



Principal's Report 2006



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Research Initiative and Output



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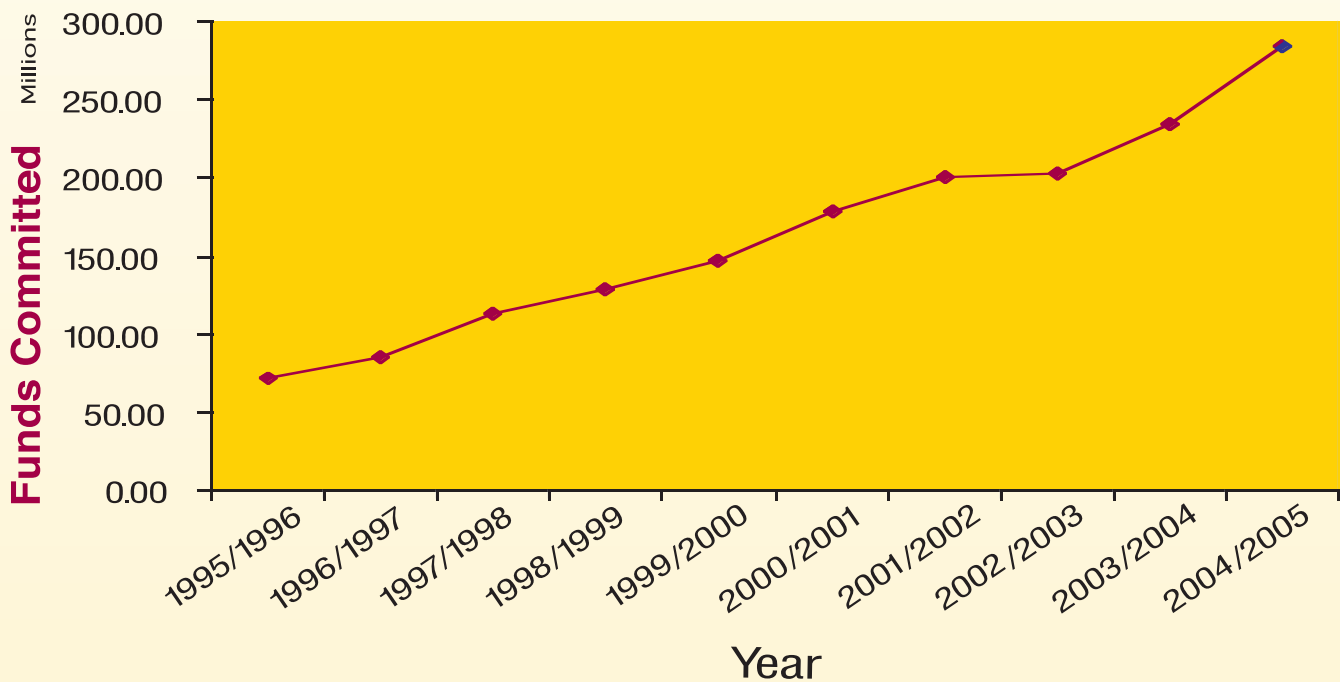
Strengthening the Research Infrastructure

The Campus continues to focus on strengthening the infrastructure that will be critical to enhancing research activity, so as to achieve the strategic objective of repositioning the Campus as a research-driven University. Every effort was made, therefore, to maintain, despite the cut in the budget, the previous year's budgetary support to research activity. Thus, funding was provided for research fellowships, new research initiatives and the various research support programmes. Data reveal that internal funding to support research actually grew by some \$50M over the previous year and show that

consistent effort to strengthen the Campus' research agenda is being undertaken. Indeed, internal funding for research increased by some 294% over the 10-year period between 1995 and 2005.

Approval was given during the year, and funds earmarked for the Library to provide necessary research support by setting up a comprehensive, accessible internet-based database of the University's research output. This will form the basis for analysis of research and facilitate on-going tracking of the use of the institution's published and unpublished research output through the years. Extensive and diverse data will be collected and will include information in print and non-print formats. Information on authors/co-authors, title,

Chart 2: Growth in Internal Funding for Research





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keyword/subject, article, monograph, abstracts, department/faculty/institute/unit, traditionally collected for published information will now be captured for unpublished material such as dissertations, conference proceedings, research reports, projects, and presentations at various fora. Additionally, there are new areas in which research information will be collected. From this database, it will be possible to extract printed outputs to satisfy specific requests for research resources, track development in any research area, and track also the use of UWI research.

Research Productivity

The schedule of New Externally Funded Projects attached as Appendix 1 indicates some of the areas of research

pursued during the year that attracted external funding. Other research activities undertaken with assistance from the Campus Research Fellowship and the New Initiatives Programme funds are reflected in Appendix II.

