

**INSTITUTES  
AND  
RESEARCH CENTRES  
LOCATED AT MONA**

**Year ending July 31, 2001**

# ADVANCED TRAINING & RESEARCH IN FERTILITY MANAGEMENT

**Professor the Hon. Hugh H. Wynter, OJ, CD, MD *Lond*, FRCOG,  
FICS, FACS, FACOG – Director**

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## WORK OF THE DEPARTMENT

### Mission

**T**he mission of the Advanced Training and Research in Fertility Management Unit (ATRFMU) is to promote, develop and deliver training, research, outreach and clinical services in the areas of Reproductive Health (including family planning) and Health and Family Life Education throughout Cariforum countries.

### Overall Objectives

To implement and evaluate the effectiveness of reproductive health/family planning/health and family life education programs, in pursuit of the national development goals of CARICOM and other countries.

### Training

Training activities for the academic year 2000/2001 are as follows:

- Meetings with guidance counsellors and peer counselors from selected educational institutions in the immediate environment of the UWI and two rural secondary Schools took place – August 25, 2000 and April 26, May 31 and June 12, 2001.
- **Objective:** To identify programs and strategies currently used to address sexual/reproductive health and other developmental concerns of youth in these educational institutions.

### Adolescent Sexual and Reproductive Health pilot program funded by UNFPA.

- This project ended April 2001 in the three project sites of Montego Bay, Clarke's Town and Maxfield Avenue.
- A training sensitisation seminar was conducted in Montego Bay in September 21, 2000.

- Reproductive Health sensitisation workshops were conducted in Montego Bay and Clarke's Town on selected weekends September 29 - November 12, 2000.
- A two day sensitisation workshop was held for 17 community workers from Clarke's Town, December 6-8, 2000.
- Members of the training staff and the Assistant Director attended meetings at UNFPA, National Family Planning Board (Executing Agency) and met with other component implementers in the Project (Advocacy, IEC etc.)

### **Proposed Distance Education MSc in Counselling.**

Plans continue for implementation of this programme January 2002.

- Meetings to discuss the program took place including the following persons, Pro Vice Chancellor Errol Morrison, Pro Vice Chancellor Lawrence Carrington, Professor Barry Chevannes, Professor Frederick Hickling, Professor Badri Koul (Barbados), Resident Tutors and Government Officials (Ministers of Education/Health and other government officials), Non Governmental Organisation in Campus and Non-Campus territories with UWIDEC sites.
- Mrs. Barbara Miller, Assistant Registrar, Graduate Studies and Research.
- Miss Christine Marrett and staff, UWIDEC.
- Miss Patricia Harrison, Office of Finance, UWI.

The programme was advertised and there were Two Hundred and Fifty (250) applicants and One hundred and Eighty Four (184) were eligible for acceptance. Applications were received from all countries with UWIDEC sites. Writers have been contracted for all courses. All writing checked for Intellectual Property Rights and permission requested accordingly.

### **Course SY21P – Reproductive Health and Family Life Education:**

This course was conducted - Semester II academic year 2000/2001 for 25 students. All were successful.

### **Reading Room**

Discussions with the Medical Library continues regarding the upgrading of the Reading Room to access current information on Reproductive Health.

### **Health and Family Life Education**

CARICOM Health and Family Life Education (HFLE) Project funded by UNDCP, implementing agent UNICEF, Barbados.

This project officially ended in April 2001 and the period May-June 2001 used for preparation of reports related to closure of the project.

During the period under review the main activities in this project were as follows:

- The Outreach Coordinator visited countries in the Eastern Caribbean and had meetings with the Country Teams who were planning the in-country phase of the Facilitators Programmes during the period August 30 – September 2000.
- Workshops conducted in Antigua, November 20-24, 2000 for Teachers, Health Workers and Community Development Officers.
- Meeting of the National committee which is responsible for the in-country training activities of the HFLE project in Dominica, November 26-29, 2000.
- Meeting of the National Committee to promote HFLE in St. Vincent, December 7, 2000.
- Regional Teacher Training Workshop for Teacher Educators held in Barbados, March 26 – April 5, 2001 sponsored by UNICEF and PAHO. Thirty one (31) Educators from 15 CARICOM states attended.
- In-country training activities for HFLE implementers
  - St. Vincent – January 23-24, 2001
  - St. Kitts – March 12-15, 2001.
- Meetings of the HFLE country team in St. Lucia - April 10, 2001
- Tri-Partite Review meeting in Barbados, June 27, 2001 to discuss draft of the final report.

#### **Collaboration with Joint Board of Teacher Education**

- Workshop conducted for Teacher Educators in Jamaica, December 12-13, 2000. This was funded by UNICEF, Jamaica

#### **Community Policing – Jamaica.**

- Collaboration continues with the Second Chance Programme of the Jamaica Constabulary Force and the closing exercise for a Screen Printing course for the Police Youth Clubs in Kingston and St. Andrew took place August 24, 2000.
- Planning meeting with potential volunteer parties, November 15, 2000.
- Graduation exercise for forty Police Youth Club members who completed courses in Computer and Electrical Installation.

**Health and Family Life Education sub-committee  
Ministry of Education, Jamaica**

The Training coordinator attended meetings of the HFLE sub committee of the Ministry of Education, Jamaica.

**Communications with other agencies**

Continuous communication was maintained with University Centres, Ministries of Health and Education in Jamaica, and Eastern Caribbean.

**Clinical Services**

The following clinical services were offered during the period under review:-

**Contraceptive Methods**

Pills  
Injections  
IUCD  
Norplants  
Condoms

**Surgical Procedures**

Tubal Ligations – Laparoscopic  
Culdoscopic  
Laparoscopy – Diagnostic and Operative  
Vasectomy  
Hysteroscopy

Infertile women for Diagnostic and Operative Laparoscopy are counselled pre and post operatively and referred to Gynae Out-Patient Clinics for follow-up.

**In-Vitro Fertilisation**

In-vitro Fertilisation for couples continues.

**Research**

**Youth Now Project – funded by Futures Group International, USA.**

- Baseline Survey of Adolescents ages 10-19 years attending school in three communities in Northern St. Elizabeth (Balaclava, Maggotty and Lacovia High Schools).
- Questionnaires administered to 900 adolescents.
- Data entry and analysis in progress.

## **PAPERS PRESENTED**

### **Pansy Hamilton**

- “Implications of Gender on the Health Budget 2001” Department of Economics, UWI, February 24, 2001, 15 pages
- “Caribbean Construct of Fatherhood”, Centre for Caribbean Medicine, London England, June 19, 2001, 15 pages.

## **PUBLICATIONS**

### **Pansy Hamilton**

- \* “Gender and Health in Government Allocations: An Analysis of the Ministry of Health's Budget 1997/98.” Chapter 3 in The Construction of Gender Development Indicators for Jamaica. Edited by Patricia Mahommed, Kingston, Jamaica: Planning Institute of Jamaica.

