



Friends of Science in Medicine

Newsletter 23—28 December 2019

WHAT'S NEW SINCE OUR LAST NEWSLETTER?

The power of one!



John Cunningham

John Cunningham *BSc(Hons), MBBS, MCLinEpi, FRACS, FAOrthA* is an Australian-trained Melbourne orthopaedic surgeon who specialises in spinal disorders and is active in clinical research. His knowledgeable opinion, especially about ageing spines, spinal trauma and spinal imbalance, is respected worldwide.

Dr Cunningham has been publishing research in international journals since 1993. He presents at Australian and international meetings and he holds Visiting Medical Officer appointments at both Epworth (Richmond) and the Royal Melbourne Hospital.

He is concerned about chiropractors' treatment of children. In 2012, a four-month-old baby sustained a fractured neck vertebra after a chiropractic manipulation. The paediatrician who treated the infant reported that, if the injury was another few millimeters closer to the spinal cord, there would have been a devastating injury and ["the baby would have either have died or had severe neurological impairment with quadriplegia"](#).

However, the Australian Chiropractors' peak body, the CAA (now the Australian Chiropractors Association), immediately published a contrary media release ["Chiropractor Cleared: Allegation of Neck 'Break' Wrong"](#). It referred to a diagnostic report of one of the child's MRIs by a chiropractic radiologist which challenged the paediatrician's investigation. This report was tabled in Parliament. Cunningham challenged the chiropractors report stating that the Queensland Parliament had been misled. The original report of the child's complete imaging demonstrated that there was "new bone formation" and "healing of a concurrent fracture" which could have happened only if there had been an acute fracture. Cunningham [continues to expose chiropractors](#) who are "cracking backs of babies as young as four days old", while warning parents of the unnecessary risks and expense of taking children to chiropractors who are "offering them what can only be a placebo."



He is a spokesmen for [Stop the AVN](#) (The Australian Vaccination-risks Network); he emphasises the importance of reducing the influence of such groups, and fights 'back-door' tobacco advertising [through sponsorships](#) of Formula-1 motor racing.

In 2016, Cunningham was awarded an OAM for services "to medicine and the promotion of immunisation". In 2017, Australian Skeptics awarded him ["The Thornett Award for the Promotion of Reason"](#) – "in recognition of his continued and authoritative exposure of chiropractic misconduct and anti-vaccination misrepresentation".

FSM congratulates John on his outstanding work.

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IQC International Seminar 10²³ - Brazil



Based in Sao Paulo, Brazil, [The Question of Science Institute \(IQC\)](#) is a non-profit, non-partisan association seeking “to bring science into the policy debate with the aim of demonstrating that scientific evidence ensures the development of a country”. It acts on three fronts: Science

Education, Science Journalism and Science Advocacy.

The association invited UK-based Michael Marshall, Director, *Good Thinking Society (GTS)* and the creator of the original international [10²³ campaign](#), and FSM’s CEO, Loretta Marron, to join in celebrating the Institute's first anniversary and to launch their own 10²³ campaign, an initiative aiming to raise public awareness about the ineffectiveness of homeopathy. (The term 10²³ is a reference to the chemical/pharmaceutical term, Avogadro number – the degree of dilution from which no more active principal molecule is found in a final product. Homeopathy claims to work with much larger dilutions.)



The *Sistema Único de Saúde (SUS)*, is Brazil's publicly funded health care system. While there are 29 current integrative practices in the system, unjustifiable by any scientific criteria, homeopathy was chosen because the practice “links a historical popularity that is fundamentally a result of disinformation to political and corporate interests”.

The aim of the 10²³ campaign is to help consumers appreciate that homeopathy is not science and to emphasise the importance of evidence-based medicine. Homeopathy is taught as factual in both medical and pharmacy degrees in Brazil.

