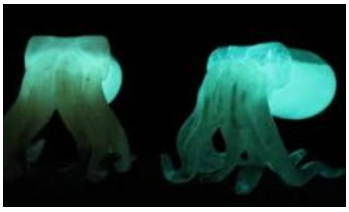
Friends of Science in Medicine
Newsletter 31— 18 March 2022

The power of one!

Siouxsie Wiles

Microbiologist Associate Professor Siouxsie Wiles loves manipulating microbes. Her passions for both bacteria and science communication found her in the spotlight during the pandemic. She has made a career of advancing our understanding of the mysteries of food poisoning, tuberculosis and hospital superbugs. The arrival of COVID-19, accompanied by a tsunami of misinformation, created new challenges which she tackled in imaginative ways, including by collaborating with cartoonist, Toby Morris. This excited her Prime Minister and the World Health Organisation.



Siouxsie leads the Bioluminescent Superbugs Lab at the University of Auckland, New Zealand. With the growth in drug-resistant bacteria, her team is currently screening 10,000 New Zealand fungi to identify potential antibiotics. They use bioluminescence to speed up the process. Because dead microbes do not glow, the 'lights go out' if the antibiotic is effective.

She has won numerous awards, including a Sir Charles Hercus Fellowship from the Health Research Council of New Zealand (2009) and the Prime Minister's Prize for Science Media Communication (2013). She is the science ambassador for House of Science, a not-for-profit science literacy in local communities. She is on the list of the BBC's 100 Inspiring Women for 2020.

An active tweeter, writer, and commentator on Radio New Zealand, she is often called upon by journalists to discuss science stories in the news. She was one of the eight scientists who fronted the 'Great New Zealand Science Project', the New Zealand government's public engagement programme leading to the National Science Challenges in 2012. She published her first book, 'Antibiotic Resistance: The End of Modern Medicine?', in 2017, and in 2019, was made a Member of the New Zealand Order of Merit for services to microbiology and science communication. She was the Kiwibank New Zealander of the Year (2021).

FSM congratulates Siouxsie on her outstanding work and achievements!

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Inside this Issue:

What to do about back pain?

Paul Rolan

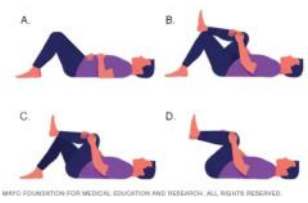
Low back pain is probably the commonest complaint presented to a health care professional. What is best practice management? FSM members would expect treatments backed by good quality evidence of safety and efficacy. With low back pain caused by heterogeneous pathologies, one should be guided by appropriate diagnostic assessments and evidence-based efficacious and well-tolerated therapy.

Unfortunately, our scientific understanding of the causes is poor by comparison with the enormous leaps of understanding in other areas, such as cancer diagnosis and management. Imaging of the lower spine in the absence of clinical suspicion of fracture or of spinal cord or nerve root involvement has a low diagnostic yield. Much evidence suggests that such imaging might be counterproductive to recovery.

A diligent radiologist will point out the visible abnormalities. A middle-aged patient will typically have multiple degenerative changes, but these might frequently be in pain-free, fit and active people. Unfortunately, patients with pain, who read their imaging reports, often lock onto the pathological findings with the take-away message "my back is wrecked" and are then advised by some practitioners to minimise activity and exercise in order to avoid further 'damage'. This starts a downward spiral of reduced function.

Although patients frequently request medication, the evidence is that it does not usually help. Ibuprofen results in clinical improvement no greater than does placebo; ditto paracetamol. Given the long-term cardiovascular risks of non-steroidals, even after short exposure, it is difficult to recommend these without an informed discussion about risks, especially because of the likely minimal likely benefit.

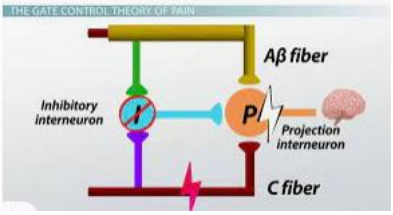
Over the last few decades, Western medicine has experimented with narcotics for such chronic pain. The rationale was "Why does one need to be dying from cancer to have relief of pain? Is it not a human right to have pain relief?" Many patients were given chronic long-term controlled-release opioids to try to improve function. Unfortunately, quality trials of such treatments are difficult. The cross-sectional data show that opioid use is associated, in a dose-related manner, with poor functioning. Unfortunately, it is impossible to conclude that the opioids directly cause poor function. It is plausible that opioids are given to patients with more suffering but, with the complexity of analysis, the most likely explanation is that the medications cause poorer outcomes. An additional consequence of widespread opioid prescribing has been misuse and harm, the 'opioid epidemic'.



