next presenter or witness will be
7 Dr. Peterson. Are you here?

8 DR. PETERSON: Thank you, sir. Mr. Chairman,
9 members of the committee, and Dr. Scollay.

10 My name is Eric Peterson. I am a
11 veterinarian from Lexington. I am also on the
12 board of directors for the American Association of
13 Equine Practitioners. I am here to provide our
14 position statement regarding race day medication
15 on behalf of the AAEP.

16 The American Association of Equine
17 Practitioners was found more than 50 years ago by
18 11 racetrack veterinarians. This long history of
19 commitment to the racing industry makes the AAEP
20 uniquely qualified to speak to the issues
21 affecting the health and welfare of the racehorse,
22 including the administration of therapeutic
23 medications.

24 Our position on race day medication is
25 long-standing. The AAEP supports the use of

1 Furosemide, or Salix, as the only medication
2 administered to a horse on the day of the race
3 with the specific purpose of treating exercise
4 induced pulmonary hemorrhage.

5 The administration of Salix should be
6 administered in accordance with the guidelines set
7 by the racing medication and testing consortium.
8 And we also do not support the use of any adjunct
9 bleeder medications on race day.

10 Secondly, the AAEP also supports the
11 administration of Salix by regulatory
12 veterinarians in a controlled environment to
13 insure the integrity of racing and the safety of
14 each individual horse.

15 Our third component of race day medication is
16 race day security. Appropriate security measures
17 must be in place at all racetracks to enforce
18 medication administration rules and ensure that
19 all involved in the sport of horse racing are
20 participating on a level playing field.

21 Now, the AAEP understand the concerns of
22 those who feel the use of Salix on race day
23 compromises the integrity of the sport. And we
24 know the integrity of the game is vital for horse
25 racing success.

1 At the same time, as doctors of veterinary
2 medicine, the safety and health of the racehorse
3 remains our primary focus. The racing industry
4 must find a way to manage exercise induced
5 pulmonary hemorrhage and regulate the process in a
6 manner that is both good for the horse and good
7 for racing.

8 As this race day medication debate continues,
9 the hope of AAEP is that the industry's ultimate
10 conclusions on race day medication are based
11 objective and factual information.

12 I am short and sweet. Thank you very much
13 for this presentation. That's all we have to say.

14 MR. FARMER: Thank you, doctor. Any
15 questions? Thank you.

16 DR. PETERSON: Thank you very much.

17 MR. FARMER: Mr. Koester?

18 MR. KOESTER: Good afternoon.

19 Members of -- Mr. Chairman, members of the
20 subcommittee, let me express my gratitude for the
21 opportunity to appear before you today to review
22 the issue of race day medication here in Kentucky
23 and elsewhere.

24 My name is Willie Koester. I am Chairman of
25 the Board of Racing Commissioners International,

1 RCI. Our members are governmentally sanctioned
2 independent regulators and arbiters of horse and
3 Greyhound racing and all associated forms of
4 wagering.

5 I am also a member of the Ohio State Racing
6 Commission. And have in the past served as its
7 chair. I currently own and race horses and have
8 loved this wonderful sport as a both a spectator
9 and participant all of my life.

10 Although I believe that no medication should
11 be allowed to be administered to a horse on the
12 day it races and have expressed my personal desire
13 that race day Furosemide be phased out, I am here
14 today to represent RCI and where our association
15 is on this issue at this time.

16 The underlying principle behind the
17 regulation of medication and racing is to ensure
18 that any substance that can affect performance of
19 a horse is not present in the horse's system when
20 it races. We do this to ensure a level playing
21 field for both the participants in a race as well
22 as our fans. This is also to safeguard for the
23 welfare of our horses to ensure that horses being
24 treated with legal medications to address a
25 particular ailment are not permitted to race.

1 Approximately 20 years ago, an exception to
2 that guiding principle was made to allow
3 prophylactic race day administration of medication
4 to address exercise induced pulmonary hemorrhage.
5 Most regulatory commissions in the United States
6 permitted the race day use of only one such
7 medication; Furosemide.

8 Others permitted Furosemide as well as --
9 known as adjunct bleeder medication to be
10 administered on the day of the race. EIPH is the
11 only medical condition affecting a horse where an
12 exception to the long-held prohibition of race day
13 medication has been made.

14 The current policy of RCI, as embodied in our
15 model rules, permits the controlled administration
16 of Furosemide on race day. We do not recommend
17 allowing anything else.

18 As most horses display at least a minor level
19 of EIPH when undergoing an endoscopic examination,
20 it is relatively easy for a trainer to qualify his
21 horse for Furosemide administration, effectively
22 leaving it up to the judgment of a horse's
23 connections ideally in consultation with a
24 veterinarian whether to race or not to race on the
25 medication.

1 The use of Furosemide is clearly disclosed in
2 the racing program.

3 This policy, which has evolved over the
4 years, is consistent with the position taken by
5 the past -- by the Racing Medication Testing
6 Consortium. There is a debate going on within the
7 RMTC as well as other organizations on whether
8 this policy should be changed. No consensus
9 currently exists to either continue or change the
10 current policy.

11 There is a proposal to provide regulatory
12 track veterinarians to independently administer
13 Furosemide. And this matter will be addressed by
14 the RCI Model Rules Committee in just a few short
15 weeks.

16 RCI, as an association of regulatory entities
17 that actually make and enforce the rules, have
18 voted to revisit the existing public policy
19 permitting the race day use of Furosemide. While
20 we have yet to reach a consensus conclusion, we
21 clearly believe that only healthy horses should be
22 running. The question is whether the existence of
23 EIPH means a horse is not fit to run.

24 I have yet to find a veterinarian willing to
25 make such a claim. There are many who believe

1 that most horses would be fine running on race day
2 without it. There are many who argue that
3 Furosemide also helps the horse.

4 The exception that has been made permits
5 prophylactic treatment of EIPH to minimum
6 instances of bleeding, no matter how minor, that
7 may occur when the horse runs. Public policy has
8 been to exclude horses that visually bleed from
9 competition for a period of time. RCI model rules
10 recommend an initial exclusion that increases if
11 the horse visibly bleeds and can result in
12 exclusion for life.

13 Certainty Furosemide's use to mitigate EIPH
14 has become widespread in racing. In many
15 international jurisdictions that do not permit it
16 on race day, it is permitted to be given to horses
17 in training.

18 There are some who believe that race day
19 Furosemide has weakened the breed. I am no expert
20 in this field but I question how an argument can
21 be made for horses that train on it but do not
22 race on it.

23 Representatives from both national
24 organizations representing the thoroughbred
25 horsemen appeared before the RCI drug testing

1 standards and practices committee to herald its
2 use as a prophylactic treatment to minimize EIPH.

3 Their primary point is that the
4 administration is necessary to protect the welfare
5 of our horses. The central question for
6 regulatory commissions is whether the underlying
7 condition is actually serious enough to warrant
8 the continued exception that has been made.

9 Obviously, no one would call for the elimination
10 of any treatment if it can be proven that it would
11 endanger the horse and, in flat racing, the rider.

12 Frankly I am surprised that those defending
13 the status quo have not successfully engaged
14 groups like the Humane Society as an ally if we
15 are to accept their argument that the elimination
16 of race day Furosemide will put our horses and
17 riders at risk.

18 RCI recognizes the effect of Furosemide in
19 minimizing instances of bleeding. We also
20 recognize that instances of Epistaxis are rare and
21 occur in jurisdictions that both permit and
22 disallow racing on Furosemide.

23 Dr. Scot Palmer, the well-respected chair of
24 the American Association of Equine Practitioners
25 Racing Committee told the RCI Drug Testing

1 Standards and Practices committee the following:

2 If Furosemide is eliminated, the risk of sudden
3 death caused by EIPH if horses race without
4 Furosemide will is extremely low. This differs
5 considerably from those warning of sudden death,
6 sudden equine death, if it were removed on race
7 day.

8 Horsemens know their horses best. And it is
9 understandable that some fear the loss of some
10 good horses. Well, Dr. Palmer also told us that
11 based upon his analysis only 120 to 540 of about
12 60,000 U. S. racehorses would be adversely
13 affected and need to be excluded from further
14 competition if race day Furosemide were
15 prohibited.

16 Putting it another way, over 99 percent of
17 all of the horses now racing would still be
18 racing.

19 It is important to note that Dr. Palmer also
20 indicated that Furosemide does not enhance
21 performance beyond what would be the horse's
22 natural ability. Certainly this is contrary to
23 the impression being made by some that Furosemide
24 is equivalent to horse doping.

25 It is not.

1 Certainly we do know that Furosemide may
2 affect -- have an affect on performance by
3 mitigating the effects of EIPH or the removal of
4 water weight or both. In some horses, Furosemide
5 results in sluggish performance which may explain
6 why this treatment is so necessary. Some trainers
7 opt to run certain horses without it.

8 Those who argue for race day Furosemide as
9 essential for a horse's wellbeing will obviously
10 have a tough time explaining why they do not run
11 their horses they care for on it. This raises
12 questions that need to be addressed.

13 As racing regulators, we are naturally
14 troubled by the fact that Furosemide, because of
15 its diuretic effect, has been listed by the world
16 anti-doping agency as a prohibited substance in
17 competitive sports. We are also concerned that
18 the reasons for its use by some may have less to
19 do with the health of the horse and more to do
20 with the perception of being put at a disadvantage
21 if not used.

22 This may certainly explain why so many owners
23 who are vocally opposed race day Lasix permit
24 their horses to run on it.

25 RCI's current review of this issue is

1 primarily limited to thoroughbred racing. Whether
2 we open the issue to other breeds remains to be
3 seen. We recognize that emotions run high on this
4 issue. And we do not agree with those who would
5 politicize this matter and attempt to impose their
6 personal opinions, be they for or against, as a
7 justification of legislative action.

8 This is an equine health and welfare issue
9 linked to the necessity to have a public policy
10 that ensures a level playing field for all those
11 involved. Blanket solutions may have unintended
12 consequences for the health and welfare of our
13 horses, particularly when you consider the
14 anecdotal concerns of quarter horse racing at
15 high altitudes. This may not be an issue relative
16 to the Commonwealth, but it surely needs to be
17 addressed by RCI.

18 As I said earlier, the determination to be
19 made is whether the almost ubiquitous condition of
20 EIPH is serious enough to warrant continued
21 exception in public prohibiting the administration
22 of medications on race day.

23 The Kentucky Horse Racing Commission, as a
24 leading member of RCI, we will be crafting
25 whatever recommendation the association ultimately

1 makes on this issue.

2 On behalf of RCI, I must note that our model
3 rules currently permit only Furosemide to be
4 administered on race day. As such, we encourage
5 you to eliminate any other medications you now
6 permit on race day. Both the national HBPA and
7 the Thoroughbred Horsemen's Association reported
8 to the RCI that they would be in favor of the
9 elimination of adjunct bleeding medications. We
10 think this would be a positive step forward and
11 encourage you to do so.

12 As far as Furosemide goes, these discussions
13 will continue. RCI members have expressed a
14 concern that if there is to be a change in this
15 policy, it be universally adopted and universally
16 implemented.

17 I appreciate the opportunity to appear today.
18 And I thank you for your time.

19 MR. FARMER: Thank you, doctor. Any
20 questions?

21 MR. CONWAY: One question, doc.

22 You mentioned that RCI supports the use of
23 Furosemide only on race day. I take it that you
24 would take the position that it shouldn't be used
25 for training purposes?