The IQC event and its emphasis on homeopathy attracted widespread media



Loretta Marron (FSM), Michael Marshall (GTS) Natalia Pasternak and Carlos Orsi (IQC)

attention and featured on the cover of [SAUDE](#), a health magazine, and also in the newspaper [Folha de S.Paulo](#) (circulation over 300,000) and the [Scientific American \(Brasil\)](#).

‘WHACK-A-MOLE’ IN BRAZIL!



Prof Luis Carlos

The [Biomedical Science Institute, University of Sao Paulo University \(USP\)](#), invited (via Skype) FSM’s President, Dr Ken Harvey, to discuss the Whack-a-Mole project, a successful Monash University initiative launched in 2016. Following the presentation, the Dean, Biomedical Science, USP, [Professor Luís Carlos de Souza Ferreira](#), confirmed that it would be introduced in 2020 as an ‘extension’ program, (university initiatives which give back to the community) as part of a new discipline, aimed at biomedical, legal and science communication students.

SPOTTERS WANTED!

Want to be a ‘Public Health Activist’? The ‘Whack-a-mole (WAM)’ project needs your help! Developing university students’ skills in critical thinking, research and in understanding our regulatory system, this project needs to be provided with more advertisements that may be making questionable therapeutic claims.

If you see any therapeutic goods or services making outrageous claims - don’t get angry, get emailing! Send the links or copies of advertisements (and where and when they were published) to our CEO, at scienceinmedicine@bigpond.com.





Looking to China for a remedy: inside the National Institute of Complementary Medicine

Reproduced in part with permission from Liam Mannix

The National Institute of Complementary Medicine was in trouble. Set up in 2007 with federal government money, its job was to research the scientific validity of complementary medicines such as acupuncture.

But by 2015 it was struggling to bring in research funding.

UWS researcher receives accolade for Chinese Medicine research



Alan Bensoussan receiving Award

Confidential board documents, obtained by The Age and The Sydney Morning Herald, show its parent organisation, Western Sydney University, had become “concerned about their relatively high level of financial support for NICM”. At a cost of about \$2 million per year, the institute was a drain on the university’s coffers.

So the institute decided to change focus and reach across the seas for funds. Under director Professor Alan Bensoussan, the NICM, and through it the university, began to concentrate on the controversial practices of traditional Chinese medicine.

What happened next shows the extensive, unreported links between an Australian university and the Chinese government - links that had potential to indirectly assist the aims of the Chinese Communist Party.

In response to its funding shortfall, the NICM lined up millions of dollars from a property developer called Yuhu group, chaired by Huang Xiangmo, a man with well-reported connections to organisations associated to the Communist Party. Huang was a big political donor to both sides of politics, a Crown casino high roller and the man whose relationship with [Sam Dastyari](#) resulted in the Labor senator quitting politics in disgrace.

NICM
Health Research Institute



Then the NICM secured a pledge of \$20 million from the Beijing University of Chinese Medicine. The money was originally lined up for a hospital of Chinese medicine in Westmead, Sydney. Bensoussan prepared to announce the funding as a coup as, according to a 2015 strategic review, “the Chinese government looks for Western validation and greater use/patient benefits from [Chinese medicine]”.

“This is universally regarded as the most critical short term source of additional research funding for NICM,” the review continued, and NICM and Australia were “ideally positioned to leverage its strengths in [Chinese medicine]”.

A separate document, also obtained by The Age and Herald, urged the NICM to “seek endorsement and influence from the Chinese government”, and named Chinese President Xi Jinping as a key person to engage. The strategy was entitled “Building a Bridge Between China and Australia”.

The centre now denies that any of the funding, either from Huang or the Beijing University, actually came through. This year, Western Sydney University cut the ribbon on a new health centre in Westmead, offering services including acupuncture and Chinese herbal medicine. They say it has been fully funded by the university.

What is not questioned is the desire of the Chinese Communist Party leadership to sell the benefits of its medical practices to the West as part of its national propaganda effort.