Two treatment modalities have been consistently effective: cognitive behavioural therapy and exercise. This is why the staffing of multidisciplinary pain management units include psychologists and physiotherapists, often in greater numbers than doctors. Not all patients accept that positive engagement will lead to improvement. Multidisciplinary pain management units have found that the best way to achieve a good outcome is for the first interaction with the service to consist of multidisciplinary education, introducing the notion that treatment will involve psychology and physical therapies as well as medical care. Most patients who understand and engage with this message tend to do well. Those seeing their role in their own health care as passive, or who seek medication or surgery, might disengage.

Many patients ask about medicinal cannabis. From their reading of the popular literature, they perceive it as highly effective and safe, their major concern being driving restrictions. Most are surprised that the evidence of efficacy of tetrahydrocannabinol is that it is not effective, produces a high rate of adverse effects and is generally not recommended by professional societies. Cannabidiol (CBD) products appear to be relatively safe, but have not been tested as have standard pharmaceuticals. Large data registries have suggested that non-neuropathic musculoskeletal pain responds poorly to cannabis-based medicines, but that it might be useful for neuropathic pain.

A wide range of surgical interventions are offered. These include epidural steroids, laminectomy for nerve root compression, fusion to reduce movement between joints, discectomy by various methods, radiofrequency rhizolysis and facet joint injections with steroids. Spinal cord or nerve root decompression might improve major symptoms. However, for patients without clear neurological involvement, surgical procedures might provide no relief, only temporary relief, or make things worse. Few patients experience long-term benefit.



Following the pioneering experimental work of Melzack and Wall on the gate control theory, neuromodulation, using electrical stimulation (transcutaneous electrical nerve stimulation – TENS) has been used. This offered safe, scientifically-based, non-medication, targeted pain relief. Although TENS can be effective, the effect is generally only modest, benefitting a minority of patients. However, the machines are inexpensive (around $100) and safe. The medical device industry has brought out an array of increasingly sophisticated such devices. Because these can cost $25,000, their use is largely limited to the private sector. With relatively weak evidence of efficacy and high cost, such treatments are difficult to justify in the public health system.

Given the high prevalence of chronic low back pain, its effects on quality of life and the relative lack of efficacy of many evidence-based medical treatments, it is not surprising that patients seek treatment elsewhere. As there is some evidence of the efficacy of TENS, many devices offer magnetic or electrical stimulation, the logic being that, if TENS works, all electrical devices work. Our regulator of medical devices has, regrettably, largely accepted this argument.

This is difficult to understand, as the corollary would be that if one drug is effective for a condition, another drug should be assumed to be effective, even though the pharmacology might be different. It is difficult to understand why the efficacy requirement for devices is so dramatically lower than that for pharmaceuticals.

Given the known placebo response in much medicine, and many patients' belief that they 'need to do something', then, if a device were cheap and safe, even without evidence of efficacy, it might seem reasonable not to object to its sale. Unfortunately, many are expensive, costing up to several thousand dollars. This is where FSM should continue its strong voice to try to reduce the likelihood of vulnerable people being fleeced on false promises. We should also consider whether or not to take such an approach to inexpensive devices which might, in theory, have some utility.

Prof Paul Rolan MBBS, MD, FRACP, FFPM(UK), FFPMANZCA, *Senior Consultant, Modbury Hospital, South Australia., Vice-President of FSM*

Avemar— a food for special medical purposes for cancer patients is now declared unlawful

Ken Harvey

Following a complaint made on 20 August 2011, the TGA reviewed advertisements for fermented wheat-germ extract products. The TGA's assessment was that the products were therapeutic goods within the meaning of the *Therapeutic Goods Act 1989* and should not be regulated as foods.

The products were not included in the Australian Register of Therapeutic Goods (Register). The advertisements contained prohibited representations about the treatment of cancer.

On 25 October 2021, the TGA sent a letter sent to advertisers requesting cessation of unlawful advertising on websites. Avemar Australia shut down their website three days later.

However, the TGA made no mention of any action taken about the underlying problem of this complaint and others, namely Food Safety Australia New Zealand (FSANZ) Standard 2.9.5 Food for Special Medical Purposes.

"Food for special medical purposes" is defined as food formulated for individuals who have special medically determined nutrient requirements or whose dietary management cannot be completely achieved without the use of the food. They are intended to be used under medical supervision.

However, 'medical foods' can be self-declared by the sponsor without pre-market assessment by FSANZ or other authorities as to whether regulatory requirements have been met. The Standard also contains contradictory clauses concerning claims and about use under medical supervision.

The *Therapeutic Goods Advertising Code (No 2) 2018* prohibits sponsors of medicines from referring to cancer, mental illness, and others serious diseases. Standard 2.9.5 provides no such restrictions on advertising claims for 'medical foods'.

