

Disease Du Jour podcast and webinar recording Dr. Corley

[musical introduction]

Kim Brown: Welcome to this bonus episode of Disease Du Jour on the topic of the EquiTrace Microchip App that we mentioned last year in Episode 32 in ThermoChips for Horses. I'm your host Kim Brown, publisher of EquiManagement.

The Disease Du Jour podcast is brought to you in 2021 by Merck Animal Health. Our guest today is Dr. Kevin Corley, a veterinarian who has a PhD and is double boarded in internal medicine and critical care. Dr. Corley is a director and project manager of EquiTrace Limited, which produces technology solutions for horses. He also works as an independent specialist consultant in internal medicine and critical care in the main breeding and racing area of Ireland.

Dr. Corley graduated from Edinburgh University and completed an internship and PhD in London, a residency in Virginia, was on faculty at the Royal Veterinary College in London for five years, is a co-editor of the book, *The Equine Hospital Manual*.

Thank you, Dr. Corley, for joining us today on Disease Du Jour to talk about the EquiTrace Microchip App.

Dr. Kevin Corley: Thank you very much for the invitation to speak. I really appreciate it.

Kim Brown: Last year in Episode 32, we talked about thermoChips for horses with Dr. Dorton and he mentioned tracking information from microchips, from a smartphone app. We've had quite a few questions about that app. So, in today's podcast, we want to help veterinarians better understand how they can make the best use of the EquiTrace App.

And as a bonus, Dr. Corley is presenting a webinar that can be found on EquiManagement.com on the article about today's podcasts. So, I am going to turn it over now to Dr. Corley, to show us the webinar. And then we can either listen to the podcast, or if you're interested, you can go on EquiManagement and watch the webinar.

Thank you, Dr. Corley.

Dr. Kevin Corley: Thank you very much for inviting me to talk. And today I'm going to talk about EquiTrace, which we designed with the idea of unleashing all the power of the microchip.

So, we're all fairly, very familiar with the act of scanning a microchip. You scan a microchip, get a number very quick, and then you have a 15-digit number. So, scan the microchip and you get a 15 digit number. But this 15 digit number isn't that human friendly. I used to be able to remember a few of my friends' phone numbers before I had a mobile phone in my pocket that remembered it for me. And now I can't remember too many numbers in a row, and I certainly can't remember the 15-digit numbers belonging to each horse that I see.

So, the microchip. It's fantastic, but it has its limitations. If we add the temp scan microchips, then we get this fantastic feature of temperature in addition to the identity. And the fact that those two come together is even better, because we know that temperature belongs to that horse. So, what we're trying to do at EquiTrace is take that information and build on it and put it in more human friendly way.

And the trick to that is to add the power of a smartphone. Now we all carry in our pockets this amazing computer. And so what we wanted to do was take the data from the microchip and pair it with data held in a mobile phone so that you can, simply by

scanning a horse's microchip, get not only information about its identity and temperature, but also a pocket diary of everything that happens with that horse. So, let's talk about identity first. Now, you might think that horses don't get mixed up very often, but it's not true. And one of the inspirations for this app was working as an emergency clinician. We would have clients who would drag mud-covered yearlings in from the field that were colicking, and they would say 'can you scan the microchip?'"

So, they would bring in a mud-covered yearling, and we would scan the microchip for them. And then they would take that 15-digit number, phone the office and wake someone out of their bed in the middle of the night. And that person had to go to the office and search through all the passports or the documents for the horses trying to match that 15-digit number to a particular horse, identify the owner, and finally, we could get permission for surgery. And all the time, this horse is throwing itself around desperately needing surgery.

And it wasn't just our studs that have had problems. This is from October last year, and this is a story about the trainer Aiden O'Brien. So, Aiden O'Brien had two horses in one of the high-profile races in England called the Fillies Mile and one called Mother Earth and one called Snowfall. And while they were being saddled up, they got the wrong number on the wrong horse.

And the two horses ran as each other. And it meant that they thought a 50-to-one chance had come third, but it was actually a stablemate who was eight to one. And this caused all sorts of trouble, both for the trainer who got fined and also for the racing authorities. And it's by no means unique that this happened.

So, there are a number of different times when horses have been mixed up. There's examples from Australia, from the UK, from Ireland and from Louisiana Remington Park. My favorite one is the stallion that got lost in the post Dubai Excellence and Al Samoud were both in a Newmarket quarantine yard. And Dubai Excellence was destined for Australia.