[To read the complete article: <https://www.smh.com.au/national/looking-to-china-for-a-remedy-inside-the-national-institute-of-complementary-medicine-20191108-p538mm.html>]



FSM Executives in the Media

Homeopathy, the National Institute of Complementary Medicine and fake cancer cures are some of the topics the FSM Executive was interviewed about or published about since the last newsletter.

- * [Looking to China for a remedy: inside the National Institute of Complementary Medicine](#)
- * [Homeopathy really works?](#)
- * [Movement that demoted homeopathy in the United Kingdom and Australia has come to Brazil](#)
- * [Pushing the last frontier: The Flinders Uni researchers cracking the colon code](#)
- * [Breast surgery: More women choosing fat transplant surgery over breast implants, says expert](#)
- * [Fake cancer cures and snake venom extractor top list of complaints to drug watchdog](#)
- * [University under fire for mushrooms claim after sponsor revealed](#)

Chiropractic spinal manipulation of children under 12

On 8 March 2019, following media exposure of [‘horrificing footage’](#) of chiropractic treatment performed on a two-week-old baby, published online by a Melbourne chiropractor, the Victorian Minister for Health, the Hon. Jenny Mikakos MP, calling the treatments “unprofessional and unacceptable”, instructed Safer Care Victoria (SCV) to undertake an independent review.

The Council of Australian Governments (COAG) consists of federal, state, and territory Health Ministers. In March, it noted community concerns about chiropractors’ spinal manipulation of children and agreed to consider whether or not public safety was at risk. [COAG welcomed](#) the Victorian Health Minister’s proposal for an independent review with the findings to be reported to the Council.

On 14 March 2019, the Chiropractic Board of Australia (CBA) responded by setting [an interim policy on spinal manipulation for infants and young children](#) until the SCV review was completed. The Board’s recommendation, pending the review’s conclusions, was that **“chiropractors not use spinal manipulation to treat children under two years of age”**.

[The Safer Care Victoria report](#), based on the lack of evidence of effectiveness for a range of conditions, was published on 31 October, 2019. Recommendation 1 states that spinal manipulation should not be provided to children under 12 years of age, by any practitioner, for general wellness or for the management of the following:

- * developmental and behavioural disorders;
- * hyperactivity disorders;
- * autism spectrum disorders;
- * asthma;
- * infantile colic;
- * bedwetting;
- * ear infections;
- * digestive problems;
- * headache;
- * cerebral palsy; and
- * torticollis.



Photo Youtube

The CBA had also stated that the outcomes of the SCV report would be “used to inform future policy on the regulation of spinal manipulation for infants and young children for public protection.”

FSM will publish any relevant future changes in CBA policy.



An avoidable tragedy

The measles epidemic in Samoa

Dangerous universal misinformation about vaccines' efficacy and safety is creating a threat to public health. The danger is manifested in global outbreaks of measles.

This most contagious viral infection was almost eliminated, but 'anti-vaxxers', using social media, have undermined confidence in immunisation. Only a small drop in rates can trigger outbreaks. We are seeing how such propaganda contributes to a disastrous epidemic.



John Dwyer

Samoa has a massive outbreak following a 70% fall in vaccination. For some time, Samoans have been subjected to anti-vaccination propaganda. As if to support such warnings, two [infants died after receiving MMR vaccine](#). The mistake had been made by nurses diluting the vaccine with a muscle relaxant instead of water.

Despite knowledge of the cause, anti-vaccination advocates highlighted these deaths as evidence that the vaccine was unsafe.



[Over 80 deaths have occurred](#), from measles, mainly in children. Survivors might be predisposed to future health hazards; the virus can provoke "immune amnesia", destroying antibodies produced to protect from other infections. Despite a massive vaccination program and government orders that all must remain housebound, the epidemic still rages, bringing the country to a standstill.

There have been so many cases in the Philippines that hospital staff were treating patients in car parks. Unvaccinated Philippine travellers spread the disease to New Zealand – from there it spread to Samoa.

The anti-vaccination targeting of ultra-orthodox Jews in the US and Israel and their travelling by air between the two, and of Somali US immigrants, has resulted in outbreaks of measles in these three communities.

