





Nintendo Wii as a Rehab Tool for Phys. Therapy?

#### **Cassava Wheat** Bread as a Whole Wheat **Alternative**









Mona News is a publication of the Marketing & Communications Office, The University of the West Indies, Mona Campus

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The enduring mission of the University of the West Indies is to propel the economic, social, political and cultural development of West Indian society through teaching, research, innovation, advisory and community services, and intellectual leadership.

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#### FROM THE PRINCIPAL

## Navigating a path towards a sustainable, more impactful future

MONA MAY 2013

he past year has been a financially challenging one for The UWI, Mona, impacting our community, stakeholders and our students in particular. Despite these challenges, we have kept in the forefront of our minds the University's enduring mission—to propel the economic, social, political and cultural development of West Indian society through teaching, research, innovation, advisory and community services, and intellectual leadership.

Our commitment is reflected in the topics addressed in this issue of the Mona magazine. Recognising the difficulties faced by students, Mona has been trying to identify new financing options for them, even as we have implemented projects which will significantly boost opportunities for students to work and study. The most significant of these projects has been our recent involvement in the business process outsourcing industry, in collaboration with an overseas company. Our students have justified this investment as, after only four weeks of training and one week of live operations, the Jamaica UWI team outperformed the company's entire global network! This is a tremendous achievement by any

The high standards achieved by our students is also reflected in the accomplishments of our computing students who developed a solution to a serious problem facing the agricultural industry,

measure.

and of our business students. who unearthed the nutritional benefits of tropical foods, creating a baby food product which copped the top prize in an international innovation and entrepreneurship competition.

At another level, our staff continue to conduct research which directly impacts the wellbeing of our nation. Innovative work underway in our Section of Physical Therapy has resulted in the use of popular games as a rehabilitation tool for children with cerebral palsy. In our Department of Physics, explorations continue into how to introduce human speech

recognition technology, which will assist persons who are physically challenged and other members of the disabled community, into mainstream use in Jamaica, using local expertise. Efforts to develop a cassava flour for use in the baking of bread, if commercially successful, will provide a significant boost to the local farming indus-

> the health benefits of uncommon local fruits is particularly important at a time when health care costs are rising resulting from an increase in lifestyle diseases.

try while research into

Even as we focus on research which will meaningfully impact society, the University cannot sustain itself unless it deepens its relationship with the wider society.

Efforts to foster development in neighbouring communities by providing educational opportunities for talented youngsters are bearing fruit, as one

of the first recipients of the UWI Township Challenge Scholarship has now graduated with first-class honours.

At another level, I commend communication students of The UWI. Mona Western Jamaica Campus (WJC) who conceptualized and initiated The UWI, Mona WJC Ambassadorial Corps. This project, which aims to further integrate the five-year-old WJC into the community, is an example of how theory and practice are intertwined to ensure that our students receive invaluable job training and experience, making them work-ready on graduation.

Another development in acknowledgement of the shift in global paradigms is the thrust by our Confucius Institute, the only one of its kind in the English-speaking Caribbean, to familiarize members of our community with aspects of Chinese culture and tradition. The Institute is also teaching the Chinese language in certain high schools, as part of its expansion and outreach initiatives.

The developments highlighted in the magazine reflect Mona's continuing commitment to high academic standards and our determination that what we do will have a positive impact on the development of our country. In spite of the challenges, we will stay true to mission, inspiring excellence, producing leaders. M



**PVC and Principal** 

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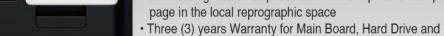
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The Nintendo Wii game system offers virtual reality scenarios in which gamers who have cerebral palsy use it as the centrepiece of their physical therapy.

hoever thought that the Nintendo Wii could be used as a rehabilitation tool for children with cerebral palsy? Physical Therapy researchers made this discovery a few years ago and use of this virtual reality training system is being integrated in treatment clinics in Europe, North America, Australia and the UK. More recently, the system has become a focus for research being conducted by the Section of Physical Therapy at The University of the West Indies, Mona

The Nintendo Wii gaming system forms part of the world of virtual reality—a computer simulated environment which might be a replica of a real environment or an imaginary or fictitious world. Released in 2006, the gaming system was manufactured with the intent of making children more active. It operates by responding to body movements and comes with a hand-held wireless remote which can detect movement in three dimensions. This allows individuals to engage in games like boxing, golf, baseball, bowling and canoeing while viewing themselves on a screen. As the individual moves, the 'Mi' on the screen, which represents the player, also moves, so the player is in tune with the results of his/her performance and can modify strategies accordingly.

##

Wii

Research on the integration of this virtual reality device into rehabilitaMONA MAY 2013

## NINTENDO Wii – NEW **REHABILITATION TOOL** FOR PHYSICAL THERAPY



Left to right: Dr. Carron Gordon, Gail Nelson and Dr. Sharmella Roopchand-Martin – the team that conducts research with the Nintendo Wii at the Section of Physical Therapy, UWI, Mona.

tion therapy for children with cerebral palsy began at The UWI, Mona in 2009 when Dr. Sharmella Roopchand-Martin, lecturer in the Section of Physical Therapy, Department of Basic Medical Sciences, UWI, Mona, along with a team of researchers, conducted a pilot project on six children from the Sir John Golding Rehabilitation Centre. Diagnosed with cerebral palsy (a lifelong disability caused from brain damage due to loss of oxygen during the birthing process), these children, aged six to ten, attended one-hour

The Wii wand gives patients, through hand/eye coordination, a means of being uniquely in direct touch with their performance

training sessions, three days per week for six weeks, at the Physiotherapy Department of the Sir John Golding Rehabilitation Centre.

The children varied in their functional level, some able to walk with rollators (walkers with wheels), others wheelchair bound, and some able to hold the wireless remote, while others had to have the remote bandaged to their hands. They all participated in a variety of games including boxing, baseball, tennis, bowling and golf. According to Roopchand-Martin, "The intention was to get these children up and physically active. Children with cerebral palsy are dominated by spasticity, which causes the muscles to be slow and weak. There are also problems with strength and coordination. In the fun of the game, the

Continued on page 6

children force themselves to do movements that they would not normally do as they focus on trying to win the game.

Prior to the start of training, the children's gross motor skills were evaluated by two experienced paediatric therapists and the same therapists reassessed the children at the end of the six weeks. The evaluation showed that the children improved in all categories of motor functions—lying, rolling, sitting, crawling, kneeling, standing, walking, running and jumping, with the most significant changes observed in crawling and kneeling. This pointed to the potential of the Nintendo Wii as an excellent rehabilitation tool. "In comparison to what obtained at the start of training, significant improvement was seen in the gross motor functions of the six participants at the end of the project," Roopchand-Martin said. However, she feels that more clinical trials and longer-term training are needed to further explore the efficacy of this device.

One of the advantages of using the Wii as a rehabilitation tool is that parents can purchase it and continue the training at home, reducing the cost of daily, private therapy, as well as the 'hassle' in public hospitals where staff complement is inadequate to provide effective treatment. "A major idea behind the research was for parents to implement the trials at home. When working



A patient with spinal cord injury engages in balance training using the boxing programme on the Nintendo Wii. The physical therapist is seated behind the patient for supervision and safety.

with patients who have neurological disorders, the main focus is to teach the unused areas of the brain to take over the function that was previously done by the damaged area. This can only be accomplished through intense training," Roopchand-Martin said. The initial burden is the cost of getting a

Wii, but once parents can afford it all that is required is teaching the children how to use it and helping them to select appropriate games. "The Wii is a fun activity for the children. They are moving the arms and making the brain work to perfect the movements of the body. What we are trying to do is retrain movement and the only way to retrain movement is by doing movement. The gaming system is a fun way of accomplishing that," she added.

#### **FUTURE PROJECTS**

Subsequent to her research on children with cerebral palsy, Roopchand-Martin continued to examine the use of the Nintendo Wii on other populations. In 2010, she initiated a second project using the boxing game on the Nintendo Wii to improve sitting balance in patients with paraplegia (those affected with spinal cord injuries). Currently, she is working on a project using the Wii as a form of aerobic exercise training to improve the cardiopulmonary function of persons with paraplegia, along with Dr. Carron Gordon, head of the Physical Therapy Section, and Gail Nelson, lecturer in Physical Therapy at Mona. Another of her current work involves comparing the oxygen consumption and exertion level when doing the free run activity on the Nintendo Wii with running on a treadmill from among a sample of

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A demonstration of the free run activity on the Nintendo Wii. Oxygen consumption is being measured using a metabolic cart.

healthy UWI students. In June the team of researchers will begin a new project which is being led by Nelson. This project will explore the effectiveness of a training programme using the Nintendo Wii on cardiovascular outcomes in patients who require cardiac rehabilitation.

In addition to trying to increase the available equipment for conducting research with the Nintendo Wii, the section of Physical Therapy has also acquired the X-Box Kinnect with an aim to explore rehabilitation applications for this gaming system. "My primary focus is trying to develop virtual reality research at UWI, as that is where I believe the future is," said Roopchand-Martin. When their research started in 2009, there were only a few articles published in North America on the use of the Wii as a treatment for stroke patients. "But things have progressed, and what we are doing in terms of research here at UWI is in keeping with current rehabilitation research occurring on the international scene. There are a lot of articles out now on gaming systems," she affirmed.

Another interest is combining robotics with virtual reality, an area of research which is being actively pursued in parts of Asia, Europe and North America. There, therapists integrate the robots and virtual reality into clinical treatment to achieve the kind of intensity of training required for patients with neurological disorders. "Today's technology offers amazing possibilities for rehabilitation, and physical therapists, biomedical engineers, computer scientists and patients working together can change visions into reality to create a better future for persons with disabilities." she said. M



he Confucius Institute at The University of the West Indies (UWI), Mona, has an aura of mystique with its traditional Chinese woodcarved facade, paper lamps swaying in the breeze and a bright red-painted door to welcome visitors. Sprinkled throughout the oriental building are aspects of Chinese culture and tradition which lend an insight into one of the world's oldest civilisations.

Officially handed over to The UWI in February 2009 during the state visit to Jamaica of Chinese Vice-President Xi Jinping, the Confucius Institute is striving to become a centre for learning Chinese culture, extending beyond the realm of simply learning the language. "The main purpose of

the Institute is to promote the learning of the Chinese language and culture," informed Dr. Courtney Hogarth, a Jamaican national, lecturer, and director of the Institute. "People can come and learn Chinese, and they will also learn about the Chinese philosophy, history and culture," he added.