We are left with a significant discrepancy in consumer protection between therapeutic claims made for medicines compared with therapeutic claims made for food. For the former, the Therapeutic Goods Advertising Code (administered by the TGA) applies. For the latter, (administered by state and territory food health departments) FSANZ Standards apply.

Therapeutic Goods Advertising Code (No. 2) 2018

The result has been medical foods promoted for Alzheimer's disease (Souvenaid), depression (Neurofolin), and most recently, for cancer (Avemar).

To prevent a recurrence, an application for Food for Special Medical Purposes needs pre-market evaluations by the TGA and/or FSANZ (*not* self-assessment by the sponsor), the contradictions within Standard 2.9.5 need to be resolved and the TGA and FSANZ need to harmonise advertising standards across the food-medicine interface.

Bruce Arnold and I have suggested that food–medicine regulatory inconsistencies need to be placed on the agenda of a future Australian Food Ministers' Meeting.

Meanwhile, international websites, over which the TGA has no jurisdiction, continue to promote Avamar for cancer.

Dr Ken Harvey AM, MB BS, FRCPA. *President of FSM*

Transvaginal laser therapy for postmenopausal urogenital atrophy – A burning question or a commercial sting?

Alastair MacLennan

The sale and promotion of a therapeutic drug in most countries require rigorous assessment and licensing by that country's therapeutic regulatory body. However, unless a new surgical technique is subject to local medical ethics review in the context of a research trial, the technique can escape such checks and overview. New medical devices in Australia such as carbon dioxide or Er-YAG lasers can be listed on a country's therapeutic register without critical review of efficacy and safety. Thermal injury to the postmenopausal vaginal wall in the hope of rejuvenating it has become a lucrative fad for some surgeons outside of formal well-conducted clinical trials.

Among the many published studies of this technique, the large majority are small, uncontrolled and observational. The few randomised controlled trials using sham controls show no more than a placebo effect and debatable clinical efficacy – in addition to limited follow-up of adverse effects. A review of these therapies in July 2020 by the National Institute for Health and Care Excellence summarised apparent claims for some efficacy in terms of vaginal dryness, dyspareunia, sexual function, and incontinence, but noted confounding in the study's designs, such as concurrent breast cancer treatments, local oestrogen therapy and lubricants. Most studies had limited follow up for adverse events. Burns, infection, increased dyspareunia and scarring have been reported. There is no physiological mechanism by which burning atrophic vaginal epithelium will magically rejuvenate it.

A recent well-conducted randomised sham-controlled trial with a 12-month follow-up of Fractional Carbon Dioxide Laser for vaginal symptoms associated with menopause, published in *JAMA* by Li *et al* has shown no efficacy.

At 12 months, there was no difference in overall symptom severity based on a 0-100 scale (zero equals no symptoms), with a reduction in symptom severity of 17.2 in the treatment group, compared with 26.6 in the sham group.

The treatment had no impact on quality of life. "Sexual activity rates and quality of sex were not significantly different between the groups at baseline or 12 months". The study compared 46 paired vaginal wall biopsies, taken at baseline and six months into treatment, finding no evidence of significant histological improvement from laser intervention.

"The annual cost of laser treatment to the individual for management of vaginal menopausal symptoms was reported to be AUD$2,733, and, because there is no demonstrable difference *versus* sham treatment, it cannot be considered to be cost-effective."

Although one could still call for more quality sham-controlled randomised trials in different circumstances, there is no justification for touting this therapy commercially. Complications following this therapy outside of ethical trials could become the next medico-legal minefield.

Vaginal atrophy in the years after menopause is almost universal and due primarily to oestrogen deficiency. Effective solution is local vaginal oestrogen or systemic hormone replacement therapy. However, the misreporting of the Women's Health Initiative and Million Women's Study has created exaggerated fear of oestrogen therapies and thus a market for alternative and often unproven therapies. The way forward is education and tailoring of hormonal therapies to minimise risk and to maximise efficacy and quality of life – and not to resort to quackery.

Professor Alastair MacLennan AO, MB ChB, MD, FRCOG, FRANZCOG, *Emeritus Professor of Medicine and co-founder and inaugural Vice-President of FSM*

The Healy device– quantum cure or quackery?

In May 2020, the German-manufactured 'Healy' device was listed with the Therapeutic Goods Administration (TGA) for transcutaneous electrical nerve stimulation (TENS). It is used in clinics and homes with claims that it can prevent, diagnose and treat patients with a wide range of self-limiting, as well as serious, diseases and disorders. Fact or fiction?

