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THE SWISSE/LA TROBE UNIVERSITY AFFAIR. FEBRUARY 2014

Friends of Science in Medicine's position on the proposed research partnership

Background

Dr Ken Harvey, an internationally respected figure in public health, recently resigned from LaTrobe University in protest at the University's decision to accept fifteen million dollars from Swisse Wellness with an understanding that the money would be used, in part, to conduct research to evaluate the clinical effectiveness of their products and to provide a credible evidence-base for any claims made for their products. Dr Harvey has raised many objections, both scientific and ethical, in criticising the planned arrangement and **Friends of Science in Medicine (FSM)**, agrees with all his contentions.

Dr Harvey's and FSM's concerns include
(a) the potential conflict of interest associated with the research agreement and
(b) Swisse's track record; this has included frequent claims for its products which have been found to be inaccurate. The abundance of credible scientific evidence, already published, contradicts those claims.
<http://www.australiandoctor.com.au/news/latest-news/two-more-nails-in-the-coffin-for-supplements>

FSM's support for research into "Complementary and Alternative Medicines" (CAM)

Recently FSM's support for CAM research has been challenged in the media by AIMA, the Australian Integrative Medicine Association. AIMA inappropriately claimed:

"It appears disingenuous to suggest that the available evidence for nutritional medicine is inadequate, protest when a nutriceutical company attempts to set up high strength trials to address prior criticisms and to simultaneously argue that no significant government funding should be allocated nor university positions be available for similar research"

Their statement continues,

"In simple words FSM argue: 'Your evidence is not good enough, we won't believe you until you provide valid proofs (and even then we will claim you are biased), and you have no right to do the research that we will respect'."
<http://medianet.com.au/releases/release-details?id=794921>

What FSM has actually said

Often FSM is incorrectly cited and misrepresented, especially by those who have not actually approached FSM for comment. The following should correct this barrage of misinformation and misrepresentation of FSM's position on CAM research. It cites a number of communications to which FSM has put its name, and by which it stands.

1. FSM website

"We (FSM) strongly support sound research to determine the effectiveness or otherwise of any biologically plausible areas of 'alternative' interventions. We do not seek to prevent consumers from making informed choices about alternative approaches, but wish to see the public better informed and therefore protected from false claims."

2. Prof John Dwyer, letter in support of Dr Ken Harvey (05.02.14)

"FSM strongly supports the need to conduct independent and disinterested scientific evaluations of those 'Alternative and/or Complementary' therapies where the anecdotal evidence for benefit is strong and the

associated concepts are not readily dismissed by our knowledge of physiology, biochemistry and pathology."

3. Prof John Dwyer, *MJA Insight* (17.02.14)
"Clinical scientists would support an initiative at La Trobe that facilitated the conduct of independent and disinterested scientific evaluations of alternative and/or complementary therapies where the anecdotal evidence for benefit is strong and the proposed method of action is plausible in the light of established knowledge and therefore does not involve pseudoscientific concepts (e.g., homoeopathy). After all, this is how scientifically validated therapeutics have been developed and become so important in modern medicine".

FSM's views on research in alternative medicines and interventions

FSM repeats that it is in favour of properly executed research into alternative medicines and interventions, but "properly executed" means high quality research which minimises bias.

Credible researchers are bound by well-known, well-defined protocols for the research, analysis and publication of clinical treatments. They exclude small and biased samples, invalid statistical analysis, hidden payments, conflicts of interest, and researchers and institutions with a vested interest in the outcome of the research. They exclude research which is 'research' in name only, and publication in trivial outlets or those under the control of the entities whose materials are being researched rather than in independent publications of good standing, which are peer-reviewed and which publish complete and exact accounts of the research undertaken so that it might be properly supported or refuted by similar research done by disinterested researchers. They do not include dependence on indefinable, undetectable and therefore untestable 'energies' claimed to lie at the heart of both ailments and treatments. Just as these approaches should apply to the research of more orthodox medicines and treatments, FSM maintains that they should apply equally to research into alternative medicines and interventions.

Evidence for the importance of adhering to the above principles

In discussing his reasons for resigning, Dr Harvey's most telling point, which we also wish to emphasise as it is backed by evidence supporting the concern, is the importance of
"*the design, assessment and funding of such research being at arm's length from a particular company and overseen by an independent body such as the ARC &/or NHMRC. One appropriate mechanism for industry to assist such research would be for several companies to partner with one or more Universities in an ARC Linkage grant submission.*

In short, I am concerned that the partnership of La Trobe University with Swisse Wellness Pty Ltd involves a fundamental conflict of interest both for the proposed CMEC and the staff involved".

A number of studies have shown that industry-sponsored research is more likely to report positive outcomes than is the case with trials funded by indifferent and independent sources.
<http://annals.org/article.aspx?articleid=745938>
<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3411392/>
<http://onlinelibrary.wiley.com/doi/10.1002/14651858.MR000033.pub2/full>

When the outcome of research is of pecuniary significance to the business providing the research funds, there is potential for distortion. An essential characteristic of good science is independent assessment and verification.

The criticism of FSM by AIMA (partly sponsored by Swisse) and their claim to champion evidence-based medicine is readily challenged. Here AIMA advertises a course in 'treating' cancer with mistletoe –
<https://www.aima.net.au/other-events/ >

when credible scientific studies have concluded:
"Thus, mistletoe has been tested extensively as a treatment for cancer, but the most reliable randomised controlled trials fail to show benefit, and some reports show considerable potential for harm. The costs of regular mistletoe injections are high".
<http://www.bmj.com/content/333/7582/1282>

also,
< http://edzardernst.com/2013/07/mistletoe-a-cancer-therapy-you-must-be-joking/>

FSM emphasises guidelines for good clinical research

The most commonly used and scientifically supported methodology for research into medicinal therapies, including alternative interventions and medicines, supplements and vitamins, is the **double-blind randomised controlled trial** (RCT), with adequate resources and patient number, to examine the alleged benefit and side effects of the proposed intervention. Initial studies are complemented by follow-up for long-term benefits or adverse effects.