1 MR. KOESTER: No. Either I misspoke or you
2 misunderstood me. Okay.

3 Currently the RCI recommends that only
4 Furosemide is used on race day. We do not agree
5 that adjunct bleeder medications be used on race
6 day. As far as in training goes, that's really --
7 we regulate racing as it happens during that day.

8 MR. CONWAY: I see. Thank you.

9 MR. FARMER: Any other questions? Thank you,
10 doctor.

11 MR. KOESTER: Thank you. I would just like
12 to correct the record. I am not a doctor. Thank
13 you.

14 MR. FARMER: Thank you.

15 Mr. Fravel with the Breeder's Cup. Craig,
16 you have the floor.

17 MR. FRAVEL: Craig Fravel. I am the
18 president and chief executive officer of the
19 Breeder's Cup.

20 This is my first regulatory hearing in
21 Kentucky. I have spent 21 years in California and
22 thought that I had seen the longest possible
23 regulatory hearing. But we learn something every
24 day. So I am going to try to make this as quick
25 as I possibly can.

1 As you know, I was the president and general
2 manager of the Delmar Racetrack for a number of
3 years. And had the privilege of sitting on the
4 racing and medication and testing consortium at
5 the time the rule changes were implemented that
6 allowed all horse usage of Furosemide.

7 So I was one of those who voted in favor of
8 that at the time. Although I look back on that
9 and wish I had had some more of the information
10 that has been presented today before that vote
11 took place.

12 I want to be clear about one thing.

13 The Breeder's Cup has taken a relatively
14 limited position on this subject. And that
15 position pertains to the championships, only. We
16 have not take positions with respect to everyday
17 racing. We are concerned with racing at the
18 highest levels of the game. And the Breeder's Cup
19 represents what we believe is a true international
20 championship.

21 As a result, the position taken by the board
22 in July was directing management to implement
23 protocols that would eliminate the use of a race
24 day medication for the Breeder's Cup championships
25 with respect to 2 year olds beginning in 2012,

1 with the championships at Santa Anita. And
2 thereafter with respect to other horses beginning
3 in 2013. And we are working carefully with state
4 regulators to try and accomplish that with respect
5 to future sites.

6 I do want to point out one thing I think is
7 relevant to this discussion. One of the reasons
8 that the Breeder's Cup took that position among
9 many was that we are interested in a level playing
10 field with respect to international racing. As
11 has been fairly pointed out, North America is the
12 only jurisdiction that currently uses -- allows
13 the usage of race day medication including Lasix,
14 for its horses.

15 We think that if we are going to develop the
16 Breeder's Cup as an international championship, it
17 is vitally important that horses, wherever they
18 might come from to participate in our races, do so
19 on the same conditions.

20 So that was one of the primary motivating
21 factors behind this decision.

22 The second is -- and I won't think it has
23 gotten a lot of discussion so far today -- is the
24 impact of race day medication usage on the
25 perception of the American breeding stock

1 internationally. I will let others address that
2 later on who are more familiar with the breeding
3 industry than I am.

4 But I can safely say that it is a -- having
5 had a large number of conversations with folks
6 overseas -- that it is unquestionable that the
7 American breeding industry has been denigrated in
8 international eyes by the fact that we allow race
9 day medication.

10 I did want to point out some things. Because
11 a lot of the conversation that we hear out in the
12 world day to day is that the sky might fall if we
13 implement these kind of changes.

14 I had my staff go back to races from 1988 to
15 1991 which is relatively shortly after the
16 implementation of Lasix regulation or the
17 permissive use of Lasix in horse races. For 2
18 year old races only, of 74 starters in those races
19 between 1988 and 1991, 74 starters, only 18 of
20 those horses raised with Lasix.

21 By comparison in the past 3 years of 161
22 starters, 150 of those 2 year olds raced with
23 Lasix.

24 The fact of the matter is that in the first 3
25 years that I mentioned of those 74 starters, all

1 of the winners, the first 3 placed horses, did not
2 race with Lasix.

3 So I think these statistics demonstrate quite
4 capably that horses can race without Lasix,
5 particularly at the highest levels of the game.
6 And what we are interested in is developing the
7 best racing we possibly can for those horses.

8 With that, I have no more comments.

9 MR. FARMER: Thank you.

10 Commissioners, any questions? Thank you.

11 MR. FRAVEL: Thank you.

12 MR. FARMER: Dr. Gustafson with the Humane
13 Society of the United States.

14 DR. GUSTAFSON: Thank you commissioners for
15 having this hearing to address this important
16 issue.

17 My name is Sid Gustafson. A brief biography
18 for those of you who would like to know. In the
19 '60s, I started catching urine in Montana. I was
20 catching urine in 1964 when Dancer's Image number
21 was taken down. And so I put a lot of thought
22 into it through the years.

23 I represent the Humane Society of the United
24 States today as well as the Humane Society
25 Veterinary Medical Association. I teach

1 veterinary behavior at the University of Guelph
2 and, in addition, I am a regulatory veterinarian
3 in 4 states; California, New York, Montana, and
4 Washington.

5 So I have been around as both an attending
6 and regulatory veterinarian.

7 We do not oppose horse racing. But we do
8 oppose race day medication. Hearing the
9 information that exercise induced pulmonary
10 hemorrhage is present in nearly 100 percent of the
11 horses, some people would conclude that that is
12 somewhat of a normal occurrence rather than an
13 abnormal pathology.

14 However, certain degrees of it can be quite
15 problematic. And I feel that part of this is due
16 to exceeding the adaptability of the racehorse.
17 So in my talk, I am going to present some
18 solutions other than medication to exercise
19 induced pulmonary hemorrhage.

20 Apparently all of these other jurisdictions
21 in Hong Kong and Europe and places they don't use
22 race day medication went through this process.
23 And I assume the process they went to -- the
24 collusions they came to will somewhat reflect what
25 happens here. But I guess that remains to be

1 seen.

2 To appreciate the nature of the thoroughbred,
3 I would like to briefly review the evolution of
4 the horse and the domestication process. Of all
5 of the human equine pursuits, horse racing is
6 perhaps the most natural equine pursuit of all.
7 More natural, for example, than polo or stadium
8 jumping or cutting. Horses have evolved for 60
9 million years to run at speed in close company.
10 Running at speed in close company is the horse's
11 long evolved group survival mechanism.

12 This is the nature which is nurtured in
13 thoroughbred lines and thoroughbred development
14 and training.

15 Racing comes natural to a horse.

16 To appreciate how horses develop the athletic
17 endurance to run at speed together and connected
18 in close company, veterinary behaviorists observe
19 horses in natural settings to assess how horses
20 naturally prepare themselves to race. We study
21 horses prepare younger horses to develop strong
22 limbs and strong lungs and musculoskeletal systems
23 to achieve success evading prey.

24 Knowledge of the horse's nature is abundantly
25 applied here in Kentucky. Farm after farm I drove

1 through coming here had large pastures where bands
2 of mares and foals and later bands of cohorts run
3 and play and learn to travel closely together at
4 speed. They learn to communicate together, change
5 leads together and move in a safe and synchronous
6 organized fashion while running in large circles
7 around the pasture.

8 It is this essential experience with other
9 horses in a heard that a growing thoroughbred
10 gains the confident to run by and through horses
11 later in life in a race. The herd conditions
12 growing horses. Running with the herd facilitates
13 the physical development of the lungs and
14 musculoskeletal system.

15 The reproduction and recreation of these
16 natural behaviors are essential for the healthy,
17 mental, and physical development of the
18 thoroughbred as is evident everywhere here in the
19 Bluegrass. In order to later prevail in a horse
20 race, growing thoroughbreds need to be conditioned
21 to develop the ability, coordination, stamina,
22 pulmonary capacity, and strength, confidence and
23 experience needed to endure training and racing.

24 It is this knowledge that elucidates how race
25 day Lasix impoverishes the welfare of horses. To

1 appreciate the principles of equine behavior is to
2 understand what is required to maintain pulmonary
3 health in horses confined to stalls being
4 conditioned to race.

5 The solution to managing exercise induced
6 pulmonary hemorrhage is appropriate breeding
7 development, horsemanship, training, and
8 husbandry. The care that establishes and enhances
9 pulmonary health and endurance in horses is the
10 same care that enriches stabled horse's lives. It
11 is the same care that keeps racehorses'
12 musculoskeletal systems sound. It is the care
13 that keeps horses on their feet during races.

14 One point is clear about all of this data.
15 The data from non-Lasix, non-race day medication
16 jurisdictions indicates to me, at least, that
17 clean running horses suffer significantly fewer
18 breakdowns than horses running on Lasix in
19 America.

20 Over the last 2 years, if I am reading the
21 data from Encompass correctly, we watched 2 horses
22 break down for every 1,000 starts. Meanwhile, the
23 Hong Kong Jockey Club, which has been discussed
24 here quite a bit, has set an example of clean and
25 racing without race day medication. And their

1 data indicates that they have less than 1
2 breakdown for every 2000 starts.

3 So on that basis, we find the use of Lasix
4 and race day medication to be a welfare issue.

5 Horses with healthy lungs are content and
6 fulfilled horses whose lives their caretakers
7 adequately, if not extensively, enrich. Lung
8 health is supported by limb health. Appropriate
9 husbandry and training maintains and establishes
10 the soundness of both wind and limb.

11 Breeding and running are biologically
12 intertwined on the racetrack, a breath per stride.
13 To stride correctly is to breathe correctly. To
14 breathe correctly is to breathe soundly and to
15 race sound.

16 Horses who are bred, socialized, and
17 developed properly from birth and who train while
18 living enriched stable lives are seldom likely to
19 experience performance-impairing equine induced
20 pulmonary hemorrhage -- exercise induced pulmonary
21 hemorrhage while racing. They are more apt to
22 stay sound.

23 Humane care of the horse prevents bleeding,
24 my friends. Pulmonary health is reflective of
25 appropriate husbandry, breeding, training,

1 nutrition, and the abundant provisions of forage,
2 friends, and perhaps most importantly locomotion.

3 Lasix perpetuates substandard horsemanship,
4 artificially suppressing the untoward result,
5 which is bleeding, to impair performance of
6 inadequate preparation of the thoroughbred.

7 Performance medication on race day leads to
8 fragility. Rather than alleviate medical
9 conditions, the data from several jurisdictions
10 and studies indicates that racing medications
11 administered on race day exceed racehorse
12 adaptability and perpetuate fragility in race
13 horses. Fragility is dangerous for both horses
14 and riders.

15 Genetics play a role in pulmonary health and
16 physical durability. Lasix perpetuates genetic
17 weakness by allowing ailing horses to prevail and
18 sow their seeds of pharmaceutical dependence.

19 Lasix manages a wide variety of
20 unsoundnesses, as do the cortisone and the
21 non-steroidal anti-inflammatory drugs. Running
22 sore can cause horses to bleed. Anti-inflammatory
23 drugs aggravate coagulation processes.

24 Please appropriate that horses running on
25 pharmaceutical scrims are 4 times more likely to

1 break down than horses running free of race day
2 medication.

3 Pulmonary health is dependent on appropriate
4 breeding and proper development for the vigor,
5 durability, and endurance thoroughbred racing
6 demands.

7 Drugs are not the solution. Competent
8 horsemanship is the solution.

9 Genetic dosage, behavioral and physical
10 development, socialization, training, and
11 husbandry are the keys to racehorse soundness,
12 stamina, and durability.