Despite rigorous research proving the opposite, the well-funded organisation of [Robert Kennedy Jr.](#), nephew of President Kennedy, who is [criticised as being anti-vaccination by his own siblings](#), insists that autism is caused by vaccines. Kennedy, in Samoa in June, met Australian activist, [Taylor Winterstein](#). She tweeted that she was "deeply honoured to have been in the presence of a man I believe can and will change the course of history". She has 25,000 Instagram followers and was planning, as part of a global tour, a Samoan anti-vaccination workshop. This was cancelled by health officials.

Since its inception, *Friends of Science in Medicine* has countered misinformation propagated by 'Australian Vaccination-risks Network Inc'. This organisation remains active on social media and YouTube. One would like to think that this measles tragedy could have them re-thinking their stance. But passionate ignorance is immune to facts!

The [2019 measles epidemic](#) must see all engaged in public health advocacy improve the education of the community and build trust in our scientific advice



The massive publicity now associated with this tiny island's tragedy might well have global ramifications as the benefits of immunisation and the hazards associated with its neglect have never been more obvious.

Professor John Dwyer, Foundation President Friends of Science in Medicine



General Practice and CAM Column by Dr Benson Riddle

Integrating Fallacy with reason?



Dr Benson Riddle

A recent Radio National debate on whether complementary therapies and mainstream medicine can be integrated highlighted that the only thing that ends up getting integrated is fallacy with reason.

In October, [Radio National's Life Matters](#) program presented an informal debate between Alastair MacLennan and the president of the Australasian Integrative Medicine Association (AIMA). The topic: 'Can complementary therapies and mainstream medicine be integrated?' Though offering up the usual CAM tropes, it's well worth dissecting the AIMA president's arguments.

The AIMA president's first justification was a classic *argumentum ad populum* – because 70-75% of the Australians use some form of complementary medicine. The president then doubled down by suggesting if so many people are using it, it is the responsibility of doctors to know about it. But where does this end? To what extent does one increase one's knowledge base of non-science based medicine? What if for some reason 30% of the population started subscribing to astral plane medicine? Instead, wouldn't it seem a better use of the limited time and resources available for training doctors to focus instead on the things that have been validated via the systematic use of observation, experimentation and logic that is science?



This of course presupposes that AIMA place much credence in science to begin with. For the AIMA president offered up the classic *tu quoque* appeal to hypocrisy by highlighting a BMJ study frequently misrepresented by CAM proponents as claiming that 50% of medical treatments have no evidence base, presumably to then justify why their treatments don't need any either. It also disregards the well-recognised limitation of evidence-based medicine in that it relies "solely on clinical evidence to determine whether a treatment is appropriate or not . . . but it deliberately leaves out an important part of the scientific evidence: plausibility" (Steven Novella).

The AIMA president also resorted to that familiar CAM hobby horse of medical errors being responsible for a disproportionate number of deaths in developed nations, as popularised by an article in the BMJ earlier this year entitled "Medical error—the third leading cause of death in the U.S.". Setting aside the well documented questions surrounding the legitimacy and interpretation of the data in that paper, commentary on the risks of something is of course incomplete without commentary as well on its benefits. As an example, although an overdose of insulin leading to hypoglycaemia counts as an adverse drug reaction, if the type 1 diabetic patient wasn't taking insulin to begin with they wouldn't even be alive to have the reaction.



An *appeal to authority* was then resorted to in the president's claim that the WHO considers traditional medicine to be a basic human right. Yet this simply appears to affirm the United Nations' Universal Declaration of Human Rights (i.e. all human beings are born free and equal with the right to liberty, freedom of thought and equality before the law etc.), not an endorsement of the scientific validity of traditional medicine. This then led to the notion of integrative medicine being *patient-centred*, and thus respecting patient choice – asserting that mainstream doctors obviously don't do this already. Yet this defies the concept so perfectly expressed by the U.S. FDA commissioner's 1977 decision in the infamous Laetrile case, that 'only informed choices are free' ... though we all know adhering to such a concept would most definitely sink the CAM industry.

