



Welcome to the 6<sup>th</sup> Edition of the MRC Newsletter, in which we highlight some of our recent achievements. One thing is certain, the environment we have been used to is changing and the only way to ensure a brighter future is to strive towards higher ambitions, put emphasis on innovation for the betterment of the society, increase dialogue between public and private bodies and focus on generating a skilled workforce. The MRC's vision has always been to harness excellence in research through innovation and knowledge creation and exchange. We now operate under the aegis of the Ministry of Technology Communication and Innovation. Government has provided its full support for the MRC's planned actions. Our budget has been increased by more than 2.5 times. We now operate no less than 18 Research and Innovation Grant schemes, among which is the Collaborative Research and Innovation Grant Scheme, which for the first time in Mauritius, has established a strong collaboration between private sector and public sector research organisations.

We operate 5 different clusters: Renewable Energy, High Performance Computing, Biotechnology, Nanotechnology and a cluster working on Social Issues. Conscious about the delivery of quality, the MRC has been certified ISO 9001:2008 since July 2016.

We are now better positioned to engage into longer term relationships with our research and innovation partners. Furthermore, we are very pleased to note that our new grant schemes are constantly encouraging partnerships and synergies between academia, the public and private sectors. With these hopes, we foresee considerable progress in research and innovation in the Republic of Mauritius.

We wish you a pleasant experience in reading this Newsletter.

Dr A Suddhoo, Executive Director

# Research & Innovation in Action

The newsletter of the Mauritius Research Council



We have recently launched our Email Newsletter. Please subscribe by sending us an email at [mrc@intnet.mu](mailto:mrc@intnet.mu).

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## MRC RESEARCH & INNOVATION GRANT SCHEMES

**Our new Innovation & Commercialisation Schemes are:**

1. Collaborative Research and Innovation Grant Scheme (CRIGS)
2. Biotechnology Research and Innovation Grant (BRIG)
3. High Performance Computing Research and Innovation Grant (HPC-RIG)
4. Social Innovation Research Grant Scheme (SIRGS)

### High Performance Computing Research and Innovation Grant (HPC-RIG)

In March 2016, the MRC launched a new funding scheme - **High Performance Computing Research and Innovation Grant (HPC-RIG)**, in line with the National Innovation Initiative being spearheaded by the Ministry of Technology, Communication and Innovation (MoTCI). This scheme is under the Research and Development Working Group (RDWG), co-chaired by the Mauritius Research Council (MRC

and Business Mauritius (BM), in collaboration with MoTCI.

The HPC-RIG aims to encourage public and private sector organisations to undertake projects using cloud computing and/or high performance computing in order to tackle issues of social relevance in a number of fields including science, engineering and business. The HPC-RIG also encourages partnerships

among local and/or overseas institutions and companies.

The award consists of a grant of up to one million MUR (Rs1M) per project for a project duration not exceeding 12 months. The funding covers the project feasibility and refinement which could eventually lead to commercial application.

This scheme is open for application. Visit our website for more details.



Applications under this scheme have been invited under the following areas:

1. Oceanography
2. Smart Energy
3. Smart Services
4. Transport and Traffic issues
5. Astronomy
6. Bioinformatics
7. Health Sciences
8. Climatology/ Meteorology/ Earth Science
9. Computational Fluid Dynamics
10. Engineering/ Advanced Computer Engineering
11. Computational Finance
12. Demographic, Market Research and Customer Research Management

Source: <http://www.techrepublic.com/article/juniper-networks-embraces-sdn-decouples-junos-from-the-hardware/>

## ISO CERTIFICATION

MRC, established in 1992, has grown up steadily to become a critical player in research and innovation in the Republic of Mauritius. MRC endeavours to consistently provide services that meet customer needs and expectation.

As a means to further enhance its customer satisfaction in conformity to stakeholders' statutory and regulatory requirements, the MRC has successfully implemented a Quality Management System based on ISO 9001: 2008. The International Standards of ISO 9001:2008 has been applied across the organisation and the services it provides.

The Quality Management System at MRC covers all its operations, processes and activities of the organisation as required by ISO 9001:2008 and is reviewed for continual improvement and enhancement of customer satisfaction and in conformity to the stakeholder's statutory and regulatory requirements.

The MRC has been ISO 9001:2008 certified since July 2016.



