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An Unseasonal Month

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Unlike in the song American Pie February has not made us shiver, but it certainly has been wet at times.

Traditionally one of the driest months of the year February has had plenty of rain for the second year in a row.

Coming off a record dry December this certainly has been welcome news for the farming community but the warm moist conditions bring another set of problems.

Spore counts in parts of the North Island have recently been going through the roof

(although the sheer force of recent heavy rain may drive spores into the ground). There is certainly the potential for another heavy facial eczema season like we had two years ago.

Preventative measures of course will be number one on the agenda but Metabolase on hand is a very wise precaution.

The other problem to raise its ugly head, one that goes hand in glove with the warmth and humidity, is Parvo virus.

There have been massive outbreaks recorded, not just in the normal suspect spots but also in many rural areas.

Clearly vaccination is a priority but, as we all know, vaccination is not a replacement for good hygiene.

With SteriGENE probably the only non oxidizing disinfectant available with a log 4 reduction for Parvo virus and the proven high efficacy of the true chlorine dioxide in Swift EA is the only company supplying all the options, a high class every day disinfectant and a supreme alternative for the every other week blast for total control and zero resistance.

An unusual February is giving rise to unusual problems for this time of year but the usual fixes still work and work extremely well.



Farewell Faris

One of the features of the happy team at EA, especially over the latter part of its 50 year existence, is the low staff turnover.

This is not just a feature of the rep force but right through the company.

Unfortunately we are about to lose one of our longest serving members, warehouse manager Faris Mohammed.

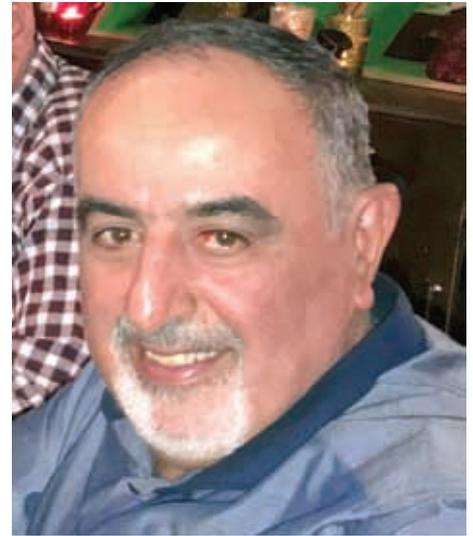
Although possessing a Master of Science degree from Baghdad University (recognized in New Zea-

land) Faris has been happy running the warehouse for nearly 17 years.

Alas he has ailing elderly parents back in Jordan that need a lot of his care and attention so he is stopping work in order to be at their beck and call more readily.

An extremely popular member of the staff with a ready sense of humour, Faris will be sorely missed.

All the best for the future Faris and, as we Kiwis say, "don't be a stranger mate."



Antibiotic Combinations

A question at the recent DCV conference was about using bactericidal and bacteriostatic drugs together; is it still considered not to be good practice? Neither speaker could answer it.

In fact the answer is not at all difficult.

Synergism and antagonism of antibacterial agents is pharmacological

theory. It is assumed that some bactericidal agents, the time dependent agents, rely on actively growing bacteria for their action.

The theory is that bacteriostatic agents halt bacterial growth so the time dependent bactericide is less effective.

It should not be such a problem with concentration dependent anti-

biotics which are strongly bactericidal and do not depend on the microorganism being in active growth phase.

In short, tetracyclines should not interfere with fluoroquinolone or aminoglycoside action.

However it would not be good practice to combine tetracycline with penicillins or cephalosporins.

Virtue

On a quiet Saturday afternoon Nagy is sitting back in his big rocking chair when he is berated by his long suffering wife.

"I have been ironing clothes, washing windows, scrubbing floors and you just sit there waiting for me to bring you a snack.

WHAT DOES THAT SAY ABOUT YOU?"

"I am very patient," Nagy replies.

Roadside Nap

Following sound advice to take a rest when sleepy Tony pulled over, stopped the car on the side of the road, settled down and closed his eyes.

He was just drifting off when a jogger tapped on his window and asked the time. Bleary eyed he reached for his watch and announced that it was 6 am.

