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Holistic Healing

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Features

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Prof. De Silva with Health Minister Dr. Rajitha Senaratne at the press conference.

Dr. Ranil De Silva, Director of the USJP University Project and the Interdisciplinary Centre for Innovation in Biotechnology & Neuroscience at the University of Sri Jayewardenepura, is a neuroscientist by training and co-Chair of this year's TradMed International 2017, an international symposium, educational exhibition, and trade fair on traditional medicines organised by the Health, Nutrition, and Indigenous Medicine Ministry. The TradMed International 2017 will be held from November 23-25 at Water's Edge in Colombo. In an interview with the Daily News in advance of the conference, De Silva, joined by a select group of his graduate students, said "the west has failed miserably" in combating many diseases and illness and advocated for a more traditional and indigenous approach to be adopted by the medical community.

Excerpts follow:

What is traditional medicine in a Sri Lankan context?



A: Our traditional medicinal practices are related to the lifestyle of the Sri Lankan people. People used certain herbal medicines in their day-to-day life, and that became indigenous medicine almost as it is practised today. We have a 5,000 year history of doing this, starting from King Ravana and continuing on to the present day. But right now, it has fallen to the background. So we must bring it back and place a real emphasis on it and develop it so the country can benefit.

Traditional medicine in Sri Lanka is somewhat different from Ayurveda. Most people have the idea that it's the same but it's not. The mantra of traditional medicine in Sri Lanka is, "You are what you eat and what you do." You are your environment—the food you eat, relaxation, yoga, meditation, the work you do. It's a holistic approach, rather than like in western medicine, with the prescription of one aspirin. In modern days, the trend is going to functional foods, which came into the western world after the year 2000. But the concept has been there with traditional medicine more than 5,000 years ago. Each and every plant that grows in Sri Lanka has medicinal properties and is unique to a certain area, some in the Central Province, some in the southern areas. In traditional medicine, the belief is that plants that grow in a certain area are suitable for

the well-being of people who live in that area. So if you add it to your curry, you won't have to visit the doctor. In western countries there is a saying, "An apple a day keeps the doctor away." I'm not going to say that's wrong, but what we say is that if you have a traditional diet you won't need the doctor.

How did you get into traditional medicine? How has it complemented your work?

A: As a neuroscientist, it is very alarming to look at the data on neurological diseases. Up to 1 billion people, over one sixth of the world's population, forms neurological disorders. If you take just one disease alone, Dementia, it's estimated to become a \$1 trillion USD disease by 2018. One simple disease is the 18th largest economy in the world as far as GDP is concerned. Then we looked at what has been done in terms of science. The West has gone to town trying to prevent these diseases, treat them, and up to now there is not a single drug that works fully. So they have failed miserably. That's why I ventured into natural products.

One thing we've done is take autopsied brains of people in Sri Lanka who had died with dementia and compared them to brains of people who were otherwise healthy but died from ageing, around 76 brains in total, and then we went and collected 50 brains from India. This was the biggest study ever done between two Asian countries. With it, we showed that people who were consuming more than three cups a day of green leaves and yellow vegetables had a better pathology in their brains, they were more protected. So that again proves our 5,000 year old holistic approach. We have published case control studies on Parkinson's Disease in 2017. It again showed that with people who consumed coffee and tea and had Parkinson's Disease, their Parkinson's had a protective effect by these natural products.

You've done a bunch of research and work on the preventative or therapeutic effects of Ceylon cinnamon and tea. How do they help combat degenerative neurological disorders?

A: My two publications on the subject have clearly shown it is protective. The more you drink black tea for example, the less plaque you get in the brain. Then, we have done work on 950 stroke patients, and we have again shown that people who were taking over three cups of black tea a day have a later age of onset (for neurological disorders such as Alzheimer's). If you are drinking one cup of tea, onset might be at 60 years, but with three cups a day, people had an onset of 70 years. Age of onset of neurological disorders is directly correlated with black tea consumption. So we have done autopsy

studies, we have done clinical studies, and also cell-culture studies. With the last type, we've definitively proven that Ceylon Green Tea protects the brain from stroke and other neurodegenerative diseases.

Then, because of my involvement in this work with natural products, I got called to take on a challenge with the national leader of Ceylon cinnamon. We've just started our work; so we don't have data yet. But cinnamon is interesting because of the structure it has - it has the ability to bind to the 2 protein that causes Alzheimer's disease, preventing the aggregation of this protein. So this could be part of a remedy in the future.

Last year, you presented original research at the 56th annual meeting of the Society for Neuroscience, titled, "Banking the Brain and Blood: A Sri Lankan Emerging Era of Collaborative Research," subtitled, "What the East Can Offer the West." In your view, what could the western world learn from traditional medicine practices of the east?

A: Sri Lanka sits on two gold mines. One is our indigenous history and knowledge, our herbs, which date back to 5,000 years. The second is my "bio-bank." We have 76 completely studied brains, and over 3,000 blood DNA samples. In South Asia, this is the biggest. So the West is eager and interested to work with us because of these two gold mines.