"Learning a language is more about selfdevelopment," Hogarth explained. As Chinese is an ancient language, he feels that it is also important to acquire holistic knowledge of the country, its people and their way of life. In this regard, two Chinese teachers, two volunteers from China and one Chinese director are on staff to provide a holistic approach for the students.

> Further, with the shift in global economic paradigms, Hogarth noted that Chinese has become a sought-after language. "Yes, it does boil down to economics, because there are ample opportunities for people who learn Chinese," Hogarth affirmed.

#### **OUTREACH PROGRAMME**

Additionally, the Institute has recently embarked on

teaching Chinese in high schools as part of its expansion and outreach plans. "To begin with, we are offering Chinese at Ardenne High School and Campion College. The objective is to start teaching the language and culture when they (students) are younger, because at that age they are flexible.

Cont'd on page 32



Hanzi, or Chinese writing, shown in

traditional (left) and simplified styles.



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# THE ALTERNATIVE TO WHEAT BREAD TO WHOLE WHEAT?

`Eat what you grow, grow what you eat.' This was the slogan in the mind of Dr. Ian Thompson, lecturer in Food Chemistry, Department of Chemistry, Mona, when in 2011 he made a composite cassava wheat bread as a substitute for regular wheat bread. His desire to experiment with cassava to make bread was also whetted by the global food for fuel crisis which emerged in 2008 and led to the use of animal feed (corn) to produce fuel. The wheat bread seen on local supermarket shelves is made from wheat imported from North America. Over 200,000 tonnes of wheat is imported annually, mainly for use in the production of wheat bread.

n 2009, in an effort to reduce the food import bill, the Jamaican government embarked on an "Eat What You Grow Campaign" and the farming community was encouraged to increase production of cassava, among other crops. However, the market was not robust enough to absorb the increased output of cassava which is limited locally to the commercial production of bammy, cassava chips and a cassava-based spray starch. Consequently, Thompson started to think of additional uses for cassava. "I was aware that there was a possibility to produce a flour from the cassava, as cassava is very high in starch. So I did some research on the crop along with a 2011 final year chemistry student and decided to take up the challenge of preparing cassava flour to make bread," he said.

Thompson was aware of some resistance to cassava consumption due to a perception that it might be poisonous. "Cassava contains poisonous agents called cyanogenic glycosides, linamarin and lotaustralin," he admitted. But, the plant has a natural mechanism to degrade it. "The act of crushing, cutting or breaking the cassava begins the degradation process. As long as it is processed properly, taking into account the possibility that these agents could cause harm, there is reduced risk of exposure to the toxins,"



Dr. Ian Thompson, Lecturer, Department of Chemistry



Cassava planting sti

he explained. The "sweet" varieties of the cassava plant, containing low levels of cyanogenic glycosides, are ideally suited for use in flour production.

Thompson pursued his research with the objective of encouraging people to buy the cassava bread and to stimulate local production. He wanted to make a product that would be acceptable to Jamaican consumers in terms of appearance, taste and texture over an aging (storage) period of seven days. However, evaluation of traditionally produced cassava meal revealed that it could not totally replace wheat as the texture was too coarse. Another option was to reduce the percentage of wheat in the bread by adding cassava flour to produce a composite cassavawheat flour.

The major objective of the research therefore was to determine the specific level of cassava flour which could be incorporated in wheat bread so that the consumer could not tell that cassava was present. "The challenge was to produce a composite cassava wheat bread which was indistinguishable from the 100 per cent wheat bread. We did not want Jamaican consumers to be able to detect the difference; we were able develop a product which tastes just like wheat bread and potentially having little impact on

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#### "Those who tasted it could not tell that cassava was present."

nomic activity in the rural communities, increasing local commerce (trade) and processing opportunities. We would also be adding value to a raw material which is currently being wasted in the fields," Thompson stated.

#### **COST OF PRODUCTION**

However, pricing remains a major consideration in the marketability of the cassava bread. Thompson found that the cassava bread could not compete with the regular wheat bread due to the cost of cassava flour production. "Because of this, cassava bread is not on the market. At this point, it is a concept. It can be made, but it cannot be made available to the consumer readily because of the cost," Thompson said.

Consequently, Thompson has commenced investigating improved technologies to convert the cassava root into flour. Traditional technology used to make bammy could not be used to produce the cassava flour for bread as the traditional processing technology relies heavily on manual labour and produces a cassava meal which is unsuited for use in bread. "We are interested in introducing more modern technologies, with a higher level of mechanisation and improved efficiencies to deliver a suitable cassava flour," Dr. Thompson stated.

In this regard, the Department of Chemistry has been holding discussions with CLAYUCA, a consortium of Caribbean and Latin American countries interested in promoting cassava production, backed by CIAT – the International Centre for Tropical Agriculture. CLAYUCA supports cassava research and development and has "tried and proven" technology for converting cassava root to cassava flour, suitable for use in bread. CLAYUCA promotes the utilisation of this technology through their member countries which fund the organisation.

In collaboration with the Caribbean Agricultural Research and Development Institute (CARDI), the Chemistry Department has also been in dialogue with the Colombian Embassy to explore mechanisms to obtain a pilot plant, with the assistance of CLAYUCA, for the local production of cassava flour and by extension cassava wheat bread. "We approached CLAYUCA, but we need some assistance in trying to ensure that our effort is on somebody's agenda. We are hoping that CLAYUCA can help," Thompson said.



A farmer inspects a cassava cultivation



A farmer displays cassava

on taste," Thompson said. This involved understanding the roles of flour and starch in the bread. "It had to perform in the same way, meaning it had to be leavened or raised by the yeast in the same way, and it had to have the same texture," he added.

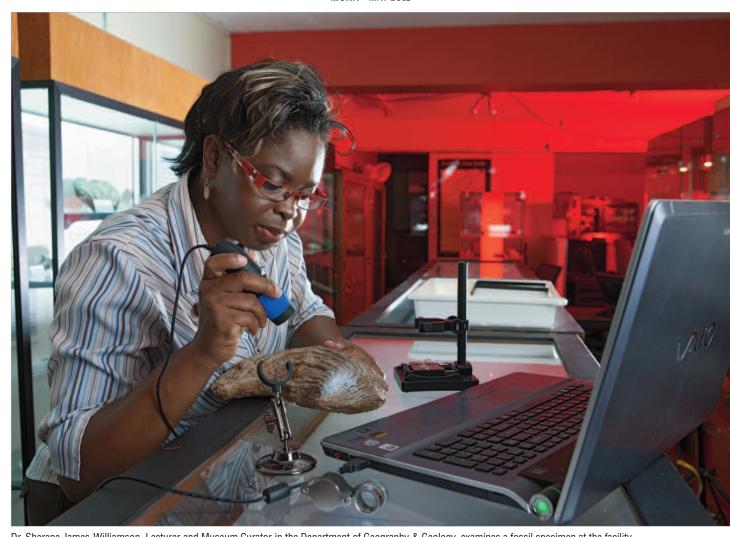
consumers' purchase decision based

He was able to produce a composite cassava wheat bread, with similar sensory characteristics to that of ordinary wheat bread even in terms of staling. He also demonstrated that the product was acceptable to the consumer when he displayed it at the Jamaica 50 celebrations in the UK last year. "Those who tasted it could not tell that cassava was present. We also sent a sample to the Colombian Ambassador to Jamaica and he enjoyed it," he said.

Consumption of bread is an everyday Jamaican custom and the local production of a cassava wheat bread would mean satisfying the need for this staple, while reducing the country's reliance on imported wheat. "It could reduce our wheat import bill by ten per cent, and instead of supporting farmers in the US, we would be supporting our own farmers, moving towards self-sufficiency and putting our farmers back to work. By re-employing farmers, we would be stimulating eco-



Cassava tubers



Dr. Sherene James-Williamson, Lecturer and Museum Curator in the Department of Geography & Geology, examines a fossil specimen at the facility.

here is nothing in the English-speaking
Caribbean quite like The UWI, Mona's Geology
Museum. Established in 1961, the museum
started as a special collection for teaching
geology when the then Department of Geology was established at the Mona Campus.
The UWIGM as a repository for research
collections, and as a public museum began
in 1967 and 1970, respectively. Since then
the museum has excelled both in terms of
the collections it holds as well as the services it offers. The significant collections represent the rich scientific heritage of Jamaica
and the Caribbean, in the areas of geology and palaeontology,
and are significant teaching tools for certain fields such as
environmental science and biodiversity.

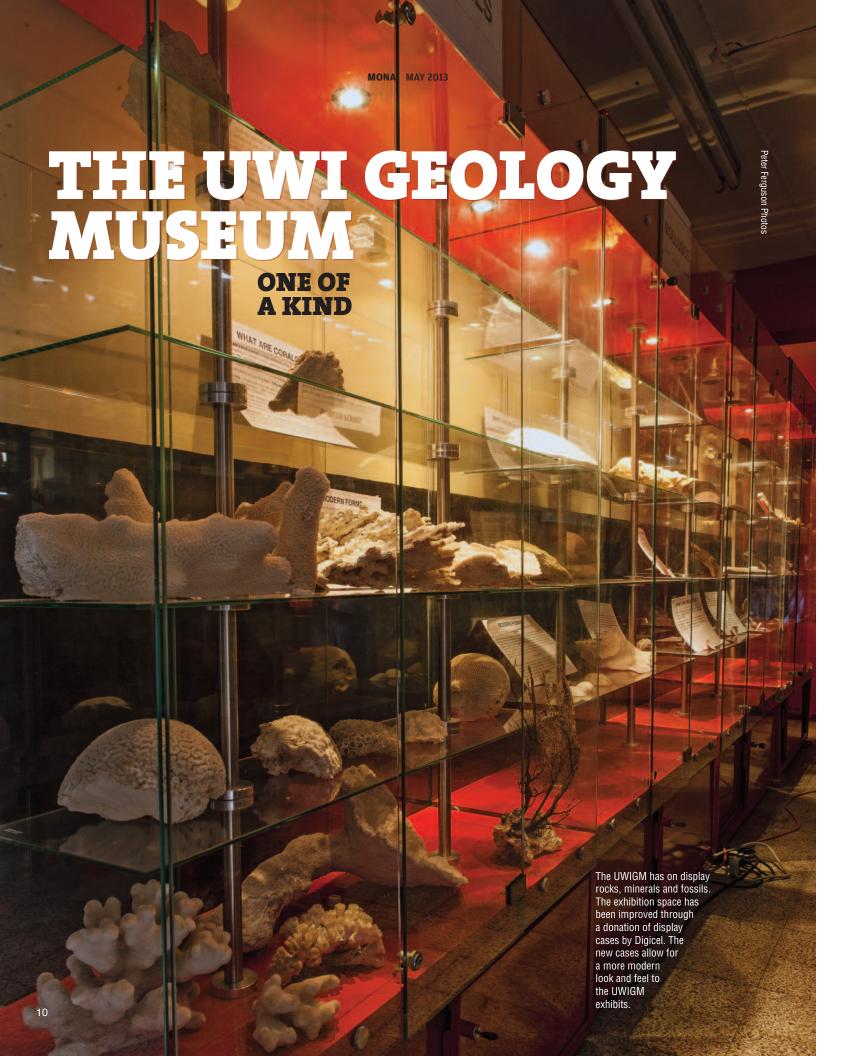
The mission of the UWIGM is "To procure, display and curate geological, mineralogical and palaeontological materials from Jamaica and the Caribbean for the purposes of research, education, posterity and the enjoyment of the public."

