

MARDI's Red Yeast Rice – A Future Alternative Therapy for Hyperlipidemia?

Kamariah Long

Director General Office,
Malaysia Agricultural Research and Development Institute (MARDI), Malaysia

E-mail: amai@mardi.gov.my

Abstract

Malaysia has around 4.06 million hectares of agricultural land distributed throughout its 14 states. Nearly 75% of this land is cultivated with primary crops and the remaining are dedicated to agro-food production. MARDI has taken the initiatives to improve the enormous agricultural produce and food industries side streams into value added products emphasizing in functional foods and ingredients. Local broken rice has been value added into red yeast rice or red fermented rice, a product of *Monascus* sp fermentation. Red fermented rice traditionally has been used for medicine, preservative and colouring agent. Over the past decades, red yeast rice has gained drastic attention and sales due to its use as statin alternative therapy for hyperlipidemia and dyslipidemia management. However, the Food and Drug Administration (FDA) USA has issued a consumer warning to avoid the use of commercial red yeast rice products in August 2007 due to the presence of monocolin-K, which is biosimilar to the active pharmaceutical ingredient lovastatin. Use of statin drug has been reported to cause some side effects such as headache, dizziness, rash, stomach discomfort, hepatic dysfunction and muscle weakness. Since then we were working on screening and isolation of a *Monascus* strain from local resources, which didn't produce monocolin compound yet contained active metabolites possessed hypocholesterolemic effect. This paper presented the functionality of MARDI's Red Yeast Rice and Its Production.

Biography

Dr Kamariah Long has proven to be an outstanding researcher and inventor in science and technology. She distinguishes herself with significant and ongoing research spanning over more than 2 decades specialising in the field of microbial enzyme technology, food biotechnology especially in fats and oils modification and functional foods. Dr Kamariah's R&D achievements and impact of her research at national and international levels has to date gained 95 research publications in refereed journals of which the cumulative citation of 1526 (H-Index score 21). She is actively involved in national collaborations and networking with local universities and has been regularly appointed as an external examiner and has supervised more than 20 postgraduate students. She has been awarded with 61 national and international professional honors and scientific awards.