Sold through multi-level marketing, and costing from $740 to $7,400, with a monthly subscription of up to $160 per month, Healy 'partners' state that it can boost your immunity, detoxify you, fix your chronic pain, 'balance your chakras', increase your 'wealth and abundance' and even cure thousands of conditions, including ADHD, cancer and COVID-19.

Using the 'HealAdvisor' program, you can search by disease or symptom for the "Healy Frequency programs that fit your individual needs". If you can't find your disease or disorder in this search module, their 'expert team' will identify which of the 144,000 frequencies you need for a cure. This you can download from their iCloud database to your iPhone, which is connected by Bluetooth to the Healy device which clips onto your clothing.

The manufacture's claim that it is based on science and technology and was designed by "engineers, doctors and scientists". They claim that it works through quantum physics and cell biology by emitting the relevant correct frequency, returning the membrane potential of unhealthy cells back to normal, thus restoring health.

FSM sought informed opinions in Australia and world-wide. Respondents included experts in electronic devices, physicists, cell biologists, psychologists and medical doctors. We asked them to look at the technical specifications ('Healy –Instructions for use') and to watch several videos.

Comments included the following:

- "Claims for how it might work are preposterous";
- "Extracting frequencies from various substances, so that the frequencies can be administered as therapeutics… are implausible scientifically";
- "[It] has no physically plausible mechanism of action";
- "Statements made regarding its mode of operation and conceptual basis are fundamentally incompatible with the reality of quantum mechanics and electromagnetism";
- "I cannot see any physically plausible basis of operation for the HEALY device", and
- "We do not know of any mechanism by which microcurrent frequencies can modulate ion pumps, as claimed".

Most agreed that the device was not harmful, except in respect of financial harm and representing "a serious health risk to seriously ill users who may rely on dishonest claims about its effectiveness instead of seeking expert medical help".

In June 2020, and again in February 2022, FSM wrote to the TGA about the Healy. They eventually reviewed the "company's website and associated social media platform" and issued a "detailed warning requiring immediate action". On 3rd March 2022, "Healy World Australia Pty Ltd was fined $26,640 for alleged unlawful advertising of a TENS device".

Although the Healy is still widely marketed in Australia, FSM considers this a positive outcome.

Loretta Marron OAM, *CEO, FSM*

[*** "How Healy members lie & exploit with voodoo-science" | Healy | Vulture Watch ***]

TGA and CAM

Bad influencers and bad laws


Mal Vickers

If you've not seen the ABC TV documentary 'Bad Influencer' – about the exposure of Belle Gibson's dishonesty – I highly recommend it. One aspect of the legal details stood out for me.

It wasn't that Gibson had lied and exploited the desperation of cancer sufferers that got her into trouble. The charges related to her promise to support certain charities *via* her wellness app, with the charities not receiving the promised funds.

Which is the more serious crime? Falsely claiming to support charities, or exploiting cancer sufferers? Both are reprehensible, but why no charge for the latter? I'm no legal expert, but I suspect that many reasonable people would think that exploiting cancer sufferers is where we should target consumer protection laws.

Health misinformation, especially during a pandemic, makes our public health response more difficult. Special mention goes to former President Donald Trump, who publicly commended bleach and linked mask wearing to political affiliation. However, I could name many political leaders, business leaders and celebrities, many of them Australian, who suddenly appear to be experts in epidemiology and public health.

In 2014, our valued FSM colleague, Bruce Baer Arnold, authored a submission for the Health Care Complaints Commission about medical misinformation. It's well worth a read. After seeing the documentary about Gibson, I was re-reading his document, looking for answers, when my concentration was interrupted by a call from an elderly relative. Clive Palmer's 'Urgent Communication' leaflet had been, for the second time, dropped into their letterbox.

I needn't waste my time trying to figure out why these people are promoting hydroxychloroquine, Ivermectin or any other substance. I've read the Cochrane review for Ivermectin as a treatment for COVID-19. I agree with the review: "no evidence" and "the evidence base is limited". But walk into any pharmacy, and most of the items on the shelves are in the same category. Why was *Ivermectin* pushed?

Recently, in Sydney and Melbourne, thousands were out protesting, openly defying public health orders. I had a sudden urge to scream in frustration. Responding to health misinformation is tiresome and draining, but we know that people, on a diet of misinformation, don't make good choices. The newspaper reports from the 1918 pandemic, now news again, are worryingly familiar – misinformation and quackery were a problem then. Do we again do nothing about this issue before the next pandemic?

Arguments about health misinformation often boil down to the 'freedom of speech' debate. While I'm generally in favour of freedom of speech, a line is crossed, in my opinion, when people are harmed. I argue that health misinformation is a special class of misinformation, because it contributes to avoidable morbidity and mortality. The Trumps of the world prove my point: we urgently need better laws.