The UWIGM's role has changed over the years, largely due to the promotion of the earth sciences, curriculum changes within the Jamaican school system and the need for teaching and learning resources. Now, through its collections and museum education

programmes, it has been able to provide a learning environment not only for students of geology, but of other disciplines as well.



Rocks and Minerals exhibit with specific reference to economic and industrial uses



The museum promotes science and geoscience education by providing opportunities for students to be active participants in their learning through the manipulation of real objects in an enabling environment with a multimedia technology-based interface. It provides curriculum support by hosting organized visits and tours for primary, secondary and tertiary level students and teachers from schools and colleges in Jamaica; seminars and workshops for teachers and children as well as summer science camp activities.

Since April 2009, the UWIGM has been undergoing a modernization and rejuvenation programme. It has introduced an interactive learning environment with funding from the Canada Fund for Local Initiatives (CFLI) under the Canadian International Development Agency (CIDA) programme. The learning centre was opened by the then Canadian High Commissioner to Jamaica, Mr. Stephen Hallihan in March 2010. The learning centre boasts a tutorial room environment with a height-adjustable SMART board. Six computers from the Department of Geography and Geology computer lab have been fitted with interactive geoscientific software for discovery learning for all age groups.

The discovery zone facilitates discovery learning through engaging activities and experiments – activities involve rocks, minerals and fossils but are based on the early childhood education curriculum. The discovery zone was funded by two discretionary grants from the Insurance Company of the West Indies Foundation (ICWI) and the Environmental Foundation of Jamaica (EFJ).

#### RESEARCH

The need for collections-based research and programme development has sparked the introduction of a research programme through the acceptance of research associates and/or fellows. Since 2011, the

UWIGM has hosted a research fellow in cultural resource conservation and management of the architectonic heritage, Dr. Patricia Green (of Patricia E. Green Architects). This collaboration has generated research proposals and research is currently being conducted in geoconservation and geoarchitecture®. The intention is to apply UWIGM's skill set and its public awareness capabilities to be able to conduct Heritage Impact Assessments for sites, monuments and areas of historical significance in a bid to engage persons on a community level in the preservation of our heritage and physical, geophysical and social history. The UWIGM previously hosted a research fellow, Miss Pietra Brown in the area of climate change and environmental security.

#### COLLECTIONS

The UWIGM houses approximately 20,000 items (rocks, minerals and fossils). A major collection comprises rudists, a fossil species that lived around the time of the dinosaurs. Many are type species and some are only found in Jamaican rocks. The collection shows the abundance and diversity of rudist taxa in Jamaica as well as other parts of the Caribbean and Central American region. There are approximately 5000 rudists in the UWIGM collection.

The UWIGM also houses the Caribbean Journal of Earth Science (formerly, Geonotes and Journal of the Geological Society of Jamaica). There are rare publications, field reports and articles along with a catalogue of articles from lecturers and where possible graduate students of the department of Geography and Geology (past and present). These resources are available through a digital archive, soon to be accessible online.

#### **PROGRAMMES**

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The UWIGM has a vibrant volunteer programme. It has been served by 23 volun-

teers and 10 temporary (student) workers who help the museum in areas such as IT, administrative, curatorial, visitor experience and tour guide support since 2009. There is an active summer programme the "Rock Star" Camp - which houses students from 4 to 16 years of age (preschool to the 11th grade). The sessions run for 2 weeks in July for high school students and 2 weeks in August for pre-school to primary school children).

The UWIGM also conducts seminars and workshops for local and regional groups of teachers and students.

The UWIGM has on display rocks, minerals and fossils. The exhibition space at the UWIGM has been improved through a donation of display cases made to the UWI Museum by Digicel. The new cases allow for a more modern feel and look to the UWIGM exhibits.

The UWIGM will collaborate with the UWI Museum to host the Museums Association of the Caribbean conference and AGM in October 2014. This will bring museum professionals from across the Caribbean into UWI and by extension Jamaica to showcase our geological, cultural and social heritage space. The UWIGM is a member of the International Community of Museums (ICOM) and is a board member of the Museums Association of the Caribbean (MAC).

The UWIGM is open from 10 am to 3 pm daily. Tours are available through bookings and spontaneous visits. Since April 2009, the museum has seen over 3000 local and overseas visitors from the pre-school to tertiary level. M

Sherene A. James-Williamson is Lecturer and Museum Curator, Department of Geography and Geology

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### **EAT WILD JAMAICAN BERRIES** AND STRAWBERRY GUAVAS

MONA MAY 2013

ietary tastes are notoriously fickle when we're growing up, given the constant bombardment of mixed messages from varied sources. However, one message that never gets old is that fruits are good for you, and there is solid scientific evidence to back up this claim.

**SEEKING A HEALTHY DIET?** 

Scientific findings have revealed that healthy diets rich in fruits may reduce the risk of a number of chronic, non-communicable diseases including cancer, arthritis and Alzheimer's disease. This is in addition to providing fiber, essential vitamins and minerals, and other contributants to good health.

In Jamaica where there is a preponderance of fruits, there is ongoing scientific research on edible fruit species that are largely unfamiliar to the general public and therefore not included in the local diet nor are cultivated. One focus of research is the health-beneficial properties and biologically active constituents of uncommon Jamaican berries (raspberries and blackberries) and strawberry guavas which, at best, grow wild and are considered invasive.

"Where I grew up in Guys Hill, St. Catherine, there was a species of blackberry which grew right by my [primary] school. When it was in fruit, kids would raid the trees, so I knew about it and loved it from back then. I knew it was also uncommon





Dr. Camille Bowen-Forbes

West Indian raspberry

because I did not see it anywhere else. While growing up I would hear about the wonderful properties of berries, so that was in my head space from an early time," explained Dr. Camille Bowen-Forbes, food chemist and lecturer in the Department of Chemistry, Faculty of Science and Technology, Mona. Bowen-Forbes researched this and similar fruits for her post-doctoral studies in 2008.

Given her talent as a food chemist and her love for fruits, coupled with an unquench-

study, Bowen-Forbes began investigating the local berries, a territory hitherto largely unresearched in Jamaica. Her research revealed that the local berries of the Rubus genus (blackberries and raspberries) contained positive biological properties. Similar properties have been found in related fruit species worldwide. "A plant species (or its contained compounds) which have good antioxidant properties is likely to have several other beneficial attributes." Bowen-Forbes said. In the case of the blackberries and black raspberries, there is a high level of anthocyanins which are antioxidant-rich compounds that give flowers, fruits and other plant materials their red, purple and blue colours. These compounds contribute anti-cancer and anti-inflammatory properties to these fruits. Noteworthy is the fact that our local berries are also endowed with anti-cancer and anti-inflammatory properties substantively superior to those on the overseas market.

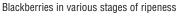
able thirst to research novel areas of

Bowen-Forbes has been lauded for this research and received the UWI's award of Best Research Publication in the Faculty

#### **HEALTH-PROMOTING PROPERTIES OF STRAWBERRY GUAVAS**

Subsequent to her research on the berries, Bowen-Forbes explored the health-promoting properties of strawberry guavas (Psidium cattleianum).





# "The common guava is considered a super fruit due to its exceptional nutritional and other health-promoting properties including antioxidant and anti-inflammatory properties," she said. She therefore hoped that the strawberry guava would possess similar or even better characteristics than the common guava. She pointed out that while these health-beneficial properties are common among fruits, the fruits she has studied are overly beneficial.

She found that the antioxidant activity of the strawberry guava was several times higher than that of the regular guava. The vitamin C content, as well as the polyphenolic content (compounds known for their antioxidant properties), were also present in significantly greater levels in strawberry guavas. All these attributes make the strawberry guava the superior fruit in comparison to the regular guava. Strawberry guavas, which are smaller, softer, and often described as more aromatic than common guavas, also possess relatively high fiber content, and as such, can be classified as an antioxidant dietary fiber (AODF). A high consumption of fiber is known to alleviate constipation, diabetes, coronary heart disease and other conditions.

Overall, the results from both studies illuminate the healthfulness of Jamaican berries and strawberry guavas. "I would definitely encourage and promote the consumption of greater amounts of these fruits, once they are available, because fruits in general are good and I know that these fruits are very good for a healthy lifestyle," Bowen-Forbes said.

#### **ECONOMIC POTENTIAL**

Further, these uncommon local fruits could be exploited to improve the country's economic status. Bowen-Forbes stressed the potential of producing value-added products from these fruits, such as jams, jellies, juices, wines and a range of desserts. Two years ago, a tentative step was taken in this direction and raspberry-flavoured jams and juices were show-cased by UWI's Department of Chemistry at the local Denbigh Agricultural Show.

Bowen-Forbes noted, however, that before capitalizing on value-added products, attention must be directed towards large-scale cultivation of these fruits as, currently, they are present in small quantities and grow wild in various locales. This problem exists more so with the berries which flourish in cool, hilly terrains, she said.

#### UWI-WJC LAUNCHES AMBASSADORIAL CORPS



The newly appointed members of the Ambassadorial Corps. From L-Front row: Adam Stewart, Fred Smith, Dr. Barbara Salmon-Grandison, Yoni Epstein, Everton Anderson, Mark Hart, WJC Director, Dr. Luz Longsworth, Hope Markes, Omar Robinson, Ernie Grant, Custos Hartley Perrin and Howard Ward. Back Row: Ambassador Stephen Vasciannie and Heather Murray

welve outstanding members of the business community in Western Jamaica have been appointed to serve as advocates for The UWI Mona Western Jamaica Campus (WJC) for a two-year period. The appointed ambassadors are Father Hartley Perrin, custos of Westmoreland; Mark Hart, executive chairman of Caribbean Producers Jamaica Limited; Dr. Barbara Salmon-Grandison, ear, nose and throat specialist; Everton Anderson, chief executive officer of the National Health Fund; Heather Murray, principal of Hampton High School; Adam Stewart

of Sandals Resorts International; Omar Robinson of Round Hill Hotel and Villas; Howard Ward of Ward Power Tools; Yoni Epstein of Island Outsourcers; Ernest Grant of Rainfores Seafoods; Hope Markes of Kiwanis International and Fred Smith of Exclusive Holidays.