## Collaborative Research Innovation Grant Scheme (CRIGS)

The Ministry of Finance and Economic Development (MoFED) in collaboration with the Mauritius Research Council (MRC) and the then Joint Economic Council (JEC), now Business Mauritius (BM), developed a scheme entitled "Collaborative Research and Innovation Grant Scheme" in 2014 aiming to improve the competitiveness of firms in Mauritius, through collaborative framework between research and industry.

Under this scheme, the Research and Development Working Group (RDWG), co-chaired by MRC and BM, in collaboration with the Ministry of Technology, Communication and Innovation (MoTCI), is inviting local companies or a consortium ranging from Micro, Small and Medium Enterprises, to Large Companies to submit proposals for innovative, collaborative research and development projects with commercial potential, in partnership with local Academic/Research/Tertiary Education Institution(s).

The Local Company also has the choice to partner with several other Research/Tertiary Education Institutions located locally and/or internationally. The company may also wish to collaborate with another Local Company (ies) (Micro, Small, Medium, Large) in addition to the above collaborator(s). Collaborating Partner(s) can be from local and/or overseas. Any proposal submitted under this scheme should therefore comprise of one Local Company and at least one partner from a Research/Tertiary Education Institution.

Under this scheme, the applicant may be awarded a matching grant of up to Rs5M per project for a project duration not exceeding 24 months. The funding amount indicated above covers Phase I: Concept Feasibility, Phase II: Concept Refinement or/and Phase III: Commercial Application. The local company will have to contribute to the project in cash and/or in kind. A minimum financial (Cash) contribution of 20% of the total project value should be made by the applicant.

Currently, under the CRIGS, 22 applications have been received, out of which eleven (11) projects that are ongoing and are as follows:



Source: <https://www.xbri.org/collaboration-is-key/>

PROJECT REFERENCE	PROJECT NAME	PRIORITY AREA
CRIGS-A02	Coal Ash for partial cement replacement	Manufacturing
CRIGS-A03	Basaltic filler for partial cement replacement	Manufacturing
CRIGS-A04	Healthcare Information System	ICT/BPO/TELECOMMUNICATIONS
CRIGS-A05	Sugarcane Trash to Energy	Renewable Energy
CRIGS-A06	Adding Value to Mauritian Sugars and By-products	Life Sciences (Health food, particularly for diabetics)
CRIGS-A07	Adding Value to Mauritian Refined Cane Sugar	Life Sciences (Health food, particularly for diabetics)
CRIGS-A08	Preparation of Nanosilica particles from combined Bagasse Ash and Coal Ash	Manufacturing
CRIGS-A10	Innovative and environmentally friendly products from recycling of the different components of the refrigerator	Manufacturing (E-Waste Management)
CRIGS-A11	Innovative Products from Recycling of Waste Glass including Cathode Ray Tube (CRT) glass	Manufacturing (E-Waste Management)
CRIGS-A13	Determining the optimum thermal processing conditions for octopus packed in retort pouches	Manufacturing
CRIGS-A16	Determining the optimum thermal processing conditions for octopus packed in retort pouches	Manufacturing

# Renewable Energy

## MRC-Carnegie Collaboration

Reflecting the potential for wave energy in Mauritius, and our shared location in the Indian Ocean with Western Australia, the Carnegie Wave Energy (Australia) signed a Collaboration Agreement with the MRC in June 2015. The purpose was to identify the opportunities and development pathways for commercial wave energy plants for the Republic of Mauritius, capable of providing a sustainable source of electrical power and desalinated water.

With the MRC, Carnegie identified a series of work packages that constitute this Project, which was endorsed by the Ministry of Finance and Economic Development, the Australian High Commission and the Ministry of

Technology Communication and Innovation during a signing ceremony on Tuesday 24 November 2015.

The project was formally initiated in February 2016, with MRC as the focal coordinating point for the Project on the Mauritian side. It consists of the following key work packages:

- Assess the opportunity for higher Renewable Energy (RE) (including wave) penetration in Mauritius that offers sustainable, replicable and economically viable sources of electricity and potable water.
- Assess the native wave energy resource and opportunity to develop commercial CETO wave energy plants.

- Design a decentralised integrated micro-grid solution that manages RE generation from multiple sources (including wave and solar PV) using storage, automation and intelligent control systems to ensure reliable, utility grade power quality, grid stability and desalinated potable water production.

