

## **International Summit on Quackery and Pseudoscience**

Co-hosted by Stellenbosch University's (SU) Centre for Evidence Based Health Care and Centre for  
Science and Technology Mass Communication  
20-21 November 2017, STIAS, Stellenbosch

### **Welcoming Address by SU Rector and Vice-Chancellor Prof Wim de Villiers**

STIAS, 08:45 for 09:00, Monday 20 Nov 2017

Good morning, everyone! On behalf of Stellenbosch University, welcome to this event – the first ever summit in the world looking specifically at quackery and pseudoscience. It is being hosted jointly by the Centre for Evidence Based Health Care in our Faculty of Medicine and Health Sciences, and the Centre for Science and Technology Mass Communication attached to the School of Journalism in our Faculty of Arts and Social Sciences.

This is a clue to what makes this gathering not only unique but also timely and powerful – it brings together professionals from the medical sciences and the media and law – for an in-depth focus on the dangers of quackery and to debunk some pseudoscience pretending to be the real thing.

And as far as we know, it is the first of its kind in the world. So, thank you for your interest.

Now, as a medical doctor, I have for the longest time been concerned about quackery and pseudoscience. My reasons are very simple: These practices are misleading, exploitative and dangerous.

Just take the anti-vaccination campaign, which is wreaking havoc worldwide – from Wales and California to Australia and right here in Stellenbosch. Diseases we thought had almost been eradicated are making a comeback – like measles. In this day and age it is just incomprehensible how anyone can spew nonsense taking us back to the dark ages.

The antidote is simple, consisting of two parts:

Firstly, healthcare decisions should always be based on the best scientific evidence available. The approach of EVIDENCE-BASED HEALTHCARE teaches doctors and other healthcare providers how to separate good research from bad. In this way they can take informed decision on treatment.

The touchstone is “evidence” – scientific evidence. Science does not work on conjecture, rumour, conspiracy theories, scaremongery. Science is able to produce reliable knowledge thanks to the scientific method. This is "a procedure consisting of systematic observation, measurement, and experiment, and the formulation, testing, and modification of hypotheses" (Oxford English Dictionary).

The second component of the antidote to quackery and pseudoscience is proper SCIENCE COMMUNICATION – which is basically a bridge between scientific research, which is often technical and complicated, and members of the public, who need the information in accessible, digestible form.

Take this University for instance. For several years now, Stellenbosch has been South Africa's most research-productive university – with the country's highest weighted research output per capita in South Africa.

So, knowledge production is key. But it would all amount to nothing if that knowledge were to gather dust on library shelves, or languishes in electronic databases. The sharing of scientific output is just as vital as conducting ongoing research of the highest quality and producing graduates with advanced qualifications.

There are numerous ways in which the sharing of research for popular consumption is promoted at SU. And all of these initiatives demonstrate the open nature of science, and the importance of dialogue.

As popular science author Steven Johnson points out, breakthroughs are not about a solitary genius that is so much more brilliant than anybody else. No, ideas are fundamentally networks of other ideas. We take the tools, concepts and scientific understanding of our time, and then remix them into something new.

And you can't do that if ideas are not shared. It is only once good ideas get into circulation that they can converge with other ideas, be tested against the demand of relevance and open up doors of possibility.

But communication professionals in the field of science need to be alert to the dangers of pseudoscience. In the parlance of our times, one could describe pseudoscience as "fake news". Fake news is media content that looks like factual reporting, but is actually propaganda aimed at swaying public opinion one way or the other.

Worsening the problem, is the echo chamber effect in social media – you only hear what you want to hear because all that you are exposed to are views similar to your own.

The result is the "post-truth world" that we sadly find ourselves in – a situation where the facts don't matter as much as what you want to believe because it suits you. This is bad news. Fake news is bad news. Pseudoscience is bad news. Quackery is bad news.

That is why THIS SUMMIT is such a welcome initiative. As Prof Volmink says in a press release, the summit is an effort to push back against these exploitative practices whose pernicious impact is being amplified through the internet and social media. It will not only highlight the threat of pseudoscience to the well-being of society, but will also offer effective tools to help people assess healthcare claims and make sound choices.

Prof Taryn Young of the Centre for Evidence Based Healthcare says "the summit brings together researchers and journalists together to emphasise the joint responsibility for ethical and evidence-informed health reporting to better serve the interests of the public"

"The media play a crucial role in communicating health research and other messages to the public. They can influence people's perceptions about the safety and efficacy of health practices, and when the media relay pseudoscientific and unreliable messages, it can be harmful to people's health."

And Prof George Claassen of the Centre for Science and Technology Mass Communication says the hope is that the summit will lead to a much-needed change, enlightening the public and all the role players in the science communication process about the dangers of quackery."

"The summit hopes to create an awareness among the public how to recognise fake news, not based on any trace of evidence and distributed by charlatans and scam artists to sell their 'health' products. "And who, when confronted and their practices exposed, often turn to the courts to silence scientists and science journalists, acting in the interest of the public."

I think it is a very important initiative and I wish all of you two days of fruitful deliberation.

Thank you.