The Ambassadorial Corps was launched at the Iberostar Grand Resort, Montego Bay, on March 13 by Jamaica's Ambassador to the United States, His Excellency Stephen Vasciannie.

Ambassador Vasciannie commended The WJC for conceptualising the Ambassadorial Corps which he described as "an excellent initiative." The Ambassador said that while The UWI focuses on students in their pursuit of learning, it must also promote the welfare of the wider society in other ways. "We, the people in the wider society, pay taxes and make other contributions to the organisation of tertiary studies. And we expect that our universities will be sensitive to our day-to-day challenges and concerns, even as we want our universities to promote personal academic development," Vasciannie said.

He said it is expected that some of the research and learning at the institution will address social needs in immediate ways. "In seeking to promote the wider social interest, some persons at the Western Jamaica Campus could consider giving particular focus to the activities and concerns

of this part of Jamaica." he charged. "This is an area in which tourism and agricultural production are important to the lives of many, which opens the door to the suggestion that there should be more and more studies emanating from the denizens of Western Jamaica on the impact of the tourism and agricultural sectors here," the ambassador added.

Jamaica's envoy to Washington also urged members of the Ambassadorial Corps to keep The WJC on its toes, even Cont'd on page 31 MONA MAY 2013

#### NEW UWI TECHNOLOGICAL EXPLORATION

## **AUTOMATIC SPEECH RECOGNITION**



by Dr. Andre Coy

utomatic Speech Recognition (ASR) is one of the hottest, new technological trends. ASR allows The user to interact with digital devices such as computers or mobile phones using only the voice instead of a keyboard, touch screen or other input method. The user simply speaks into a microphone attached to the device; ASR enables the device to recognise what is said and perform the appropriate actions. For instance, ASR can be found in mobile phone voice-dialing applications; it is possible to say "Call John" and the phone will find John's number then dial it automatically. Computer dictation software is available that makes use of ASR, allowing the user to speak directly to the computer, as if to a human assistant, and the entire transcript of what is uttered is automatically typed into a document.

Advancement in ASR has led to the prevalence of telephone dialogue systems which allow for the use of speech to make menu choices such as who to speak with or which topping to put on a pizza. More recently, the technology company, Apple, has introduced the world to Siri, the personal assistant that is available on the iPhone handset. Siri can be used to send messages, make calls, set up meetings

and find directions to a restaurant, all using simple voice commands instead of typing or browsing.

Only a few years ago this was all science fiction; human-computer interaction was limited to typing, scrolling or button-pressing. Today, a whole new world has opened up and, with the recent advances in ASR, there is now the possibility of interacting with electronic devices using conversational speech—the medium of expression most natural to humans.

#### SIGNIFICANCE TO JAMAICA

So what does all this have to do with The University of the West Indies (UWI) and Jamaica and how can we use this technology to positively impact the development of our society? The potential benefits of using this technology locally are tremendous. As the technology moves closer to the goal of seamless, natural interaction between humans and machines, the use of ASR to tackle real-world problems is becoming more viable.

One problem to which ASR is directly applicable is the lingering issue of illiteracy. The results of the most recent Grade Four Literacy Test indicate that approximately 26 per cent of our children are not able to master literacy tasks. This is a serious problem which adversely affects the overall education and long-term prospects of the illiterate as well as the development of the country. Despite the many efforts to tackle the problem, the progress to date has been slow and speaks to the need for a meaningful solution in the short term, notwithstanding the limited resources of the educational system.

This problem can be readily addressed using ASR technology. The approach proposed is the development of an automated literacy tutor that incorporates ASR technology. The rationale is that the inclusion of ASR allows the tutor to mimic the performance of a human tutor in a way that other computer-based literacy aids cannot. The basic and most profound advantage of an ASR-based system is the ability to listen to the reader and recognize what is being said. This capacity allows for two-way communication between the reader and the ASR-based tutor, which leads to increased reader engagement

and a more effective reading session. Studies have shown that an automatic reading tutor that listens to the user and provides useful, real-time feedback is more likely to replicate the experience of having a one-to-one session with a literacy specialist than one that does not listen.

Work is currently ongoing in the Department of Physics at The UWI, Mona towards the development of such an ASR-based literacy tutor. When complete, the tutor will be able to reach a large number of challenged readers across Jamaica. This solution aims to address many of the challenges that are faced by teachers and administrators alike. For instance, each learner has unique challenges which would ordinarily require that a specialised reading plan be tailored for each participant in a literacy class. This is currently not feasible given the large, average student -to-teacher ratio that obtains across the school system. Thus, it is easy for challenged readers to fall behind. Using the ASR-based tutor, individual attention can be given to each reader, even to the point of developing a targeted reading programme for each user of the system. In this way, the use of ASR can augment the instruction each student receives without the burden of increased

#### **ASR & THE PHYSICALLY CHALLENGED**

Earlier this year, during the Research Days held at the Mona campus, the Speech Group from the Department of Physics demonstrated another potential use of ASR technology. The team developed an ASR-based 'Smart Room' in which members of the public were allowed to manipulate various household devices using voice control. While this may not be necessity for most individuals, it can lead to a significant improvement in the quality of life of those who are physically challenged. With access to such technology, an individual who has always relied on a caregiver to perform the most basic household tasks can now interact with his/her environment in a way that might otherwise be impossible.

#### CONCLUSION

This article has barely scratched the surface of what is possible with ASR technology. We have not explored hands-free GPS

pe Markes of Kiwanis ernational and Fred ith of Exclusive Holidays.

e Ambassadorial Corps is launched at the crostar Grand Resort

Team Leader of the Communication Analysis and Planning (CAP 2), Ambassadorial Corps project, Janet Silvera (centre) is flanked by team members, Karesha Allen (left) and Odette Soberam-Dyer (right).

EMULATING HUMAN
SPEECH RECHENISH

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navigation, enhanced hearing aid performance or automatic dictation for the visually impaired; the range of possible solutions

Dr. Andre Coy's book on ASR

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to common problems is quite wide. The work is ongoing at The UWI, Mona and the aim is to introduce this exciting area of technology into mainstream use in Jamaica, using local expertise. ASR has the capacity to change the way we interact with our devices and Mona is spearheading the effort to make this a reality.

**Dr. Andre Coy** is Lecturer in the Department of Physics, Mona and author of the book Emulating Human Speech Recognition: 'A Scene Analysis Approach to Improving Robustness in Automatic Speech Recognition'.

#### ΓHE CALL CENTRE

## PROVIDING EMPLOYMENT OPPORTUNITIES FOR UWI STUDENTS



UWI Call Centre

ecent initiatives at The University of the West Indies (UWI), Mona are set to significantly boost opportunities for students to work and study on campus. Approximately 200 undergraduate students have been employed since the start of the year, at a newly established Call Centre on campus which forms part of the burgeoning business process outsourcing (BPO) industry. The number of students employed is expected to increase as the Centre acquires more clients.

BPO involves hiring another company to handle business activities. There was a time when companies outsourced mainly payroll functions, but nowadays, anything that is considered 'non-core' to the primary business of an organisation can be outsourced. This includes human resources (HR) accounting and payroll functions as well as call centre and customer service activities.

Dr. George Stewart, senior projects officer, Office of the Principal, UWI, Mona, said that Mona had been trying to create opportunities on or near the campus to facilitate meaningful, large-scale student employment for some time. After investigating, BPO was selected as the most suitable option. "The interests of the Mona campus and the BPO operators coincided," Stewart said. "The needs for business-processing are simple: the availability of trainable and dependable human resources; reliable energy supplies and security. Mona was able to satisfy all of these needs. We have a pool of highly educated, trainable students, many of whom live on campus and therefore have no difficulty getting to work on time. Campus security services are available and we have a reliable power supply. Additionally, there is a steady pool to draw on in an industry which normally sees a high turnover of staff - students are here for approximately three years, and then a new set arrives," he explained.

Operations at the Call Centre got under way in September 2012 in partnership with Sutherland Global Services, one of the top ten BPO companies in the world. Stewart said some 800 students have been trained to date after a rigorous interview process and were recruited depending on the needs of the company. In one instance, someone wanted Spanish speakers.

#### **BUSINESS INCUBATOR NETWORK**

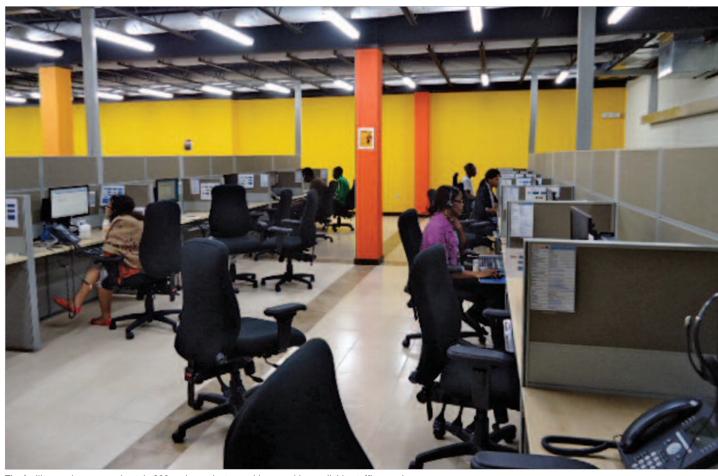
Additionally, another initiative – the Busi-

The goal is for the Incubator to provide employment opportunities for undergraduate students who will be expected to participate in the provision of some technical skills, that is, website and market research services."

ness Incubator Network – will be coming on stream to offer assistance to students in garnering useful work experience. It will operate out of the same building as the Call Centre and aims to provide undergraduates and post-graduates with an alternative source of employment to the traditional job market. Project Manager Colin Webster said that, ultimately, the aim is to create an entrepreneurial spirit in the students to foster business pursuits. To get the ball rolling, students will be encouraged to take their business ideas to the Incubator for development. 'Incubatees' will be assisted through the stages of a business plan development and operational start-up leading to the attainment of a stable and/or break-even position, culminating in graduation from the Incubator. The Mona campus Office of the Jamaica **Business Development Corporation will** provide support during the business plan development stage.