The aim of this project is to lead towards subsequent building and commissioning of a 1-5MW (megawatt) renewable energy micro-grid system and, in the longer term, commercial wave energy plants in Mauritius, thus contributing towards meeting the government's renewable energy and wave energy targets.

The Project budget, excluding capital and operational costs, is **AUD 990,000**, which is being financed by a combination of Carnegie (19%) and the Australian Government Food Aid grant (81%).



## Deployment of a wave-monitoring device

On 27th June 2016, a launching ceremony was organised in collaboration with the Australian High Commission in Mauritius, which focused on the deployment of a wave-monitoring device in Souillac with the technical support and collaboration of the National Coast Guard (NCG) and the Mauritius Meteorological Services (MMS). All necessary clearance were obtained from the Prime Minister's Office, Ministry of Ocean Economy, Marine Resources, Fisheries, Shipping and Outer Islands and Ministry of Environment, Sustainable Development, and Disaster and Beach Management.

The Launching Ceremony was attended by different stakeholders, including academics, researchers and representatives of public and private sector, including the local coastal community.

The Hon. Premdutt Koonjoo, Minister of Ocean Economy, Marine Resources, Fisheries, Shipping and Outer Islands was the Chief Guest of Honour together with Guests of Honour the Hon. Marie Roland Alain Wong Yen Cheong, M.S.K, the

then, Minister of Civil Service and Administrative Reforms and Minister of Environment, Sustainable Development, and Disaster and Beach Management and the Australian High Commissioner Her Excellency Ms Susan Coles, for the Launching Ceremony on Monday, 27th June 2016.

In September 2016, a visit to Rodrigues was carried out by the Carnegie team for preliminary investigation for sites of wave integrated renewable development.

The project is due to be completed in February 2017, with the following outcomes:

1. A renewable energy roadmap for Mauritius, including: technical, commercial and financial feasibility of high penetration renewable energy.
2. An assessment of the Mauritian wave energy resource and the identification of a preferred site for a commercial CETO wave energy project.
3. The design of a microgrid powered desalination plant on the Mauritian island of Rodrigues.



# Offshore Wind Energy

The Republic of Mauritius has a total area of 2.3 million square kilometres of EEZ. We thus have an invaluable opportunity to harness ocean energy including offshore wind, ocean wave, ocean current, ocean thermal energy and ocean saline energy.

Marine renewable energies can amply contribute to our energy security and help in exceeding the expected target of 35 per cent of our electricity production from renewable energy sources. The Mauritian offshore renewable energy sector has huge potential for development and growth, to the level of competing on a global scale. Preliminary research on offshore wind in the waters of Mauritius and Rodrigues has yielded encouraging results.

In this context, the Mauritius Research Council (MRC) in collaboration with the U.S. Embassy in Port Louis hosted a workshop on Offshore Wind Energy on 26th October 2016 at the Conference Room, Cyber Tower 1, Cybercity, Ebene. The main aim of the workshop was to inform relevant stakeholders on the potential of offshore wind energy.

The expert speaker, Mr Gautier de Martene from General Electric's (GE) Offshore Wind Company in France, shared GE's experience in offshore wind projects and addressed the potential of offshore wind energy in Mauritius.

The workshop was attended by around 250 participants from different stakeholders, including academics, researchers and representatives of public and private sector.

The workshop was opened by the Permanent Secretary of the Ministry of Ocean Economy, Marine Resources, Fisheries, Shipping and Outer Islands on behalf of the Hon. Premdutt Koonjoo. The Chargé d'Affaires of the Embassy of the United States of America, the Hon. Dr Melanie Zimmerman also addressed the participants.

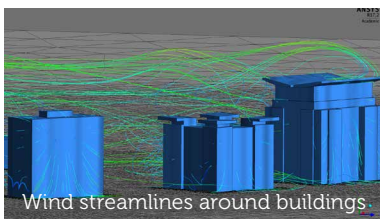


# Computational Fluid Dynamics

The MRC has initiated a number of projects using Computational Fluid Dynamics (CFD) to create mathematical models of some problems that Mauritius could face in the future. These simulations may allow us to better understand the risks and thus take necessary mitigation actions. The studies are briefly outlined below.