And Messrs Palmer and Kelly, please stop wasting my time and our trees with these irresponsible and dangerous newspaper ads and letterbox drops – just stop it!

Mal Vickers, *FSM, Regulatory Compliance and Consumer Protection*

Snake oil leaves you breathless


Bruce Arnold

Last year's Federal Court judgment – a $3 million penalty under the *Therapeutic Goods Act 1989* for advertising an amazing range of interventions – isn't cause for celebration. It comes late. People have been harmed. The government is unlikely to collect. Rather than sending a 'well done' card to Commonwealth Health, we should be asking for better performance.

The judgment in *Secretary, Department of Health v Oxymed Australia Pty Ltd* [2021] FCA 1518 involved prosecution of Malcolm Hooper and his company *Oxymed* over claims about devices to administer hyperbaric oxygen therapy (HBOT). The devices are not illegal. They are used lawfully by hospitals and others, for example, to treat divers' 'bends'. They have no magical properties. Hooper was able lawfully to acquire the devices and operate them. Prosecution related to his advertising.

Over at least a decade, he appears to have advertised HBOT for Alzheimer's, Crohn's and Lyme diseases, autism spectrum disorders, autoimmune illness, cellulitis, cerebral malaria, cerebral palsy, chronic fatigue, dementia, infertility, kidney disease, multiple sclerosis, pancreatitis, psoriasis, stroke, Tarlov spinal cysts and, more recently, Coronavirus! The judgment includes a longer 'shopping list'.

The Court stated that Hooper and Oxymed had "a practice of posting pseudo-scientific articles targeted at a vulnerable audience" and that the advertising was "intended to engender in the unscientifically trained and vulnerable reader a perception of credibility" about interventions "not supported by scientific evidence". It noted the "risk of substantial financial harm to patients" and the more serious harm if "patients with conditions such as cancer or HIV/AIDS defer or avoid orthodox evidence-based treatment".

This late litigation comes alongside prosecution in Victoria under the state *Occupational Health & Safety Act* after patients' complaints and a death. It follows appearances in tribunals since 2011. In *Chiropractic Board of Australia v Hooper (Occupational and Business Regulation)* [2011], the Victorian Civil and Administrative Tribunal heard allegations that Hooper failed to "make a proper assessment; obtain informed consent; prepare and modify the treatment plan; liaise with other treating health practitioners and monitor outcomes ... misrepresented the likely efficacy of treatment; engaged in misleading and deceptive advertising and maintained an inadequate clinical file".

Hooper faced the Tribunal repeatedly, before eventually losing his chiropractic registration – but continuing in business outside the scope of the Health Professions Registration Act. The gullible or desperate continued seeking his services. Business was good.

Hooper wasn't invisible. His activity and complaints featured in the mainstream media. We might accordingly ask why the TGA (ie Commonwealth Health) took so long to act. Prosecution a decade late might sadly be a response to litigation in Victoria after a patient's death.

It reminds us that unregistered practitioners are willing to make money from bogus interventions and are likely to get away with it by operating in the gaps between the different consumer protection regimes and neglect by regulators. A bleak view is that Hooper attracted action by the TGA only because he advertised HBOT as an intervention for COVID.

Associate Professor Bruce Baer Arnold, *FSM, Regulatory Compliance and Consumer Protection*

Complementary Medicine Immune Boosters

Winter heralds a flood of 'complementary medicine' claims that their products, "improve immune defences and reduce the frequency of common colds". (eg FusionAstra 8 Immune tonic and Fusion Zinc Advanced) The former claims traditional use; the latter invokes science.

Fusion Astra 8 "contains eight Chinese herbs, including astragalus, which is traditionally taken as an immune tonic to enhance immunity in both traditional Chinese medicine (TCM) and Western herbal medicine".

To authorise 'complementary medicines', the TGA accepts claims of 'traditional' and/or scientific evidence. In 2018, the Therapeutic Goods (Permissible Indications) Determination limited 'advertising creativity'. But, with the industry creating the list, 86% of 1,021 indications were justified by 'traditional use'. This removed the need for evidence.

"If you are aware that there is conflicting evidence between the history of traditional use and contemporary scientific evidence for your medicine, then it is advisable to include a statement to this effect in any labelling and advertising associated with the medicine, for example: 'this traditional use is not supported by scientific evidence'". (TGA *Evidence Guidelines*)

So, does scientific evidence support astragalus – alone or in combination with other herbs? Extracts, studied in-vitro, have found specific interleukins with immunostimulatory properties. However, *clinical* studies in healthy people, the target market for winter 'immune boosters', are lacking. In addition, classical Chinese herbal prescriptions usually include five to ten botanicals. The lack of standardisation of the ingredients or extracts casts doubt on the identity of the formulae and the reproducibility of results.