Additionally, incubatees will receive training and assistance in functions such as reception, accounting, HR and payroll, along with the optional information technology, marketing support, legal services, website development and market research areas. They will also have access to a business/copy centre and courier service.

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The facility employs approximately 200 undergraduates and is served by a reliable staffing pool

#### **OFFICE SPACE**

The Business Incubator will provide "virtual office" space, allowing the client company the use of the Incubator's location as the company's trading address, access to a receptionist/telephone operator, website and scheduled use of meeting rooms.

The available space can accommodate approximately 25 clients comfortably, but this will be offset by the ability to admit virtual clients. According to Webster, 25 is the recommended limit to the number of clients under the supervision of a manager. With two managers in the Incubator, an initial limit of 25 virtual clients will be set, however, "between the residential and virtual clients, the Incubator will consider itself as having a capacity of 50 clients. The admission to fill these spaces is anticipated to be gradual, based on public awareness of the opportunity and the admission criteria".

Client companies are expected to remain in the Incubator for a period not exceeding three years. "Graduation from the Incubator is primarily about relocating from the physical building. Negotiated access to all other services provided by the Incubator will be allowed. Graduation is required based on an obvious desire to allow access for new ventures to the facility and to maintain the quality of the overall service," Webster said.

#### STRATEGIC ADVANTAGES

Initially, the incubator will rely heavily on the strategic advantages of its location on the Mona campus, which allows access to existing buildings; a secure environment; parking; telecommunications, computing, educator and training facilities.

Also, the Incubator intends to call on the expertise of the Mona School of Business and Management, Webster said, while other campus departments will be approached when needed for specialised

client (industry) requirements. The potential to assist clients through student projects is also being explored, as well as a second centre in the network (satellite office) planned for a later start-up date at The UWI Western Jamaica campus in Montego Bay.

#### **ULTIMATE GOAL**

The goal is for the Incubator to provide employment opportunities for undergraduate students who will be expected to participate in the provision of some technical skills, that is, website and market research services. Receptionists will also be drawn from a pool of undergraduate workers who will be trained and scheduled.

"Ultimately, the centre will be geared towards assisting the graduates in the establishment of innovative, economically sound, financially profitable and sustainable business ventures," Webster said.

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The Hon. David C. Onley, (seated) Lt. Governor of Ontario, Canada being welcomed to The UWI, Mona by Principal Shirley and Campus Registrar Dr. Camille Bell-Hutchinson. Mr. Onley led a delegation of University professors, medical specialists, accessibility professionals and building contractors to Jamaica from April 5-9 to conduct an in-depth examination of the Sir John Golding Rehabilitation Centre (SJGRC) with a view to rehabilitating the facility to provide an enhanced level of medical services for persons with disabilities. Among the group were representatives of the Canadian television series *Holmes on Homes*.

The proposed interventions would include the refurbishing and expansion of buildings, the development of an accessible playfield and the introduction of new technologies. It is hoped that a part of the project will be completed and officially opened on December 3, the International Day for Persons with Disabilities. Professor Shirley noted that the objective is to enhance the development of Physical & Rehabilitation Medicine as a subspecialty of the Faculty of Medical Sciences by operating the patient care and related clinical facilities at the complex in partnership with the Ministry of Health and the South East Regional Health Authority. At right is Jamaica's Consul General to Toronto, Mr. George Ramocan.



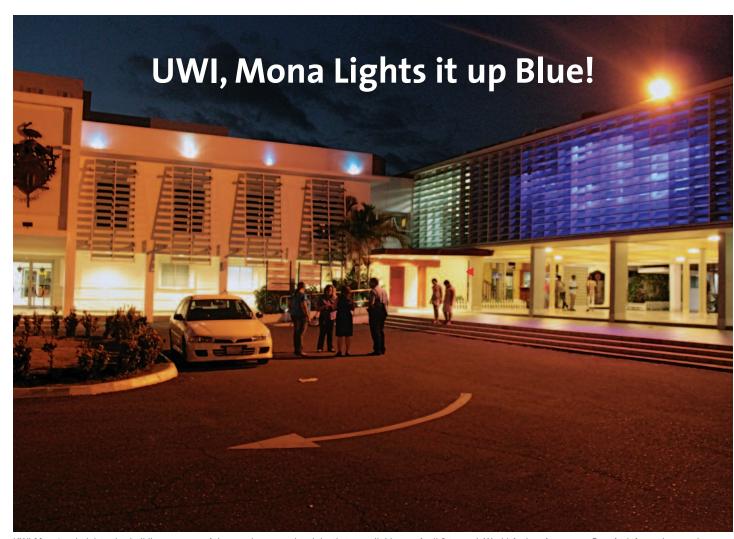
### MONA GETS ROYAL ROAD SAFETY VISIT

HRH Prince Michael visited the Mona Campus on April 16th as part of his royal tour of Jamaica (April 15 – 19, 2013) in the capacity of Patron for The Commission for Global Road Safety and on the occasion of the 20th Anniversary Celebration of the Road Safety Council.

Prince Michael visited the Mona GeoInformatics Institute which has been in the forefront of road safety initiatives in Jamaica through mapping of accident hot spots. Prince Michael also toured the Campus and the Sir John Golding Rehabilitation Centre.

Here, he discusses aspects of Mona GIS' road safety initiatives with Director, Dr. Parris Lyew Ayee, Jr. as Chair of Jamaica's Road Safety Committee, Dr. Lucien Jones, and Deputy Principal, Mona, Professor Archibald McDonald (right) listen keenly.

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UWI Mona's administrative building was one of thousands across the globe that were lit blue on April 2 to mark World Autism Awareness Day. An information session on Autism was also hosted on the Campus.



Dean of the Faculty of Humanities & Education, Dr. Swithin Wilmot(left) engages Minister of Education, Hon. the Rev. Ronald Thwaites (right) in a serious discussion as Mona Principal, Professor Gordon Shirley looks on.



for Resource/Knowledge Valorization, Vincent Taylor, and winner of the Innovation Award for Health & Wellness (2012) Denise Daley-Beckford, were presented with the inaugural Graduate Researchers' Awards Trophy for Academic and Research Excellence at The UWI, Mona's annual Scholars' Breakfast held on April 10. Taylor won for his involvement in the development of RTMAS, the Real Time Monitoring and Alert System, which is used for monitoring industrial waste. Daley-Beckford is involved in a project aimed at validating the use of a local Eucalyptus plant in the treatment of diabetes and hypertension. The Scholars' Breakfast is spearheaded by the Office of Graduate Studies and Research.

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UWI STUDENT AWARDS 2013

### OUTSTANDING STUDENTS RECOGNISED



Premier Award winner Nicolette Wilson (right) receives her trophy for Student Leadership from Director of Student Services Rose Cameron at the April 6 ceremony.

erome Johnson and Nicolette Wilson were named recipients of The UWI, Mona's Premier Award for Student Leadership at the annual Student Awards ceremony held April 6 at the Mona Campus. They headed the list of students who received Premier Awards in the categories of Culture, Service, Student Leadership and



Premier award winner, Jerome Johnson, accepts the award from Mrs. Rose Cameron

Sports, as well as others who were recognized for academic and co-curricular achievements.

Eighteen trophies were awarded in culture, service, leadership and sports, while sixtyone awards were given for academic achievement. In the Outstanding Performance category, sixty awards were issued for culture, sixty for service, twenty-seven for leadership and forty-six for sports. A further seventy-three certificates were given for excellence, including eighteen for culture, thirty-two for service, seventeen for leadership and six for sports. The guest speaker was Dr. Hixwell Douglas, Education Officer in the Special Education Unit, Ministry of Education and an alumnus of the UWI.

Jerome was recognized for service at the international, national and Campus levels. He is Deputy Campus Chairman at The UWI, Mona Western Jamaica Campus in

Montego Bay, St. James, Circle K international Trustee, Chief Advisor to the St James Junior Council and was a nominee for the Prime Minister's Youth Award for excellence in the category of Youth in Service. Nicolette has been an active member of the ABC Hall community initiating and maintaining several Hall and Block events. She has served as Distinguished President of the UWI, Mona Circle K Club.

The premier award for the Creative Arts (Female) was shared by Shanique Brown and Naala Nesbeth, both members of the University Dance Society. Shanique also excelled in dramatic roles in different stage productions, while Naala was a member of the UWI Performing Arts Troupe which toured the UK in 2012 as part of the Jamaica 50 independence celebrations. In the male category, the award was shared by Jermaine Harvey, director of the 2012-2013 Choirfest Champions, Taylor Hall Chorale, and Jon-Joseph Nepaul, President of the UWI Pop Society who also served as musical director of the UWI Performing Arts Troupe.

Regina Bailey, Peer Advisor and President of the Placement & Careers Services Career Club was named winner of the premier award for Service (Female). The award in the Male category went to Nikolai Nunes, President of The UWI Student Emergency Response Team (UWISERT), a non-profit, volunteer, student-run and student-managed emergency medical service



Professor Verene Shepherd (left) presents the Premier Award for Creative Arts (Female) to Naala Nesbeth, who shared the award with Shanique Brown. Both are members of the Dance Society.

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UWI Mona Western Jamaica Campus administrators with student awardees, from left to right: Actg. Student Services Manager, Mr. Peter O'Sullivan; Ms. Karesha Allen, service to the University community; Mr. Deneil Watson Vice Chair (elect), Guild WJC; Ashley Anguin, Chair Sports Committee; WJC Director, Dr. Luz Longsworth; Mr. Jerome Johnson, Winner Premier Leadership Award; Ms. Janet Silvera, service to the University community; Mr. Odaine Thomas, Guild Chair WJC; Mrs. Odette Soberam-Dyer, service to the University community and Mr. Roylan Genus, (Guild Treasurer) awarded for academic excellence.

and public health organization, providing medical first response protocols to the university community.

Sportsman of the Year was Jelani Bogle, an outstanding high and triple jumper who also served as captain of Mona's track and field team at the Intercollegiate Championships. Sportswoman of the Year was Malysha Kelly, who has represented The UWI, Mona in netball and basketball and Jamaica in local and international competitions.

Tavia Taffe, who is pursuing the BSc in Diagnositc Imaging (Radiography) topped the list of academic achievers with a Grade Point Average of 4.30. Individual awards were also presented to students or groups who had played a significant role in the growth and success of a UWI sports team, cultural, service or leadership group which had made an impact on the university community.