Um, he was a very good stallion and going to Australia. And Al Samoud was less well thought of and was destined for Ukraine. Unfortunately, they found out that the wrong horse was in the wrong country. And trying to get back the excellent stallion from Ukraine proved quite difficult. And I do believe he had quite a few illegitimate foals in Ukraine before he was finally sent back.

Now, if these high-stakes, high-profile incidences of the races or moving a stallion result in mistaken identity, imagine how many times it happens in the training yard, in the stud. We actually know it happens in the trading yard because the drugs positives—a number of drugs, positives—the trainer says that the wrong horse received the drug, and that's what caused the drugs positive.

And as we know that can stop the horse winning the race and create a fine for the trainer and bring racing into disrepute.

So, we're very focused on identifying the horse. Right horse, right treatment. Right horse, right transport.

So how do we do that?

Well, scan the horse's microchip and instantly the app will show you the horse identity. And if you have a biothermal microchip in the horse, it will also show you the horse's temperature.

That temperature is grafted and can also be listed. The app will also show you the highest temperature in the last seven days, the baseline morning temperature, baseline evening temperature, and the raw average temperature to help you interpret any temperature. And on this example, you can see a clear spike occurred on this horse.

Um, I've changed the name, but otherwise this is real data showing when this horse had a fever spike.

You can also list the temperatures and you can email the temperatures off for someone else to see.

Every time you scan the horse, the GPS of the phone is recorded. And this is plotted on a satellite or a map image. This means that, for example, if you're turning a horse out to a field, scan it as it goes into the field, and then you'll have a record of which horse is in which field.

You can make notes. And each note is time and date stamped and stamped with the person who made the note. And this allows quick communication on the farm.

You can also upload images and PDFs to a particular horse's file. So, anytime you're on the road or away from the farm, you can instantly get the blood results, the Coggin's result, the X-rays ... you can have on your phone, they're filed under the horse's name.

So, let's look at a couple of those features in more detail. The first one is temperature, and we know that labor costs are important to farms. Everyone is short of time. And you can really get the temperature amazingly quickly with the biothermal microchip/scanner combination.

So here, and we've got two videos in the bottom video, the temperature has been got in 2.25 seconds with a microchip scanner and in the top video we're still going trying to take a rectal temperature on this foal, it's fairly well behaved foal, but we're still waiting. And this is actually one of the causes of inaccuracy in rectal temperature in that the people tend to not be patient enough, or the foal jumps off the thermometer and people withdraw it too quickly. So, in this particular incident, the foal took 55 seconds to have its rectal temperature taken.

And here's real data from a client of mine using the app. And every day they get between 17 and 20 temperatures in less than two minutes. If you take an average of three minutes for a rectal temperature, that means in a of barn of 80 horses. It takes two people four hours to get every single temperature. Compare that with getting 20 temperatures in two minutes, or, you know, you'd have to go to the next barn.

So, you can easily get all the temperatures of 80 horses in less than half an hour with the app. We've seen that from our clients.

One thing about the biothermal microchips, there's a new study out from Australia, which suggests that if you put it in the muscle just below the nuchal ligament, rather than in the nuchal ligament itself, the temperature is very close to central temperature—the temperature measured in the central vein.

And actually, after exercise, it is more accurate than rectal temperature.

Communication. So, the app is built for teams to work around horses and everything on the app is instantly sent via the internet to other users on the farm, other authorized users on the farm.

So, if there's no internet connection at the time you take a recording, the app still works. The app will still identify the horse, and then the app will transmit as soon as it has an internet connection again.

So, the app works with both iPhone and Android. Here's a little video example of the app on Android, and it works exactly the same on Android as it does on iPhones.

Here's a little video of the app in action filmed on an iPhone.

[Music playing]

Here we see the temperature graph and here we see the identity of the horse. The location. And here you see, you can be in your office and get the data of the horse. And some of our clients, even with one horse, are using it this way. If they work in

the city and their horses at a yard, they're using the app to check if the horse is well and if the supplements and other things they've asked for have been given to the horse.

[music ends]

The data's available in various formats in the app. And one way is that you can list the data. So, you can select a date range that you want to look at the data over and just simply select it. And then you can look at all the temperatures of the horses. Each horse is clickable. So, you can go straight through to a horse's ID page if you want to get further details.

This is data that one of our clients kindly shared with us. Real data from a check on the 7th and 8th of January this year. And you can see, once again, they've got a lot of temperatures very quickly.

I've covered the names obviously for their confidentiality, but you can see that you can look down all the lists of temperatures and you can quickly spot anything that's a problem.