## **PUBLIC SERVICE**

### **Professor Hugh Wynter, OJ, Director**

- Chairman, National Family Planning Board
- Member, Board of Governors, Wolmer's Boys School
- Trustee, Wolmer's Schools Trust

### **M. Jean Munroe, OD, Assistant Director**

- Member, Board of Gallimore McPherson Senior Citizens Home, St. Margaret's Church, Liguanea
- Member, University Hospital Trust
- Member, Lion's Club of St. Andrew, Central
- Member, Dental Council of Jamaica
- Member, Jamaica Association of Health Service Executives
- Member, Management Committee, School of Medical Radiation Technology, UHWI

### **Pansy Hamilton, Research Fellow**

- 2nd Vice President, Young Women's Christian Association
- Vice President, Jamaica Association of Health Executives (Education)
- Member, Board of Directors Whole Person Resource Centre

**Lillith Williams, Training Coordinator (Lecturer)**

- Member, Jamaica Association of Mentally Handicapped Children
- Member, Jamaica Red Cross Association

**Joan Meade, Training Officer**

- Member, Association of Health Service Executives
- Member, Lions Club of St. Andrew Central
- Member, Heart Foundation of Jamaica

**Amy Lee, Research Fellow**

- Family Counsellor, Barbican Baptist Church
- Family and Adolescent Counsellor at Family Court and Women's Crisis Centre

**Elaine Jackson, Training Officer**

- Member, National Intercessory Network of Jamaica
- Director for Music Ministry, Word of Life Christian Fellowship

**CATEGORIES OF STUDENTS**

**Clinical Training**

During the period under review the following were trained;

Undergraduate	46 (medical students)
Post Graduate	11 (doctors pursuing DM)
Post Basic	
Pupil Midwives	44

**Course SY21P – Reproductive Health and Family Life Education**

Undergraduate	25
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**DISTINGUISHED VISITORS**

**Dr. N. Andino**, UNFPA

**Miss Hetty Sergeant**, UNFPA

**Dr. Mary Kitundi**, Winona State University, USA

**Mrs. Liz Scholefield**, UWIDEC, Cayman Islands

**Dr. Phyllis Pitt-Miller**, Faculty of Medicine, St. Augustine

**Dr. Christian Harper**, Dean GTZ Consultant

**Dr. Paul Donald**, St. Mary's Hospital, Manchester UK

## **AGRICULTURE UNIT**

**Dave G. Hutton, BSc UWI, MSc C'nell, Diploma (Nematology)**

*Universidad Centrale de Venezuela – Agriculture Representative*

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**T**he Faculty of Agriculture and Natural Sciences (FANS) of The University of the West Indies at St. Augustine, Trinidad is comprised of the School of Agriculture (SoA) and the School of Natural Sciences. The Agriculture Unit, Mona i) represents the SoA of FANS at the UWI Mona Campus; ii) interacts with the wider Jamaican agricultural and related communities on behalf of the SoA; iii) coordinates the SoA External Programme in Agriculture in Jamaica; and iv) carries out relevant adaptive research. The Representative lectures to and supervises UWI and other students by special arrangements.

### **WORK OF THE UNIT**

Administrative support was given to SoA students completing degrees and other requirements in Jamaica. The Representative coordinated i) the SoA's 10-week On-Farm Attachment Programme (Course AC 32D) in Jamaica by negotiating assignments and visiting the students and supervisors at their worksites; ii) dispatch of Jamaican students in the SoA's exchange programme with the University of Wisconsin – Madison, and iii) participation of two SoA students in the Agricultural Skills Programme offered by the College of Agriculture Science and Education (CASE), Jamaica. The Representative served as Internal Examiner for M.Phil. Thesis, Soil Science Dept., SoA. Materials, documents, information, etc. emanating from the SoA were supplied to various Jamaican interests. The Representative served on the Planning Committee to and participated in the UWI/Mona 2001 Career Expo, and mounted exhibitions on the SoA, and on careers in agriculture.

The Representative delivered a two-hour Economic Nematology lecture to Course Z22F (Management of Pests and Pesticides) Mona students, and served as University Examiner for Course BL20M. The Representative promoted the SoA, and gave talks/demonstrations on careers in agriculture at Career Days and similar events at various high schools, etc. The Unit supervises the "Breadfruit Improvement Project", carried out in Jamaica by the Dept. of Food Production, SoA, to characterize local, and



assess introduced germplasm, and identify, multiply and distribute improved local and foreign cultivars. The Unit participated in the third UWI/Mona Research Day.

The Representative collaborated with the Research and Development Department, Ministry of Agriculture (MINAG) to establish a protocol for nematological research. The Unit has developed a simple hot water dip technique to disinfest yam heads of injurious nematodes. This technique was demonstrated at Field Days in Trelawny (four separate occasions), Manchester, Portland and St. Ann in collaboration with RADA, and/or the Domestic Food Crops Programme, MINAG, for students, extension officers, farmers and other interests. The Representative made presentations on the benefits of soil solarization to similar constituencies in collaboration with RADA or the Coastal Water Quality Improvement Project (CWIP).

The Representative is a member of the National Youth in Agriculture/RADA Schools' Agricultural Programme Committee, whose objective is to reinforce the integration of agriculture into schools' curricula, and to encourage the involvement of Jamaican youth in the study/practice of agriculture. The Committee staged relevant events islandwide for schools and youth groups, culminating in competitions at the Denbigh Agricultural Show; the Representative served as chief judge for two competitions. Two scholarship winners, sponsored by the Trafalgar Development Bank through financing from the German Development Bank, were in place at the FANS, and two, sponsored by the Bank of Nova Scotia, Jamaica, at CASE. The representative delivered 10 hours of Economic Nematology lectures to CASE A.Sc. final year students. The Representative is Vice-Chairman, and sits on four sub-committees of the National Food and Nutrition Coordinating Committee of Jamaica (NFNCCJ), which promotes the improvement of household foods availability and the nutritional status, particularly of at-risk groups in Jamaica's population. The Representative participated in several NFNCCJ events.

Soil and plant samples were analyzed (on a complimentary basis) for noxious nematodes for several farmers, householders, institutions or agencies, and relevant nematode control recommendations or assistance with addressing plant nematode problems given. The Unit continued a survey of banana fields for plant nematodes at Annotto Bay, St. Mary on behalf of Agricultural Product of Jamaica and is collaborating with the Coffee Industry Board to address substantial nematode problems at certain locations. The Representative sat on interview panels for the Calvin Foster Memorial/Caribbean Cement Company, and National Youth in Agriculture/RADA, etc. scholarship awards. The Representative sits on the "Sugarcane Task Force", set up to determine the cause of a "disease" claimed to be devastating sugarcane cultivations all over Jamaica. The Representative attended/participated in several conferences, seminars, field

days, training days, workshops, symposia and other such events hosted by UWI, MINAG, CARDI, IICA, the Jamaican Society for Agricultural Sciences (JSAS), etc., and sat on sundry MINAG committees set up to address topical issues.

The Representative attended the Twelfth Symposium of the International Society for Tropical Root Crops (ISTRIC) in Tsukuba, Japan in September 2000. Literature and other materials (e.g. sweet potato weevil lures) obtained from that Conference were passed on to CARDI, the Biotechnology Centre, MINAG Research and Development Dept., etc. The Representative is currently striving to coordinate a visit to Jamaica and Trinidad by personnel from the National Agriculture Research Centre, Japan re exchange of sweet potato germplasm.

### **The External Degree Programme in Agricultural and Rural Development by Distance Teaching (EPA)**

Twenty-seven students were enrolled in the EPA for 2000/2001, seventeen in the MSc., two in the Diploma, and eight in the Certificate Course programmes. The Unit administers this programme in Jamaica, being the contact point for students, providing information, advice, supervision, counselling or administrative support, and interaction with St. Augustine. The Representative is Local Supervisor for the Research Project of one MSc. student. The Representative coordinated the visit of a three-member team (including the Dean, FANS) to Jamaica, and participated in the team's promotion of the EPA.