Trophies for the Most Improved New Society went to the Jamaica Medical Students' Association – Standing Committee on Reproductive Health including HIV/AIDS. The UWI Pop Society received the trophy for Most Vibrant Society. Other trophies were presented to the UWI Spanish Club (Most Improved Society); the UWI Historical and Archaeology Society (for Sustained Initiative) and Taylor Hall (Community Development).



The Premier Award for Creative Arts (Male) was shared by Jermaine Harvey (right) and Jon-Joseph Nepaul (centre).



Regina Bailey (right) receives her trophy for Service (Female) from Student Services Director Rose Cameron.

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### MICHAEL MCFARLANE, NEW PROFESSOR



Prof. Michael McFarlane

The University of the West Indies (UWI), Mona is pleased to announce the promotion of Dr. Michael McFarlane, senior lecturer and consultant surgeon in the Department of Surgery, Radiology, Anaesthetics and Intensive Care, to the rank of Professor, with effect from January 23, 2013.

Professor McFarlane holds the Bachelor of Medicine, Bachelor of Surgery (MBBS) degree and the Doctor of Medicine (DM) in Surgery from The UWI, Mona. He also undertook additional training to enhance his skills in laparoscopic surgery. A Fellow of two of the most prestigious organisations for surgeons—the Royal College of Surgeons of Edinburgh and the American College of Surgeons —he is also a Fellow of the International College of Surgeons, and Member of the Society of American Gastrointestinal and Endoscopic Surgeons (SAGES).

Professor McFarlane joined the Staff of The UWI, Mona in 1986 as a Temporary Lecturer in Surgery and worked during various periods between 1986 and 1997 before being appointed Lecturer in 1998 and Senior Lecturer in Surgery in 2007. He also served as Consultant Surgeon at the University Hospital of the West Indies and at the Kingston Public Hospital.

Professor McFarlane has demonstrated sustained achievement in academic medicine – in education, clinical practice, research and administration. Recognised for his effectiveness as a teacher, he is also highly respected as an expert in general, vascular and colorectal surgery, including the minimally invasive approach to operative management.

He has consistently contributed to scientific literature: his work appears in the West Indian Medical Journal, the International Journal of Clinical Practice and the International Journal of Surgery Case Reports, among other publications. He has published on a broad spectrum of topics including trauma, general surgery, and oncologic surgical diseases. He has also contributed to medical literature with regards to most of the major organ systems, and his work adds to the understanding of many aspects of simple surgical diseases such as hernias, breast masses and hemorrhoids, as well as the more complex issues of colorectal, breast and gastric malignancies.

He serves as committee member for a number of peer-reviewed journals, including the International Journal of Surgery, the Breast Journal, the International Journal of Clinical Practice and the Journal of BMC Gastroenterology.

Professor McFarlane has given distinguished service to The UWI, Mona as contributing author of the Surgery Clerkship Guide for the undergraduate programme of The UWI and principal coordinator for the revision of undergraduate Stage 1 and 11 surgery core curricula. He was also a member of the accreditation committee for the development

of off-campus sites for undergraduate and postgraduate surgical education in Montego Bay, Spanish Town and Mandeville. Additionally, he served as principal supervisor and organiser of the MBBS surgery examinations and as coordinator

for the Clinico-pathological

conference.

As President of the American College of Surgeons (Jamaica Chapter) and the Association of Surgeons in Jamaica, he has also exhibited effective administrative skills.

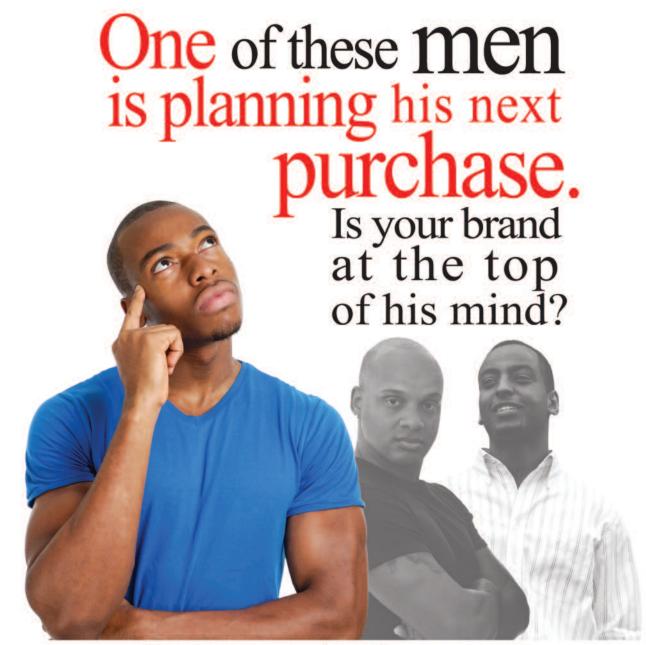
## LOCALLY-GROWN PRODUCE GETS INTERNATIONAL SPOTLIGHT



Executive Director of Mona School of Business & Management, Prof. Paul Simmonds, stands proudly with members of the winning team (I-r) Andre Moore, Kaydian Dawes, Donya- Jean Brown, Sacha Walters-Gregory, Suzette Pottinger. Also in the photo are Faculty Advisor Douglas Lindo and Chantelle Fuskin, Marketing Coordinator (MSBM).

abies from around the world could one day soon be raised on the best of Jamaican foods, courtesy of a team from The University of the West Indies, Mona (UWI). The team comprised of MBA students of the Mona School of Business and Management (MSBM) presented their business plan highlighting the value of brand Jamaica with their pitch for Giggles: baby food made from high nutrition Jamaican produce; for which they won the first place award in the recently held Opportunity Funding Corporation Innovation & Entrepreneurship (OFCIE) competition. The MSBM delegation was the only non-US based team among 25 schools including Howard University and Tuskeegee University. This is the second time The UWI has won the prestigious competition, which is hosted in Atlanta, Georgia.

The baby food product pitch came from the joint efforts of team members Donya- Jean Brown, Sacha Walters-Gregory, Suzette Pottinger, Kaydian Dawes, and Andre Moore under the company name Near Earth Delights Ltd. The Giggles brand wowed judges including representatives from Microsoft, UPS, and Sam's Club. The MSBM delegation presented a business plan to respond to the international demand for high quality infant nutrition. Giggles products were positioned to compete internationally, and would be made from healthy Jamaican ingredients, reputed to exceed the nutritional value of any other source. The team proposed that products made from foods grown under ideal tropical conditions would be not only delicious and nutritious but the healthiest choice in 'starter-foods'.



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## SPORTS DAY 2013

UWI Sports Day 2013 was competitive intramural track and field at its finest, featuring athletes representing their halls of residence/ attachment.

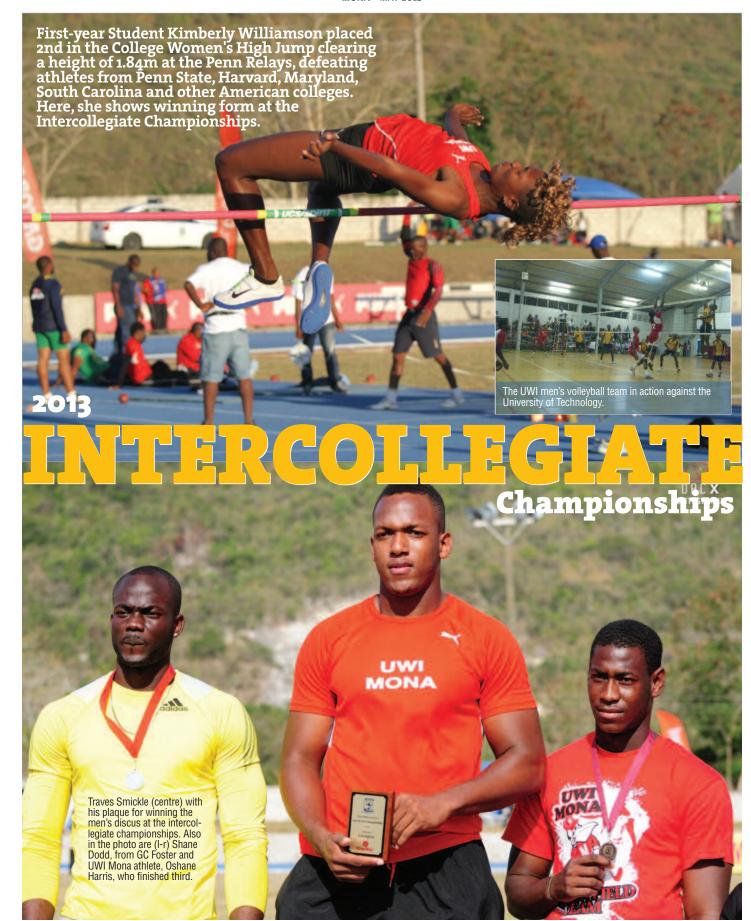
#### SHIFTING THE HORIZON

Mona continues to shift the horizon in sport with a number of teams breaking new ground. The Men's Sprint Medley team, comprised of Nicholas Maitland, Kaevan Smith, Dwayne Ferguson and Jowayne Hibbert, created history by becoming the first UWI team to win a Championship of America event at the Penn Relays held in Philadelphia in April (see related story on page 35). Also at Penn, Traves Smickle placed 2nd in the collegiate Men's Discus final and Kimberly Williamson won 2nd place in the Collegiate Women's High Jump. Nicholas Maitland also placed 2nd in the Collegiate Men's 400-metre hurdles.

Congratulations are also extended to the Women's Basketball Team who defeated the University of Technology (UTech) in the Inter-Collegiate Basketball Championship 'Best of 3' final on April 18 and 22, 2013. The pictorial captures some of the more recent achievements.



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## Shenhaye Ferguson

UNIVERSITY
TOWNSHIP PROJECT
SCHOLAR

saying goes — "The bend in the road is not the end of the road unless you refuse to take the turn". This encapsulates the life of Shenhaye Cavelle Ferguson, a recent graduate with a BA First Class Honours in History, who has not only managed to overcome the challenges that faced her but found a way to work around them.

A resident of August Town, which is perceived to be a volatile community, the going was tough, and in the shadow of constant challenges. "I remember locking myself in the bathroom and reading for my exams in candlelight when there were disturbances in the area," Shenhaye said. Shenhaye was constantly encouraged by her mother, who she said was a disciplinarian and "the best mother you could ever wish for."

"She is truly a remarkable woman," Shenhaye said. "Whether we had lunch money or not, she ensured that we never missed a day from school."