Sleeping at last he was soon awakened by another jogger asking

for the time. "it's 6.15", he said grumpily. At this rate he wasn't going to get any sleep so he wrote a note and stuck on the window for all passing joggers to see. It read "I do not have the time."

Again he settled down for his badly needed nap but only for a few minutes before there was another tap on the window.

"Hey mate," said yet another jogger. "It's seven o'clock!"

The Big 0

2018 is a celebratory year for many, with a host of big 0 birthdays. Forgetting for a moment the fact that it is exactly 1750 years, or 1¼ millennia since the execution of Valentine, the celibate saint that a day for lovers is paradoxically named after, Carevets, one of the originators of the current drive of the veterinary profession towards corporatization, is celebrating 10 years of existence.

What began as a marketing idea has morphed into a corporate group with each clinic maintaining its individuality.

Older than that is the magazine of our profession, Vetscript, which is now celebrating 30 years of existence. It was always designed as a coffee table type of magazine to contain articles of interest to veterinarians without the dry science of a journal.

It has coexisted now for three decades alongside the NZVJ, with each admirably fulfilling its own function in our veterinary society.

When Vetscript started New Zealand had a Labour government and the United States a Republican president. Neither of them are anything like the Labour government and Republican president of today but Vetscript, while having some differences and including a more

modern look, still has similar values and purpose to that original idea of thirty years ago.

Going back a score of years from 1988 we have the beginning of Ethical Agents, now preparing for its own celebrations of half a century of existence, a real milestone in a highly competitive industry.

Early years in such a venture are about survival but critical mass has long since been achieved and now growth is strong, so much so that the company is barely recognizable from that of those early days.



1968 was one of those seminal years in history, with the Tet offensive in Vietnam, which ultimately decided the fate of the war, the crushing of the Prague uprising, the assassinations of Martin Luther King and Bobby Kennedy, the black hand protests at the Olympics and, closer to home, the sinking of the Wahine.

Who knows what 2018 will bring but it is a safe bet that world peace

is not on the agenda.

Part of the growth of EA over the years is the acquisition of more and more trading partners and one of these, Fatro from Italy, is itself having a milestone year, in this case celebrating 70 years of business.



Not only that but, in this age of gender equality, Fatro actually has more female staff members (62%) than males (38%). This is not just tokenism but is reflected on the board with the president and three out of four vice presidents being female.

Ethical Agents compares favorably in this area as well with 55% of permanent staff members being female and three of seven board members (that is including the outside member) also female.

It is also an eclectic mix with not only Maori and Pakeha but also Egyptian, Serbian, Scottish, Iraqi and Indian staff members.

A far cry from the norm of 50 years ago.

Divine Intervention

The vicar was the lone survivor of a shipwreck and, as he staggered ashore, he found himself surrounded by hundreds of spear-wielding warriors.

“Oh God, I’m finished,” he cried.

“No you are not,” thundered a voice from on high.

“Who is that?” shouted the vicar.

“It’s God, now listen carefully. Grab that spear from the thin native next to you and plunge it into the heart of the chief.”

Although terrified the vicar did exactly as he was told and, as the chief collapsed to the ground the voice boomed out once more,

“NOW you are finished!”



Old Friends

Some interesting concepts have been recently espoused regarding the prevalence of allergies in the human population. In the UK the level of asthma in the human population was about 1% 30 years ago but has risen to 10% today. Other allergic conditions also seem to be on the rise.

Experts feel that this rise is too sudden and too large to be due to genetic variation in the population and have been looking at other possible causes.

What is apparent is that this phenomenon is peculiar to the developed world; there is a very low level of allergies in third world countries. Moreover the level in immigrants from third world countries rises after they begin life in the developed world.

Immunologists and microbiologists believe that the answer lies with the microbiota of our modern society; with our living in clean and air-conditioned buildings we have lost the microbiological diversity of our ancestors.

A microbiota is an "ecological community of commensal, symbiotic and pathogenic microorganisms" found in and on all multicellular organisms studied to date, from plants to animals.

About a quarter of a century ago the hygiene hypothesis came into play; the thought being that over dependence on hygiene meant that children were not exposed to microbes and so they did not develop adequate immune systems, thus being more prone to infectious diseases.