### **RESEARCH IN PROGRESS**

- Lethality of household disinfectants, plant residues or extracts to plant or free living nematodes *in vitro*, or in soil.
  - Bleach, Dettol, Jeyes Fluid, other disinfectants, crude pimento oil or one derivative, and other "safe" chemicals are being investigated for nematicidal activity. Crushed, dried pimento leaf and the three named disinfectants have shown strong soil activity against several plant nematodes.
- Determining the effectiveness of bleach, Dettol, Jeyes Fluid and other "safe" chemicals to disinfect yam planting material of noxious nematodes.
  - Previous trials proved bleach, Dettol and Jeyes Fluid to be as effective as nematicide or hot water dips to disinfect yam planting material of destructive nematodes, resulting in improved plant vigour and production.

- Persistence in soil of household disinfectants used as nematicides.
  - Low rates of the disinfectants are proving to be as persistent in soil as traditional nematicides, but somewhat less effective in suppressing soil and root populations of destructive nematodes.
- Confirming pathogenicity of *Phomopsis dioscoreae* to yam.
  - Yam plants in a field at St. Leonards, Westmoreland were affected by a disease caused by *Phomopsis dioscoreae*, a fungus not previously reported in Jamaica. Pathogenicity tests are being carried out in order to complete a “new disease” report for publication in an international journal.

## PAPERS PRESENTED

- **Hutton, D.G.** “Growth and bearing of nematode-infested yellow yam dipped in household disinfectants”. Twelfth Symposium of the International Society for Tropical Root Crops (ISTRC); Tsukuba, Japan. September 10 – 16, 2000. Oral presentation.
- **Hutton, D.G.** and G. Dunkley. “Efficacy of household disinfectants to suppress *Scutellonema bradys* infestation of sweet yam (*Dioscorea alata*) planting material”. Fifth Conference, Faculty of Pure and Applied Sciences, The University of the West Indies, Mona. January 8 – 11, 2001. Poster presentation.

## PUBLICATIONS

### Non-refereed

- \* **Hutton, D.G.** and E. E. Plummer. 2001. *In vitro* nematicidal activity of three household disinfectants or crude extracts of pimento leaf or two organic amendments. JAGRIST (The Bulletin of the Jamaican Society for Agricultural Sciences (JSAS)) 13: 36 – 39.
- \* **Hutton, D.G.** 2001. Efficacy of household disinfectants or pimento leaf residue to manage nematode infestation in soil. JAGRIST (The Bulletin of the Jamaican Society for Agricultural Sciences (JSAS)) 13: 40 - 44.

## **PUBLIC SERVICE**

- Vice Chairman, the National Food and Nutrition Co-ordinating Committee of Jamaica (NFNCCJ)
- Member, the Jamaican Society for Agricultural Sciences;
- Member, National Youth in Agriculture/RADA Schools' Agricultural Programme Committee;
- Member, Publications Committee, Research and Development Dept., Ministry of Agriculture;
- Member, Minister of Agriculture Standing Committee on Research;
- Member, The Sugarcane Task Force.

## **DISTINGUISHED VISITORS**

**Dr. Alain Kermarrec**, INRA, Guadeloupe.

# CENTRE FOR GENDER AND DEVELOPMENT STUDIES MONA UNIT

**Kamala Kempadoo, PhD** *Colorado, MA Ohio State, MA Amsterdam*  
– Temporary Lecturer-in-Charge

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## WORK OF THE UNIT

**E**stablished in the University of the West Indies, September 1993, the Mona Unit, Centre for Gender and Development Studies, completed its eighth year of existence in this academic year 1999/2000. The Unit is committed to continued work in the fields of gender and development studies through the areas of Teaching, Research and Outreach.

**Dr. Patricia Mohammed**, Senior Lecturer in Charge of the Mona Unit, was awarded two years Research Fellowship leave by the University of the West Indies, Mona Campus, for the period August 2000 to July 2002, for her research project **Iconography and Image in the Evolution of the Caribbean**. She handed over to Dr. Kamala Kempadoo who assumed duties as Acting Lecturer in Charge from August 1, 2000 to July 31, 2001. Dr. Kempadoo was on leave from the University of Colorado, Boulder, where she worked as an Assistant Professor in the Women's Studies programme.

### Staffing of the Mona Unit and Fulbright Fellows

Mrs. Beverly Shirley, Senior Administrative Assistant and Mrs. Shakira Maxwell, Temporary Teaching/Research Assistant at the Unit, continued to carry out the work of the Unit. Along with Dr. Kempadoo, they were joined by Ms. Shani O'Neal, Fulbright graduate student from the University of California, Los Angeles. Ms. O'Neal completed the first leg of her research programme in Semester One and moved on to the St. Augustine Campus for Semester Two. During her stay here in Jamaica, her primary function was that of a researcher on the research/action project entitled **The Making of Caribbean Feminisms**

Dr. Edna Bay, Fulbright Fellow from Emory University, Georgia, was also attached to the Unit in Semester Two of this academic year. She has carried out extensive research on women in Africa where she also lived for many years. She undertook the teaching of the undergraduate course AR20A – Gender in Caribbean Culture II.

Due to the limited space for existing staff in the Unit, arrangements were made with the Department of Geography to provide office space for Ms. Shani O’Neal, and with the Sir Arthur Lewis Institute to provide office space for Dr. Edna Bay. The Unit occupies only 300 sq. ft of floor space and is physically challenged for space to house both its equipment and facilities as well as a staff of six persons.

#### **Website**

Mrs. Shakira Maxwell worked in collaboration with the Webmaster, Mr. Patrick Anglin, in constructing and developing the Mona Unit website.

#### **Dorian Powell Prize**

The Mona Unit established the Dorian Powell Prize Award in 1999, to honour the most outstanding undergraduate student(s) who had pursued at least three courses in gender offered through the Centre.

The Prize of \$15,000 was offered for the first time this year 1999/2000, and was shared by two students, **Charmaine Langoth** and **Yolande Gyles**. Dr. Patricia Mohammed made a personal contribution of \$5000 to the Prize. The awards function was held at the Senior Common Room, University of the West Indies, December 18, 2000, hosted by the Centre for Gender and Development Studies, Mona Unit, and organized by Ms. Beverly Shirley and Ms. Shakira Maxwell.

#### **Lucille Mathurin Mair Public Lecture Series**

The Unit has so far, hosted two Lucille Mathurin Mair Public Lectures held in commemoration of the International Day of Women – 1998 and 2000. The Lectures were presented by **Professor Jocelyn Massiah** and **Dr. Peggy Antrobus** respectively:

- Professor Jocelyn Massiah “On the Brink of the New Millenium: are Caribbean Women Prepared?” University of the West Indies, Jamaica, March 1998.
- Dr. Peggy Antrobus “The Rise and Fall of Feminist Politics in the Caribbean Women’s Movement 1975-1995” University of the West Indies, Jamaica, March 2000.

Both Lectures were published by the Mona Unit and have been in great demand both by students and faculty as well as other interested members of the public. The publications are offered for sale at minimal cost at the Mona Unit and also at the University Bookshop.