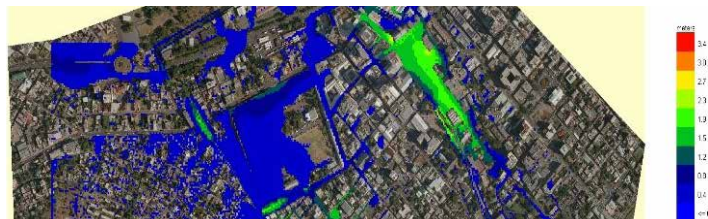
## Cyclonic Wind Impacts on High Rise Buildings

This study extends the past work carried out at the MRC to model wind effects on an urban area with several buildings closely erected. New findings show that close proximity of tall buildings has major amplifying effects on turbulence generated from those buildings. The effects could also have unfavorable consequences on building facades, claddings and glass panes, thus leading to adverse effects on its sub-structural integrity.



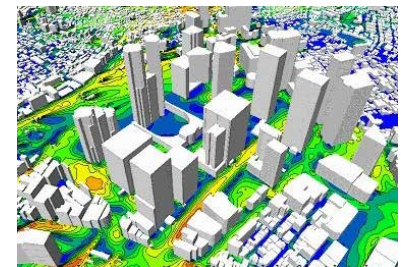
## Developing a flood prediction and mitigation map for Mauritius

A highly detailed flood model has been developed at the MRC to predict flooding in Mauritius, whereby parameters such as maximum surface water depth, street water depth, flow velocity and hazard level are generated and mapped. The model has been validated using data from the 2013 Port Louis flash flood. Hence, this can then be replicated to any part of Mauritius for detailed information on water run-off and accumulation. The National Disaster Risk Reduction and Management Center (NDRRMC) has already taken cognizance of the study. This model would be a vital tool in identifying flood prone regions, advising the Government and especially the NDRRMC on new sustainable developments and finally developing a flood mitigation plan for Mauritius.



## Study of Pedestrian Comfort in an Urban Area

The MRC is also carrying out a study to show how the wind affects pedestrian comfort in an area with many closely erected medium- to high-rise buildings. This work will give a better understanding of how the built environment will affect the microclimate in the vicinity which in turn will impact on the comfort at human height.



Source: [http://www.aij.or.jp/jpn/publish/cfdguide/index\\_e.htm](http://www.aij.or.jp/jpn/publish/cfdguide/index_e.htm)

# Technology

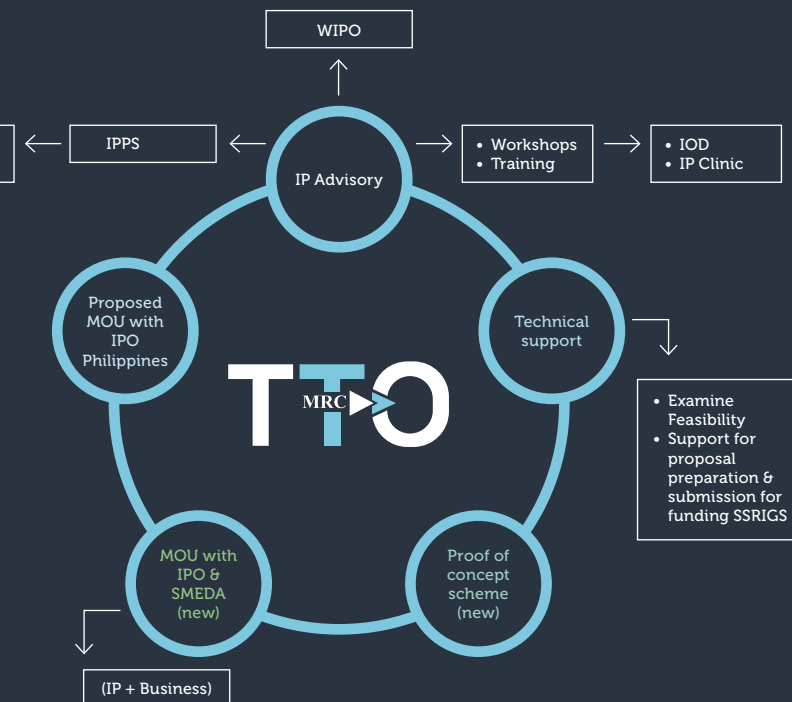
## Technology Transfer Office (TTO)

The TTO currently functions as an operating unit of the Council in line with the MRC (Amendment) Act 2014 (Act No.1 of 2014), which mandates the Council to encourage commercial utilisation of the results of Research and Development (R&D) and Innovation.