The Campus engaged in activities to establish a regional and international collaborative research unit which will engage research in a number of areas including environmental issues. Regional collaboration in research is exemplified in the UWIHARP/ UWISON HIV/AIDS project within the region. This new study will be funded by a grant of over J\$4.8 million from both MERCK & Co. Inc. and its Caribbean subsidiary, to help design new strategies in the campaign to encourage earlier diagnosis and treatment of HIV/AIDS by reducing the prevailing stigma attached to people living with the disease.

Table 2: Publications and Presentations from Research, Faculty of Pure and Applied Sciences

DEPARTMENT	No. Acad. Staff	REFEREED PUBLICATIONS	NON-REFEREED PUBLICATIONS	CONFERENCE PRESENTATIONS
Biotechnology Centre	5	2	2	19
Chemistry	18	26	3	21
Geography & Geology	7+7	18	16	56
Life Sciences	19	15	6	20
Mathematics & Computer Science	7+7	13	0	4
Physics	10	6	0	16
Centre for Marine Sciences	2	4	3	14
Electron Microscopy Unit	2	1	0	2
NPI/MIAS	3	2	0	7
TOTAL:	87	87	30	159



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Senior Lecturer in the Institute of Education, Dr. Halden Morris, recipient of a United States patent for the invention of a portable mini clothes dryer and hair dryer.

In October a team from the Natural Products Institute (NPI), Mona Institute of Applied Science (MIAS) and the Department of Chemistry attended the 3rd Conference of the International Society for the Development of Natural Products in Nanjing. At that meeting Jamaica, which held the first meeting where the Society was formed, was granted a permanent seat on the Board of the Society. The team used the opportunity to visit several Science Parks and to develop several connections in China. Several research projects in the NPI were taken closer to commercialization and patent proposals.

The Research Policy Group, launched out of the Mona School of Business in 2002 to undertake research and analysis with a view to informing policy choices in key priority areas relevant to the needs of government, the private sector, regional institutions and, as appropriate, international organizations, broadened its mandate to include in its eleven focus areas, three new ones. These were in ageing & health issues, tourism and hospitality; and culture, masculinity and peace.

Discoveries/Inventions/Patents

The Office of Sponsored Research made strides in the efforts to assist the academy in securing patents for its research inventions. In 2004-05, Senior Lecturer in the Institute of Education, Dr. Halden Morris, was granted a United States patent, along with Rhona Miller, for his invention of a portable mini clothes dryer and hair dryer. The device is designed to fit into a standard suitcase and is the result of extensive work over the past several years. Five other patents were filed in the USA for scientific work done by staff members.

A concerted effort was made in 2004-05 to establish a Science and Technology Innovation Park (STIP) that will serve to boost interdisciplinary research activity on the Campus. Much of the initial work for such a STIP has for a number of years been undertaken by the Mona Institute of Applied Sciences (MIAS), which has developed research projects in areas such as mariculture and butterfly farming that can be converted into commercially-driven enterprises. In the coming academic year the Campus will seek to secure funding to jumpstart the STIP which, we expect, will boost the earning potential of the Campus.



Mona Geoinformatics (MonaGIS), formerly Mona Informatix, and part of the planned STIP, began a new strategic direction since November 2004 with the development of a Geographic Information Systems (GIS) division. This has now been upgraded to the core function of the operations and is aimed at providing services to the Campus, as well as the public and private sectors. These services include delivering training courses, among them, GIS modules for undergraduates in Geography and



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postgraduates in Life Sciences, as well as specialized training for UWI staff and the general public, environmental modeling for insurance, telecommunications and bauxite companies, three-dimensional rendering of architectural plans, and mapping and consulting services to different public sector agencies.

The vision for MonaGIS is a company with:

- a diversified suite of products and services that meet local and regional needs and which provide adequate revenue for its long-term sustainability and income for the Mona Campus
- an internationally recognised facility for commercial GIS services; and
- a research and development (R&D) capability to develop new products and services and a problem solving capability built on top level expertise and with strategic alliances for research, training and consultancies.

MonaGIS engaged during the year in dialogue, consultation or active research in all Faculties at the Mona Campus. It provided services such as GIS training for environmental chemists and marine biologists, research in GPS tracking and navigation and natural hazards, mapping and modeling of AIDS risk, and modeling Taino locations. MonaGIS has been involved in critical research and will bring considerable expertise to major projects that will or have already attracted major funding.