[musical intro to commercial break. Music plays during commercial]

Kim Brown, reading commercial script: Today's Disease Du Jour podcast is brought to you by Merck Animal Health, the makers of Prestige vaccines, Banamine, Panacure, Regu-Mate, Protazil and other trusted equine health solutions. Merck Animal Health works for you, and for horses. Learn more about Merck Animal Health's comprehensive portfolio of products as well as their ongoing investment in our industry, profession and community at MerckAnimalHealthUSA.com.

[music fades out after commercial ends]

Dr. Kevin Corley: You can also view the notes over a set period of time, and these are controlled by ... these are ordered by the name of the horse. So, you can quickly look through and see what each horse has received. If the horse has no name, it also lists the dam's name and the year of birth.

This information can also be exported from the app and looked at in your favorite spreadsheet program ... works in Excel, open Office, Numbers, whichever spreadsheet program you like best.

Documents and photos, you can upload them from Dropbox, iCloud files or photos.

Here is, I don't know quite why we want to, add a photo of a swan to a particular horse, but here we are adding a photo of a swan. You can write a description so, you know what's what, and upload it to the app and there it is. And it's available for everyone.

Now, if I go into that horse's file, I can find the horse, go into the horses file and there is the document ready to look at.

One person on each farm pays the subscription and has complete control of the data. So, if you have 10, 20, 30 people working on a farm, only one person has to pay the subscription and they have complete control of the data. They can invite other people to be able to see the data by sending a SMS message to them that will have a link in it that allows them access to the data, or they can give the name that they've used for the farm to someone else.

And if someone else enters that, they will get a little pop-up asking them to either accept or reject that person as being able to share the data.

If someone leaves the farm, they can immediately be removed from the authorized people. And that will mean that they instantly lose access to the data.

All the data is encrypted prior to sending it to the cloud server. It's encrypted on the cloud server. So that even though I have all the passwords and permissions for the cloud server, I can't read anyone else's data because it's all encrypted with a private

key to each farm. So, the data is very secure, and it is controlled by the person who's in charge of the app for that farm.

If that person leaves the farm, control can also be transferred to someone else.

For vets, there's the option to be a member of more than one farm. So, you can switch between different farms within the app, and those farms have ... you can see each of those farms' individual data, but those farms cannot see each other's data.

So, if you go from one farm to another farm, they can both maintain their records privately. And although you can see both, they cannot see each other's.

We're just adding this feature where in addition to the GPS ... GPS tells you which barn it's in, but not necessarily what stable. We've just have added and it is in beta testing the ability to also list the stable manually so that if you have an outbreak of strangles or something, you can look very carefully at what's been in what stable and have a complete record of everything that the horse has been in.

Now I'm going to give you a sneak preview of the exciting new feature that is in advanced beta testing. We expect this to be released as an addition to the existing app within the next four weeks, and this is the ability to list treatments.

So, scan the horse's microchip, and you get a list of treatments that are due for that horse. Right horse, right treatment.

Here's a video of its in action. So, scan the horse's microchip. The horse's name comes up. It tells you what drug to give and you can mark it as given. And then the app will show you that. You don't have to manually enter drugs names, although you can, because if you scan the barcode on the box with the app, it will automatically grab the app.

Furthermore, it will give you guidance on when not to compete. So, you can enter different sets of rules ... You can choose a different set of rules, which applies to your horse, and it will give you guidance as to when not to compete.

So, just to go through that again. You can, when you scan the horse's microchip you get a list of drugs which are due. There is a treatment diary, which you can list the drugs which are due. You can sort them by time, by name of the animal, by drug to give, and by stall.

When you go to enter a drug, you can either enter it by scanning the bar code on the box so that you don't have to do any entry at all, or you can start typing and it will suggest entries for you. It will also give you the guidance as to a suggested withdrawal time from competition based on the competition rules.

If you've treated the animal with any drug previously, it will list those. So that one touch button to treat it with the same drug again.

It knows all the rules. So, here's a little example where if you scan the bar code for banamine, New York Thoroughbred guidance suggested withdrawal time is 48 hours. However, if you've given phenylbutazone/butazoladine, and now I go to put in banamine. Now for the same rules for New York Thoroughbred, the suggested withdrawal time is six days to avoid a stacking violation.

So, for joint injections, you can add drug, scan the drug, in this case, it's hyaluronic acid. Say which joint is going to be injected in, in this case it's the left fore fetlock. And it will give you the withdrawal time. And it knows rules that for fetlock injections are 30 days in California that some states have 14-day withdrawals for all corticosteroids as a minimum, etcetera.