Dr Benson Riddle is a general practitioner with an interest in preventive health and the use of technology in improving health care. He is a strong proponent of critical thinking and science-based medicine.



Dentistry and CAM

Column by Michael Foley

Charcoal toothpaste and brighter smiles – black and white issues?



Michael Foley

Many toothpastes claim to whiten teeth. We all want white smiles, so that's great, right? Well, it depends on what you mean by 'whitening'. Toothpastes contain abrasives to help clean plaque and stains. While attractively described as 'micro-cleansing crystals', 'micro-active foam' and the like, these are usually just calcium carbonate (chalk), silica or sodium bicarbonate.

Some toothpastes, particularly those aimed at smokers or coffee drinkers, can be highly abrasive. Removing those stains sounds attractive, but if the abrasive is powerful enough to do this, it will also be removing enamel, the whitest part of your teeth. If you're wearing away enamel over many years, your teeth will become more sensitive to hot and cold and appear yellower. Not so great.

In recent years, many toothpastes aimed at the alternative health market have included charcoal as an abrasive. Hippocrates recommended charcoal for tooth cleaning, and celebrities and beauty bloggers agree! Charcoal toothpastes and powders (into which a wet toothbrush is dipped) are promoted as eco-friendly, organic, herbal and pure, with claims of therapeutic benefits, including whitening, countering halitosis, strengthening enamel, detoxifying, and with antibiotic, antiviral and antifungal actions.



These claims have limited supporting evidence. Charcoal can remove stains, but will not 'whiten' teeth. Most charcoal toothpastes, lacking fluoride and other minerals which help strengthen enamel, increase the risk of decay. Many are too abrasive, wearing away enamel and damaging gums. Charcoal particles can lodge under the gums and around the tongue, making them appear darker. Yes, charcoal is 'natural', but do you want it in your mouth?



The only whitening products which change the underlying colour of tooth structure (as opposed to simply removing stains) contain hydrogen peroxide – or carbamide peroxide that breaks down to hydrogen peroxide. Hydrogen peroxide can cause tooth sensitivity and irritation and chemical burns to the gums and mouth – particularly in the hands of untrained shopping centre whitening booth operators.

Most over-the-counter whitening products contain low concentrations of peroxides, so irritation is rarely a problem, but any whitening will also be minimal. Higher concentration peroxides are most effective and work quickly, but are only available from dentists, who can protect the rest of the mouth from irritation and burns.

A few words of caution – whitening is not permanent. Not all teeth are suitable for whitening, and fillings and crowns won't change colour, so seek advice from your dentist first.

My advice? Use a mainstream fluoride toothpaste, forget the charcoal, and see your dentist if you want whiter teeth. But please remember that 'Hollywood white', 'supermodel white' and 'refrigerator white' are not natural colours. Don't overdo it. A healthy smile is the most beautiful smile.

Michael Foley holds Masters degrees in Public Health and Epidemiology, and is currently studying for a PhD in dental public health. He was the [Australian Dental Association \(Old branch\)](#) President in 2005 and has been involved in water fluoridation advocacy for many years.



Nursing and CAM

Column by Tara De Koning

Vaccination myth unravelled - time to take action in the face of a global epidemic



Tara De Koning

Amid a rising epidemic of measles globally, anti-vaccination activists are ramping up their efforts. By 2014, [Australia had eliminated measles](#), but in 2019, the World Health Organisation (WHO) reported a [sharp rise in measles globally](#) (including Australia) due to less vaccination.

Over the past two years, [measles cases have been increasing globally](#). There has been a [300 percent](#) rise over the same period in 2018, with nearly [5,000 dead in the Democratic Republic of Congo](#) alone.