During this academic year, the Unit is presently engaged in the preparation for the next Lecture to be held on March 6, 2002, at the Philip Sherlock Centre for the Creative Arts, University of the West Indies.

### **Conversations with Gender**

This year, the Mona Unit launched its fifth annual discussion seminar series **Conversations with Gender** geared to engage the University community and the public in new and interesting debates within gender. Held at the Sir Arthur Lewis Institute, February 22, 2001, the two presenters were Dr. Edna Bay and Dr. John Campbell, who spoke under the theme "Women, Power and Slave Production in the 18<sup>th</sup> and 19<sup>th</sup> Century Atlantic World".

## **RESEARCH IN PROGRESS**

### **The Mona Unit**

#### **– Constructing Masculinity and Femininity in the Caribbean**

The Unit is engaged in the project **The Making of Caribbean Feminism** that seeks to map the histories and construction of feminism in the region. It attempts to bring together existing material pertaining to prominent women and men, feminist organizations as well as grass roots activism in the struggle for gender equity and equality in the English speaking Caribbean in the twentieth century.

#### **– Gender, Peace and Development**

A project, funded by UNESCO which aims to identify initiatives, organizations and individuals involved in policies, strategies, initiatives and publications on gender, peace and development in the Northern Caribbean. A counterpart team is conducting research on the southern and eastern Caribbean from Trinidad. Researchers in Jamaica are: Mrs. Shakira Maxwell, Ms. Nicola Smith and Ms. Olatz Landa with Team Leader, Dr. Kamala Kempadoo. Dr. Gwendolyn Williams is the coordinator of the project for UNESCO. Reports were submitted to UNESCO by the researchers in Jamaica.

### **Kamala Kempadoo**

Dr. Kempadoo was one of the five consultants to the UNFPA/UNICEF research project **Meeting Adolescent Development and Participation Rights in Jamaica**. Her specific task was to conduct a study to determine the factors that shaped the initiation of early sexual activity among adolescent girls and boys.

### **Patricia Mohammed**

#### **– History and Gender Relations**

Dr. Mohammed completed the first year of her Campus Research Fellowship from the Office of the Principal.

### **Gender Equity**

Dr. Mohammed continued as the Chief External Advisor on the gender equity initiative of the Cayman Government assisting the policy formulation process as researcher and advisor.

### **Outreach**

#### **FAMPLAN**

The Mona Unit has been a member of the Family Planning Association (FAMPLAN) since 1997. Through collaboration with this Association, the Unit is integrally involved with the Brothers for Change project. This is the first group of its kind which provides counseling for men who batter, under the supervision of court appointed probation officers.

The Unit facilitated the program **Gender Based Violence and HIV/STDs** on FAMPLAN's Members' Day, moderated by Shakira Maxwell November 25, 2000, held at Club Jamaica, Ocho Rios.

#### **Living Caribbean Feminisms**

In collaboration with the School for International Training (SIT), the Mona Unit organized and participated in a discussion "Living Caribbean Feminism" on February 20, 2001, at the Social Welfare Training Centre, University of the West Indies, Mona. Father's Incorporated, Women working for Transformation and Sistren Collective, also participated.

### **Other Activities**

Mrs. Shakira Maxwell, Research Assistant to the Unit participated as discussant on the KLAS radio talk show programme *My Place* hosted by Mr. Michael Anthony Cuff. She represented the Mona Unit in its involvement with FAMPLAN Jamaica, including hosting meetings with this Association in their visits to collaborate with the Centre for Gender and Development studies. In keeping with their policy to alleviate gender violence, the Unit



through Mrs. Maxwell, commemorated with FAMPLAN Jamaica, the occasion of International Women's Day, 2000.

## **PAPERS PRESENTED**

### **Kamala Kempadoo**

- “Liberating Sex: The Future of Prostitution,” plenary talk at the inaugural conference Feminist Utopias, of the Institute for Women's and Gender Studies, University of Toronto, Canada, November 8-10, 2000.
- “A Transnational Feminist Agenda on Sexwork: Thinking Through the Impossible?” inaugural conference At The Meridians, hosted by Meridians Journal, Smith's College, Northampton, March 8-10, 2001.
- “Recuperations and Revisionings: Transnational Feminism in action” plenary speech at the National Women's Studies Association 22nd annual Conference, Minneapolis, June 13-17, 2001.

### **Patricia Mohammed**

- “To All to Whom these Presents Shall Come” keynote address at the opening ceremony of the Caribbean Heritage Week, Brown University, Rhode Island, February 22, 2001.

### **Shakira Maxwell**

- “An Exploration of Gender Relations among the Ex-Slave Population in Jamaica: Looking at Sources and Methodology” 21st Anniversary Celebrations of the Social History Project, Department of History, University of the West Indies, Jamaica, April 21, 2001.
- “Recovering Women's Voices: Exploring Sources of Data in Post-Emancipation Jamaica” conference Atlantic Crossings: Women's Voices, Women's Stories from the Caribbean and the Nigerian Hinterland, Dartmouth college, New Hampshire, USA

## **PUBLICATIONS**

### **Kamala Kempadoo**

- \* “Freelancers, Temporary Wives, and Beach boys: Researching Sex Work in the Caribbean” *Feminist Review*, No. 67, (Spring 2001): 28-51.

- \* “Women of Color and the Global Sex Trade: Transnational Feminist Perspectives”, *Meridians: Feminism, race, Transnationalism* Vol 1.2, (Spring 2001): 39-63.

**Patricia Mohammed (ed)**

- \* “The Construction of Gender Development Indicators for Jamaica”, Commissioned by the Planning Institute of Jamaica, United Nations Development Program and the Canadian International Development Agency, 2000.
- \* “The Emergence of a Caribbean Iconography in the Evolution of Identity” in Brian Meeks and Folke Lindahl, (eds) *New Caribbean Thought: A Reader*, Kingston: University of the West Indies Press, 2001
- \* “A Very Public Private Man: Trinidad's Eric Eustace Williams (1911-1981)” in Anton Allahar (ed), *Caribbean Charisma: Reflections on Leadership, Legitimacy and Populist Politics*, Kingston, Boulder and London: Ian Randle and Lynne Rienner Publishers, 2001.
- \* Book review of “Gender: A Caribbean Multi-disciplinary Perspective”, Elsa Leo-Rhynie, Barbara Bailey, Christine Barrow (eds.) *Development and Change*, The Hague, Vol. 31 (2000).

**TEACHING**

**Undergraduate**

The Undergraduate courses offered through the Mona Unit were:

AR20M – Men and Masculinities

AR20A – Gender in Caribbean Culture I

AR20B – Gender in Caribbean Culture II

AR21A – Introduction to Women's Studies I

AR21B – Introduction to Women's Studies II

In Semester II of this academic year, AR20M - Introduction to Men and Masculinities was taught for the first time at the University of the West Indies. The aim of the course is to explore the construction of Caribbean masculinities using gender as an analytical category.

## **Other Teaching**

### ***Course Development***

- Dr. Patricia Mohammed developed two course outlines, “Feminist Theory” and “Gender and the Caribbean Family” for the Distance Teaching **Certificate Course in Gender and Development Studies** administered through the Regional Coordinating Unit of CGDS.
- Dr. Patricia Mohammed and Mrs. Shakira Maxwell assisted Ms. Rebecca Shaw, a graduate of the University of the West Indies now teaching in Belize, in the development of two courses on women and gender studies at a High School in Belize, South America.