Simply stated, a lack of early microbial stimulation results in aberrant immune responses to innocuous antigens later in life. This theory has been debunked recently as there is more disease in the inner city and that is where most of the allergies occur.

In the past, as hunter gatherers, our ancestors were exposed from an early age to a wide range of microbes prevalent in the environment. As we know, not all bacteria are deleterious to our health and, in fact, the vast majority are beneficial and we could not survive without their presence.



These 'good' bacteria are referred to as our old friends that co-existed with us for mutual benefit. Microbiologists have found different microbial flora in allergy sensitive individuals with low levels of more beneficial organisms such as *Acetobacter* and *Bifidobacteria* with higher gut colonization of less helpful organisms such as *Clostridium difficile*.

One intriguing fact is that, in the few days prior to birth, the human vagina becomes highly colonized by *Lactobacillus* organisms and these provide a lot of the initial bacterial exposure to the new-born. Of babies born by caesarean section one in five becomes asthmatic.

There are also higher levels of *Lactobacilli* and *Bifidobacteria* spp, with lower levels of *Clostridium difficile* in the birth canal if there have been older siblings born.

As well as bacterial contact our antecedents also suffered from infestations of worms, both round worms and flatworms. While the relationship was not symbiotic, like that of many bacterial organ-

"These 'good' bacteria are referred to as our old friends"

isms, but a parasitic one, it was still essential for these parasites not to kill their hosts otherwise they would ensure their own doom.

However they were able to soften the immune response to their presence and this mechanism also meant a lower reaction to other potential antigens.

Rather than lack of exposure to microbes being the major problem it is lack of diversity in the microbiota.

The concept is that significant perturbations in gastrointestinal (GI) microbiota composition in westernized areas (due to antibiotic use, dietary changes, and other lifestyle differences) have disrupted the mechanisms of mucosal immunologic tolerance.

Epidemiologic and clinical data supporting this interpretation include:

- 1) A positive correlation between increasing risk for asthma/allergies and increasing use antibiotics in industrialized countries
- 2) Correlations between altered

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Old Friends

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faecal microbiota composition and atopic disease

- 3) Successful prevention/reduction of allergies in some individuals by oral probiotics or dietary changes.

Experimental data in mice include the observations that:

- 1) Germ-free animals display numerous defects in immune response generation
- 2) Antibiotic treatment can augment Th2 type immune responses
- 3) Probiotics can diminish airway allergic responses.

Altogether, these experimental, epidemiologic, and clinical observations support the hypothesis that changes in the indigenous microbiota can be a predisposing factor for allergic disease.

Such theory begs the question as to how to go about reducing the potential for development of allergies in the population. Roundworm infestations are almost nil in the developed world and having them

reappear is not an option. Getting back to nature, i.e. having higher exposure to the natural outdoors away from the cities is clearly a good idea but not practical for most inner city dwellers.

The use of probiotics is an option but which ones? There are many effective probiotics but also many spurious claims in an unregulated industry. Clearly this is an area for growth.

There are also prebiotics, chemicals that promote the growth of beneficial bacteria in the gut. These abound in many fruits and so eating fresh fruit is a good option, but it needs to be a variety of fruit as different fruits possess different prebiotics.

And maybe less emphasis on elective caesarean sections will be more beneficial to the future health of the child.

Further reading:

Huffnagle, The Microbiota and Allergies/Asthma, PLoS Pathogens, May 2010 | Volume 6 | Issue 5

Penders et al, New insights into the hygiene hypothesis in allergic

diseases Mediation of sibling and birth mode effects by the gut microbiota, Gut Microbes 5:2, 239–244; March/April 2014; © 2014 Landes Bioscience



Budding Professionals

The old man lived in a small side street and was being annoyed by a group of kids who would play cricket in the alley using a tin can as a ball.

The noise would irritate him and sleep was hopeless so he decided to put an old business principle to work.

He called the boys together and he explained that he was an old pensioner and nothing gave him greater pleasure than to see young lads playing cricket with a tin can. He

said that, if they came there every evening and play cricket, he would pay them fifty cents each per night.