13 Horses evolved as social grazers of the
14 plains, group survivalists moving and grazing
15 together much of the time. Horses require near
16 constant forage, friends, and locomotion to
17 maintain health of wind and limb. Racehorses are
18 no exception. The last place a horse evolved to
19 live is in a stall alone. The solution to manage
20 bleeding in racehorses is to develop, teach,
21 train, and care for horses in a horse-sensitive
22 fashion.

23 Training and husbandry need to be a good deal
24 for horses in order for horses to maintain healthy
25 partnerships with people. Pulmonary health is

1 reflective of overall health and soundness in
2 horses.

3 In order to maintain pulmonary health,
4 natural conditions need to be recreated in the
5 stable. Horses prefer to graze together and move
6 nearly constantly. This constant grazing and
7 moving are essential for joint and bone health,
8 hoof health, metabolic health, and pulmonary
9 health. In order for lungs to stay healthy,
10 horses need movement, often more movement than
11 trainers provide.

12 Walking enhances and maintains horse health.
13 Stabled horses need a lot more walking than most
14 are currently afforded. Abundant on track and on
15 track locomotion is necessary to condition a
16 horse's lungs. Lungs deteriorate when movement is
17 restricted. Horse breath all day long and walking
18 is part of the way that assists their health.

19 Walking and movement enhance breathing and
20 lung health. Development and conditioning of
21 pulmonary health throughout growth and while
22 training are the answers to prevent and manage
23 bleeding as they have always been.

24 To enhance pulmonary health is to enhance the
25 horse's entire life and outlook. Not only do

1 properly stabled and trained horses' lungs hold
2 bleeding in abeyance, they hold sway and win.

3 Pulmonary health and bleeding prevention are
4 dependent on smooth running and biomechanically
5 sound locomotions.

6 Horse evolved in the open spaces of the
7 northern hemisphere and require the cleanest,
8 purest air to thrive and develop health lungs and
9 hearts. Stable air needs to be constantly
10 refreshed to maintain pulmonary health.

11 Ventilation is essential and enclosed structures
12 are often inappropriate. Barn design must be
13 addressed to maintain pulmonary health. Bedding
14 is critical. Clear straw provides the moves
15 movement by simulating grazing.

16 Horses stalled on straw are noted to move
17 about with their heads down nibbling and exploring
18 for hours, recreating natural, keeping their lungs
19 healthy with movement.

20 Their respiratory tracts drained by all the
21 head-down nibbling and grazing. Horses need near
22 constant movement to maintain optimum lung health.
23 Long standing horses' lungs deteriorate quickly.
24 Not only does near constant movement maintain and
25 enhance pulmonary health, abundant locomotion

1 maintains metabolic health, joint and bone health,
2 hoof health and digestive health.

3 To enhance lung health, is to enhance the
4 overall health and soundness of the horse.

5 Racing has proven to be safer in Lasix-free
6 and race day medication free jurisdictions where
7 the drug crutch is not allowed.

8 Drugs are not allowed to replace appropriate
9 care and training in Hong Kong and Europe. And
10 race day drugs should not be allowed in America.

11 The stabled race horses has to be carefully
12 and humanely cared for and nourished, both
13 physically and behaviorally to win and stay
14 healthy. Lasix has weekend the breed, and
15 weakened the American horse racing game
16 considerably as the numbers across the board
17 reveal.

18 The horse has brought us all here today. If
19 racing is to flourish as a sport in Kentucky and
20 subsequently in the rest of the world, horse
21 racing must come clean of drugs and replace its
22 race day medication attitudes with appropriate
23 horse sensitive breeding, development,
24 horsemanship, behavior, training, and husbandry
25 programs.

1 To honorably share this great Commonwealth
2 with our friend the horse, we must learn to use
3 the resources of the land and people to nurture
4 Kentucky horses and rid the heart of the sport of
5 its dependence on race day drugs.

6 Respectfully submitted.

7 MR. FARMER: Thank you very much, doctor.

8 Any questions from the panel? Commissioners?
9 Thank you very much.

10 DR. GUSTAFSON: Thank you.

11 MR. FARMER: Terry Meyocks? The Jockeys
12 Guild.

13 MR. MEYOCKS: Thank you.

14 As you said, my name is Terry Meyocks. I am
15 the national manager for The Jockeys Guild. Good
16 afternoon. Thank you for allowing The Jockeys
17 Guild to provide testimony on such an important
18 topic to our industry. It is our hope that by
19 discussing these matters in an open forum,
20 solutions can be developed that benefit the entire
21 industry.

22 Already numerous discussions, both public and
23 private, have taken place since the issue of race
24 day medication was raised yet again in the spring
25 of this year. Many of these discussions have

1 taken place within the racing medication and
2 testing consortium. And, at the behest of that
3 organization, for those that might be unfamiliar
4 with the work of the RMTC, it is a national
5 industry organization whose board of directors is
6 comprised of all of the various stakeholders who
7 represent this industry. Given the fact that 25
8 industry organizations sit on the board, you can
9 imagine the different perspectives that are
10 brought to the table on any medication issue not
11 to mention one as controversial as the permitted
12 race day medication debate.

13 Of the 25 organizations that are on the board
14 of the RMTC, at least 9 are here today. Despite
15 the diversity of opinion within the RMTC, a
16 consensus was reached on the issue of race day
17 medication at a special meeting of the board of
18 directors this summer.

19 The consensus opinion, which emerged after
20 countless hours of study and debate including a 2
21 day meeting in New York after the Belmont Stakes,
22 was 2-fold.

23 First, the elimination of bleeder adjunct
24 medication in those states in which they are
25 permitted. And, second, the continuation of a

1 race day Furosemide administration, but via the
2 regulatory rather than a private practitioner.

3 The Jockeys Guild, as a board member of the
4 RMTC, is in full support of these recommendations.
5 It is our opinion that it is the best and most
6 reasonable approach available to the industry for
7 several reasons.

8 First, we believe the permitted
9 administration of Furosemide on race day is in the
10 best interest and the welfare of the racehorse.
11 Almost all horses bleed into their lungs to some
12 degree during maximal intensity exercise. Since
13 there have been horses, there likely has been
14 exercise induced pulmonary hemorrhage. In fact, a
15 racehorse in the 18th Century the name of
16 Bartlett's Childers, whose sire was a Darby
17 Arabian, was tagged with the unfortunate nickname
18 of Bleeding Childers. This was due to the fact
19 that every time the horse ran, blood would gush
20 from his nostrils. He never raced because of his
21 bleeding problems.

22 He did go on to be a sire, however. And just
23 so happens to be a great grandsire of Eclipse, who
24 is responsible for some of the most dominant sire
25 lines in the United States.

1 I use the story not to blame breeders in the
2 1700's, but to demonstrate that exercise induced
3 pulmonary hemorrhage has always been a part of
4 racing and will, almost certainly, always be a
5 part of racing in the future.

6 If we accept this premise, the question then
7 becomes what do we do about it. Furosemide is the
8 only medication that has been proven by scientific
9 study to be effective in managing exercise induced
10 pulmonary hemorrhage. The study performed by
11 Hinchcliff, et al, using race horses under actual
12 racing conditions published in the Journal of the
13 American Veterinary Medical Association last
14 summer is as conclusive a study as we would likely
15 ever get on the subject.

16 Furosemide doesn't cure the condition. But
17 given the philosophy of the horse, no medication
18 will likely be developed that will cure EIPH. The
19 best we will be able to do is control the bleeding
20 as best we can. At this point, Furosemide is the
21 best medication we have available to do this.

22 And the study I just mentioned demonstrates
23 that Furosemide is, in fact, capable of reducing
24 the severity of individual bleeding episodes.
25 Unfortunately, the effects of Furosemide wears off

1 very quickly after administration, so it must be
2 administered a few hours prior to exercise to have
3 any effect.

4 If the administration of Furosemide is pushed
5 back to 24 hours before the race or even further,
6 as in the case in Europe, you may as well give a
7 shot of saline solution instead.

8 So we have a condition in the horse that we
9 know is likely to happen during the course of a
10 horse's racing career. We know this condition is
11 probably not ever going to go away, We know that
12 this condition in many horses is progressive
13 meaning it gets worse each time it happens.

14 We know that a small percentage of horses
15 eventually bleed from the nostrils. We know that
16 this condition is a cause of decreased athletic
17 performance. And we know that we have a
18 medication that can mitigate some of these changes
19 and improve the pulmonary health of the race horse
20 over the course of their career.

21 That is where our belief as an organization
22 that Furosemide should continue to be a permitted
23 race day medication. Our riders do not want to be
24 riding a horse that suffers a rupture of the
25 pulmonary artery in the middle of a race.

1 While I am not saying that Furosemide
2 eliminates these as possibilities, certainly
3 anything we can do as an industry to reduce the
4 incidence of these events is of benefit for the
5 horse and for the rider and to the image of the
6 industry.

7 Unlike Furosemide, however, there is no
8 scientific support for the continuation of the
9 so-called adjunct bleeder medications. In fact,
10 most of the published science indicates there is
11 no effect on EIPH from those specific medications
12 that have been studied. Our organization fully
13 supports the elimination of permitted adjunct
14 bleeder medications.

15 Second, we believe the change to the current
16 policy provides no upside benefit, but instead,
17 offers only significant downside risk at what is a
18 very precarious time for our industry
19 economically. There is no evidence that a change
20 in policy will lead to any increase in pari-mutuel
21 handle or any increase in U. S. bloodstock prices.

22 And actually from the standpoint of the
23 handicapper, the permitted administration of
24 Furosemide is one of few things this industry does
25 well. We notify the public that the medication is

1 or is not being administered to the horse. And we
2 ensure, through post-race testing, that the
3 regulations surrounding the administration of this
4 medication are being followed.

5 This has produced consistency in the
6 management of EIPH that many handicappers
7 appreciate. Some of them use this information as
8 part of their handicapping process. Others don't.
9 But the fact that the public is notified and can
10 account for this information I would argue has
11 been a net positive for our sport for over the
12 last 20 years.

13 And in terms of medication control, it is one
14 of the very few areas of the industry that offers
15 complete transparency.

16 Let's compare this to a situation facing
17 handicappers. If Furosemide is prohibited, now a
18 handicapper has to guess which horse is going to
19 bleed, guess which horse will be compromised by
20 this bleeding, and guess which barn may be
21 administering something else on race day to manage
22 EIPH that escapes detection.

23 Again, I would not have you believe that
24 Furosemide administration eliminates any of these
25 possibilities. But the permitted and regulated

1 administration of Furosemide has provided a much
2 more level playing field for not only bettors, but
3 participants as well.

4 Additionally, if the average field size was
5 reduced by just one horse per race as a result of
6 prohibiting Furosemide, the end result on handle
7 would likely be disastrous for this industry.
8 There would also -- potential negative economic
9 consequences for owners and for the regulatory
10 bodies themselves.

11 For some owners, the \$25 shot of Furosemide
12 will be replaced with a litany of other treatments
13 of questionable effects such as Vitamin C or other
14 herbal remedies that will certainly cost more to
15 owners than a single injection of Furosemide.

16 Again, EIPH isn't going away no matter what
17 the rules of racing say. One only has to look at
18 Europe to see evidence of this. Two years ago,
19 Nicky Henderson, who trained some of the Queen's
20 horses, had a positive test for Tranexamic Acid,
21 which is a permitted adjunct bleeder medication in
22 some U. S. jurisdictions.

23 Henderson had a horse that was a bleeder and
24 sought a treatment on race day that would help
25 control the condition that would not result in a

1 positive test.