The TTO has new areas under consideration:

- **IP Healthcheck:** The MRC is working on the development of an IP assessment tool based on the existing model operated by the UK Intellectual Property Office (UK-IPO), entitled "IP HealthCheck". The IP assessment tool will be an online tool free to use through a link to the Council's website, and will provide guidance on key IP issues covering Patents, Trademarks, Industrial Designs, Copyright and Confidential Information. Users of this online tool will answer a series of questions and, based on their responses, a tailored Confidential Report will be created

- **IP Newsletter:** The TTO wishes to present succinct information on current IP issues that impact on various sectors in the country through an IP Newsletter. The IP Newsletter will serve as a tool to disseminate IP information in the public domain, and will be produced as an e-publication targeting both the public and private sectors
- **Exploratory study of the Mauritian ICT sector:** this study will be aimed at mapping out the current status of the ICT sector in terms of innovation and the use of IP during the past three years  
In the longer term, the TTO aims to develop the necessary technical skills and capacity to include:
  - IP auditing of SMEs and larger enterprises;



- Undertaking technology and IP valuation of inventions disclosed to the TTO;
- Drafting and filing of patent and/or industrial design applications until issuance of certificates;
- Analysing market intelligence and competing technologies for determining the commercialisation potential of disclosures made to the TTO;
- Identifying and negotiating with suitable technology commercialisation partners;
- Drafting of legal documentation for commercialisation (licence agreements, formation of spin-off or joint venture companies); and
- Facilitation of access to professional Technology Transfer association (e.g., ATTP, AUTM)

## The MRC – Business Research Incubator Centre (MRC-BRIC)

The MRC – Business Research Incubator Centre (MRC-BRIC) is a business pre-incubator fostering the transformation of innovative technology-driven business ideas led by young graduates into potential business start-ups. The MRC-BRIC's objective is to contribute to the commercialisation of local innovative knowledge. In this set-up, the MRC-BRIC acts as an entry point for young technopreneurs (entrepreneurs having an innovative, technology-driven business idea) to develop their technopreneurship skills.

A brochure detailing the full operation of the BRIC is available on the MRC website.

Since January 2016, four (4) technology led- pre-start-ups involving 11 graduates are being incubated under the BRIC. Each incubatee group is being followed by one Mentor. On average, each group has at least two mentoring sessions per month. One of our Incubatee team, Maufaim (www.maufaim.com) was a runner up during the recent Start Up weekend organised by the OTAM, MITIA and the CCIFM, while the other group (Smarthealth Ltd) has developed a Medical Toolbox on both iPhone and iPad.



# Nanotechnology

Background – Workshop on Nanotechnology, 06 – 07 April, 2016.

The Mauritius Research Council in collaboration with the Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR), Bangalore, India, organised a “Workshop on Nanotechnology” on 6-7 April 2016, with the support of the University of Technology, Mauritius (UTM) and the Centre for Biomedical and Biomaterials Research (CBBR, University of Mauritius).

The workshop aimed to showcase research and development in the field of nanotechnology and share knowledge on various applications that have been developed for commercial use, with wide socio-economic benefits. In this context, the objectives were to:

- promote an understanding of nanotechnology as it applies to basic and applied research;
- enable participants to gain knowledge and develop an appreciation for the role nanotechnology plays in shaping our future;
- offer insight from interdisciplinary faculty in biology, engineering, materials science and nanotechnology through a series of lectures;
- discuss practical aspects of nanotechnology relating to biomedical, industrial and computational applications; and
- discuss the way forward in terms of the direction the country should be considering in nanotechnology and to explore further opportunities for collaboration that can be developed.

At the conclusion of the workshop, the following actions were proposed for follow up:

- To investigate the possibility of collaboration with the JNCASR and the other institutions/centres for training of

researchers and students, short-term exchange programs and collaborative research projects. The modalities for collaboration could be developed through a Memoranda of Understanding and Project Collaboration Agreements.

- To facilitate the above through the setting up of a Nanotechnology Unit, whose main role would be to coordinate and provide support for activities that can be developed in collaboration with the JNCASR and the other institutions/centres.

## Way Forward

Discussions are under way between the National Research Chair for Biomaterials and Drug Delivery (based at the CBBR) and the Centre for Nanotechnology & Advanced Biomaterials (CeNTAB, SASTRA University, India) on joint collaboration in Polymeric Nano(bio)Materials for Tissue Engineering and Nanocarriers for Sustained Drug Delivery. The focus of the collaboration will be on developmental projects of common interests that respond to local needs in the health care sector, in particular regarding non-communicable diseases (i.e., cancer and diabetes).