Consumers need to appreciate the difference between 'traditional beliefs' and 'scientific' evidence. The Royal Australian College of General Practitioners, *Choice*, FSM and others have called for an educational statement on packs and in promotional material, reading: "This product is based on traditional beliefs and not modern scientific evidence"? Opposed by industry, TGA and Government, this is still needed.

Fusion Zinc Advance, "is a high strength Zinc supplement with 1000 mg of Vitamin C to support immune health and function". Is the sponsor's claim for scientific evidence supported?

Zinc is essential for the growth, development, and maintenance of immune function. Zinc deficiency compromises immune systems and causes other problems. Zinc is particularly important in underdeveloped countries where the risk of infection is heightened because of poor sanitation, public health and vaccination.

What about Australia? Fusion Health claims, "1 in 3 men over the age of 19 aren't getting enough zinc" referencing a 2011-2013 Australian Bureau of Statistics food survey. The Bureau's figures of low zinc levels due to dietary inadequacy in men were estimated by survey and modelling, using a value known as 'Estimated Average Requirements' (EAR) value. The sample were questioned verbally about how much each food-type they eat. This was then compared to the EAR, and percentage adequacy of each mineral and vitamin was calculated. There were no assays of plasma levels or other laboratory markers of zinc status. Regardless, most people, including vegetarians, will get enough zinc by eating a healthy, balanced diet.

The 'complementary medicine' industry often extrapolates from a nutrient's important *metabolic* role to imply that supplements benefit healthy people. This ignores the balance of absorption of minerals and vitamins with requirements, while 'excess' vitamins and minerals (over and above a regular, balanced Australian diet), will be excreted, not utilised nor stored.

What about the 1,000 mg of Vitamin C in Fusion Zinc Advance? A 2013 Cochrane Review of 29 trials involving 11,306 participants found that vitamin C supplementation failed to reduce the incidence of colds and that routine supplementation was not justified.

Recommendation: Eating a healthy, well-balanced diet (and keeping your immunisations up to date) improves immune defences; for almost all people, supplements are not required.

*By **Dr Mark Belkin** PhD (RMIT), BAppSc (LabMed) and **Dr Ken Harvey AM,** MBBS, FRCPA*

FSM Executives in the Media

FSM's recent 10th anniversary, the Omicron virus, anti-vaxxers and dodgy doctors are some of the topics the FSM Executive was interviewed about or published about since the last newsletter.

* Friends of Science in Medicine, Australia – the 10th Anniversary
* Patient beware: many a medical practitioner is naught but a dodgy doctor
* Australia's splintered healthcare system is plagued by inequity
* Omicron is fuelled by our failure to mount a coordinated global response
* The Dawning of Friends of Science in Medicine (FSM)
* Brisbane naturopath's 'outrageous, dangerous' Covid vax claims
* A Skeptical Look at the Healy "Bioresonance" Device (update)

Recent relevant publications by our Friends

Edzard Ernst

* The 'moral and intellectual decay' of COVID disinformants
* There's a sucker born every minute – particularly in the realm of so-called alternative medicine

Timothy Caulfield

* Timothy Caulfield's quest to quash a pandemic of misinformation
* In the battle to debunk COVID-19 misinformation, Ottawa Public Health officials lead the way
* Hidden camera reveals some pharmacists recommend homeopathic products to treat kids' cold and flu
* Researcher Timothy Caulfield debunks COVID misinformation

Forbes: Steven Salzberg

* The Five Stages Of Anti-Vax Angst
* Of course we should all get boosters

Science-based Medicine

* Steven Novella — Super Immunity vs Anti-Vaxxers
* Harriet Hall — Laser therapy for vaginal rejuvenation
* David Gorski — Substack: Where quacks and antivaxxers all go now
* Clay Jones — A 2-Month-Old Infant Seriously Injured by Chiropractic Neck Adjustment
* Scott Gavura — Detox: What "They" Don't Want You To Know
* Jann Bellamy — The "Natural Immunity is Real Act": Real or an act?

Jonathan Jarry

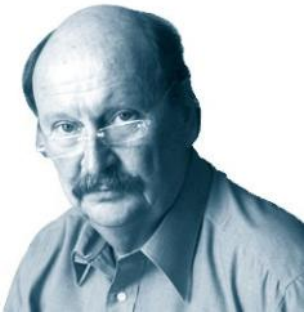
* With COVID-19, Air Is Both the Problem and the Solution
* Do Bad Viruses Always Become Good Guys in the End?