2 Anyone who thinks eliminating Furosemide in
3 and of itself results in a medication free race
4 day is naive.

5 There will continue to be medicating for this
6 condition. And owners will continue to write the
7 checks. Tie that to cost of post racing testing
8 in order to catch these Furosemide replacements
9 will either increase, or in the case of many
10 regulatory bodies in the United States that are
11 strapped for dollars, other drugs will be
12 eliminated from the testing scheme in order to
13 test for any bleeding substances.

14 It would be decidedly detrimental to the
15 sport to eliminate the one permitted medication
16 that we actually notify the public about, but then
17 ignore the multitude of other substances that
18 could be used as replacements for Furosemide.

19 The proverbial level playing field is
20 something we all strive for. To ignore the other
21 substances would be patently unfair to those
22 participants who choose to play by the rules and
23 for handicappers seeking consistency. If
24 Furosemide is prohibited, is this Commission
25 prepared to spend the dollars for the security at

1 post-race testing necessary to ensure
2 unequivocally that no medication on race day truly
3 means no medication on race day.

4 There is little question than being one of
5 the few racing nations to permit the
6 administration of medication on race day has been
7 a negative in terms of perception of our industry.
8 There are varying reasons given for this negative
9 perception, depending on whom you ask and how the
10 question is phrased.

11 Certainly a large part of this negative
12 perception is in the fact that in the United
13 States, the private practitioner is responsible
14 for race day administration of Furosemide. The
15 perception is that this allowed contact with the
16 horse 4 hours prior to the race gives
17 opportunities for other doping substances to be
18 administered.

19 This is why The Jockeys Guild supports the
20 RMTC recommendation to place administration of
21 Furosemide in the hands of the regulator.

22 There are 2 real world examples which we
23 believe support this route as a positive,
24 reasonable solution for the industry. First is
25 the experience of the New York Racing Association.

1 During the time frame that the detention barn was
2 utilized, once the detention barn was put in
3 place, additional NYRA veterinarians were employed
4 to administer Furosemide. The effect on some of
5 the post-racing tests was immediate. The chemists
6 for the state of New York reported much more
7 consistent results for Furosemide concentrations
8 in post-race samples, and also more consistent
9 total carbon dioxide values which are typically
10 elevated by Furosemide administration depending on
11 when and how the Furosemide is administered.

12 These results indicated that Furosemide was
13 being administered in a much more consistent
14 manner in terms of the time and route of the
15 administration. Today the detention barn has been
16 eliminated. But the administration of Furosemide
17 by NYRA veterinarians has continued. And
18 practicing veterinarians are not allowed in the
19 stall on race day.

20 The second example is a self-funding program
21 put in place by the Canadian Pari-mutuel Agency
22 that utilizes certified veterinarian technicians
23 to administer Furosemide. For whatever reason,
24 the race day administration of Furosemide in
25 Canada is not nearly the lightning rod for

1 controversy that it is in the United States.

2 I think we can certainly assume, however,
3 that the successful administration of this program
4 by a federal agency plays at least some part in
5 this differing perception of the drug.

6 While there are obvious logistical issues to
7 be overcome, we believe that this program which
8 has been in place for close to 20 years can be an
9 excellent model for regulators in the United
10 States.

11 In conclusion, The Jockeys Guild supports the
12 RMTC recommendations to, number one, eliminate the
13 permitted use of adjunct bleeder medications.
14 And, number two, to continue the permitted
15 administration of Furosemide on race day with the
16 regulator in control of the administration, rather
17 than a private practitioner.

18 It is vitally important that the industry and
19 its 38 state racing commissions approach this
20 issue with consistency and uniformity. The
21 Jockeys Guild believes that the RMTC
22 recommendation is most likely to achieve the
23 desired results. And, most importantly, we
24 believe this approach is in the best interest of
25 the horse, our member riders, and all other

1 segments of the industry.

2 Thank you for your attention.

3 MR. FARMER: Thank you, Terry. Any questions
4 from the Commission? Thank you very much.

5 Dr. Byars? I am sorry, Doug.

6 Kentucky Association of Equine Practitioners.
7 You have 10 minutes I will remind everyone so we
8 will get out of here today.

9 DR. BYARS: I am going to shorten this up and
10 go as fast as I can. I intended to. We all got
11 to get out of here.

12 I am going read our position statement for
13 the Kentucky Association of Equine Practitioners.
14 I may interject a few comments as we go,
15 especially based upon some of the discussions that
16 have been here today.

17 As stewards of the health -- and we should
18 have and welfare -- of the horse, the 300
19 veterinary members of the Kentucky Association of
20 Equine Practitioners unequivocally support the use
21 of race day Furosemide as a preventative for
22 exercise induced pulmonary hemorrhage or bleeding
23 in the thoroughbred race horse.

24 I will interject that it is not a monopoly
25 that the thoroughbred has. Other breeds, other

1 uses; pulling horses, barrel racing horses,
2 anything that has exertional efforts that are
3 supreme can bleed. So -- and we also have it in
4 Greyhound racing dogs. We have it in humans. So
5 it is not very common in others. But compared to
6 what we know. But the endoscope has been our
7 biggest educational tool.

8 Going on.

9 It has been proven through long clinical
10 experience and rigorous prospective scientific
11 studies that the majority of racehorses worldwide
12 bleed into their lungs during strenuous exercise
13 or racing. Each episode of EIPH results in
14 cumulative damage to the lungs. And that is
15 important. Blood is an irritant. It is an
16 inflammatory component that changes the nucleosary
17 clearance in the lungs and many other component.
18 It is an ignitus for secondary infections.

19 Severe episodes of EIPH put the life of the
20 horse and jockey in danger. Furosemide has been
21 proven safe, effective at significantly reducing
22 rate, occurrence, and severity of EIPH.

23 It has a humane consideration.

24 Veterinary scientist continue to study EIPH
25 and the many factors that contribute to EIPH in

1 the thoroughbred racehorse. Until a safe and
2 effective alternative is identified, the 300
3 veterinary members of the KAEP unequivocally
4 support the use of race day Furosemide as a
5 preventative for EIPH in thoroughbred racehorses.

6 A decision to ban the use of race day
7 Furosemide unnecessarily jeopardizes the health
8 and safety of the thoroughbred racehorse and its
9 jockey.

10 For those that know me, the only thing that
11 is really important is the horse. And Dr. Scot
12 Palmer was quoted earlier today and I want to read
13 one quick quote from Scot. I talked to him the
14 other day.

15 We know from scientific and medical
16 perspective that Furosemide is good for horses.
17 But is it good for the business of racing?

18 That paradox is one we have made an enormous
19 effort to try to resolve. Fundamentally we
20 believe that what is good for the horse has to be
21 good for racing. And I think Scot kind of
22 summarizes it all right there.

23 I appreciate this meeting because you can
24 appreciate the gap between facts and rhetoric.
25 And both sides have plenty to learn. But we have

1 to continue on with research. And this is such an
2 important issue, it is not going to be ended here
3 today. And I don't really think anybody in this
4 room or on the planet has enough knowledge to be
5 able to end what we are currently doing.

6 So I stand behind this statement.

7 Absolutely.

8 MR. FARMER: Thank you very much. Any
9 questions from Commissioners? Thank you.

10 Mr. Rick Hiles, Kentucky Horsemen Benevolent
11 and Protective Association.

12 MR. HILES: Thank you, Mr. Chairman.
13 Committee members.

14 My name is Rick Hiles. I am the president of
15 the Kentucky Horsemen's Benevolent and Protective
16 Association. Also the vice-president and past
17 president of the National Horsemen's Benevolent
18 and Protective Association. And we represent
19 about over 30,000 horsemen across the country.
20 And we have about 30 affiliates across the
21 country. So this is an issue that is dear to our
22 hearts as we deal with these animals on a daily
23 basis.

24 And I want to thank this committee for having
25 this open hearing. We have heard a lot of good

1 dialogue today, some pro and some con. And some
2 of the things I have heard said I would like to
3 speak to. But I unfortunately didn't write them
4 all down. But a few that I did here, I want to
5 agree with Dr. Byars.

6 The horse is first and foremost in our heart.
7 And what we believe is good for the horse is good
8 for racing. I don't believe that the public is
9 crying out for us to do away with Lasix. I
10 haven't heard that and I have talked to several
11 people in the racetrack communities.

12 I think this is an excuse that is being used.
13 So I will go on with what I have got.

14 I have been an owner and trainer for 39
15 years. Fortunately, I was around before Lasix.
16 And I have been able to see both sides of using
17 Lasix and not using Lasix. And speaking to what
18 Mr. Leavitt said earlier about what went on if you
19 do not use Lasix, Alan, we had to withdraw horses,
20 their water, maybe anywhere from 8 to 24 hours
21 out. We withdrew their feed. Some of them
22 standing on bare ground stalls, taking their
23 bedding out. It bordered on being almost
24 inhumane.

25 And I think that you would see, if we went

1 back to these old methods, you would probably hear
2 some people crying out that we were being
3 inhumane. And the humane society may even come
4 and make an issue of that.

5 I do agree with the doctor from the humane
6 society that said cardiovascular and pulmonary
7 airways are best done by natural environment. If
8 we could all take these horses and keep them on a
9 farm out in a pasture in a field, we probably
10 wouldn't be here today having this problem. But
11 unfortunately we can't.

12 It is a business. It requires us to be in
13 dust-filled barns. The horses live 30 yards from
14 a bacteria infested manure pit. And they are
15 going to get infections. And they are going to
16 bleed. It is just a matter of fact.

17 When they bleed, they set up lung infections.
18 And the lung infections have to be treated by
19 veterinarians and that is costly to the owners.
20 As in human medicine, equine therapeutic
21 medications have come a long way in scientific
22 research and studies to make the quality much
23 better, the life of the horse much better. And I
24 don't see why we would want to go back and regress
25 to archaic ways of 30 or 40 years ago of what we

1 had to do.

2 If we tried to do this with human medicine, I
3 think there would be quite an uprising.

4 So through research and technology it has
5 given us Lasix. And until something better comes
6 along, I see no reason for us do away with it.
7 The South African study that was paid for by The
8 Jockey Club, proved beneficial -- that the
9 Lasix -- how beneficial Lasix is to the horses.
10 One thing we know for sure is that horses will
11 bleed and that Lasix helps prevent this.

12 This years Breeder's Cup had 172 out of the
13 180 horses that competed, they were running on
14 Lasix. Several of them were on adjunct bleeder
15 medicines, also. So that many trainers and
16 veterinarians, they just can't be wrong. They are
17 looking for the best interests of the horses and
18 the competition factor.

19 I would also like to add that this years
20 Kentucky Oaks and Kentucky Derby, there were
21 100 percent of the horses competing in those two
22 races on Lasix. And many of those were also on
23 adjunct bleeder.

24 So if you have never seen a horse
25 hemorrhaging on a racetrack, it is not a very

1 pretty site to see. Unfortunately I have been
2 privy to seeing this. I am watching a horse go
3 down in front of your fans and collapsing on a
4 race track, and blood gushing out his head where
5 he is laying in a pool of blood, you want to see a
6 fan uprising, you let something like that happen
7 and you will get a lot of kickback from that.

8 It endangers the lives of the jockeys and the
9 other horses in the race. And it could cause a
10 potential pileup.

11 So doing away with a simple thing like Lasix
12 to me would have to have something better than
13 what we are hearing here today to help the horses.
14 I know that in our Olympics, I have heard about
15 how clean they are. Well, the Olympics allow -- I
16 have got a list of things here -- just some of the
17 things they allow their athletes to use on the
18 days they compete. And some of the things are
19 Novocain, Xylocaine, Adrenaline, anti-depressants,
20 antihistamines, asthma drugs, caffeine, muscle
21 relaxers, anti-inflammatories, ulcer medications,
22 even cortisone injections on the day they run.