Closer to Australia, Samoa, where children's [vaccine coverage](#) fell from 58 percent in 2017 to 31 percent in 2018, has experienced a notably sharp rise in measles and related deaths. The country recently commenced a mass vaccination campaign, arresting an [anti-vaccination activist](#) who falsely claimed that papaya leaf extract and vitamin C would cure the illness.

Other anti-vaxxers, spruiking that vaccines are the underlying cause of epidemics, tried to stop the mass campaign.

[Measles is highly contagious](#). With complications ranging from pneumonia to meningitis resulting in severe brain damage and mental disability. These neurological lesions have a [greater long-term impact](#) than the acute disease. One in five cases is fatal.

One of the biggest reasons for the global drop in vaccination is the mistaken belief that the combined measles, mumps, rubella (MMR) vaccine causes autism.



In 1988, [Andrew Wakefield](#), a gastroenterologist at the Royal Free Hospital in London, published a paper in *The Lancet* claiming a link between the MMR vaccine and autism. Even though this study was [found to be fraudulent](#) and was retracted, it is still quoted as a fact by anti-vaxxers.

Autism appears in the second year of life, which happens to be the same time the MMR vaccines is given. However, this link is not causal. In fact, a [2019 study](#) carried out over 20 years, the largest of its kind, has shown that rates of autism are the same among children who have and have not been vaccinated.

Another causal myth spruiked by anti-vaxxers is the amount of mercury in vaccines containing the preservative thiomersal. However, this is less than [the amount of mercury in a can of tuna](#). Most Australian vaccines no longer contain preservatives.

Nurses and midwives are well placed to advocate for the scientific evidence supporting vaccination. In 2016, the Nursing and Midwifery Board of Australia (NMBA), in response to a few nurses and midwives promoting anti-vaccination messages via social media, distributed a [position statement](#) urging nurses and midwives to use the best available evidence about vaccination.

The NMBA recommends the [Australian National Immunisation Handbook](#) which provides evidence-based advice about the safe and effective use of vaccines and the associated public health benefits.



Tara de Koning has a Nurse Practitioner's Master's Degree and 18 years experience as a nurse She has worked as a Medical Writer at NPS MedicineWise and is now working as a freelance Medical Writer.



Therapeutic Goods Administration (TGA) and CAM Column by Mal Vickers

Green Tea Extract Safety

What does one think of when one drinks green tea? It goes well with Asian foods, it's a refreshing way to hydrate and it's good for us – right? Perhaps not, in a different form.

Green tea *extract* (GTE) is the commercially produced, dried, powdered *concentrate* included in many 'complementary medicines'. The quote, "It's the dose that makes the poison" is relevant here. One small (Chinese teacup, 100ml) cup of green tea equates to [consuming approximately 126mg of GTE](#), depending on all the variables of the produce used and the preparation. In Australia, GTE is an ingredient in many of these 'medicines' and shake powders, typically indicated for weight loss, although the evidence of efficacy is thin (excuse the pun!).

Finding solid evidence of harm is difficult. Consider the difficulty of conducting a study, where an adverse outcome is rare, where exposure relies on recollection of consumption and where an RCT is ethically out of the question due to the potential for harm. So far, the globally collected evidence is based on case reports only.



The literature contains two large and well researched collections of case reports, [Lin et al](#) (Taiwan) and [Navarro et al](#) (USA). Additionally, the TGA's [Database of Adverse Event Notifications](#) (DAEN) lists six Australian reports of possible GTE-induced hepatotoxicity. As correctly reported by the Australian media, these case reports *associate* (but do not conclusively *prove*) GTE consumption with hepatotoxicity (chemical liver damage). In these case reports, however, the expert opinion linked the affected patient's GTE consumption with hepatotoxicity. In the more severe cases, when extensive death of liver tissue has occurred, a liver transplant is the only life-saving treatment.

The European Food Safety Authority (EFSA) [warns against consuming more than 800mg per day](#). The TGA has a webpage advising of [GTE's 'potential' for hepatotoxicity](#). There are no marketplace restrictions: no label warnings, nor the maximum dose stated. Chemist Warehouse currently offer [Carusos Natural Health One a Day Green Tea 50 Tablets](#); although it says "one a day" in the product name, the recommended two capsules daily equates to consuming 1383mg.