The kids thought this was great and turned up the following evening to make their usual noise and were duly paid fifty cents each.

The second night the old man explained that he was a pensioner and would they mind copping 40 cents as he was a little short. The boys accepted the money.

The third night he told the boys that he had suffered some unex-

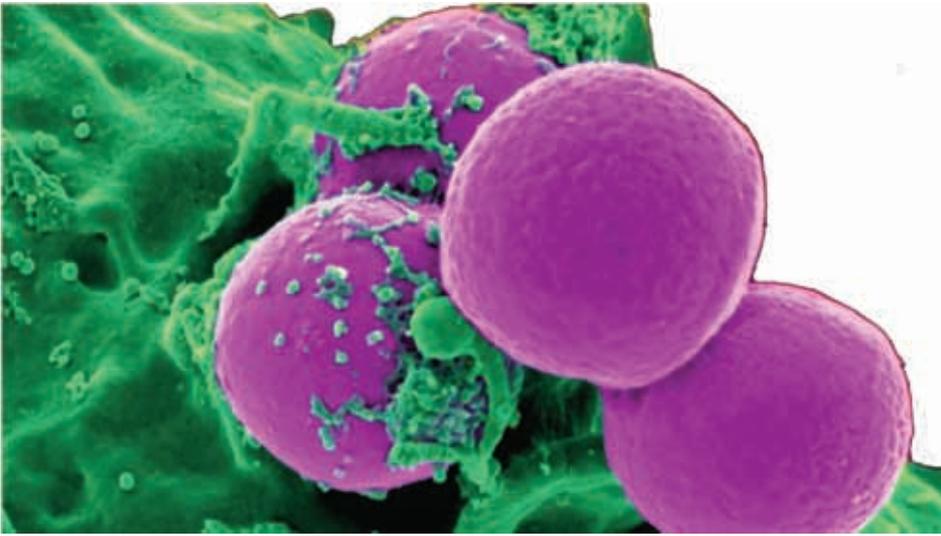
pected expenses and would they mind taking just 30 cents.

The fourth night he explained that his pension cheque had not arrived and the best he could do was five cents each.

This did not go down well. The boys looked at each other and finally one said, “To hell with this. I’m not wasting my time playing cricket for a measly five cents. I’m off.”

The rest followed, and he has never seen them again.

Equine Vets and MRSA



The following summary, prepared by Claire Thune PhD, was of a paper presented at the AAEP conference in 2017.

“When veterinarians diagnosed MRSA infection in hospitalized Thoroughbred racehorses at two veterinary hospitals in Japan not long ago, they wondered about the source of the infection.

Such cases are tough to manage and lead to lost training days, all while posing a risk to human health.

The veterinarians, who work for the Japan Racing Association (JRA), conducted a thorough investigation to determine the infection’s origin. Taisuke Kuroda, DVM, PhD, presented their findings at the 2017 American Association of Equine Practitioners convention, held Nov. 17-21 in San Antonio, Texas.

Methicillin-resistant *Staphylococcus aureus* (MRSA) is a Gram-positive bacterium that differs genetically from other *S. aureus* strains, making it resistant to many antibiotics. Therefore, it is particularly difficult to treat and causes more human deaths than methicillin-susceptible strains.

The bacterium is colonized on the skin and in the nasal passages of humans and animals. Scientists estimate that the level of nasal MRSA colonization in healthy horses is 2% in the United Kingdom and 4.7% in the United States and Canada. Among people in the veterinary community, the level of nasal MRSA colonization has been shown to be 15.6% in the United States, 9.3% in Canada, and 21.4% in Australia. There are three routes of transmission of MRSA in the human population; between people within a community, be-

tween health care workers and the larger community and between humans and livestock.

The JRA veterinarians aimed to determine the route of MRSA transmission in the infected horses hospitalized at JRA veterinary hospitals at two training centers. They collected nasal swabs from 600 healthy Thoroughbreds housed at the centers, which represented about 30% of the horses housed at the JRA training facilities. They also collected nasal swabs from 53 veterinarians, as well as 16 office staff. The office staff acted as controls, as they had no physical contact with any horses.