23 And they can also use a diuretic, which is
24 Lasix, if they have an exemption from the World
25 Doping Agency. We have heard about the World

1 Doping Agency. And what they do, they have
2 \$1.6 million on their budget every year to check
3 for drugs. The thoroughbred community has \$35
4 million. We are probably the most policed
5 industry of all professional sports.

6 If you don't think that the NFL or the NBA or
7 those guys are using painkillers and drugs, just
8 check the records. They are not being policed up.

9 Anyway, it is believed by me and a lot of
10 other people that a horse's hemorrhaging are
11 causing a lot of fatal breakdown. You know, they
12 say, well, we broke a leg. Well, hemorrhaging
13 first and as they go down maybe breaking the
14 animal's limbs. So, yeah, they are use -- they
15 are allowing these Lasix into their training
16 sales. And if a potential buyer is going there,
17 are we going to stop Lasix in the 2 year old
18 training sales, also.

19 So the customers, when they go there, they
20 would have an idea. There is a possibility that
21 maybe cardiovascular or pulmonary things are being
22 passed on in the breeding of a horse. Maybe he
23 has got weak walls in his blood system. So if
24 that's the case, are we going to publish this in
25 our catalogs, our sales catalogs which stallions

1 and which mares.

2 I heard Dr. Richardson today talk about they
3 wanted a different mark for horses that compete in
4 graded stake races without Lasix and ones that
5 have Lasix. Are they going to put that in the
6 catalog so when the buyers go to the sales, they
7 can say, well, this stallion produced a lot of
8 bleeders. He was a bleeder. The mares threw a
9 lot of bleeders.

10 I mean this is a big thing that we need to
11 really look at hard before we get into all of
12 this.

13 And then also, when you have got over
14 80 percent of your horses bleeding, you know it
15 costs a lot to treat the horses. We have these
16 lung infections. And the veterinarians are there
17 trying to help us all they can. But it is just a
18 way of life on the racetrack.

19 And one other thing that I just -- really
20 bothers me is that we would sit here and consider
21 taking Lasix away from a horse that would help
22 keep him from hemorrhaging. But we would allow
23 our jockeys to ride on Lasix to lose weight.

24 It is a known fact they all have to reduce on
25 weight and they use Lasix pills. But yet we

1 wouldn't consider using Lasix for the horses to
2 keep them from hemorrhaging and possibly dying.

3 So it is a bad, devastating effect. And from
4 the 30,000 horsemen across the country that we
5 represent, our 30 affiliates, and our horses, we
6 ask that you really consider what you are looking
7 at here and look at all of the ramifications that
8 may be caused from less horses, less fans, less
9 entries in races. And just make sure you make the
10 right decision.

11 And we would like to go on record as opposing
12 stopping the use of Lasix.

13 MR. FARMER: Thank you.

14 Any questions from any of the commissioners?

15 MR. WARD: I have one. Here we go to
16 clarity.

17 As I understand the HBPA's national position,
18 Lasix is the only drug that you all know of that
19 helps bleeding on race day.

20 MR. HILES: Other than adjunct. And adjuncts
21 have been done away with. And we did hear
22 Dr. Stack this morning say this they are starting
23 to use adjuncts in Dubai and other countries now.

24 So they have come to the knowledge that it is
25 beneficial.

1 MR. WARD: So you are pro Lasix on race day?

2 MR. HILES: Yes.

3 MR. WARD: You are for or against adjuncts on
4 race day?

5 MR. HILES: The national position was that
6 they would be pro to do away with adjuncts on race
7 day.

8 MR. WARD: Okay.

9 And as far as regulatory veterinarians
10 administering Lasix on race day --

11 MR. HILES: Yes.

12 MR. WARD: -- you are pro that.

13 Do you think there is a horseman in your
14 organization that would be willing to give up
15 Lasix on race day if we had another medication
16 that didn't have to be on race day that protected
17 our horses from.

18 MR. HILES: I think so, John. I, as a
19 trainer, usually don't start any of my 2 year olds
20 on Lasix. I usually try to run them as long as I
21 can without Lasix. But I know in my heart that
22 there is just a matter of time is going to come
23 that they are going to bleed. And it always has
24 happened.

25 And I have tried to go without it before.

1 MR. WARD: And I think there is a national
2 indication that probably every horseman in the
3 country, if they gave these horsemen a better
4 product to use, they would be willing to give up
5 any type of medication on race day?

6 MR. HILES: I think so.

7 MR. WARD: Thank you.

8 MR. FARMER: Thank you. We appreciate it.

9 Our next guest is Dr. Tobin, the National
10 Horsemen Benevolent and Protective Association.

11 DR. TOBIN: Racing Commissioners, honored
12 guests, ladies and gentlemen. I am going to
13 present the National Horsemen's Benevolent and
14 Protective Association position on race day
15 medication Furosemide. If I can get slides. Just
16 is a second.

17 Racing commissioners, honored guests,
18 colleagues, ladies and gentlemen. I am honored to
19 make this presentation on behalf of Mr. Kent
20 Stirling, chairman of the medication committee of
21 National Horsemen's Benevolent and Protective
22 Association.

23 Kent is also executive director of the
24 Florida Horsemen's Benevolent and Protective
25 Association. He has some compelling commitments

1 in Florida this morning, so he cannot join us here
2 in Kentucky. He extends his apologies and he has
3 asked me to make this presentation on his behalf
4 and on behalf of the National HBPA.

5 Let me first put the National Horsemen's
6 Benevolent and Protective Association in
7 perspective for you.

8 In the early years, there were no
9 organizations like the National Horsemen's
10 Benevolent and Protection Association to represent
11 horsemen's interests. Horsemen simply took care
12 of their own. So if someone was sick or down on
13 their luck, they passed the hat taking up
14 collections to help horsemen having trouble.

15 In 1940, a group of committed horsemen
16 brought into existence what is now the National
17 Horsemen's Benevolent and Protective Association.
18 Today, the National Horsemen's Benevolent and
19 Protective Association represents a total of over
20 35,000 owners and trainers of horses who are
21 members of 33 or so -- we are not quite sure of
22 the precise number -- affiliated state and local
23 organizations throughout the United States and
24 Canada and including, of course, the Kentucky
25 HBPA, one of the largest HBPA affiliates

1 represented here today by President Rick Hiles of
2 Kentucky HBPA and their executive director,
3 Mr. Marty Maline.

4 While the National HBPA is involved in many
5 issues that affect horsemen, its primary motto of
6 horsemen helping horsemen continues to this day as
7 relevant as when the National Horsemen's
8 Benevolent and Protective Association was first
9 formed.

10 As a large and active horsemen's
11 organization, the National Horsemen's Benevolent
12 and Protective Association is focused on a myriad
13 of issues, including medication for the betterment
14 of racing at all levels. Within the structure of
15 the National HBPA is the medication committee that
16 draws upon the leading experts in the industry
17 including Dr. Sams, who we heard from here today.
18 Dr. Soma. Dr. Scollay has attended our meetings
19 and contributed. Dr. Selway. My long-time
20 colleague, Dr. George Malin in New York. Dr. Rick
21 Arthur. Dr. Steve Barker. And one we will
22 particularly mention here, Dr. Paul Morley, who is
23 one of the key scientists who worked on the
24 classic South African study on Lasix that has been
25 presented here today that unequivocally

1 establishes its efficacy in the prevention of
2 EIPH.

3 These are the scientists to whom the National
4 HBPA looks to for scientific studies and opinions
5 on medication issues to protect our equine
6 athletes.

7 It is this commitment to knowledge and
8 scientific rationales and approaches to medication
9 issues that guides the National Horsemen's
10 Benevolent and Protective Association medication
11 committee headed by Mr. Kent Stirling.

12 The National Horsemen's Benevolent and
13 Protective Association, through its national
14 programs, affiliate networking, and communications
15 strives to promote the welfare and safety of all
16 of those involved in live racing, including the
17 equine athletes themselves, throughout the United
18 States and Canada.

19 The presentation that I am going to make is
20 simple and straightforward. I will read into the
21 record the National HBPA board resolution that
22 dated July 24, 2011 that I understand was
23 communicated to the racing medication and testing
24 consortium on race day Furosemide and which I
25 understand is similar to their position on this

1 matter.

2 The National HBPA Board Resolution, National
3 HBPA's Lasix Policy.

4 Whereas, the National HBPA board of directors
5 met on Friday, April 15, 2011 and unanimously
6 agreed that in the absence of scientific evidence,
7 it could not support the 5 year plan announced by
8 the Association of Racing Commissioners
9 International, RCI, on March 28, 2011 to eliminate
10 the use of race day medication, namely Furosemide
11 (Lasix), as it is currently written.

12 Whereas, based partly on the National HBPA's
13 objection, an international summit on race day
14 medication (Summit) was sponsored by the RMTC,
15 AAEP, and the NTRA in early May, 2011 to study the
16 issue of race day usage of Lasix.

17 Whereas, the national HBPA participated in
18 the Summit which presented many viewpoints, both
19 for and against the race day use of Lasix and is a
20 member of 2 sub-committees formed to prepare a
21 proposed policy on the race days use of Lasix to
22 be presented at the August 4, 2011 follow-up
23 meeting of the RMTC.

24 Now, therefore, be it resolved that the
25 National HBPA board of directors supports a

1 national race day Lasix policy which has been
2 discussed by one of the Summit sub-committees and
3 which would allow the race day use of Lasix in
4 accordance with current practices, provided that:

5 1. Lasix (Furosemide) be the designated race day
6 medication approved for usage to prevent the
7 occurrence of exercise induced pulmonary
8 hemorrhage (EIPH).

9 2. Any use of adjunct bleeder medications be
10 banned. And --

11 3. Race days administration of Lasix be
12 restricted to regulatory veterinarians.

13 Be it further resolved, based on the 2011
14 National HBPA Summer Convention Medication Forum
15 and, specifically, data related to the safety
16 hazards to both horse and rider in cases of sudden
17 extreme EIPH/Epistaxis in horses that have not
18 received race day administration of Lasix, the
19 National HBPA Board of Directors also encourages
20 the National HBPA staff, its medication committee
21 chair, and its veterinary adviser to share these
22 findings with the RCI so that the issue of horse
23 and rider safety is properly considered in the
24 context of race day use of Lasix.

25 The above resolution was passed by unanimous

1 vote of the members of the National HBPA board of
2 directors during its regular meeting held in
3 Seattle, Washington on July 24, 2011.

4 I have made this presentation on behalf of
5 Mr. Kent Stirling, chairman of the medication
6 committee of the National Horsemen's Benevolent
7 and Protective Association for the National HBPA.

8 I thank you for your attention and I remain,
9 Thomas Tobin. Thank you.

10 MR. FARMER: Thank you, Mr. Tobin. Any
11 questions from any of the members?

12 Thank you.

13 DR. TOBIN: Thank you.

14 MR. FARMER: Ms. Kathy Guillermo with -- I
15 think I messed your name up there.

16 MS. GUILLERMO: No. That's okay.

17 It's Kathy Guillermo. I am with People for
18 the Ethical Treatment of Animals. Thank you very
19 much for inviting me. I don't often get a chance
20 to sit in front of people who are making these
21 kinds of decisions. So let me tell you a couple
22 of things you might is not have known.