In addition to capsules, many diet-shake powders (regulated as foods) also contain GTE. In one of Australia's most published cases, a [Perth man consumed a GTE-containing diet shake](#), and subsequently required a liver transplant. However, Food Standards Australia New Zealand (FSANZ) has no restrictions in place.

Although there's an element of chance and although GTE-induced liver failure is rare, the collected case reports are compelling; so why take the risk? I don't understand why our regulators haven't budged on the issue of safe consumption.

Shall we discuss this over a cup of green tea?

Mal Vickers, Researcher, Monash University School of Public Health.



Mal Vickers



Veterinary Medicine and CAM

Column by Tanya Stephens

Anxious pets and anxious owners

The life of a veterinarian can be difficult because of close contact with aggressive animals, especially human ones, with a high incidence of abuse, mostly over money.

Behaviour problems which cause owners angst are common in dogs and cats. Inappropriate behaviour is a common cause of abandonment and euthanasia. Some problems are amenable to medication eg diazepam for dogs' fireworks and storm phobia. Fluoxetine has had good results for dogs with separation anxiety and anafranil for cats urinating around the house!



Tanya Stephens

But vets have to be careful. A client told me of her anxiety about her dog's storm anxiety. I dispensed some diazepam and had what I thought was a commonsense chat. She phoned later to ask how many tablets she should take!

Judging by the number of products on the market for anxious, stressed pets, there appears to be an epidemic of pet or owner anxiety.

Collars and sprays containing pheromones and tablets of L-Tryptophan and alpha-casozepine are available. Pet foods which 'can help to improve quality of life for pets and their owners' and 'proven to help manage stress in dogs and cats' are also available, as are others to 'meet the nutritional needs of cats facing stress related digestive, skin and urinary sensitivities'. There is even a dog food with added probiotic, to 'help dogs maintain calm behaviour'.



A 'Thunder Vest'

Then there are the homeopathic remedies and 'thunder vests' in which to encase your dog during storms, a 'pet remedy' with valerian and L-Tryptophan and a product containing Ginger, Chamomile and Withania for travel anxiety. For demented dogs, there is a food for Canine Cognitive Dysfunction, and, for aggressive dogs with arthritis, foods with chondroitin, glucosamine and fish oil just in case your dog doesn't yet have a behaviour issue as well.

What is the evidence for this plethora of 'remedies'? It's a mixed bag, but mostly none. Any noted decrease in anxiety is most likely due to the well-documented caregiver placebo effect.

Then, there is the 'Fear-Free' phenomenon. We know that at least 80% of dogs are fearful when visiting a vet. 'Fear Free Veterinary Clinics' have therefore emerged. Advertised as a solution is a costly 8hr training course (fearfreepets.com). A certificate states that the practice is 'fear free' and that the vet has undergone training to become a Certified Fear-Free Professional. The ads state they are a 'cut above the rest when it comes to caring for your pets'.



But, there's a hitch. Firstly, it's difficult to quantify animals' fear – there is no universal assessment technique. This makes fear reduction studies difficult. There is a fair amount of research about fear and stress in dogs and cats, but little directly related to stress in the veterinary clinic and extremely little directly investigating fear-reducing interventions and no valid clinical trials. For example, whilst 'low stress' manual restraint is recommended, there is just one small study demonstrating some beneficial effects for dogs at a veterinary clinic.

Dog Music Therapy

Although there may be some evidence for medications such as trazadone, unproven interventions – such as music therapy, pheromones, and various scents – abound.

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



A SPECIAL REPORT FROM EDZARD ERNST

[Drug-induced liver injuries after SCAM: a new and most valuable review](#)

This [review](#) provides published data on so-called alternative medicine ([SCAM](#))-related liver injuries (DILI) in Asia, with detail on incidences, lists of most frequently implicated herbal remedies, along with analysis of patient population and their clinical outcomes.