Such studies require:

- prior ethical approval;
- notification to the Cochrane collaboration of the trial's commencement and protocol;
- inclusion and exclusion criteria which do not make the trial participants unrepresentative of the public;
- assessment of therapy/placebo compliance, and
- an independent trial monitoring committee to review adverse events and withdrawals during the trial period.

Results, data storage and data analyses should be independently monitored e.g. by the Therapeutic Goods Administration (TGA).

Such long-term trials e.g. The *US Women's Health Initiative*, studying both hormone replacement therapy and, separately, life-style interventions (including vitamins and supplements) required tens of thousands of participants and close to $US 1 billion dollars to provide valid outcomes. This trial failed to show benefit from long-term supplementation.
<https://www.nhlbi.nih.gov/whi/background.htm>

Smaller less expensive trials can be performed if a large and early beneficial outcome is expected. This is unlikely with supplements.

It is bad science and disingenuous to conduct poorly controlled trials, short-term, with soft outcomes and unvalidated tools.

Other valid research methods

While RCT is the best method for ensuring that the measured effect of a therapeutic agent is real, beyond placebo and did not occur by chance, it is not necessarily the best method for researching all interventions. Other methods include population health studies. The method used should be chosen to best answer the research question being asked, but that does not sanction abandonment of well-established research principles which involve appropriate attention to independence, sample size, controls, publication and other matters embraced by accepted scientific methodology.

Problems with the Swisse Wellness approach to science and marketing

Perhaps the most interesting and disturbing questions emerging from the planned partnership between Swisse and the university involve the apparent failure of a major university to subject the track record of its proposed partner to 'due diligence'. Why was their 'in- house' expert on complementary and alternative treatments, and on Swisse products in particular, not consulted? Was the university not aware of the very public reports that Swisse had been rebuffed when it approached Bond and Monash universities with the same deal?
<http://www.australiandoctor.com.au/news/latest-news/uni-moves-to-calm-storm-over-swisse-deal>

Did La Trobe know that Swisse had been severely criticised for offering GPs financial incentives to supply special versions of their products for sale in doctor's surgeries?
<http://www.australiandoctor.com.au/news/latest-news/gp-incentives-to-on-sell-vitamins>

And what about the very questionable Swisse sponsored 'research' studies at Swinburne University of Technology where one of the authors on the published papers was a surgeon and father of the Swisse CEO?
<http://www.ncbi.nlm.nih.gov/pubmed/18683195>
<http://www.medreach.com.au/wp-content/uploads/2012/11/Swisse-Press-Release-Nov-2012.pdf>
<http:/www.tgacrp.com.au/uploaded/doc/Swisse_Products.pdf>

A TGA-sponsored review panel did not accept that these studies supported the claims being made in Swisse advertising. Indeed, the panel decided that many of Swisse's claims breached the TGA's advertising code. <http://www.theage.com.au/national/swisse-ads-did-mislead-as-complaint-is-upheld-again-20130607-2nvok.html>

It is hard to accept that Swisse is really interested in an evidence base for their claims. If they were, why have they not asked the TGA for 'registration' rather than 'listing' for their products? Registration subjects claims to independent scientific evaluation. Having celebrities provide the public with rehearsed, inaccurate endorsements, which they possibly believe to be true, gives a more accurate picture of the Swisse marketing philosophy. <http://www.youtube.com/watch?v=12ww26sQF7E7feature=youtube>

Where scarce research dollars should be spent

It is important to appreciate that investigations using scarce research dollars should be saved for worthwhile questions, pursued by independent researchers under well-accepted scientific research and publication protocols. The best scientific methodology and research dollars should not be applied to the study of pseudoscience (e.g. homeopathy). Similarly, there is no justification for studying the Swisse concoctions in the manner proposed by the university. Millions of dollars have already been expended studying the benefits or otherwise of the ingredients. Those studies do not support the marketing claims made by Swisse which they continue to make while calling for research to justify their claims.
<http://www.nhmrc.gov.au/your-health/complementary-and-alternative-medicines>
<http://nccam.nih.gov/about/offices/od/directortestimony/0410.htm>

Finally, there is a major ethical and scientific difference between a pharmaceutical company (i) developing a new medicinal product in the laboratory, (ii) assessing it *in vivo* and then, before seeking TGA approval to market the product to the public, (iii) performing audited Phase 1, Phase 2 and Phase 3 clinical trials to establish long-term safety and efficacy in a targeted population.
<http://www.sciencedirect.com/science/article/pii/S1752928X14000092>
<http://www.crikey.com.au/2011/10/25/public-deserves-better-information-on-complementary-medicines>

By contrast, Swisse and many other supplement and vitamin manufacturers market their products directly to the public without conducting a package of trials. They do so using a TGA 'listing number' rather than seeking a 'registration number' which requires rigorous review of their data. However, if products are TGA-listed, the manufacturer is meant to hold purity, safety and efficacy data for *potential* audit, based on the product labelling and advertising claims.

So if a company needs to find this evidence *after* marketing, they are, *de facto,* in no position to justify 'listing'. Why should they continue to sell products which do not have adequate data for TGA listing or registration? Why should a University conduct that company's commissioned research into their products when there is considerable good quality literature suggesting that such supplements are not beneficial and that some might in the long-term, be harmful?