23 One of them is that PETA never wanted to be
24 involved in this industry at all. It was never
25 part of our agenda. We would like to get out of

1 it as soon as possible but that's not going to
2 happen until some changes are made.

3 The reason we felt pulled into this was that
4 the week following the breakdown of Eight Belles,
5 I spent 5 solid days on the telephone with people
6 from your industry who called us to say something
7 needs to be done to help these horses. We can't
8 do it within the industry. We need you to help.

9 That's why I am here today.

10 Although the focus today is the potential ban
11 on race day medications, especially the use of
12 Lasix, this forum really is a form of triage for
13 an industry that is in critical decline on all
14 fronts and in jeopardy of federal intervention.

15 The thoroughbred racing industry, like the
16 horses themselves, is bleeding -- losing fans at a
17 rate of about 4 percent a year according to The
18 Jockey Club's McKinsey report. Only 22 percent of
19 the general public has a positive impression of
20 thoroughbred racing. Even among thoroughbred
21 racing fans, only 35 percent consider themselves
22 proud to be fans.

23 The McKinsey study revealed the extent to
24 which fans have been disillusioned by a number of
25 serious problems, including animal welfare issues.

1 And at the top of the list was the rampant use of
2 drugs.

3 The horse racing industry has taken
4 significant measures. But its primary response
5 has been an attempt to remarket the sport to try
6 to change the public perception and attract a new
7 audience that way.

8 But perception isn't the problem. Reality is
9 the problem.

10 The only surprising thing about the negative
11 brand perception is that it is not even worse
12 given the number of scandals and the alarming
13 casualty rate. Yesterday alone, 5 horses broke
14 down, suffered catastrophic breakdowns at
15 Monmouth, Churchill Downs, Aqueduct, Golden Gate
16 and Albuquerque in one day alone.

17 The inability to attract new fans can be
18 attributed largely to a new moral climate in the
19 21st century in which a more informed and
20 sensitive public no longer tolerates such abuses
21 to animals.

22 In this information technology age, blinders
23 are no longer possible. The industry can't
24 selectively promote the majesty of horse racing
25 while censoring the dark underbelly. And PETA

1 will continue to relentlessly and unapologetically
2 expose these issues until real reforms are made.

3 That's our responsibility.

4 So you may ask, why doesn't PETA celebrate
5 racing's troubles and sound the death knell? We
6 think racing can be done better and we think it
7 can be done humanely. But we know than when an
8 industry is in crises, the most vulnerable are
9 even more vulnerable. When the margins are tight
10 and people are desperate and cynical, the horses s
11 are always the first victims.

12 At this time now more than ever, we need to
13 work in partnership. And that's why we are here.
14 To help you formulate policies to limit the
15 casualties which brings us to today's subject of
16 race day medications which have been so damaging
17 to the horses and to the integrity of the
18 industry.

19 There has been a sincere commitment to
20 improve testing and enforcement procedures to
21 advance detection technology and to administer
22 tougher penalties across multiple racing
23 jurisdictions for the most egregious animal
24 welfare offenses and for repeat offenders.

25 The industry that has made significant

1 strides in eliminating the obviously detrimental
2 performance enhancing medications such as anabolic
3 steroids and milkshakes. More challenging
4 questions, though, persist about the most
5 prevalent so-called therapeutic drugs in the
6 sport, in which both sides of the debate claim to
7 have animal welfare interests on their side.

8 For example, Mr. Rick Violette, the president
9 of the National Thoroughbred Horsemen's
10 Association, who is a proponent of Lasix, has
11 argued, quote, that over 80 percent of horses
12 bleed without the administration of Lasix and to
13 introduce legislation banning the therapeutic use
14 of Lasix would simply be premeditated animal
15 abuse.

16 Similarly, proponents of maintaining higher
17 race day Bute threshold levels argue that horsemen
18 concerned about residual race day positives would
19 deprive horses of needed anti-inflammatory for
20 pain relief throughout training.

21 Dr. Scollay, at an October 10 meeting at
22 Keeneland, said that for supporters of stiffer
23 medication policies, a horse needing that much
24 medication, quote, raises the fundamental question
25 of whether that horses should still be racing.

1 PETA's answer to that fundamental question is
2 simply no. That horse should not still be racing.

3 A horse should not be training or racing who
4 needs medications to numb chronic pain from
5 injuries. Or in the case of Lasix, regardless of
6 whether or not the drug has masking properties or
7 gives a weight advantage, a horse should not be
8 running if he or she requires this medication to
9 stop profuse bleeding caused from being driven to
10 excessive exertion.

11 Perhaps this is the wrong question. Are we
12 even asking the right question? The more
13 fundamental question is why any horse would ever
14 be pushed to such dangerous extremes that risk
15 exercise induced pulmonary hemorrhage.

16 Behind the adulation for every Zenyatta, is
17 the indifference for tens of thousands of horses
18 in trucks on their way to Mexico and Canada and
19 thousands more breaking down on tracks every year.

20 The career of the racehorse from training to
21 racing is inherently damaging. Every time a horse
22 circles a track, it is a fatality risk. And these
23 horses are being driven far beyond what they would
24 do naturally or voluntarily. From the
25 veterinary's standpoint, they clearly should not

1 be subject to this. So we should drop the
2 pretense that this race day medication debate is
3 primarily about what is therapeutic for the
4 animals.

5 The Greek word for drug is Pharmakon. And it
6 can mean either remedy or poison. The same drug
7 can serve either purpose depending on how and why
8 it is used. A false dichotomy similarly has been
9 generated in the horse racing industry between
10 therapeutic and performance enhancing drugs.

11 The so-called therapeutic drugs used to stop
12 bleeding or reduce pain are being used primarily
13 for non-therapeutic purposes, specially when
14 proper rest and healing are necessary.

15 For horses to withstand rigorous training
16 programs, drugs and other invasive procedures and
17 devices are often introduced. And these become
18 the standard treatments in response to the demands
19 of unreasonable training programs and racing
20 schedules. In this context in which winning and
21 speed are the focus to the detriment of the long
22 term health of the horse, the drugs can hardly be
23 called therapeutic.

24 Just as there is a false dichotomy between
25 therapeutic and non-therapeutic or performance

1 enhancing drugs, there is also a false dichotomy
2 between illegal and legal drugs.

3 The so-called legal drugs are often being
4 administered indiscriminately and sometimes for
5 nefarious purposes, often by completely
6 unqualified personnel in ways not sanctioned by
7 the appropriate legal and regulatory bodies.

8 Veterinary decisions must be made in the
9 interest and the health of the horse alone, and
10 certainly not dictated by the financial interests
11 of the connections. The race day medication
12 debate is not intelligible unless we first
13 understand this friction and this potential
14 conflict.

15 In the U. S. horse racing industry, a
16 racehorse is treated, by definition, as
17 pathological. In the U. S. model, as so many
18 people have pointed out today, 95 percent of
19 horses are treated with Lasix. Racehorse is
20 considered a diagnosis and the prescription is
21 almost automatically drugs.

22 The purpose here is not to condemn the equine
23 veterinary industry, although it is fully
24 complicit in these practices, but to rid North
25 American horse racing of the morally and

1 intellectually bankrupt paradigm, which is also
2 bankrupting the industry.

3 What is needed is a comprehensive policy that
4 addresses the rampant administration of drugs that
5 tarnish the entire North American industry from
6 the breeding shed through training and racing. A
7 race day medication ban is the appropriate place
8 to start. And we support this unequivocally.

9 But it is just the tip of the iceberg. It is
10 just the first question that needs to be asked.

11 We see the solution in the first stages as
12 very straight forward. When Dr. Rick Arthur, the
13 California Horse Racing Board's equine medical
14 director, was asked to account for the low rate of
15 fatalities at Santa Anita on the synthetic surface
16 during he 2009/2010 racing season as compared to
17 the dramatic increase in fatalities when the
18 surface was converted back to dirt as year later,
19 he described the 2009/2010 year at Santa Anita as,
20 quote, an unusually safe year. It was almost
21 European levels, unquote.

22 The obvious question is, if a safe year for
23 us is an anomaly but the standard in Europe, why
24 aren't we adopting their rules and methods. We
25 don't have to be the shame of the international

1 horse racing world. We now have the international
2 models, the demonstrated techniques with which
3 horses can run well and safely without race day
4 medications.

5 In U. S. racing, all of the eyes are on
6 Kentucky and that is why it is so important what
7 your decision is here today. Kentucky should be
8 our national model.

9 Thank you.

10 MR. FARMER: Thank you very much.

11 Any questions, commissioners? Thank you.

12 MR. CONWAY: I have a question.

13 Maybe I am misinterpreting what you said.
14 But we have heard that all horses bleed. We have
15 heard from Dr. Stack that when horses are
16 exercised or put in stress situations, that their
17 heart rate goes up 10 or 15 times, that their
18 blood pressure goes up hundreds of times.

19 Wouldn't it be inhumane to race a horse that
20 we know is going to bleed without giving them some
21 medication to alleviate the hemorrhaging problem?
22 Or are you simply saying that racing a horse is an
23 inhumane exercise?

24 MS. GUILLERMO: I am saying that the way
25 racing is conducted right now is an inhumane

1 exercise.

2 MR. CONWAY: That's what I thought you said.

3 MS. GUILLERMO: Let's flip it around a little
4 bit. And instead of saying is it inhumane not to
5 give a horse Lasix, let's ask if it is inhumane to
6 give a horse a variety of drugs over a course of
7 weeks leading up to a race, top if off with Lasix
8 and then run that horse excessively.

9 I don't believe that Dr. Stack -- and correct
10 me if I am wrong -- said that it was running alone
11 that causes bleeding. It is the excessive
12 exertion of the race that causes the pulmonary
13 bleeding.

14 Not quite?

15 DR. STACK: I didn't say that.

16 MS. GUILLERMO: All right. I apologize I
17 don't mean to misrepresent.

18 MR. CONWAY: I didn't think she said that.
19 Thank you.

20 MR. FARMER: Any other questions?

21 MS. GUILLERMO: Thank you very much.

22 MR. FARMER: Thank you.

23 Mr. Arthur Hancock, Stone Farm.

24 MR. HANCOCK: Good evening ladies and
25 gentlemen. I am a fourth generation horseman.

1 And I am here today because I love the horse and I
2 love this industry and I feel that we are in
3 danger of losing it.

4 Sadly statistics bear this out. The recent
5 McKinsey report on thoroughbred racing points out
6 that a vast majority of the population, over
7 75 percent, regards racing as a sport in which
8 drug use runs rampant. The report also says that
9 this majority of the population has a very
10 negative perception of the sport.

11 I think that is worth repeating.

12 The vast majority of the population has a
13 very negative perception of our sport. How in the
14 world can we expect to thrive and be popular when
15 the vast majority of the population views us in
16 such a negative light?

17 Another fact the McKinsey report points out
18 is that racing is losing 4 percent of its fan base
19 a year. At this rate, the time will come when the
20 business of horse racing will not be sustainable
21 and we will be out of business. Remember at one
22 time we were the leading spectator sport in
23 America. This is indeed a very sad state of
24 affairs.

25 But let me go back in time for a minute.

1 In 1966, I went to work for a trainer named
2 Eddie Nelay in New York. No race day medication
3 was allowed. There was no Lasix. No Butisol. No
4 nothing. Fans loved racing and Belmont Park was
5 full every Saturday. The only time the
6 veterinarians came to our barn was when a horse
7 had colic, a temperature, or an injury.