The team tested the swabs for MRSA, genetically sequencing any bacteria they found to determine which strains were at play.

“colonized vets can be sources for infection for their patients and for other people.”

They then compared these to the samples that had been collected from MRSA-infected horses at the hospitals. They did not isolate MRSA from any of the healthy horses or from the office staff, ruling out horse-to-horse transmission. However, they did isolate MRSA from 16 (30.1%) of the veterinarians tested. This compares to a nasal MRSA colonization in healthy Japanese people of 1.4%.

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The Check

Our Robbie and hubby Ken are off on a trip. Ken starts the car and asks Robbie to pop out and check that the indicator light is working.

He can hear her rather indecisive voice, “yes it is, no it isn’t, yes it is, no it isn’t”.



Equine Vets and MRSA

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Ten of the 16 strains were classified as SCCmec type II-ST5, which was the same classification as all nine strains isolated from the infected horses.

These findings show that no MRSA colonization exists within the healthy racehorses at JRA, but a high rate of colonization exists in the JRA veterinary community, said Kuroda. Therefore, MRSA is likely being transferred between the JRA veterinarians and horses. These results show that there is an occupational risk to veterinarians of becoming colonized with MRSA. Additionally, he said, this study confirms the need for strict hygiene

management programs within veterinary hospitals to prevent MRSA transmission between veterinarians and horses.”

This is not the only association between MRSA and veterinarians, Most reports have shown MRSA strains from horses and humans in close contact differ from those spread in the human population or pets.

MRSA infections in horse clinics are a nosocomial problem and that there is mutual transmission between humans and horses. It is hypothesized that the horses acquired them from veterinarians also attending livestock or via environmental transmission.

In short, vets, especially equine vets, are at higher risk for carrying MRSA. While carrying MRSA is not necessarily a problem for most people, it does increase the risk of development of an MRSA infection in certain circumstances. As well, colonized vets can be sources for infection for their patients and for other people.

This reinforces the need for strict hygiene management programs within veterinary hospitals.

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Bosch *et al* Transmission and Persistence of Livestock-Associated

Methicillin Resistant Staphylococcus aureus among Veterinarians and Their Household Members. Applied and Environmental Biology, February 2018, Volume 84, Issue 4

Cuny *et al* Methicillin-resistant Staphylococcus aureus from infections in horses in Germany are frequent colonizers of veterinarians but rare among MRSA from infections in humans. One Health Volume 2, December 2016, Pages 11-17

Cuny and Wilte MRSA in equine hospitals and its significance for infections in humans. Veterinary Microbiology. Volume 200, February 2017, Pages 59-64



Justice

Two magistrates were rolling home from a reunion, arms around each other, singing Sweet Adeline.

“Hey,” said one, “I think we’re drunk.”

“You’re right and, according to law, I will have to charge you with being drunk and disorderly,” said his mate.

“And you will have to appear before me at 10 tomorrow,” said the first.

The next morning in court the second magistrate pleaded guilty to the charge and was fined \$10. They then changed places.

“Drunk and disorderly, eh, fined \$20.”

“Hey,” protested the first, “When I was in the chair I only fined you \$10.”

“Yes,” said the second magistrate. “But the offence is becoming far too prevalent. You are the second drunk to appear before this court this morning.”



Gratitude

This letter was sent to a local High School Principal's office after the school had sponsored a luncheon for seniors.

An elderly lady received a new radio at the lunch as a door raffle prize and was writing to say thank you. This story is a credit to all humankind.

Dear Principal,

God bless you for the beautiful wireless I won at your recent Senior Citizens luncheon.

I am 87 years old and live at the St Anne's Nursing Home for the Aged. All of my family has passed away so I am all alone. I want to thank you for the kindness you have shown to a forgotten old lady.

My roommate is 95 and has always had her own wireless; but she

would never let me listen to it. She said it belonged to her long dead husband, and understandably, wanted to keep it safe.

The other day her wireless fell off the nightstand and broke into a dozen pieces. It was awful and she was in tears. She asked if she could listen to mine, and I was overjoyed that I could tell her to #@%\$ off.

Thank you for that wonderful opportunity.

God bless you all.

Vesna

