



University of Mauritius
ANDI Centre of Excellence for Biomedical and Biomaterials Research
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About CBBR

Founded in May 2011 as a Centre of research attached to the Faculty of Science of the University of Mauritius and designated Centre of Excellence in Oct 2011 by the African Network for Drugs and Diagnostics Innovation (ANDI) and COMESA Regional Centre of Excellence in December 2012.

CBBR has mainstream research interests in the biomedical/pharmaceutical field as well in the development of high value-added products from locally available land and marine resources. In this area precisely, researchers at CBBR were the first in 2006 to isolate and characterize biopolymers from red seaweeds available around the Mauritian coast. The chemical modification of seaweeds to yield nanoparticles for use as drug delivery devices, is also an area of research investigation of CBBR. In particular, the deep sea water project offers a lot of potential for R&D and for eventual commercialization of high value-added products through a sound combination of basic and applied sciences. To support its research activities, CBBR has state-of-the-art analytical facilities and well-equipped chemistry and biology labs.

On-going projects in the marine sector

(i) Development of value-added products from seaweeds (red, brown and green) for high-tech applications:

- Biopolymers for food/agriculture and medical/pharmaceutical applications
- Screening of seaweeds for their anti-oxidant properties
- Collaboration with Financière Marine Internationale (FMI) Co. Ltd for high value-added chemicals (amino acids, fatty acids, etc)

(ii) Bio-prospecting (Collaboration CBBR-Sotravic Ltée) - Deep sea water applications

(iii) High value-added Microalgae prospecting.

Services offered

Our *Synthesis labs* are equipped for extraction of chemicals/polymers from seaweeds and their functionalization. Our *Analytical labs* are equipped with state-of-the-art equipment for a range of physico-chemical and biological testing of products.

Publications on marine derived products

- Jhurry D, Bhaw-Luximon A, Mardamootoo T, Ramanjooloo A, *Biopolymers from the Mauritian Marine Environment*, Macromolecular Symposia, 231(1), 16-27, 2006
- Heerah Booluck M, Bhaw-Luximon A, Jhurry D, Helbert W, Genicot S, *Oligoagarose-grafted PCL: Synthesis and characterization*, Macromolecular Symposia, 227(1), 14-23, 2009
- Bhaw-Luximon A, Musharat Meeram L, Jugdawa Y, Helbert W, Jhurry D, *Oligoagarose-g-polycaprolactone loaded nanoparticles for drug delivery applications*, Polymer Chemistry, 2, 77-79, 2011

International collaborations in the marine sector

Dr Joël Couprie, Université de La Réunion & Dr Laura Lallemand, CYROI, La Réunion

Dr William Helbert, CERMAV, CNRS, France

Prof Byung-Wook Jo, Chosun University, South Korea

Financière Marine Internationale (FMI) Co. Ltd, Madagascar