8 Things have certainly changed in the last 50
9 years. Nowadays, if you go to the backside at 4
10 in the afternoon, you are likely to see a
11 veterinarian's van parked at almost every barn.
12 And most racetracks in this country on most race
13 days, 100 percent of the horses are racing on
14 Butisol and 85 to 90 percent are racing on Lasix.

15 If that's an indication of the true level of
16 soundness of our horses, we are in deep, deep
17 trouble.

18 Drugs are not free of charge. And the only
19 person who pays these bills is the owner. And
20 these bills can run a thousand dollars or more a
21 month which can be up to \$12,000 a year. If the
22 training bill is \$80 a day which comes to about
23 \$30,000 a year, then these vet charges of \$12,000
24 add 40 percent a year to the expenses paid by the
25 owner for owning a racehorse.

1 Race day Lasix alone costs owners
2 \$100 million a year.

3 A lot of owners are leaving the game because
4 of these expense. And a whole lot more are very
5 unhappy about it.

6 But that's thought the only concern about the
7 drug issue. The public doesn't want it, period.
8 That's all that really matters because they are
9 the fans. And our fans keep us in business.

10 Again, the McKinsey report bears this out.
11 We have experienced, according to them, a
12 37 percent drop in handle and a 30 percent drop in
13 attendance in the last decade alone. Only
14 22 percent of the general public has a positive
15 impression of our sport. And only 40 percent --
16 only 46 percent of racing fans would recommend our
17 sport to others.

18 What the McKinsey report is saying in a
19 nutshell is that you cannot market a flawed
20 product. You sell the sizzle and not the steak.
21 The fans have spoken. We must listen to our
22 customers or continue to lose them.

23 Many say the drugs these horses get are
24 therapeutic. But therapeutic drugs are given to
25 horses who are in therapy and who are recovering

1 from an illness or an injury. Is every horse in
2 every race ill or injured?

3 Therapeutic drugs, by definition, are used
4 for healing and curing. Drugs that mask pain and
5 enhance performance are not therapeutic. They are
6 what they are; performance-enhancing drugs.

7 In speaking to English trainer, John Gosden,
8 the other day on the phone. He said the Europeans
9 have a new name for the Breeder's Cup. Do you
10 know what it is? It is what they are calling it.
11 The Bleeder's Cup.

12 What a sad commentary on our championship
13 races. And don't tell me that if you give a horse
14 Lasix and he loses as much as 25 pounds that this
15 is not performance enhancing. Why even weigh the
16 jockey?

17 As Bill Casner testified this morning that
18 the next day he weighed one of his horses, and it
19 has lost a hundred pounds because of the ongoing
20 loss overnight.

21 Ladies and gentlemen, 50 years ago horses
22 averaged 45 lifetime starts. And now they average
23 13 lifetime starts. Proponents will say that
24 these so-called therapeutic drugs are needed to
25 fill races when the obvious is that the opposite

1 is the case. Statistics prove it.

2 Since 1960, the number of annual starts has
3 dropped from 11.3 per year to 6.23 in 2009, a drop
4 of nearly 50 percent. What in the world are we
5 doing to ourselves? Imagine the economic impact
6 on the owners and the trainers alike as well as
7 the fans whose heros have short-lived careers.

8 On another note, our horse sales were once
9 driven by an international market. This
10 September, all of the million dollar yearlings
11 were bought by Americans. And this November, only
12 5 of \$18 million mares went abroad,
13 notwithstanding the fact that dollars are very,
14 very cheap. The November sale has been good so
15 far because of the life work of some our top
16 breeders has been put on the block. But watch and
17 see what happens toward the end of the sale. We
18 will be giving the horses away from nothing just
19 as we did at the end of the September yearling
20 sale.

21 It is difficult to attract investors when the
22 vast majority of the population has such a
23 negative perception of our business. In the words
24 of a top Australia bloodstock agent, quote, you
25 are isolating yourselves. And while the

1 international market will still buy broodmares and
2 occasional well-bred yearling, they won't purchase
3 many horses in training. Why would they?
4 American race horses have been overloaded with
5 drugs. And we have bred 5 generations of drug
6 dependent horses.

7 A top bloodstock agent, Hugo Lascelles, said
8 we no longer have the confidence in your stallions
9 we used to have because we don't know if the
10 horse's performance was enhanced chemically or was
11 natural. So we are becoming more and more
12 reluctant to purchase their offspring.

13 Or perhaps Louie Romine, chairman of the
14 International Federation of Horse Racing Authority
15 said it best. How can we still recognize as world
16 champions horses who run with medication? And
17 what about the horse himself? We all love our
18 racehorses, the noblest of God's creations.

19 There is a perception out there that some
20 people drug them, break down them, slaughter them.
21 And to those who do this to these noble creatures,
22 I say this, so dies the victim, so dies the
23 vampire. And by the vampire, I mean the industry
24 that allows this to happen.

25 Now then let's take a look at just one of our

1 competitors, NASCAR. I personally remember when
2 Kentucky horsemen laughed, talked about these
3 folks in North Carolina who were racing cars and
4 trying to make it into a business.

5 Now look where they are and where we are.

6 Traffic is backed up for miles as thousands
7 arrive at NASCAR events. Major companies and
8 CEO's sponsoring attend these events. Even more
9 telling is the ongoing planning for a private
10 airport to support Kentucky Speedway, the NASCAR
11 track just a few miles down the road from Turfway
12 Park, the weak sister thoroughbred track that is
13 struggling to survive. NASCAR needs this airport
14 because there is so many planes coming in the
15 Greater Cincinnati Airport that they get backed up
16 both landing and departing.

17 NASCAR allows no cheating. And if you are
18 caught for even a minor infraction, penalties are
19 severe. NASCAR fans have confidence in their
20 sport. When the integrity of the industry is
21 called into question time and time again, the
22 support for that industry will decline. And
23 NASCAR knows this. People who cheat repeatedly
24 deserve no quarter.

25 We need the squeaky clean, milk-mustached

1 image that NASCAR has. If you want our Kentucky
2 horse industry to survive and thrive, we must do
3 away with performance enhancing drugs on race day.
4 Follow the model set by Europe, Asia, Australia,
5 and the rest of the racing world. Their horses
6 all run without medication. And they are not in
7 distress. They are not bleeding to death as some
8 people here have said with all of these horrible
9 images.

10 They have a healthy industry. The fans love
11 it. Racing is thriving and the horses are happy
12 and healthy.

13 So, ladies and gentlemen, as the horse
14 capital of the world, let's lead the way by
15 becoming the first state and the first racing
16 jurisdiction to do the right thing. Let's ban
17 race day medication. Let's rejoin the
18 international thoroughbred market with clean
19 medication-free rules of racing and horses racing
20 on their performance and not on some drug that may
21 have been given to them. Let's create a level
22 playing field for everyone; horses, jockeys,
23 trainers, veterinarians, owners, and fans alike
24 and restore our reputation around world and with
25 our fans here at home.

1 Thank you.

2 MR. FARMER: Thank you, Mr. Hancock. Any
3 questions to Mr. Hancock? Thank you, Arthur.

4 MR. HANCOCK: Okay.

5 MR. FARMER: Lincoln Collins, Kern
6 Thoroughbreds.

7 MR. COLLINS: Mr. Chairman, members of the
8 committee, thank you for allowing me to speak.

9 I am Lincoln Collins. And I am president of
10 Kern Thoroughbreds, a bloodstock agency based in
11 Midway, Kentucky. I have spent almost my entire
12 working life in the thoroughbred industry and have
13 a thorough experience with thoroughbred racing in
14 several different countries.

15 The debate over race day medication is coming
16 to a head in an environment where the whole future
17 of horse racing in North America is in question.
18 We have declining attendance, falling betting
19 handle, falling purses in states that do not enjoy
20 outside support from gaming revenue, and we have
21 been through a severe recession in the breeding
22 industry which is particularly relevant to those
23 of us who live and work in the state of Kentucky.

24 It is no exaggeration to describe Kentucky as
25 the home place of the thoroughbred racehorse in

1 the United States having as it does a history of
2 thoroughbred breeding dating back more than 200
3 years. For almost all of that history, the main
4 intention of Kentucky thoroughbred breeders has
5 been to produce a better horse.

6 But what is a better horse?

7 Certainly it is a faster horse. But it also
8 needs to be a horse that is physically capable of
9 having a racing career long enough for it to be
10 able to fulfill its potential, not just in
11 Kentucky or the U. S. but anywhere in the world.

12 And owners who breed that kind of horse,
13 there are a myriad of physical defects to take
14 into account. One of which is bleeding or EIPH.
15 Bleeding is a physical problem which dates back
16 almost to the beginning of the thoroughbred breed.
17 The horse, Harrod, foaled in 1758 was one of the
18 first recorded bleeders in a race when he
19 reportedly bled in the Subscription Stakes at York
20 Races in 1766. And he has been cited by some as
21 the very source of severe bleeding in the
22 thoroughbred.

23 For generations breeders have been aware of
24 this problem and had avoided bleeders when making
25 breeding decisions. The widespread use of Lasix

1 has made it virtually impossible to know which
2 thoroughbred stallions or mares are bleeders and
3 which are sound. And, therefore, we are
4 inadvertently perpetuating the defect of severe
5 bleeding in the horses we breed.

6 This weakness remains hidden as long as the
7 only market for Kentucky's thoroughbreds is the
8 United States. Because currently all U. S. racing
9 jurisdictions allow anti-bleeding drugs. But it
10 becomes an increasing problem, both in practice
11 and in perception, when our Kentucky-bred horses
12 are being considered for purchase by overseas
13 buyers in racing countries which do not allow
14 medication of any kind.

15 Many international buyers regard the
16 performances of top American horses as unreliable
17 indicators of their ability to reproduce those
18 performances in their offspring because of
19 widespread drug use in American racing.

20 And as a footnote, just today I was told that
21 a top Australia breeder named Paul Fudge, who has
22 removed all of his mares from Kentucky, taken them
23 to France, because he does not want the offspring
24 of his mares running in an environment where the
25 result is prejudiced by the excessive use of

1 medication.

2 Many European trainers believe that American
3 horses are unsound and buy much less than they
4 used to in Kentucky. This puts our position as
5 the supplier of the world's best thoroughbreds in
6 serious jeopardy.

7 There is a thriving export market for proven
8 racehorses to go to racing destinations as far
9 flung as Hong Kong, Dubai, and Australia. This
10 market is effectively off limits to American
11 racehorses because these destinations are
12 medication free and purchasers cannot run the
13 risk, since nearly all American horses run on
14 Lasix, that the horse they buy may turn out to be
15 a bleeder.

16 Many of these destinations have compulsory
17 periods of rest for horses that bleed. And in
18 some cases, repeated bleeders are banned from
19 racing all together.

20 Having said all of that, the actual incidents
21 of severe bleeding, that is over bleeding from the
22 nostrils, is uncommon in most of the countries
23 where anti-bleeder medication is banned. While it
24 is postulated that all thoroughbreds bleed to some
25 extent, this has presumably always been the case.

1 And bleeding only becomes a serious problem for
2 horses that bleed significantly, either through
3 their nostrils or in a way that noticeably impairs
4 their performance.

5 There have been plenty of instances where
6 American horses, which have always to date raced
7 on Lasix, have run in overseas races without Lasix
8 and performed just as well they did in the United
9 States.