## **University of Maryland**

Mrs. Shakira Maxwell represented the Mona Unit at the University of Maryland Summer Institute, July 5-20, 2001, and participated in the Curriculum Transformation Project under the theme “Women's activisms and Feminist Thought”.

## **Awards**

Dr. Patricia Mohammed was awarded **Caribbean Advocate of the Year** by Brown's University, Providence, Rhode Island, not only for her work and activism in feminism, but particularly for her work relating to Caribbean identity through image and iconography which addresses the issue of diaspora and heritage. She delivered the keynote address *To All to Whom These Presents Shall Come* at the opening ceremony held February 22, 2001, which inaugurated the Caribbean Heritage Week celebrated each year by students of Caribbean descent.

## **DISTINGUISHED VISITORS**

**Dr. Mayke Kromhout**, Amsterdam Research Institute for Global Issues and Development Studies, University of Amsterdam.

**Dr. Deborah Thomas** and **students** of Wesleyan University.

**Ms. Christine Scott-Dunkley**, Canadian International Development Agency (CIDA).

**Ms. Gladys Acosta Vargas**, United Nations International Children and Educational Fund (UNICEF).

**Ms. Annmarie Campbell** and **Ms. Althea Bailey**, GTZ Programme,  
Ministry of Health.

## **CENTRE FOR GENDER AND DEVELOPMENT STUDIES REGIONAL UNIT**

**Barbara Bailey, BSc, BSc (Med. Microbio), PhD, DipEd UWI**  
– **Regional Co-ordinator**

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### **WORK OF THE CENTRE**

#### **INTRODUCTION**

**E**ight years after its establishment as an Interdisciplinary Centre for conducting teaching, research and outreach, and despite its limited resources, the Centre continues to play an increasingly important role in local, regional and international efforts geared towards the achievement of gender equality and equity. This continues to be accomplished mainly through:

- Teaching and Research

- Consultations and training workshops
- Executing regional projects on behalf of multi-lateral agencies.

## **STAFF**

The Unit, through the efforts of **Dr. Leith Dunn**, the Acting Regional Coordinator for the year 2000/01, was able to acquire the service of **Ms Michelle Davis**, a recent graduate of the M.Sc. Programme in Gender and Development Studies, for two years from June 2001 - June 2003. Ms Davis' employment is supported by the Co-operant programme of the Canadian Government through the Canadian International Development Agency (CIDA) and CUSO, a Canadian Development Agency.

**Dr. Bailey** met with the Vice-Chancellor for a second time, and again made representation to him about the staff situation in the Unit and the volume of work which was there to be done. She spoke specifically to the need for a Coordinator for the new 18-month *Certificate Programme in Gender and Development Studies* which was being developed with funding from the Government of the Netherlands through a project of support in *Teaching, Research and Outreach in Gender and Development Studies*. The Vice-Chancellor agreed to the employment of someone at the Assistant Lecturer level for a period of 18 months, beginning January 2002.

## **TEACHING & CURRICULUM DEVELOPMENT**

### **Graduate Teaching**

Teaching of the third cohort of students in the 18-month M.Sc. degree in *Gender and Development Studies* has ended. In September 2001 there will be a new intake of graduate students. As Acting Regional Coordinator of the Centre for the year, **Dr. Leith Dunn** was responsible for co-ordination of the graduate programme, and supervised and was first examiner for five of the students. In September, Dr. Dunn convened a small committee to select students for awards provided by the Royal Netherlands Embassy, and hosted an awards ceremony in September 2000, where Mr Roelof Buffinga, First Secretary of the Royal Netherlands Embassy, made the presentation to the three students selected.

### **Undergraduate Teaching**

Dr. Dunn delivered two guest lectures to undergraduate students in the Faculty of Social Sciences and the Faculty of Arts and Education.

### **Intercampus Staff Exchange**

A small grant from the Government of the Netherlands through the Project of Support for Teaching, Research and Outreach in Gender and Development Studies has made it possible for staff from each unit to contribute to teaching and to hold seminars among the four Units of the Centre. Dr. Bailey, while on sabbatical leave, was able to visit and do teaching sessions with undergraduate and graduate students at Cave Hill. This exchange has enabled students over the life of the project to receive another perspective on their subject area, and this has resulted in the enrichment of their course of study.

### **University of Maryland Summer Institute in Gender and Development Studies**

The University of Maryland held an International Summer Institute for Lecturers in Gender and Development Studies aimed at improving research and teaching skills in the area of Gender Studies. They invited the participation of the CGDS, and provided fellowships for six lecturers from the three campuses. The Institute provided an opportunity for networking and collaboration with scholars from South Africa, and the host university.

### **Certificate Programme**

The development of a 3-semester part-time Certificate Programme in Gender and Development Studies, sponsored by the Government of the Netherlands, continued. Course material for one course is being prepared by University of the West Indies Distance Education Centre (UWIDEC). One course has been sent for external assessment and the other six courses are being written, with Dr. Bailey providing guidance to the writers in her capacity as a curriculum specialist. The programme, originally scheduled for delivery in 2001/2002, will now be offered for credit from the academic year 2002/2003.

## **RESEARCH IN PROGRESS**

Research continues in the areas of Gender Issues in Education, including Early Childhood Development and Transformational Leadership

*Gender Awareness Training Programme for Teacher Educators in the Region.* US\$64,000 (The Caribbean Community (CARICOM) Secretariat)

The output from this project, a gender training module, written by **B. Bailey, PhD, M. Brown, PhD & Y. Yusuf-Khalil M.Ed.**, and edited by Dr. Bailey, has been circulated throughout the region to Teacher Educators,

Ministries of Education and Tertiary Level Institutions. They will be responsible for introducing the module into the curricula of Teacher Training Institutions in the region. This programme expansion, was approved by the Chief Education Officers of the CARICOM countries.

*Perspectives on the School Experience* – C\$15,000  
(Canada/Caribbean Gender Equality Fund)

This research was undertaken to look at the reasons for the differentials in achievement between girls and boys at the secondary level of the education system in Jamaica, as well as those who had already dropped out of the formal school system. There was a significant amount of data collected and analysed and a workshop, led by **Dr. Bailey**, the Chief Researcher, and **Dr. Monica Brown**, Senior Lecturer in the Institute of Education, was held in December 2000 to examine the conclusions and try to determine the way forward in terms of policy development and change. The workshop was attended by senior representatives of the Ministry of Education, including the Chief Education Officer, persons involved in teaching and teacher training, as well as staff from various Non-governmental Organisations (NGOs) across the country. The report is being edited for publication as a monograph titled *Unmasking Stereotypes: Boys' and Girls' Perception of Gender and the School Experience*.

#### **Project Proposals Developed and Awaiting Approval**

The Unit is still awaiting official approval of the following proposals:

*Caribbean Gender Ideology: Influence, Transformation and Impact*  
– The Ford Foundation

Developed by Dr. Bailey, to examine and to strengthen the Centre's graduate programme, this project for US\$70 000.00 was submitted to Ford Foundation through the Office of Planning as a part of the Vice-Chancellor's Cultural Studies Initiative.