The company has been involved in many activities outside of the Mona Campus, including involvement on several national technical committees such as the Palisadoes Conservation Committee, the National Works Agency Advisory Board, Crime Committee and GIS Committee. It has also been invited to give major presentations to

parliamentarians and Cabinet. MonaGIS already works closely with the Electoral Office, Jamaica Constabulary Force, the Jamaica Defense Force and the Ministry of National Security on crime issues, and has been asked to partner with a Canadian defense-contracting firm on developing crime solutions for Jamaica. MonaGIS' research and development potential has attracted interest from the Port Authority of Jamaica as well as Aeronautical Telecommunications Limited, the latter being willing to partner and share development costs surrounding the implementation of a GPS tracking system for the island.

Research Day 2005

The Campus showcased its research activity at the annual Research Day activities. The theme this year focused on *Natural Hazards, Disasters and Sustainable Development*. The Research Day activities were guided by the Department of Geography & Geology, led by Mr. Rafi Ahmad. Four interactive fora were held, dealing with different aspects of natural hazards, their effects on development and the need for strategic management to avoid or mitigate disasters and speed recovery when they strike. *Natural Hazards Information Packs* comprising CDs and DVDs developed by the Unit for Disaster Studies in the Department of Geography & Geology, Mona Infomatix and the Mona Information Technology Support Unit (MITS) were distributed at the conference.



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Research Day 2005



1. Professor th Hon. Kenneth O. Hall addresses audience at the opening ceremony
2. Vice Chancellor Professor E. Nigel Harris greets the audience
3. The Principal exchanges pleasantries with the Hon. Omar Davies and Governor General Sir Howard Cooke.
4. The Principal and Vice Chancellor greet Senator Oswald Harding
5. Audience at the opening ceremony
6. High School students listen attentively while the UWI exhibitors explain displays



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Conference & Symposia

Held between August 27 and 29, 2004, **the Mona Academic Conference**, coordinated by the Research Policy Group, carried the theme “Revisiting Tertiary and Education Policy in Jamaica: Towards Personal Gain or Public Good”. Presenters at the conference included Sir George Alleyne, Chancellor, UWI; Professor, the Hon. Rex Nettleford, Vice Chancellor Emeritus; Mr. Audley Shaw, Member of Parliament and Opposition Spokesman on Finance; Hon. Maxine Henry-Wilson, Minister of Education, Youth and Culture; and Dr. the Hon. Omar Davies, Minister, Finance and Planning.

The Tourism and Hospitality Unit, Mona School of Business, which became operational in August 2004 organized (in collaboration with the Jamaica Chamber of Commerce, Jamaica Promotions Corporation (JAMPRO) and the Jamaica Tourist Board) the symposium under the theme **It's Not Just Cricket! It's Business!** where the guest speaker was Dr. Ali Bacher, former executive director of South Africa's World Cup Cricket 2003. The aim of the symposium was to create a national awareness of the opportunities that are likely to flow from Jamaica's hosting of the Cricket World Cup in 2007.

The Faculty of Pure and Applied Sciences held its **7th Biennial Research Conference** in May. The theme of the lead-off public forum was “Education Meeting the Needs for Development”. Dr. June George of the Department of Educational Research & Development, St. Augustine Campus, delivered the keynote address. Plenary speakers at the conference were Dr. Raymond Wright of the Petroleum Corporation of Jamaica who spoke on “Surging Demand, Diminishing Resources” and

Professor George Maul, Florida Institute of Technology, Chairman of the IOCARIBE Tsunami Steering Group of Experts, who spoke on “Development of a Tsunami Warning and Mitigation System for the Caribbean and Central West Atlantic Region”. The Conference included 39 oral and 30 poster presentations. A high point was the forging of the “Mona Resolution” on Education, Outreach and a Tsunami Warning System for the Caribbean, arising out of the session on Natural Hazards, Disasters and Sustainable Development. This has gained some attention in various international fora.

Among the conferences hosted by the Faculty of Medical Sciences was the **12th International Conference on Human Retrovirology: HTLV and Related Viruses**, and in association with the University of Miami Bioethics Programme and PAHO a conference under the theme **Research Ethics a Global Concern – Regional Concerns**.

It also hosted the annual Nursing Research Conference under the theme **Quality Nursing Care through Evidence based Practice**. The Faculty's Annual Research Day was held under the theme **Violence and Violence Prevention**. The opening session featured the Sir Kenneth Standard distinguished lecture by Dr. Rodrigo Guerrero, coordinator of the Inter-American Coalition on Violence Prevention.



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1. Professor th Hon. Kenneth O. Hall, Pro Vice Chancellor and Principal welcomes participants to the Mona Academic Conference

2. The Most Hon. Edward Seaga examines the publication launched at the Opening Ceremony

3. Former Head of the Caribbean Tourism Organization, Mr Jean Holden making his presentation

4. The Hon Karl Hendrickson making his address at the Mona Academic Conference

5. Professor Alvin Wint making his presentation at the Conference

6. Dr. Anthony Harriot makes his presentation at the conference

7. A member of the audience engages the discussion