10 The real benefit of anti-bleeding medication
11 is to those horses that bleed severely.
12 Unfortunately, it has become obvious over the
13 years to many in the game that the use of
14 Lasix/Salix -- that the use of Lasix and Salix not
15 only does Lasix prevent this severe infirmity, but
16 in doing so, also proves to be a performance
17 enhancer.

18 The great paradox of Lasix, Salix,
19 Furosemide, or whatever you want to call it, is
20 therefore as follows. A horse with an inherited
21 infirmity, when provided with a therapy for that
22 infirmity, is able to outrun a horse which doesn't
23 have the infirmity to the first place. Therefore,
24 the horse that doesn't have the infirmity has to
25 have the therapy for the infirmity in order to

1 compete with the horse that does have the
2 infirmity.

3 The rank absurdity of this makes me feel as
4 if I am involved in the Mad Hatter's Tea Party
5 rather than a legitimate, competitive endeavor.

6 Salix and its adjuncts always get star
7 billing in this controversy because it is the
8 medication which Kentucky currently allows to be
9 administered on race day. And it gets its name in
10 the program with that ubiquitous big black L.

11 But there are various other medications
12 permitted to be present in the system of horses on
13 race day which would not be allowed in any major
14 overseas racing jurisdiction.

15 Here in Kentucky, Bute can be administered up
16 to 24 hours before the horse runs as can two other
17 non-steroidal, anti-inflammatory drugs.

18 Furthermore, various anti-ulcer medications,
19 Gastrogard, Tagamet, and Zantac, can also be
20 administered up to 24 hours before the horse runs.

21 Most international racing jurisdictions do
22 not allow these drugs or any others to be present
23 in other than trace amounts in a horse's system on
24 race day. I don't think that any reasonable
25 person argues that therapeutic medications have

1 their place in training race horses. But it is
2 imperative that horses be free of medication when
3 they compete in officially sanctioned races, which
4 are the only environment we have in which we can
5 objectively compare one horse to another both for
6 the purposes of betting and for the purposes of
7 breeding.

8 Any of us who have been involved in horse
9 racing with any degree of depth know that rumors
10 are constantly swirling that some trainers are
11 using exotic new medications that are yet
12 indetectible. And there is always the suspicion
13 that clever vets are able to use, quote-unquote,
14 legal medication to mask illegal drugs.

15 I have no way of knowing just how wide-spread
16 the use of illegal drugs is. But trainers who are
17 successful deserve to be free of the taint of
18 suspicion that they have somehow cheated. And the
19 betting public needs to be assured that they are
20 betting on horses that are competing on the same
21 terms with one another.

22 There are many people in the industry who
23 believe that some legal drugs are, quote-unquote,
24 legitimate and others are not. This argument is
25 untenable. Either a horse is running on drugs or

1 it isn't, period.

2 The integrity of horse racing has always been
3 difficult to maintain, given that so much money is
4 at stake in so many different aspects of its
5 structure. There are several interest groups
6 within the sport which fear negative financial
7 consequences from a medication ban. But our
8 governing bodies must rise above any such
9 short-term considerations and do the right thing
10 for the future of the sport and the horses that
11 make it possible.

12 The sporting and betting public simply will
13 not tolerate anything less. And neither should
14 our industry leaders.

15 Kentucky is the home of the thoroughbred
16 horse in the United States and the home of its
17 most famous race, the Kentucky Derby. I urge the
18 Racing Commission to take the lead in banning race
19 day medications. I understand that any ban will
20 have to be phased in. And I understand the
21 reasons that many people oppose this position.

22 But we face a choice.

23 We can claim, as some sadly do, that we are a
24 special case making us right and the rest of the
25 world wrong. We can ignore the needs and desires

1 of our current and future fan base. Or we can
2 recognize that we need to clean up our act,
3 address our many problems which include the
4 shameful overuse of medications and move forward
5 into a brighter era where we can retake our
6 position as the genuine source of the world's best
7 thoroughbreds.

8 Thank you.

9 MR. FARMER: Thank you, Mr. Collins. Any
10 question from any of the commissioners?

11 DR. YON: I have a couple of questions.

12 MR. FARMER: Go ahead, Dr. Yon.

13 DR. YON: I had a hard time understanding
14 some the sequence of statements that you make.
15 And borrowing from my illustrious companion up
16 here, for the sake of clarity you say that there
17 is tremendous overuse of medication.

18 As a regulator, we are here to talk about
19 race day medication. But I have a feeling when
20 you are saying that, that you are referring to
21 other medications given on days other than race
22 day.

23 Am I wrong?

24 MR. COLLINS: No. As I say, obviously the
25 purpose of this is race day medication which is

1 Lasix.

2 I was making the point that some drugs which
3 are not allowed to be present in the horse's
4 systems on race day in other countries are
5 permitted to be present in the horse's system here
6 in Kentucky.

7 DR. YON: Right. And I would like to make
8 sure that you understand that we are well aware
9 that their thresholds for determination of those
10 drugs are so much higher than it is here that we
11 will pick them up and they won't in Europe.

12 I mean you are comparing apples and oranges.
13 And you have got to be careful about that. That's
14 confusing the issue.

15 If you want to talk about Lasix on race day,
16 that's fine. But I think some of your other
17 statements are out of line.

18 MR. COLLINS: Which were those?

19 DR. YON: Well, those are that in Europe,
20 that they don't use all of these medicines. And
21 that they are not --

22 MR. COLLINS: I am not saying --

23 DR. YON: Now, wait a minute. I am saying
24 something.

25 MR. FARMER: Hold it. Hold it.

1 DR. YON: You have got to measure things with
2 the same system of drug testing. And they don't
3 use the same system that we do here. We pick up
4 everything practically. I mean we can go down to
5 many, many picograms. And they can't or don't.
6 They don't.

7 So that is not comparing apples with apples.
8 That's all I am saying.

9 MR. COLLINS: I will have to defer to you.

10 DR. YON: Done.

11 MR. FARMER: Okay. Thank you, Mr. Collins.

12 You gave us some very good information. And
13 we appreciate you coming.

14 MR. COLLINS: Thank you.

15 MR. FARMER: Our next speaker is Neil Howard
16 who needs no introduction. He is the famous
17 trainer at Gainesway Farm.

18 MR. HOWARD: I only wish I was the famous
19 trainer.

20 Chairman, members of the commission, thank
21 for allowing me to speak here today. It is not
22 that I like to being last but I will keep it sort.
23 I am the general manager at Gainesway Farm and I
24 am here speaking on behalf of Gainesway.

25 We have heard a lot of copious amounts of

1 general and scientific material presented both for
2 and against the use of Salix here today. But our
3 message is simple. We have the responsibility to
4 the public and ourselves to clean up our game. We
5 believe that Salix is used indiscriminately. As
6 we have heard here today, the percentages are high
7 and it is routine to see 2 year olds racing for
8 the first time on Salix without any real proven
9 reason.

10 Ours is a sport of individual performance.
11 And we have also heard here today by the action of
12 Salix, it improves the ability of the equine
13 athlete to perform. And, therefore, it must be
14 considered performance enhancing.

15 We have heard also heard here today and
16 believe that Salix is hard on these animals. It
17 is a diuretic causing dehydration and weight loss
18 which has compounded the effect on the average
19 number of starts per horse over the years. They
20 just don't have the stamina or the soundness and
21 longevity they used to have.

22 We also believe that the use of Salix has
23 systematically altered the gene pool both by
24 enabling otherwise inferior horses to race beyond
25 their natural abilities. And then upon retirement

1 to the breeding ranks, they pass along these
2 inferior traits to future generations.

3 And I know this doesn't happen overnight.
4 But Lasix has been in use for 20 years now.

5 Scientific advancements in pharmacology have
6 influenced many sports besides horse racing. Drug
7 use has become more commonplace in almost all
8 sports.

9 It is imperative that we endeavor to restore
10 integrity to our industry, just as other sports
11 have tried to clean up their own houses. The
12 banning of all race day medication will be a
13 bitter pill to swallow, especially for most of us
14 in this room and my generation. But the future of
15 our industry and generations to come is dependent
16 on us running an industry that is held to the
17 highest standard of integrity.

18 I also would hope that this would become a
19 whatever is -- nothing is done without being a
20 nationwide initiative. And as Mr. Ward alluded to
21 earlier with the graded stakes committee, I think
22 it would be crime if we don't use that to our
23 benefit and get some statistics so we know what is
24 going on.

25 So I hope that somebody takes that ball and

1 at least tries to figure out what -- how bad it
2 really is.

3 And I thank you for your time.

4 MR. FARMER: Thank you, Mr. Howard. Any
5 questions from anyone?

6 We have 2 other speakers who signed up and
7 wish to speak; Mr. Marty Maline, Kentucky HBPA.

8 MR. MALINE: Thank you. Chairman, members of
9 the committee.

10 This obviously has been well dissected today
11 and I don't have many comments to make other than
12 to read from an article from the late Stuart
13 Janney, owner and breeder of Private Terms and the
14 great Ruffian. He was quoted in an article as
15 saying, I know I was very much opposed to using
16 Lasix or anything else at one time. But I have
17 had bleeding happen so many times to so many of my
18 horses, that's don't feel that way any more. I
19 have gotten to be an old man and I even have to
20 take Lasix once in a while.

21 Thank you.

22 MR. FARMER: Thank you, Mr. Maline.

23 We have David England, Kentucky HBPA.

24 MR. ENGLAND: Thank you. Comments are very,
25 very short.

1 After sitting here listening all day, it
2 seems like Lasix is today's evil. As a trainer, I
3 certainly don't see it that way. We talked about
4 other sports and comparing horse racing with
5 NASCAR, and you getting rid of race day
6 medication. It seems like we have pretty much
7 done that. You know, I would think we have got
8 one of the cleanest sports there are. I think it
9 is more of marketing problem and how to address
10 this to the public more than cleaning up our
11 sport.

12 You know with Lasix being the last of the
13 race day medications that we can give, I don't
14 think you really get to a NASCAR race and wonder
15 if one of the NASCAR drivers took 2 aspirin that
16 morning to get rid of his headache to make his
17 performance a little bit better. I think we need
18 to take a real hard look at our industry as a
19 whole and compare it with other things.

20 You know, what is the NBA doing? What is
21 NASCAR doing? What are the things that they are
22 doing to attract new fans? And that's what we
23 need to do as a whole. What do we need to do
24 attract new fans? The fans has never heard of
25 Lasix. It makes no difference to them either way.

1 Thank you.

2 MR. FARMER: Thank you. Any questions?

3 That concludes today's hearing. And I thank
4 you for the thoughtful comments today. This is a
5 divisive issue.

6 We will continue to gather information and
7 monitor discussions around the country on this
8 issue. And we will keep it in our research and
9 under advisement and we will continue down this
10 road.

11 Thank you very much.

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CERTIFICATE

STATE OF KENTUCKY

COUNTY OF FRANKLIN

I, Georgene R. Scrivner, a notary public in and for the state and county aforesaid, do hereby certify that the above and foregoing is a true, correct and complete transcript of the KENTUCKY HORSE RACING COMMISSION'S RACE DAY MEDICATION COMMITTEE MEETING, taken at the time and place and for the purposes set out in the caption hereof;, that said testimony was taken down by me in stenotype and afterwards transcribed by me; that the appearances were as set out in the caption hereof; and that no request was made by counsel that the transcript be submitted for reading and signature.

Given under my hand as notary public aforesaid, this the 16th day of December, 2011.

Georgene R. Scrivner
Notary Public
State of Kentucky at Large
CCR#20042109

My Commission Expires: 7/15/2015