*Gender Imbalance at the Secondary and Tertiary Levels of Education Systems in Borrowing Member Countries (BMCs) of the Caribbean Development Bank (CDB)*

Dr. Barbara Bailey was invited to a meeting on February 9, 2000, at the CDB where the proposal was discussed with her, and Dr. Eudine Barriteau, Head of the Cave Hill Unit, who also attended. Certain changes were requested by the CDB's Project staff. This was done and the proposal was resubmitted to the Bank. Funding will also be sought from University Research and Publications Committee and other sources.

***Transformational Leadership Project*** – United Nations Development Fund for Women (UNIFEM)

The proposal is not yet finalised. Alternative ways of handling the research activity, which is to be coordinated by the Regional Coordinating Unit, are still being considered.

***Gender in Early Childhood from a Caribbean Perspective.***

This proposal was developed by Dr. Bailey and Mrs. Freda Thomas, Project Officer at the Dudley Grant Memorial Trust. The project was submitted, at their invitation, to the United States Agency for International Development (USAID) and to the Caribbean Community (CARICOM) Secretariat for support funding of US\$286,965.

***Gender Training and Research.*** (Japan Fund for Women – US\$200,000)

As a result of the success of the Micro-enterprise project, the Regional Coordinating Unit was invited by the Embassy of Japan to submit a proposal to support the Centre's distance education programmes, the development of a database and website, which will allow access to current research on Caribbean issues to policy analysts and planners, and international development agencies. The holding of a regional conference to discuss ways in which the region could achieve the mid-decade goals, agreed on during the 1995 Conference on Women, held in Beijing, was also proposed. The document, which was prepared by **Dr. Dunn**, is now being considered.

## **OUTREACH**

The Outreach Programme, consistently one of the most important of the Centre's activities, continues to expand. The content of the programme continues to outstrip what the Unit can comfortably handle with the resources available; but having responsibility for the promotion of gender and development studies within the academy and the region, the Unit has felt compelled to accept assignments and try to acquire part-time help to carry them forward. Listed below are some of the activities undertaken over the reporting period

## **TRAINING SEMINARS AND WORKSHOPS**

***Workshop on Women in Management in Higher Education***  
(Offered by The Association of Commonwealth Universities (ACU) in collaboration with the UWI)

This 5-day regional workshop was held in Barbados in January 2001 and was coordinated on behalf of the Vice-Chancellor, by **Louraine Emmanuel** and **Mary Morgan** of the Regional Coordinating Unit of the



Centre. The workshop is offered annually by the ACU to women in management in higher education in universities throughout the Commonwealth, and is a part of their training programme. The workshop was attended by 19 persons from 7 countries in the region.

***Women in Micro-enterprise Development*** – US\$26,000 (Japan Fund for Women, administered through the United Nations Development Programme (UNDP)).

After the success of the first two phases of this project, which trained trainers, and approximately 80 women involved in small business enterprise across Jamaica, a third phase was approved by the government of Japan. This phase which has begun, involves training of rural women and strengthening the rural women's network, publication of a newsletter, and reprinting of the Training Manual. The training is being done by **Joan Browne, M.A.**, a training consultant who with **Dr. Bailey** co-authored the manual.

***Gender Analysis in Policy and Planning*** – J\$436,000 (CIDA and the Canada/Caribbean Gender Equality Fund in collaboration with the Management Institute for National Development (MIND)).

Between December 2000 and June 2001, **Dr. Dunn** conducted research and developed and delivered a gender training programme to policy analysts in line ministries, in the Office of the Prime Minister and to permanent secretaries. A *Gender Training Manual* and *Gender Analysis Checklist* were also developed for use in the Public Sector.

## **PAPERS PRESENTED**

- \* “Globalisation, Women and Work” by Barbara Bailey and Leith Dunn was presented by Dr. Bailey, at the UWI's Academic Conference 2000. UWI, Mona, Jamaica.

*Presentation  
of Awards to three  
graduate student from  
the Royal Netherlands  
First Secretary,  
September 2000.*



## **PUBLIC SERVICE**

### **Dr. Dunn**

- Member, the Board of Directors of Shortwood Teachers' College
- Member, Educational Council of the United Theological College of the West Indies
- Member, Stewardship Committee of the Anglican Diocese of Jamaica
- Member, NGO Advisory Committee of the Commonwealth Foundation, London, UK
- Representative, CGDS on the Canada/Caribbean Gender Equality Fund

## **CATEGORIES OF STUDENTS**

### *Postgraduate Students*

Seven MSc students  
One MPhil

## **VISITORS TO THE CENTRE**

**Dr. Philomena Steady**, Professor of Africana Studies, Wellesley University, USA

**Ms Lucie Bazinet**, CIDA Gender Equality Programme Officer, Ottawa, Canada

**Mr. Martin Abrahams**, CIDA Policy Consultant to the Office of the Prime Minister

**Ms Christine Scott-Dunkley**, Programme Director, CIDA, Jamaica

**Dr. Mayke Krumhout**, University of Amsterdam, The Netherlands

**Mr. David Nii Addy**, Programme Director, International Labour Organisation (ILO) Programme, Caribbean Office.

## **CENTRE FOR MARINE SCIENCES**

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**G. F. Warner, PhD – Director**

## **WORK OF THE CENTRE**

**A** major achievement this year was the most extensive coral reef survey ever undertaken in Jamaica. The work was carried out in collaboration with the Atlantic and Gulf of Mexico Rapid Reef Assessment (AGRRA) project. Four AGRRA survey teams, supported by boats and equipment from Discovery Bay Marine Laboratory, studied 57 sites along the North Coast of Jamaica during the month of August 2000. CMS personnel and UWI students were present on all teams. 371 coral reef transects were surveyed in respect of live coral cover and other parameters. Mean percent live coral cover at sites deeper than 5 m was 11.7% and 4.8% at shallower sites. Fish populations were also assessed and the results showed high proportions of small fish and low numbers of commercially important types such as snappers and groupers. These data confirm the poor and overfished state of Jamaica's coral reefs.

Coral reefs continue to be a focus for much of our work, as evidenced by our attendance at the 9<sup>th</sup> International Coral Reef Symposium in Bali in October. Three CMS staff, three PhD students and the former Director, Dr J.D. Woodley, attended the conference. One function of this Symposium was to integrate research and management of reef resources. A clear message of the Symposium was the rapidly degrading state of reefs all over the world. Coastal development, overfishing, global warming and coral diseases are believed to be important agents in coral reef degradation. Attention is being given to all these factors in the research being conducted by CMS. A memorandum of understanding between CMS and the Caribbean Planning for Adaptation to Global Climate Change project (CPACC) was signed in January. The agreement is to continue close collaboration especially in the area of their Component 5 (coral reef monitoring) involving continued CPACC financial support for Ms Marcia Creary, the Component 5 Coordinator, based in the CMS Caribbean Coastal Data Centre (CCDC).

Our interest in coastal management has increased over the year. Dr Warner has been involved in national planning leading to the development of the current Green Paper on integrated ocean and coastal management for Jamaica. Working closely with the GOJ/USAID Coastal Water Quality Improvement Program (CWIP), DBML has overseen the implementation of five environmental outreach projects in the Ocho Rios area. Two other grant-supported initiatives intended to improve coastal management, which have started during the year, include "Impact and amelioration of sediment and agro-chemical pollution on Caribbean coastal waters" and "ECOCOAST – US/Jamaica Educational Cooperation for Integrated Coastal Management" (see below).