If you take the United States as an example, to make one drug and bring it into the market, they take a minimum of twelve years with a cost of almost \$6 billion USD. More than 90 percent of these drugs fail. So see how much the USA is investing, the time they're using, and the end result. On top of that, their healthcare is quite expensive. But here, the holistic approach is absolutely accessible, cheap or free. When you compare western medicine and indigenous medicine, there is a big disparity. Over 80 percent of the world population depends on traditional and plant-derived medicine. Even in Germany, 90 percent of the population now uses herbal medicine. So you can see how things are changing, and there's a huge potential and huge market for herbal medicine.

If you look at it from a western point of view, they will look at turmeric, take the molecule, go to town, and pay billions of dollars to do that. But look at the 5,000-year-old tradition of Sri Lankans using this. They don't take turmeric alone; it's a mixture. If you consider the curries, we have a mixture of spices in curry powder called 'thuna paha', and all those have a synergetic effect together that cannot be replaced by western medicine. Science has now proven that the synergetic effect of them makes the

absorption better. Western medicine looks at a molecule or nanoparticle, whereas indigenous medicine is holistic.

What is your involvement with TradMed International 2017?

A: This is my first TradMed conference. My area of expertise is neuroscience, not necessarily traditional medicine, but because of a request made by the Health Minister, I took on this challenge. We have really fulfilled that challenge. We have over 300 abstracts already in the pipeline, one of the highest in Sri Lanka to get into an international symposium. The authors are from Sri Lanka and around the world; from Iran, India, Australia, and many more. These 300 abstracts come from medical faculties, agricultural faculties and indigenous faculties. Everybody has contributed. In a true sense, it's a multidisciplinary event, so everyone can enjoy it.

What we are trying to do in this conference is, first, make traditional medicine evidence-based. Even though we have a 5,000 year old history of using it, every western person still asks us, "Where are the clinical trials?" One of the main criterion of this conference is to introduce evidence-based traditional medicine with success proven in control studies. Second, we know that you can't ever prove the efficacy of holistic traditional medicine if you don't use a multidisciplinary approach. So the entire conference is centred around being multidisciplinary and evidence-based. We're trying to regularize traditional and indigenous medicine, so that western medicine does not eventually overtake ours.

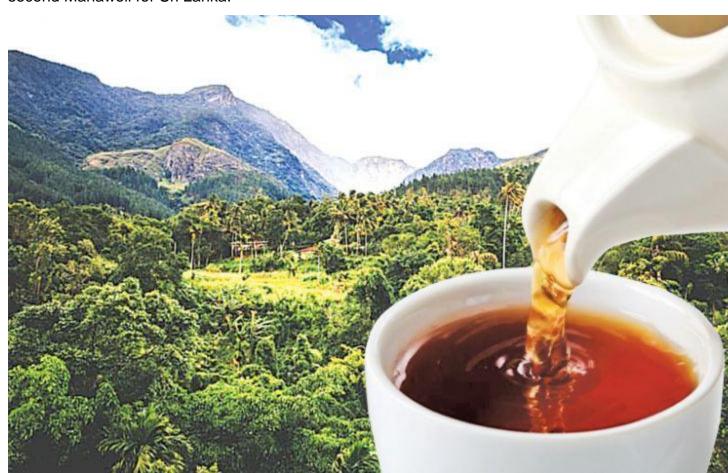
What can attendees expect to gain from this year's TradMed conference?

A: A tremendous amount. For younger graduates, there will be two directors from EURON (European Graduate School of Neuroscience) and Queensland University of Technology in Australia, with whom the University of Sri Jayewardenepura signed MOUs (Memorandums of Understanding), to provide fully-funded scholarships to study abroad. There will also be scientists from the Chinese Academy of Science, with whom we also signed a MOU. So there is the option to meet officials from China, Australia and Europe and see the possibility of doing double doctorates or double masters with these affiliated institutions.

Then for the business sector, there are tremendous opportunities. You can forge relationships with export market buyers. On the last day (November 25) of the conference, chaired by the Health Minister, there is a brainstorming session at the end which will focus on business to business and business to academic partnerships. What

we are trying to do there is foster innovation. For example, we're not going to be exporting turmeric. We're exporting an end product from turmeric, in which clinical trials have been done. That has a huge potential. Finally, especially for the indigenous groups, they could come in in a big way and open Sri Lanka for indigenous medicine with the international community. We are not asking for their secrets, what they have been holding for a long time, otherwise people might take them and patent them.

We are getting academics from Iran, the US, Australia, Singapore, Norway, and Holland. So interaction with them and their research will help develop new products. Earlier we had the Mahaweli, which opened the economy. This is going to be the second Mahaweli for Sri Lanka.



Tea protects the brain from stroke and other neurodegenerative diseases.