Its authors conclude that SCAM use is widely prevalent in Asia and is associated with, among other adverse effects, hepatotoxicity. Both proprietary as well as non-proprietary or traditional SCAMs have been implicated in hepatotoxicity. Acute hepatocellular pattern of liver injury is the most common type of liver injury seen, and the spectrum of liver-related adverse events range from simple elevation of liver enzymes to the very serious ALF and ACLF, which may, at times, require liver transplant.



Edzard Ernst



SCAM-related liver injury is one among the major causes for hepatotoxicity, including ALF and ACLF worldwide, with high incidence among Asian countries. Patient outcomes associated with SCAM-DILI are generally poor, with very high mortality rates in those with chronic liver disease. Stringent regulations, at par with that of conventional modern medicine, are required, and may help improve safety of patients seeking SCAM for their health needs. Regional surveillance including post-marketing analysis from government agencies associated with drug regulation and control in tandem with national as well as regional level hepatology societies are important for understanding the true prevalence of DILI associated with SCAM.

An integrated approach used by practitioners combining conventional and traditional medicine to identify safety and efficacy of SCAMs is an unmet need in most of the Asian countries. Endorsement of scientific methodology with good quality preclinical and clinical trials and abolishment of unhealthy publication practices is an area that needs immediate attention in SCAM practice. Such holistic standard science-based approaches could help ameliorate liver disease burden in the general and patient population.



I congratulate the authors to this excellent paper. It contains a wealth of information and is well worth reading in full. The review will serve me as a valuable source of data for many years to come.

SCAM: So-Called Alternative Medicine by Edzard Ernst



So-called alternative medicine (SCAM) is popular and therefore important, no matter whether we love or loathe it. Consequently, an impressive number of books about SCAM are already available. Most of them, however, are woefully uncritical, overtly promotional and dangerously misleading.

Not so this one!

This book provides an insider's perspective by covering aspects of SCAM which most other books avoid, and by questioning the many tacitly accepted assumptions and wild extrapolations that underpin SCAM.



RECENT RELEVANT PUBLICATIONS BY FRIENDS

Edzard Ernst

- * [‘Perineum sunning’ gives an entirely new meaning to ‘HOLISM’](#)
- * [Chiropractic spinal care for children is dangerous, unwarranted and must cease immediately](#)
- * [Death by chiropractic neck manipulation? More details on the Lawler case](#)
- * [Pharmacists must advise customers that homeopathic remedies lack evidence](#)

Australian Skeptics

- * [Naturopath O’Neill banned for life](#)

Forbes: Steven Salzberg

- * [New Autism Study: Gluten-free Diet Does Not Help Autistic Children](#)
- * [Prestigious NY Cancer Center Will Spend \\$3.7M To Study Bogus Cancer Treatment](#)

Science-based Medicine

- * Steven Novella [Scientific Fraud in China](#)
- * Harriet Hall [Aging: Is It a Preventable Disease?](#)
- * David Gorski [Dichotomous thinking and uncertainty in medicine and science](#)
- * Clay Jones [From the Vault: Newborn Vitamin K Shots Save Baby Lives](#)
- * Scott Gavura [What do consumers think about homeopathic remedies?](#)

Respectful Insolence (David Gorski)

- * [Antivaxers are targeting minorities with their misinformation and conspiracy theories](#)
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Good Thinking Society (UK)

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- * [BBC upholds our complaint against homeopathy item on “Health: Truth or Scare”](#)

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- * [Reduce cancer risk in 12 easy-ish steps – number 3 is “get your vaccines”](#)
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- * [Don’t Believe The Ads: Dietary Supplements Don’t Cure Tinnitus](#)
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- * [Chiropractic a bad idea made in the USA](#)
- * [Diluting UK taxpayer spending on homeopathy, until it is just a memory](#)
- * [Equals before Science](#)

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