Important staff changes during the year included the appointment of Dr Norman Quinn as Director of the Discovery Bay Marine Laboratory (DBML). Dr Michael Haley was awarded a UWI Research Fellowship to work on projects designed to investigate methods of coral reef restoration. Other staff changes included the appointment of Miss Tatum Fisher as Research Assistant in the CCDC, Ms Arlene Lawrence as Outreach Officer under our Coastal Water Quality Improvement Project (CWIP) grant at DBML and Mr Peter Edwards as Scientific Officer in the CMS Main Office.

## **RESEARCH IN PROGRESS**

- **Caribbean Coastal Productivity Programme (CARICOMP) Data Collection.** Mr P Gayle supervised the collection of data from coral reef, mangrove and seagrass sites in Discovery Bay for inclusion in this Caribbean wide research programme, which has been running since 1993 (Funding 1).
- **Caribbean Coastal Productivity Programme (CARICOMP) Data Management.** The core of the CCDC is the CARICOMP Data Management Centre. Mrs DM Linton, the Data Manager, and Miss Tatum Fisher have been active in maintaining and improving the database as well as coordinating the dissemination of data and analyzing components for publication. (Funding 1,2).
- **Caribbean Planning for Adaptation to Climate Change (CPACC).** Component 5 (coral reef monitoring) data is analyzed and archived by Ms Marcia Creary in the CCDC. (Funding 3).
- **Chemical Analytical Facility.** Under the supervision of Dr A Greenaway (Department of Chemistry), this laboratory at DBML has been actively engaged in sampling and analyzing the water quality of samples of coastal water from several sites including Negril and Ocho Rios. The results of this work show that there is cause for concern about near-shore water quality in some sites close to these important tourist areas. (Funding 4).
- **Coastal Water Quality Improvement Program (CWIP).** These management projects, coordinated by Dr G Warner are intended to improve coastal water quality, an essential aspect of coastal management to achieve healthy coral reefs. The projects involved Environmental Education, a Management Plan for the Ocho Rios Marine Park, Solid Waste Management and Community Animation Training. (Funding 5).

- **Fisheries Improvement Programme.** Ms Nadine Earle carried out studies on the role of the Discovery Bay Marine Protected Area in fisheries management in collaboration with personnel representing the International Center for Living Aquatic Resources Management (ICLARM). (Funding 6).
- **Studies on the Restoration of Coral Reefs.** Dr Michael Haley and his students have initiated work on the potential roles of artificial reefs and artificial corals in providing habitat for coral reef fishes, and studies on sea urchins as important grazers of algae on coral reefs. (Funding 7).
- **Impact and amelioration of sediment and agro-chemical pollution on Caribbean coastal waters.** A memorandum of understanding between CMS UWI Mona, The University of York UK and Marine Resources Assessment Group Ltd (MRAG) was signed in January to undertake this collaborative 2-year project coordinated by Dr Dale Webber (Life Sciences). In Jamaica, the project involves CMS, the Department of Chemistry, the Caribbean Agricultural Research and Development Institute (CARDI) and Caribbean Coastal Area Management (CCAM). The intention is to assess impacts of agrochemicals on the coastal zone by literature and agency research and a questionnaire to farmers. A parallel project is running in St Lucia. (Funding 8).
- **ECOCOAST – US/Jamaica Educational Cooperation for Integrated Coastal Management.** This is a collaborative 2-year project between CMS, the Center for the Study of Marine Policy at the University of Delaware, UNEP- Regional Seas Program, and NOAA International Program Office, USA. The project includes faculty and student exchanges between CMS and Delaware, the development of distance-education graduate level modules and the creation of an educational website concerning Integrated Coastal Management. (Funding 9).

## GRANTS AND DONATIONS

CMS gratefully acknowledges the following funds supporting our activities:

US\$10,000 from UNEP to support the expanded role of the CCDC and to aid with CARICOMP coral disease monitoring (18 mo. 2000-2001).

Core funding for the operation of the CARICOMP Data Management Centre, raised by the University of South Florida.

Continued funding from CPACC to support the new Data Analyst.

J\$4,077,000 from CWIP (GOJ/USAID) for the Ocho Rios water monitoring program (18 mo. 2000-2001)

J\$3,030,148 from CWIP (GOJ/USAID) to Strengthen community-based environmental initiatives (additional total of J\$9,025,000 to community groups for 4 projects managed through DBML) (18 mo. 2000-2001)

US\$11,000 from ICLARM to improve the management of artisanal fisheries (1 y. 2000-2001)

J\$125,000 from the JHTA to Dr Haley (1 y. 2000-2001)

£18,070 from DFID (2 y. 2001-2003)

US\$100,000 from the Association Liaison Office (ALO) for University Cooperation in Development, USAID. Funds administered by University of Delaware, CMS to receive approx 30% (2 y. 2001-2003)

## PAPERS PRESENTED

- **L Cho.** “*Diadema antillarum, a facilitator of recovery on the reefs of Discovery Bay Jamaica*”. 9<sup>th</sup> International Coral Reef Symposium, Bali, Indonesia, Oct 2000.
- **B L Kojis & N J Quinn.** “*Distribution and abundance of Panulirus argus (Palinuridae) peuruli at seven sites around St. Thomas, US Virgin Islands*”. 30th Scientific Meeting of the Association of Marine Laboratories of the Caribbean, Puerto Rico, June, 2001.
- **D M Linton.** “*The Caribbean Coastal Marine Productivity Program (CARICOMP) database*”. 9<sup>th</sup> International Coral Reef Symposium, Bali, Indonesia, Oct 2000.
- **J Mendes & J D Woodley.** “*Biological effects of the 1995-96 bleaching event on Montastraea annularis in Jamaica*”. 9<sup>th</sup> International Coral Reef Symposium, Bali, Indonesia, Oct 2000.
- **J Mendes & J D Woodley.** “*A growth depression model for coral density banding in Montastraea annularis*”. 9<sup>th</sup> International Coral Reef Symposium, Bali, Indonesia, Oct 2000.
- **R Murray.** “*Prolonged herbivore deficiencies suppress recovery of an algae-dominated ‘coral’ reef*”. 9<sup>th</sup> International Coral Reef Symposium, Bali, Indonesia, Oct 2000.

- **N J Quinn.** “*Reef Check - Papua New Guinea's participation in a global assessment of human effects on coral reefs*”. Annual Meeting of the Society for Integrative and Comparative Biology, Chicago, Jan 2001.
- **N J Quinn & B L Kojis.** “*Variation in sub surface seawater temperature in waters off St. Thomas, US Virgin Islands and Discovery Bay, Jamaica*”. 30th Scientific Meeting of the Association of Marine Laboratories of the Caribbean, Puerto Rico, June 2001.
- **G F Warner.** “*CARICOMP achievements and future directions*”. Association of Marine Laboratories of the Caribbean Meeting, Bahamas, Aug/Sept 2000.
- “*Status and temporal trends at CARICOMP coral reef site*”. 9<sup>th</sup> International Coral Reef Symposium, Bali, Indonesia, Oct 2000.
- **JD Woodley & P Gayle.** “*Lagoonal grassbed sea-urchin appears on weedy reefs*”. 9<sup>th</sup> International Coral Reef Symposium, Bali, Indonesia, Oct 2000.

