

Headline	Work smart, research smart		
MediaTitle	The Star		
Date	28 May 2014	Color	Full Color
Section	StarTwo	Circulation	288,916
Page No	20	Readership	866,748
Language	English	ArticleSize	410 cm ²
Journalist	N/A	AdValue	RM 20,634
Frequency	Daily	PR Value	RM 61,902



Work smart, research smart

DEVELOPING the herbal industry in Malaysia will require more than simply getting companies to invest in R&D, because the back end of the industry has its own set of challenges.

Dr Zakiah Ismail, who heads the Herbal Medicinal Research Centre at the Institute for Medical Research (IMR) and is part of the team that evaluates Entry Point Project 1 (EPP1) proposals, gives her perspective in an e-mail interview: "Being new to research, the local herbal industry doesn't have enough 'research understanding' yet.

"One of the biggest challenges is that our herbal products are 'polyherbs' – that is, they consist of multiple ingredients."

She adds that most researchers in Malaysia are familiar only with single-herb R&D, so standardised guidelines on polyherbs need to be developed and established.

Prof Ibrahim Jantan from Universiti Kebangsaan Malaysia is inclined to agree.

"The emphasis on this conventional approach to drugs makes discoveries, and a shift to new technologies, slow," he says. "This is a problem at the expertise level; more people need to be trained."

A polyherb or multi-target approach to herbal drug development is a globally emerging trend.

This is because the traditional mono-target approach is usually more costly and long-winded, and not very efficient when studying herbal extracts.

"Herbal medicines contain many compounds, and the mono-target approach is reductionist in nature," explains Ibrahim. "You take a complex mixture, and you reduce it to a single compound."

"With the multi-target approach, you are working with multiple compounds present within the extract."

Those compounds may have multiple receptors in your body, and work in synergy to create a more potent therapeutic effect.

Hence, it makes sense to study them all

instead of just trying to isolate each one individually, he says.

Unfortunately, few researchers in Malaysia have embraced this new paradigm, and the majority of research is currently mono-target.

Another industry challenge raised by various research institutions has been the need for better coordination of research efforts. Under the current system, there are multiple R&D funds and overlapping portfolios among the various government agencies under different ministries.

This creates competition for resources, and the constantly-shifting landscape of new policies and research priorities makes it difficult to build and maintain core R&D capabilities in areas of strategic importance.

Currently, the Herbal Development Office established by the Agriculture Ministry acts as the main coordinating body, tasked with mapping the strategic direction, policies and

regulations required to spur the industry's growth and bring our products in line with international standards.

It is, however, focused mainly on the area of herbal products, while the problems that must be overcome are systemic in nature – crossing over into finance, science and higher education, portfolios of other ministries.

Dr Rasadah Mat Ali at the Forest Research Institute Malaysia (FRIM) is responsible for overseeing some key projects under EPP1, including the investigation of *tongkat ali* for chemoprevention in breast cancer, and *belalai gajah* for immunomodulatory (modulating or regulating one or more immune functions) activity.

As director for FRIM's Natural Products division, she believes that specific research goals can be achieved faster if a task force above ministerial level was formed to help coordinate research collaboration among different institutions and universities.

The best way to move forward is to pool resources and manpower, giving a better research focus. It would also help avoid the over- and under-utilisation of, for example, equipment located in different universities and institutions.

Another widely acknowledged hurdle is the lack of research facilities equipped with Good Laboratory Practice (GLP) certification.

GLP is a quality system required for pre-clinical testing – doing its tests in a GLP lab is the only way a manufacturer is going to get to export its product to an OECD country.

It is widely acknowledged that Malaysian herbal products are severely lacking in the one thing required to gain a competitive edge in global markets: scientific data.

The trouble is, there just aren't enough GLP laboratories around in Malaysia. Which means companies have to do those studies overseas, which adds to product development costs, further discouraging local investors from going the extra mile and creating clinically proven products.

Again, why bother with investing in scientifically backed products in Malaysia (even though locally you are permitted to label them as such after conducting preclinical trials in a non-GLP lab), when consumers are happy spending less money on any old pill advertised as a slimming agent or testosterone booster on the shelf?

Seed funding for anchor companies tied to EPP1, it is hoped, will make a difference in overcoming this cost barrier.

This is a core strategy of the Herbal Development Office.

Until the problem is solved on the demand side, rampant bogus claims are curbed (pick up any local tabloid and the scale of the problem becomes apparent) and consumers are educated on the benefits of scientifically proven products, the dream of turning herbal products into international stars of the Malaysian bioeconomy is likely to remain just that – a dream.

Headline	Work smart, research smart		
MediaTitle	The Star		
Date	28 May 2014	Color	Full Color
Section	StarTwo	Circulation	288,916
Page No	20	Readership	866,748
Language	English	ArticleSize	410 cm ²
Journalist	N/A	AdValue	RM 20,634
Frequency	Daily	PR Value	RM 61,902



At the Forest Research Institute Natural Products Division, researchers are busy transforming raw herbs into extracts to conduct further chemical analysis.