The discipline instilled at home and hard work translated into academic excellence. It was the "University Township" Project (UTP), UWI, Mona's community outreach progamme, which was a life changer. The UWI University Township programme, a part of a universal concept adopted by many universities and colleges, seeks to foster a better relationship between 'town and gown'.

Since the inception of this programme, residents of August Town, particularly the youth, have been given a chance to

pursue tertiary education and prove their mettle.

Ferguson was part of the second batch to be awarded the scholarship. "I heard about the programme from my dad," she informed.

"Many graduate from high school with excellent grades, however, are unable to pay for tertiary education. The UTP must be commended for providing us with this opportunity," Shenhaye said.

She credits the UTP with giving her the leverage and the chance to grow. "I have become more mature and see things differently, based on my experiences at UWI," she said.

The growth has not been restricted to academic achievements alone; The UWI has helped in her personal development. "I have learnt to be strong and to never give up hope."

A first-class honours student throughout, Shenhaye had her set of challenges, "In my first semester everything was going well except for one course which affected my GPA at the end of the semester and I lost the scholarship," she informed. Guidance and mentorship assisted in giving her direction and charting the way forward. "I was determined not to let that happen again by coming up with a new strategy and approach," she said.

By the end of Semester 2, Shenhaye not only regained the scholarship but stayed on it till she graduated. An entrepreneur

at heart, she tutors students from primary school to high school, including those sitting the Grade Six Achievement Test (GSAT) and Caribbean Examinations Council (CXC) examinations. Her aim is to open her own gas station and a supermarket one day.

She said her endeavours were made possible through constant motivation and encouragement from her family and close friends, in particular Aunt Sandy who always motivated her to strive for excellence. Of her former history lecturer, Dr. Sultana Afroz, she said, "She was very instrumental in my years at UWI - motivated me to strive for nothing less than an 'A'. It was a lot of hard work but I appreciate that push which she gave me."

"She still plays an integral role in my life although she is no longer at The UWI." Shehaye is all praises for the Township programme, which has been a catalyst to her achievements. She is currently involved in the programme, mentoring youth.

"The fact that the UTP aims to improve certain areas - education, culture, sports, crime and violence etc, that was enough reason to support it.

"Getting involved in those areas is crucial as the community would benefit from the upliftment of the youths," she said. Her aim is also to see The UWI becoming more active in the social, cultural and economic welfare of the community and taking it to greater heights.



## PATHWAYS & OPPORTUNITIES FOR REGIONAL DEVELOPMENT



'OMG'! This student can't believe the results of the experiment she conducted during demonstrations held on Research Day 2013

he UWI, Mona put the spotlight on regional development at its annual Research Days Exposition, held February 7 and February 8 on the campus. Under the theme, 'Pathways and Opportunities for Regional Development', Research Days 2013 highlighted various ways in which Mona is using its diverse research efforts to identify innovative solutions to major developmental challenges.

Researchers from across its five faculties presented the findings of their research in select areas of challenge and their recommendations for addressing these issues. The focus was considered timely as Jamaica and other Caribbean states grapple with the question of how to successfully navigate their way through the worsening global economic climate, towards a path of sustained growth and development.

Research Days 2013 featured special presentations and discussions by international and UWI experts on topical issues, under

specialised faculty sub-themes, namely: Culture, Identity and Human Development; Energy Security & Sustainability; Governance; Non-communicable Diseases; and Building Resilience to



Nearly 70 members of academic staff were named recipients of the Principal's Awards for Research Excellence. Awardees (shown here) were recognised in categories including best researcher, the best research publication; the project with the greatest business/economic/development impact and for the research project attracting the most research funds.

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opportunity for The UWI, Mona community to share its research with students, academics, the business community, policy makers and the general public. It is an opportunity to understand and draw inspiration from the University's current work in an effort to address societal issues.

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The Department of Languages & Linguistics is now the official centre for the the International English Language Testing System in Jamaica. The centre was opened on Research Day.

Developmental Challenges. This year's event featured interesting innovations, including the renewable energy driven microcontroller based fully automated and controlled hydroponic greenhouse system; new treatment option for the deadly duo of diabetes and hypertension; as well as research into improving robustness in automatic speech recognition, emulating human speech recognition (See related article on page 15).

A number of special lectures were also delivered over the two-day event. On Thursday, February 7, Professor Dale Webber, the James Moss-Solomon Senior Professor of Environmental Management at the UWI explored how Funding Environmental Research at the UWI is an Investment in the Future. His presentation was part of the annual American Friends of Jamaica Incorporated Inc. and the Cobb Family Lecture Series which encourages debate on Jamaica's future.

Dr. Glenda Simms, consultant on gender issues and former director of the Bureau of Women's Affairs, shared new insights into the state of gender equality as its relates to the impact on regional development under the theme, 'Beyond 20: Gender Equality, Regional Development and the MDGs'.

On Friday, February 8, Dr. Dawn Richards Elliott, Associate Professor of Economics at Texas Christian University delivered the thought-provoking main Research Days 2013 Public Lecture 'A Critical Analysis of the Policy Making Process and its Impact on Jamaica – Exploring Opportunities for Improvement'.

Research Days culminated with an awards ceremony on Friday, February 8 in recognition of the contributions of some of the best researchers of 2012. Now in its 14th year, UWI Research Days provide an



#### **COMPUTING STUDENTS WIN SOFTWARE FARMA BREDREN APPLICATION COMPETITION**

ould five University of the West Indies (UWI) undergraduate students, from the Department of Computing have come up with a real solution to a major challenge facing the island's agricultural sector? Judges of the Jamaican code sprint entries at the Caribbean Open Data Conference certainly believe so.

Bruce Hoo Fung, Jonathan Smith, Kimberley Roper and brothers Mumba and Kangwa Sambo are Team K2MJB – the creative minds and developers behind 'Farma Bredren', a mobile phone application that will improve how the Rural Agriculture Development Authority (RADA) collects information on crops from farmers across the island. Team members are students in the Department of Computing, Mona.

"RADA will benefit by having a mobile application which (its) extension officers can use to update their records instantly from the field," explained Mumba Sambo of Team K2MJB. "This will be important so that there is a better record of which crops are available and from whom. It will improve the quality of information on the amount of produce available," he added.

'Farma Bredren' will also allow RADA extension officers and farmers to record instances of praedial larceny through a special feature called 'Infarma'. The extension officers will use 'Infarma' to document farmers' reports of theft firsthand, storing images and dispatching information about the theft to the police and other farmers. Praedial larceny is one of the chief issues crippling farmers in Jamaica. Team K2MJB argued in their presentation that their app will allow reports about the theft of produce and livestock to be disseminated accurately and with greater ease. This can provide the inputs for a dynamic theft reporting system where incidences can be displayed on a map, as well as broadcast via SMS to enable police and other farmers to be alerted and respond in a timely manner.

Team K2MJB created the application in 24 hours during the Conference's code sprint session, outrunning 12 other teams. Team K2MJB's solution was aided by data and



Members of the prizewinning K2MJB, developers of the top code sprint app at the Caribbean Open Data Conference, from left to right: Bruce Hoo Fung, Mumba Sambo, Kimberley Roper, Jonathan Smith and Kangwa Sambo.

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statistics contributed by RADA as part of the conference's long-term mission to raise public awareness about open data and encourage innovation through its access and use.

All 13 teams participating in the Jamaican leg of the Caribbean Open Data Conference's code sprint benefited from access to data and statistics on tourism, education and agriculture sourced from several government agencies. This open data informed the design of practical and easyto-use mobile and web-based tools with useful solutions for consumers as well as the financial, agricultural, food and beverage and transportation sectors.

The use of open data or government statistics that are accessible by the public, free of cost, can only improve a nation's economic and social development. "We are currently assessing the economic potential of open data in various sectors. but high-level estimates suggest that if managed well, open data initiatives could add significant value to the Jamaican economy," said Dr. Maurice McNaughton, Director of Mona School of Business and Management's Centre of Excellence and one of the principals in the Caribbean Open Institute, a regional research initiative funded by the International Development Research Centre (IDRC).

"The open data movement is gathering momentum across the region, as government agencies begin to appreciate the potential of open government data as a catalyst and enabler of innovations that can lead to improved public sector efficiency and service delivery." he said.

The applications developed by the top three Jamaican teams are sure to enhance service delivery in the local financial, agricultural and food and beverage

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Second-place winners at the Caribbean Open Data Conference code sprint, Delton Phillips and Tremaine Buchanan proudly display their certificates.

The top three finishers in this year's competition will be required to refine their app entries and then source funds before taking their work into production.

sectors, and could possibly be used in other markets. Delton Phillips and Tremaine Buchanan's second-place winning 'Farmscore' app will help banks assess a farmer's ability to repay loans and farmers in turn will be able to calculate their risk profile. The 'Blaze Bartender' developed by Jason Scott, Jonathan Scott and Kevin Leyow will take the hassle out of ordering drinks at the club and provide bars with a new way to engage their customers.

Team K2MJB along with the second and third-place teams will now have the opportunity to focus on refining their software applications and sourcing funds to take them into production.

The Caribbean Open Institute will support the journey of these three teams and their winning counterparts from the four Caribbean countries in which the conference took place last week by inviting them to take part in the Caribbean App Challenge.

The Challenge is a two-month virtual competition in which participating code sprint teams will have the opportunity to build out their prototypes into apps that are stable and ready for deployment, with help from international and regional mentors. Through various mechanisms including forums, video conferences and webinars, developers and mentors with specific domain expertise, business development, marketing, design and other backgrounds will work together to refine projects that address a subset of the prototypes submitted at the conference. M

AMBASSADORIAL CORPS while helping to project the campus in St. James, Hanover, Westmoreland and St. Elizabeth. He expressed the hope that the distinguished group will take the opportunity to engage with the students and assist the campus in presenting high-quality graduates to the world.

The Ambassadorial Corps is one aspect of the wider Communication Analysis and Planning (CAP) project - UWI WJC: Forging New Paths in Education. The initiative was executed by a team of final-year students of the Caribbean Institute of Media and Communication (CARIMAC) and aims to further integrate the five-year-old WJC into the community. According to team members Janet Silvera, Odette Sobberam-Dyer and Karesha Allen, members of the corps will advocate on behalf of The WJC to increase public awareness of its offerings as part of a strategy to maximise growth in the student population. The advocates will also deliver lectures in their fields of expertise to students enrolled at The WJC. M

#### **LOCALLY GROWN**

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Professor Paul Simmonds Executive Director of MSBM expressed the school's commitment to fostering the advancement of local businesses, saying "Winning this competition is not the end of a process it is really a beginning, as we endeavor to springboard these innovative ideas into fruition."

