
Title: Manipulating Functional Plant Pigments to Improve the Agronomic and Nutritional Value for Human and Animal Consumption



Rashidi Othman, PhD
(Guest Editors)

International Institute for Halal Research and Training (INHART)
Herbarium Unit, Department of Landscape Architecture, KAED,
International Islamic University Malaysia, 53100 Kuala Lumpur, Malaysia
Email: rashidi@iium.edu.my

Proposal

Many plant pigments have been extensively researched both in terms of its health and nutritional impact. It is also has been widely implemented because it is relatively simple, cheap and highly cost effective. Currently, there is considerable interest in manipulating plant pigments such as carotenoid content and composition in plants to improve the agronomic and nutritional value for human and animal consumption. Therefore, improving the nutritional quality of food crops and its ingredients for human consumption is one of the urgent health issues and high priority areas of research worldwide.

The carotenoids are used in the biosynthesis of vitamin A, essential to vision and growth. Naphthoquinone photosynthetic pigments lead to another important vitamin group of K vitamins which essential to blood clotting. Yet another vitamin derived from plant pigments is riboflavin or known as vitamin B2.

Carotenoids, for instance, are antioxidants with pharmaceutical potential. More than 600 carotenoid structures are known, but source material for their extraction is limited. The major carotenoids important to humans are α -carotene, β -carotene, lycopene, lutein, β -cryptoxanthin, and zeaxanthin. Up to now, the well-established function of carotenoids in the human diet is the provitamin A activity associated with β -carotene. The health benefits of dietary carotenoids, especially β -carotene which is the most potent dietary precursor of vitamin A, are becoming increasingly apparent in human and animal nutrition. Intake of carotenoids both pro- and non-provitamin A is known to reduce the risk of a number of health problems.

The challenge of this area lies meeting the demands of an increasing world population. On top of that, it will aid the disadvantaged peoples of the world; the hungry, the poor, or those whose environments are threatened by global climate changes Therefore, the **Journal of Pharmacy and Nutritional Sciences (JPANS)** is releasing a special issue on this subject of 2019.

It will cover all aspects related to functional ingredients, including- but not limited to:

- CAROTENOIDS
- FLAVONOIDS
- PORPHYRINS
- CHLOROPHYLLS
- QUINONES

It is our pleasure to invite you, as an Expert in this field, to contribute to the Special Issue of **JPANS** on Functional Plant Pigments with a submission of original research or review article on a related topic. Before submission of the full manuscript, the authors should carefully read the journal's Author Guidelines, which are located at <http://setpublisher.com/guideline-for-authors/>.