Skeptical Raptor

* COVID-19 vaccine facts and myths – UPDATED info about the new vaccines

A Special Report From Edzard Ernst

There's a sucker born every minute - particularly in the realm of so-called alternative medicine



Edzard Ernst

"There's a sucker born every minute". This phrase was allegedly coined by P. T. Barnum, a mid-19th century American showman pictured below. It describes the tendency of the gullible to believe all too readily and therefore be easily deceived.

Gullibility can be described as a failure of social intelligence in which a person is easily tricked or manipulated into a course of action for which there is no plausible evidence. To express it positively, because gullible people are naively trusting, they fall for nonsensical propositions. This renders them easy prey for exploiters.

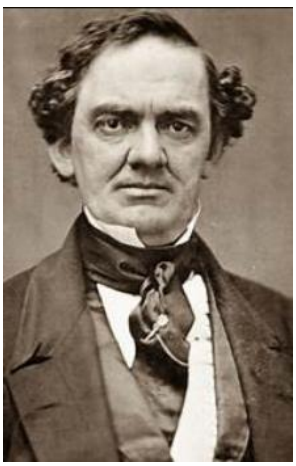
On this blog, we see our fair share of this phenomenon, *eg* people who

- are easily persuaded by anecdotes;
- disregard evidence;
- fall for pseudoscience;
- have irrational belief systems;
- thrive on fallacies;
- cherry-pick evidence which fits their beliefs;
- are unable to change their views in the face of evidence;
- interpret even contradictory facts such that they confirm their beliefs;
- have no ability to think critically; and
- would do just about anything to avoid cognitive dissonance.

Let me cite just three well-known examples from the realm of 'so-called alternative medicine' (SCAM).

Advocates of SCAM believe that *natural* means safe. Yet SCAM interventions are neither natural nor devoid of risk.

SCAM activists believe that interventions with a long tradition of usage must be fine. Yet a long history might just signify that the intervention in question is based on obsolete concepts.



P. T. Barnum

Advocates of 'integrative medicine' believe that, by adding unproven interventions to our medicine bag, we might improve health-care. Yet it is clear that such a move can only make it less effective.

If I look back on 30 years of research into SCAM, I have to say that it very much looks as though a sucker is indeed born every minute.

Is the Australian Traditional Medicine Society failing Australians?

Loretta Marron

The Australian Traditional Medicine Society (ATMS) represents the majority of natural therapists. Its Code of Conduct (2016) states "members must work within their scope of practice". This prohibits their making comments about vaccines.

Should the ATMS take action when members quote COVID-19 misinformation? In August 2021, a naturopath refused entry to her clinic for recently vaccinated people. She claimed, erroneously, that they were shedding "spike proteins" caused by "these experimental treatments". Although alerted to the comments, the ATMS took no action.

In July 2014, the Queensland Office of the Health Ombudsman (OHO) replaced the former Health Quality Complaints Commission (HQCC) to become "the single entry point for all complaints about health services and health service providers." There is no other independent authority in Queensland which can deal with complaints about 'alternative medicine' (AltMed) practitioners.

In October 2021, a complaint to the OHO was rejected as it was "not satisfied there is evidence of serious risk which would require action". (However, on 8 December 2021, a similar complaint, to the South Australian Health and Community Services Complaints Commissioner (HCSCC), about "an anti-vaccination article he authored", resulted in a 'prohibition order' against the naturopath.)

FSM Immunology Consultant, Emeritus Professor John Dwyer, was interviewed about the claims made by the Queensland naturopath. He found that he "is basically saying the vaccines don't work at a time when we are trying to round out our number and get to a point where we can live safely together … this is the sort of thing we don't need".

On 1 November, FSM President, Professor Ken Harvey, wrote to the ATMS detailing the extensive list of claims published on that same member's website which "contradict the information published by our Health Ministers and the Government". Dr Harvey asked the ATMS what action they intended to take. We have received no response; the articles remain on-line.

This correspondence is one of a series of letters written to the ATMS in the past seven years about the professional misconduct of members who consistently use invalid pathology tests and unlisted medical devices and who make false and misleading claims for many of the products they sell. The ATMS has never responded.

AltMed practitioners have no interest in the conclusions of Cochrane Reviews, the gold standard for high quality information, nor in peer reviewed complementary medicine databases, especially when they contradict their personal beliefs – and threaten to curb their profits. They prefer to 'cherry pick' articles and anecdotes to convince their patients that they have something better to offer than clinically proven therapies.

If AltMed practitioners are genuine about helping patients, should they study up-to-date research rather than remain ignorant of the progress being made by medical science? If the ATMS has a role in educating their members, should it not be encouraging them to learn about evidence-based medicine?

During a pandemic which has killed more than 5 million people worldwide, surely the ATMS should at least ensure that their members remove COVID-19 vaccine misinformation from their websites! Is that too much to ask?