MSBM was instrumental in the process from start to finish, hosting the local leg of the 'Venture Challenge' alongside lead sponsor Scotiabank Small Business Banking. Simmonds also noted that the school provided significant support for the team throughout the process by connecting them with a support system of Jamaica's finest business persons and scientific resources.

MSBM aided the team through its network of graduates and affiliates who volunteered their time to guide the team in key areas of their own expertise. Mr. Douglas Lindo, the team's faculty advisor as well as corporate mentors such as Mark Chisholm, Elaine Commissiong, Jacqueline Scott-Crossley, Harry Smith, James Moss-Solomon and Garfield Gordon who contributed to the team's success.

optimal nutritional content for children ages 6-48 months. Special commendations are extended to Valmo Wynter, Annmarie Smith, Sardia Morgan-McDonald and Yanique Rodgers from the SRC who provided the technical guidance and expertise required in developing a comprehensive business plan.

**CONFUCIUS INSTITUTE** from page We need to start early," Hogarth said.

He said this effort will be a catalyst to the longevity of the Chinese language and culture in Jamaica and will also benefit students who would like to do Chinese as a core or elective subject.

"When students start learning at the high school level, by the time they reach the university they would have acquired proficiency in the language. This basic knowledge will make an easy transition," Hogarth stated.

He noted that the response from the schools has been very good although the classes will be organised in small batches. "To impart effective training, we are keeping the class size to a maximum of 15 students," Hogarth said.

The teaching methodologies are a mix of text books, charts and posters, audio and audio visual aids.

In addition, the students will be given calligraphy classes. Hogarth strongly recommends learning how to write Chinese: "The written script is not related to the spoken language. It has sound and character and to understand the language better it is very critical to learn the written language. The written script binds both nuances."

Recounting his personal experiences, Hogarth encourages individuals to come and experience the Chinese language, culture and arts: "It (learning Chinese) was for self- actualisation and to understand an ancient culture firsthand. It completed me as an individual. By learning Chinese it is possible to know yourself and discover what or who you are."

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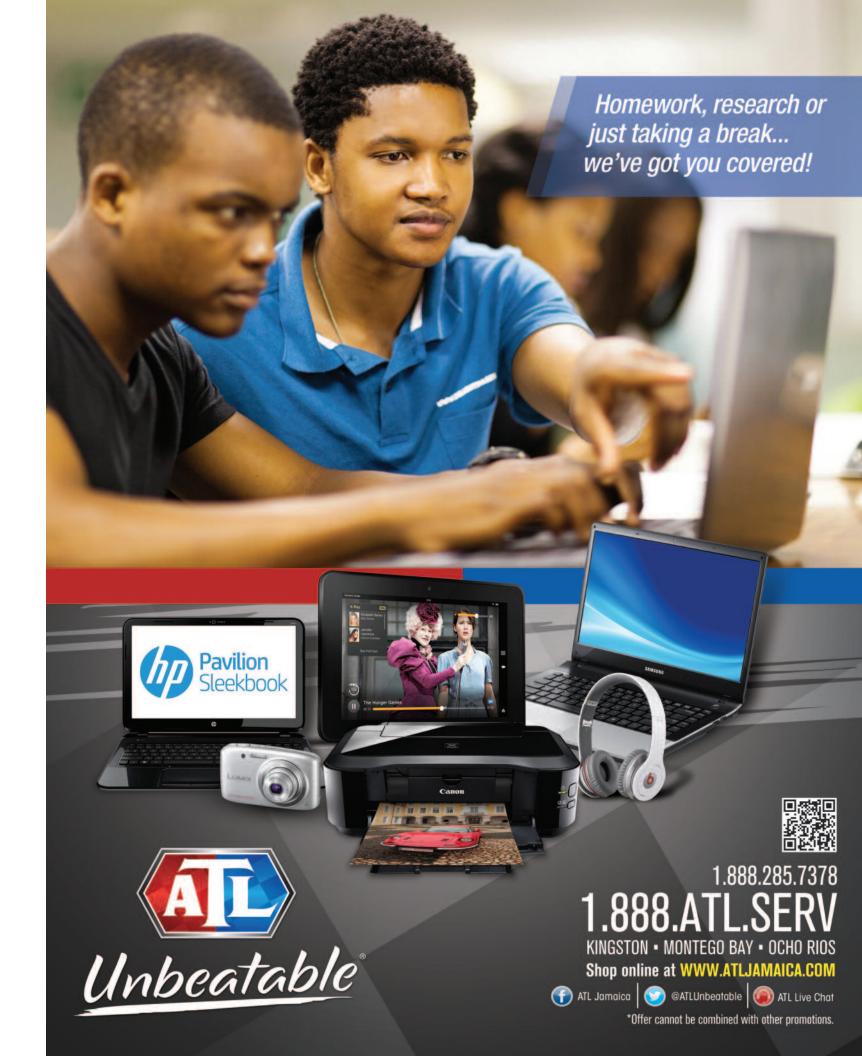
## STATE-OF-THE-ART HYPERBARIC CHAMBER WILL SAVE THE LIVES OF DIVERS



The UWI, Mona commissioned a new state-of-the-art hyperbaric chamber into service at its Discovery Bay Marine Laboratory (DBML) in March. The chamber, the only one of its kind in the island, is used to treat decompression illness in divers. Decompression illness usually manifests itself within 24 to 48 hours after surfacing, when, for example, a diver returns too quickly to the surface, not allowing enough time for the nitrogen accumulated in the tissues during the dive to be expelled slowly from the body through the lungs. The new chamber was funded by The UWI and the Tourism Enhancement Fund and is valued at approximately \$34 million. It can accommodate up to five people at a time.



They're not suffering from decompression illness, but Mona's Registrar, Dr. Camille Bell-Hutchinson; Principal, Prof. Gordon Shirley; Director General in the Ministry of Tourism & Entertainment, Carole Guntley; Hon. Arnaldo Brown, Minister of State in the Ministry of Foreign Affairs and Foreign Trade; Executive Director of the Tourism Enhancement Fund, Clyde Harrison and Minister of Tourism, Hon. Dr. Wykeham McNeil, were obviously enjoying their experience inside the hyperaric chamber.



## UNIVERSITY ARCHIVES LAUNCHES ELIZABETH WILLIAMS READING ROOM



Grace Williams, sister of late University Archivist Elizabeth Williams, is greeted by UWI Vice Chancellor Professor E. Nigel Harris after she unveiled the plaque of honour at the Elizabeth Williams Reading Room during a cerembony at the University Archives, UWI Regional Headquarters, Mona.

he Elizabeth Williams Reading Room has been launched at the University Archives, now located in its permanent home at the University of the West Indies (UWI)

Regional Headquarters on Hermitage Road.

In the midst of scores of persons who attended cross-campus meetings, a short ceremony was held on January 21 to mark the transition of the Archives to its new locale and the establishment of the Reading Room. Highlighting the ceremony was the unveiling of a plaque naming the Archives' Reading Room in memory of Elizabeth Williams, University Archivist from May 2002 up to her death in June 2007.

The first West Indian Archivist, Williams had worked hard for a purpose-built archival facility but died before her dream was realised. The plaque in her honour was unveiled by her sister, Grace Williams, and UWI's Vice Chancellor Professor E. Nigel Harris.

Gloria Barrett–Sobers, University Registrar during Williams' tenure, and herself a strong advocate for a purpose-built archival facility, spoke eloquently of the contribution of the late Archivist to the University. The Vice Chancellor also paid tribute to Williams.

Also in attendance at the ceremony were senior University officials including the University Registrar, Bursar and Librarian; campus librarians, campus records managers and members of the family of the late Elizabeth Williams.

#### **FIRST LECTURE/PRESENTATION**

The following day, the Archives hosted its first function in The Elizabeth Williams Reading Room - a lecture/presentation on archival development in the Caribbean region with emphasis on the role of the University of the West Indies. Sharon Alexander-Gooding, senior assistant registrar, (Archives and Records), Cave Hill campus, and Dr. Stanley Griffin, assistant archivist, University Archives, made presentations.

Special guest at the function was Professor Emeritus Sir Roy Augier, former pro vice chancellor and long-serving member of the Department of History. A citation highlighting his contribution to archival development in the region over the past fifty years was read by Dr. Kusha Haraksingh, chair of the University Archives and Records Management Committee, and presented to him. In response, Sir Roy regaled the audience of over 65 persons with comments and anecdotes relating to events he recalled in his almost 60 years of service to the University.



he University of the West Indies (UWI) Press, in collaboration with regional partners throughout the Caribbean, recently made 200 of its e-books available to secondary school students, teachers and administrators. March 2013 was the date set to highlight this landmark achievement.

The first phase of the project was coordinated in conjunction with the National Library and Information Systems Authority in Trinidad and Tobago. According to Linda Speth, director of the UWI Press, "The goal of the Press is to offer superb Caribbean scholarship in a variety of formats, whether print or electronic. This recent e-book initiative provides a way for the University of the West Indies Press and its stakeholders to enhance regional cooperation and integration, to ensure indigenous control of Caribbean content, and to provide electronic access to Caribbean content to the citizens of the region in a quick, affordable format."

Additionally, during the past year, the Press made over 80 books in electronic format available for a variety of tablets and e-readers, including Kindle and Kobo. "The Press recognises that our customers want a choice in how they access the Press's content, and these initiatives will allow our customers greater access to and usability of our peerreviewed books," explained Marketing and Sales Manager Donna Muirhead

The UWI Press is a non-profit publisher of scholarly books in 13 academic disciplines. It is particularly well known for its work in Caribbean history, Caribbean cultural studies, Caribbean literature, gender studies, environmental studies, education and political science. It has over 350 books in print, which are peerreviewed and approved by an editorial committee comprised of local and international scholars.

Founded in 1992, The UWI Press celebrated its 20th anniversary this year. It has won 44 international, regional and national book awards for scholarly, editorial and production excellence.



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Jowayne Hibbert, Nicholas Maitland, Duwayne Ferguson and Kavean Smith

Winners of the Championship of the Americas Sprint Relay Medley (Collegiate) at Penn Relays 2013

UWI: Shifting the horizon in the development of Sport

For further information: Contact the Sports Office, The University of the West Indies, Mona T: (876) 702-4473/927-1660/8 Email: sport@uwimona.edu.jm Website: www.mona.uwi.edu

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