To this effect, a Research Collaborative Agreement has been signed and this will enable projects to be undertaken over an initial period of two years focusing on:

- (i) preclinical studies of optimized nano scaffolds and nano drug delivery formulations developed by CBBR, to be conducted at CeNTAB, and
- (ii) capacity building in the areas of nanotechnology and nanomedicine.

These initiatives constitute the initial stages in the envisaged setting up of a Nanotechnology Research Cluster, through which further nanotechnology research and innovation will be carried out.

## National Research Chair: Biomaterials and Drug Delivery

Biomaterials and Drug Delivery research are driven by regenerative medicine and nanomedicine.

Regenerative medicine is about restoring structure and function of damaged tissues and organs and this is achieved via tissue engineering which involves combining scaffolds, cells, and biologically active molecules into functional tissues. Our goal in this area is to engineer polymeric nanoscaffolds and test their efficacy as skin grafts or bone grafts. Locally developed skin grafts that can promote healing of wounds or injuries in particular for

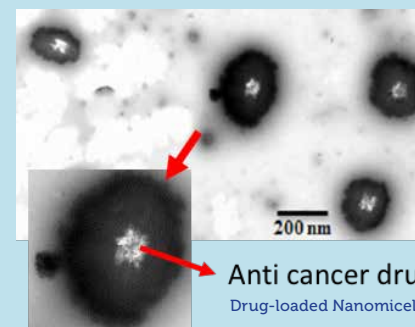
the treatment of diabetic foot ulcer, a chronic problem in Mauritius, would greatly impact on peoples' lives.

Nanomedicine is the application of nanotechnology to medicine. Nano-based formulations of drugs have revolutionized the area of drug delivery as they offer several advantages over conventional delivery such as maintenance of optimum therapeutic concentration of drug in the blood or cell, elimination of frequent dosing and better patient compliance. Our team has developed a range of polymeric

micelles and nanovesicles which have proved to be quite promising for use as nanocarriers of anti-TB, anti-cancer and anti-inflammatory drugs. We focus on developing systems that can more efficiently fight cancer through multiple drug nano formulations including synthetic and bio-active molecules. Various formulations are currently under in vitro testing on pancreatic and breast cancer cells. We also work towards the development of long term opiate delivery systems such as naltrexone, as a substitute for methadone.



Microscope image of Nanofibres



Anti cancer drug Drug-loaded Nanomicelles

Prof Dhanjay Jhurry - National Research Chair

# COMMUNITY PARTICIPATORY RESEARCH

## EMPOWERING THE COMMUNITY THROUGH RESEARCH AND INNOVATION IN RODRIGUES

In 2011, the Rodrigues Office of the Mauritius Research Council initiated a study to explore the feasibility of seaweed farming as an additional source of revenue for the fisher folk community. A Community-Based Research Approach was adopted with community participation cutting across decision-making, capacity building and research activities. The experience of Jaimie, Sabrina, Nicole, Danila, Dolores, Joseline, Marie Aimee and Dorette is shared to demonstrate how research can impact peoples' lives. These 8 women are now in the business of seaweed farming and processing and selling seaweed-based food products as a result of the study.

From 2011 to 2014, a group of women were trained in seaweed farming and processing of seaweed-based food products; in parallel they were also assisting the Research Team to maintain the seaweed farm in Petite Butte.

In 2015, they decided to set up their own farm which is about 100 m<sup>2</sup> in Petite

Butte with the assistance of the MRC Research Team. The women started a small enterprise to manufacture seaweed based pickles for the market. Their products are being sold in the central market in Port Mathurin and they also have customers who place their orders directly in Joseline's shop at Petite Butte.

The Research Team of the MRC supported the women to register as a cooperative, the **Seaweed Multipurpose Cooperative Society Ltd**.

The women have been imparted the basic skills of managing a cooperative by the Cooperative Division of the Deputy Chief Commissioner's Office.

The women reported that they used this experience to acquire new skills such as setting up an enterprise and marketing their products. As a result the women are now more confident and are generating some extra revenue for their homes, and most importantly they have bigger dreams for the future.