Loretta Marron OAM, *CEO, FSM*

Veterinary Medicine and CAM

Tanya Stephens about her new book

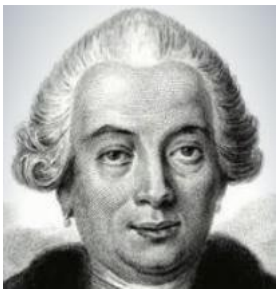
Tanya Stephens

A book on 'One Welfare', the interrelationship between animal welfare, human wellbeing and the environment, has never felt more relevant than when the world is in the long grip of a zoonotic pandemic.

Over the past 60 or so years, societal interest in animal welfare, as well as in the environment, has been evident. Animal welfare, the environment, and human wellbeing cannot be conveniently separated. Protecting the planet and all its inhabitants is urgent. Climate change, biodiversity loss and new and emerging pandemics present existential threats to humankind. A debate is needed about balancing human needs and the environment, food production to feed a burgeoning population, and balancing animal health and welfare.

Most importantly, practical and achievable evidence-based solutions are needed soon. These cannot be achieved without prompt action and collaboration between people with a common goal – not only to make the world a better place in the short-term, but livable in the long-term. Veterinarians play an essential role in the 'One Welfare' agenda.

We live in the new 'Anthropocene geological epoch,' A great acceleration of human activity has altered our planet, losing as much as half the tropical forests to agriculture and human settlements. Around one-third of emerging communicable diseases, probably including COVD-19, are the result of these rapid changes in land use – increasingly leading humans into close contact with wildlife's viruses.



Claude Bourgelat

'One Welfare' is not new. Concern for more than the individual animal is not a novel concept for veterinarians, but an integral aspect of veterinary professional ethics. The emergence of 'One Health' and recently 'One Welfare' is, in a way, re-inventing the wheel in response to fragmentation and specialisation within our profession. The idea that veterinarians have a concern for more than their patients, but also for humanity, is longstanding. When Claude Bougelat established the first veterinary school in Lyon in 1761, he intended that these new animal doctors should be regarded, alongside other medical professionals, as being in the service of humankind.

The 'One Health' Commission and 'Vet Sustain' make significant contributions to the book. Individual chapters address broad aims. Firstly, animal welfare is central to the chapters on laboratory animals, working animals, live exports and fish. The second category deals with the humane application of control measures for wildlife management, pest control and disease control programs for farm animals.

The chapter on rabies control in Indonesia provides an example of the 'One Health'/'One Welfare' approach to addressing a complex problem. The third category examines broad environmental aims – such as food security for humans in subsistence communities, the animal welfare impacts of land clearing, and climate change.

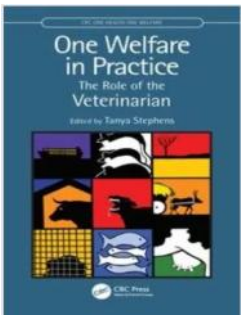
Contributors bring expertise and experience to demonstrate how, using professionalism and best evidence, veterinarians can and are contributing to the 'One Welfare' agenda and highlight the importance of collaboration.

Tanya Stephens *BVSc (USyd) MSc IAWEL (Edin) MANZCVS (Animal Welfare) FRCVS.*

New Books

One Welfare in Practice: The Role of the Veterinarian:

The interrelationship between animal welfare, human wellbeing and the environment, in a pandemic, has never been more important



Tanya Stephens

Animal welfare has long been recognised as central to the role of the veterinary professional, but this is increasingly aligned with the welfare of humans and the broader environment in which we co-exist. This is the first book dedicated to the role of the veterinarian in One Welfare, a concept which recognises the interconnections between animal welfare, human wellbeing, and the environment.

Fake Medicine:

Exposing the wellness crazes, cons and quacks costing us our health

Brad McKay

We all want to live healthier, happier and longer lives, but too many of us are charmed by charlatans, misled by marketing or scammed by 'sciencey'-sounding salespeople. Too often, when it comes to making important health decisions, we place our trust in online influencers, celebrities and Dr Google. Fake Medicine explores the potential dangers of wellness warriors, anti-vaxxers, fad diets, dodgy supplements, alternative practitioners and conspiracy theories.

Flesh Made New:

Exposing the burgeoning business of stem cell treatments

John Rasko and Carl Power

The dazzling promise of stem-cell medicine: does it work and will it save us? Two experts look at the hype. For decades, we've been anticipating the dawn of regenerative medicine. Again and again, we've been promised that stem cells will soon cure just about every ill imaginable. If not tomorrow, then the next day, or the day after that, and so on. We're still waiting.

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