For drugs, which you're giving to a batch of animals—so, typically wormers and vaccines—you can create a list of drugs that you're giving, and then you can choose reminders for repeat treatments, and then you can choose the horses and you can filter the horses by the age of the horse, the sex of the horse, and sort them by name, dam,

year or stall. So, you can get a list of horses which matched the criteria you set, or you can just search for them by name and create a list of horses that are due to receive that same treatment.

So typical use would be all the horses in this field are going to get vaccinated, and you can set it up very quickly.

So that's the sneak preview of the medications part, which is just in final checking that all the data's correct, etcetera.

And there is a white label version of this app, which is for the US Trotting Association. So, the US Trotting Association have this app available for their members. It links straight into the database and pulls up the identity of trotting horses. The app is called USTA Chip ID, and it is a bespoke version of this app for the US Trotting Association.

So, in summary, EquiTrace is about identity, making sure that you have the right horse, that the horse has been checked, that the right drug goes to the right horse. EquiTrace gives you the location of each scan so that you know where and when every horse was scanned. With biothermo or temp scan microchips, EquiTrace gives you the temperature of the horse. that comes together with identity so there's no mistakes in writing down. There's no mistakes in measuring; the rectal temperature instantly and quickly comes to the app, and it gives you data to manage the farm.

[music playing]

This is a video we recorded in Kentucky with Dr. Dorton. Just talking a little bit more about the app. So, this is Ramsey Farm, where Dr. Dorton is the vet.

Dr. Alan Dorton: Hi, I'm Alan Dorton. I'm an equine veterinarian here in Central Kentucky, and I've been here since 1990. So, this is my 29th year here in Kentucky. I started using the Bio-Thermo chips about six years ago on the recommendation of some friends of mine at the University of Kentucky. Most of the foals we put them in usually the day they're born before they leave the foaling stall when I do the initial examinations on the foal. This way there can be no doubt as to the proper identity of each foal, because we've had as many as 200 foals here in one year. And there have been several occasions when we've had five foals born in one night.

So, identification and people can get mixed up. It's been pretty important to us here. I started using the EquiTrace app about five or six months ago, and it didn't really get here in time for use much during the breeding season and the foaling season. But I've used it a lot since then. I use it kind of like a portable medical records deal, where I enter each time I work on the horse, if it's sick, if I give it vaccines, if I do any lab tests on it. It's just like a running record individualized for that horse, and I can easily pull it up on my smartphone. So, I've been very pleased with the accuracy and also the way that the app can track each individual horse's temperature, so we can see a spike, and then we know we might have a problem.

I've been extremely happy with the chip and extremely happy with the app. Pretty much coming up with new ways to use it every day.

[music ends]

Dr. Kevin Corley: Thank you very much. And our website is www.equitrace.app.

Kim Brown: Well, thank you very much, Dr. Corley, that I think will answer a lot of questions that we've had sent to us from veterinarians around the world interested in trying to use this app and use the very large array of ways that you can not only put data in, but get data out and share it. Which a lot of the vets say that they're excited that all this can be done. I mean, the temperature is, I mean, that in and of itself would make the app fabulous using those Thermo chips, but to be able to do the things...

And then when you talked about the sneak preview of what's coming next with the treatment so forth, that's, that's pretty exciting.

Dr. Kevin Corley: We're excited. Yes. Yeah. We're excited by that.

Kim Brown: And we again, want to tell our audience that Dr. Corley presented a webinar that goes along with this podcast, that you're more than welcome to go watch. And we, do appreciate your patience. We are doing from different continents this morning as Dr. Corley is traveling. So, we had just a little bit of a glitch in trying to get one section of the podcast and webinar presented.

But thank you, Dr. Corley, for sticking with us. And we want to thank all of our guests for listening to this bonus episode of Disease Du Jour.

And don't forget, go to EquiManagement to this podcast episode and watch that webinar.

Thank you for listening to Disease Du Jour, and a special thanks to our 2021 sponsor Mark Animal Health. We invite you to listen and rate previous and future episodes of Disease Du Jour on iTunes, SoundCloud, Stitcher, or wherever you like to listen to podcasts, and take our survey so we know how you better serve you with the podcast. Or if you have any questions or suggestions like veterinarians did with the previous podcast we had, which is why we're having this bonus one, you can send an email to kbrown@aimmedia.com.

Disease Du Jour is a production of the Equine Podcast Network, an entity of the Equine Network LLC.

[outro music plays]