The main lesson from this experience is that research when conducted in a culturally-sensitive manner and when considering the strengths/needs/activities/preferences of communities can impact on peoples' lives.



Meeting of the Seaweed Multipurpose Cooperative Society Ltd in Petite Butte



Joseline selling seaweed-based pickle in her shop at Petite Butte



Sale of seaweed products in Quatre-Bornes, Mauritius 2015

### Profiles of the 8 Rodriguan women

Joseline is 54 years old and former octopus fisher residing at Petite Butte. She also cultivates crops and rears animals.

Nicole is 41 years old and former octopus fisher residing at Corail Petite Butte. She is also a craftswoman.

Sabrina is 32 years old and former fisher residing at Grand Var. She is also a craftswoman.

Jaimie Ernest is 31 years old and former octopus fisher residing at Petite Butte. She is also a sheep breeder.

Danila Ernest is 31 years old and former octopus fisher residing at Petite Butte. She also rears animals.

Dolores is 24 years old residing at Petite Butte and rears animals.

Dorette is 32 years old and residing at Petite Butte. She cultivates crops and rears animals.

Marie Aimé is 50 years old. She was an octopus fisher until she launched her own business of agro-processing and she operates mainly at the central market in Port Mathurin.

## NRC: Applied Biochemistry

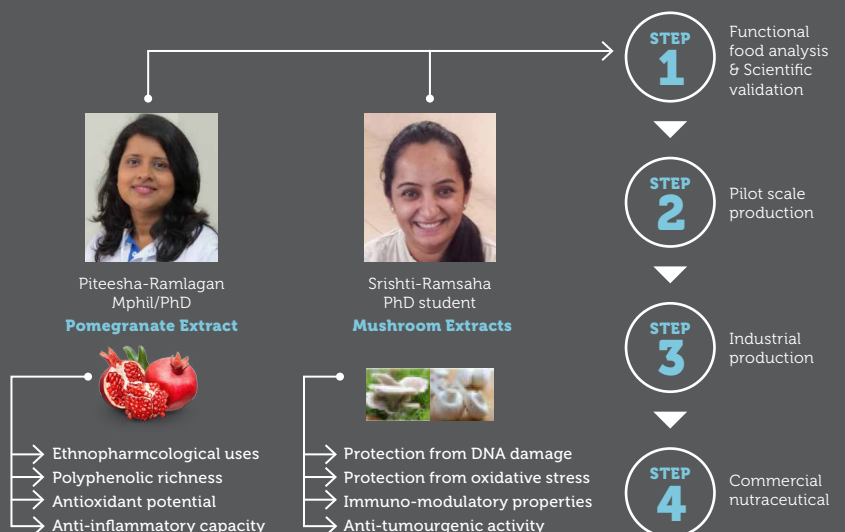
### NRC program in Applied Biochemistry leads to commercial potential

*"While we continue to research and develop novel extracts/compounds to serve as prophylactic treatment to diabetes and cancer, we have now strong scientific evidence to progress towards commercialization of our top formulations which have the potential to hold significant market value given the high number of patients seeking alternative methods to alleviate their disease burden"*

**Professor Theeshan Bahorun, PhD, G.O.S.K**  
National Research Chair

The NRC Applied Biochemistry program led by Professor Theeshan Bahorun has been instrumental to develop strategic competence to validate scientific data using rigorous biochemical, molecular, preclinical and clinical methodologies and approaches to target direct applications

and initiate potential commercial ventures. The work at CBBR by his group on anti-diabetic Pomegranate (PE) and anti-cancer Mushroom extracts (ME) is the showcase of high level dedicated research. The prospects for setting up start-ups for commercial ventures stems from intricate analytical, biochemical and cell culture works for PE and advanced biophysical, molecular and animal studies on ME. Major outputs on PE emanate from breakthrough research which propose a novel mechanism of action by which PE exerts its protective effects on oxidatively stressed preadipocytes diabetic model. Works on local mushroom extracts (ME) focused on their hepatoprotective, immunomodulatory and anticarcinogenic effects with micro-nodular lesions in mice liver being consistently reduced due to the presence of antioxidant phenolics and a major compound, ergothioneine.



# Major MRC Events 2016

## MRC's participation in the INFOTECH 2016



The objective of the MRC in the INFOTECH 2016 was to create awareness on Robotics and 3D printing as key tools for promoting innovation in the country. The overarching objective was to boost the interest of the younger generation in innovation and emerging technologies.

MRC occupied a stand of 300sqm at the INFOTECH 2016 (held at the Swami Vivekananda International Convention Centre (SVICC) from 1-4 December 2016) where Robotics and 3D Printing technology were showcased.

Experts in the field of Robotics and 3D Printing from India, Australia, USA and France displayed some of the latest teaching and learning tools.

### Key achievements:

- Approximately **20,000 visitors** in the MRC stands during the 4 days of the infotech
- **14 different training workshops** (1h - 1h30 mins each) on introduction on how to code and how to build robots were organised during the 4 days
- **200 young individuals initiated** to robotics and coding through these workshops
- One special introductory course on robotics for young children 4 - 6 years (20 participants reached)

## Research Grant Application Training 2016



The Research Grant Application Training 2016 is the third edition organised by the Council and it was run over the period October and November 2016. It sought to impart participants with the skills of proposal write-up for submission under its various Research Grant Schemes. It is aimed at improving the quality and applicability of research projects. For this third run, more emphasis was put on looking beyond the immediate academic or theoretical value of research projects in order to be more innovative and be of more practical relevance to societal challenges.

128 participants across 6 broad disciplinary areas have benefitted from this training. The areas included (1) Life Sciences, (2) Engineering, (3) Agriculture and Environment, (4) Sustainable Development, (5) Information and Communication Technologies and (6) Socio-Economic Issues. It is believed that further to this training, participants have a better understanding of the research grant application process and will make good use of this knowledge when applying for research and innovation grant schemes.

Participants received their certificate of participation during the Best Mauritian Scientist Award Ceremony held on 12 December 2016.

## National Innovation Challenge

The **National Innovation Challenge (NIC)** aims at uncovering and fostering local and professional innovations created by Mauritians working in a variety of fields from Academia, Start-ups, SMEs, communities to local schools and home inventions. This challenge proposes to showcase, nurture and reward ideas leading to potentially life changing solutions from the Mauritian population.

The NIC consists of three (3) categories namely, (i) Open Category, (ii) Tertiary Students Category and (iii) Secondary Students Category. Participants will be required to devise a solution from one of the thematic problem areas and are expected to identify a specific problem, and come up with a viable idea to solve that problem. Participants will outline how they intend to further improve their ideas or come up with a prototype in the six months provided in the Proof of Concept phase.

The 1st edition of the NIC will comprise of the Open Category as a start. The 1st prize for this category will include:

- A cash prize of Rs.500,000
- A trophy
- A recognition certificate

The guidelines and application form can be downloaded from the MRC website.

## Workshop on Innovation

Establishing a Regional Innovation Alliance among Small Island Developing States (SIDS) of the Indian Ocean Region



The United Nations Educational, Scientific and Cultural Organization (UNESCO) organised a follow up conference in Mauritius to explore

the possibility of promoting and establishing a regional innovation alliance among Small Island Developing States (SIDS) of the Indian Ocean. The consultation was organised in partnership with the MTCI and the Mauritius Research Council (MRC). The workshop was held on the 24th and 25th November 2016 at Voila Hotel and gathered around 50 participants from the public and private sectors as well as from academia. The Union of Comoros and the Republic of Madagascar were represented by the Honorary Consuls of their consulate and Embassy respectively. As the way forward, it has been proposed to set up a Regional Innovation Alliance among Indian Ocean Island Developing states and UNESCO Centres of Excellence in Mauritius.

## Best Mauritian Scientist Award (3rd Edition)



The ceremony of the award of the 3rd edition of the Best Mauritian Scientist Award was organised on Monday 12th December 2016. This open competition aimed at recognising the efforts of Mauritian scientists and researchers, through open competition, and appreciating how their contribution could impact on the life of Mauritian Citizens. This award consisted of a Trophy, a certificate, a cash prize of Rs.200,000 and a support of Rs.50,000 for a study tour. Four participants were nominated for this award:

- Dr Pierre Clarel Catherine
- Assoc. Prof. Boopen Seetanah
- Dr Shamimtaq Sadally
- Prof. Ponnadurai Ramasami

The Jury made a Honorary Mention which carries a cash prize of Rs 50,000 to Dr Pierre Clarel Catherine for his early career achievements. Prof Ponnadurai Ramasami was the winner of the 3rd edition of the Best Mauritian Scientist Award.