## **PUBLIC SERVICE**

### **Dr G.F. Warner**

- Member, National Council on Ocean and Coastal Zone Management (Ministry of Foreign Affairs & Foreign Trade);
- Member, Ocho Rios Environmental Advisory Group;
- Member, Institute of Jamaica Natural History Division Advisory Board.

## **GRADUATE STUDENTS**

### **Higher Degrees Awarded**

MPhil **Marcia M. Creary.** *The abundance and distribution of epibenthic bryozoans on the roots of Rhizophora mangle in and around Kingston Harbour, Jamaica.* Supervisor: Dr JD Woodley

MPhil **Carlton Campbell.** *The phytoplankton community as an indicator of water quality in Discovery Bay, Jamaica.* Supervisor: Dr D Webber (Dept of Life Sciences)

### Higher Degree Students Registered in CMS

**Leandra Cho.** *Diadema grazing on reef algae.* (PhD) Supervisors: Dr GF Warner & Dr D Webber (Dept of Life Sciences)

**Peter Edwards.** *Mangrove, seagrass & coral reef interactions.* (MPhil) Supervisor: Dr D Webber (Dept of Life Sciences)

**Marlon Hibbert.** *Ecology of the Martha Brae River Estuary, Falmouth.* (MPhil) Supervisor: Dr D Webber (Dept of Life Sciences)

**Loy Malcolm.** *Tilapia mariculture in Discovery Bay.* (MPhil) Supervisor: Dr D Steele (Dept. of Life Sciences) & Dr M Haley

**Judith Mendes.** *Skeletal density banding in the stony coral Montastraea annularis: the role of reproduction and temperature.* (PhD) Supervisor: Dr JD Woodley/Dr GF Warner

**Stacy-Ann Moses.** *Are fish attracted to artificial coral patches?* (MPhil) Supervisor: Dr M P Haley.



**CMS Christmas Luncheon: L-R:** Marlon Hibbert (Graduate Student), Tatum Fisher (Data Analyst), Mrs. Sarah Jones, Marcia Creary (CPACC Component 5 Coordinator), Peter Edwards (Graduate Student) and Dr. Alrick Jones (Visiting CMS to work on new edition of his book "Marine Life of the Caribbean")



**Robert Murray.** *Grazing of fishes on coral reef substrata at Discovery Bay.* (PhD) Supervisors: Dr GF Warner, Dr E. Hyslop (Department of Life Sciences)

**\*Gale Persad:** *Plankton populations in Discovery Bay.* (PhD) Supervisor: Dr M Webber (Life Sciences).

**Robert Stephenson.** *The interaction between Diadema antillarum and Tripneustes ventricosus on macroalgal covered coral reefs.* (M Phil) Supervisor: Dr M P Haley.

**\*Sean Townsend.** *Oceanography & circulation in embayments.* (MPhil) Supervisor: Dr D Webber (Dept of Life Sciences)

**Wayne Whittaker.** *Coral reef distribution inside Discovery Bay.* (MPhil) Supervisors: Dr JD Woodley/Dr GF Warner

**Peter Wilson-Kelly.** *An assessment of the impact of fluvial inputs into the Kingston Harbour.* (M Phil) Supervisor: Dr. D Webber (Dept of Life Sciences)

**\*Postgraduate Scholarships**

#### **Higher Degree Students Using CMS facilities**

**Peter Gayle** (Dept of Life Sciences)

**Jahsen Levy** (Dept of Life Sciences)

**Ava Maxam** (Dept of Life Sciences)

**Debbie-Ann Ramsey** (Dept of Chemistry)

#### **Courses offered by DBML**

An Underwater Photography course was presented at DBML in May 2001, organized by Dr NJ Quinn, with assistance from professional underwater photographer Mr. Barry Lipman. Participants included undergraduate and postgraduate students, and employees of UWI and NRCA (now NEPA). The course was very successful and will be repeated in 2002.

#### **DISTINGUISHED VISITORS**

**Dr. Alrick R Jones**, University of Reading

**Prof. James Crabbe**, University of Reading

Mr. Yasunori Karo, University of Tokyo.

## THE EARTHQUAKE UNIT

Margaret D. Wiggins BSc UWI, MS Atl.U  
– Research Fellow in Seismology

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### WORK OF THE DEPARTMENT

#### Fieldwork

The five full-time staff and one part-time student (Lara Baugh), through commendable personal efforts and high levels of cooperation contributed to making this a very productive year. A tremendous amount of fieldwork was accomplished, including over 41 trips for maintenance and installation of field stations of the Jamaica Seismograph Network (JSN). In addition, some 400 hours or 10,000 kilometres were done in establishing and maintaining a portable network of 5 stations along fault systems of central Jamaica and one portable station in Greenhill, Portland (the epicentre of the Jamaica's last significant earthquake). Another six GPS monuments were emplaced across the island bringing the total to about twenty, and 16 site-occupations of 5 to 7 days each, were completed, this in collaboration with Professor Charles DeMets and Instrumentation Engineer Neal Lord of the University of Wisconsin at Madison. Thanks to all the authorities that allowed us to use their premises for the various installations.

#### Bulletins

A major effort went into completing 11 annual volumes of the Jamaica Seismograph Network Bulletin, covering the years 1990 to 1999. Each volume consists of four sections: A - a description of the JSN; B - a list of earthquakes and phase readings with relevant maps; C - details of felt earthquakes and intensity maps when appropriate; D - an illustrated summary of the year's seismicity. Colour copies of the bulletins are available at the small library at the EQU, and 30 copies for each year were distributed to parish libraries, Mona Campus libraries and libraries of various other national agencies, as well as to other regional networks. As usual, annual earthquake catalogues are available at the official website of

the JSN, <http://www.earthquake.uwimona.edu.jm:1104>. Two other bulletins are approximately 80% ready for distribution, the volumes for 2000 and 1986-89. All the data available for 1986 to 1989 from analogue records had to be manually entered into an electronic database and re-analysed to produce that bulletin. The bulletins were prepared entirely in-house and this was made possible with the procurement of an HP 4050N high capacity laser jet printer and a smaller colour printer.

### **Network improvements and expansion**

The radio links of the JSN underwent significant redesigning to improve signal reception and clarity based on computer prepared elevation profiles between the various stations. For the first time, all the stations were transmitted on JSN radio equipment. A new seismograph station was installed at Pike/Coleyville, Manchester. It is worthwhile to note that repairs and service to 90% of JSN electronic and telemetry equipment is done in-house.

The JPSCo provided expertise and equipment in removing a rotten wooden pole from our Munroe station in St. Elizabeth, re-drilling the hole and planting a new 60 foot one, and in the safe moving and reinstallation of all our equipment from the old to the new pole (at a fraction of the true cost). Thanks to Mr. Cooke, Mr. Smith and the 15 JPSCo workers for their kind and understanding display of good corporate citizenship.

An independent second seismic data acquisition system was set up at the Central Recording Station (CRS) as a back up to the main system. After seven years of continuous operation, the batteries of the Alternate Solar Power System that runs the CRS were replaced, bringing the system back to peak performance.

### **Implementation of Strong Ground Motion Network**

The EQU took delivery of 7 new Etna digital ground motion accelerographs and upgraded one K-2 instrument during the year. Three were installed at Stony Hill, Mona Campus, and at Old Harbour. Florin Ionica, Network Engineer, visited the offices of Kinometrics in California for training on the new instruments for 1 week in January. He also visited and had talks with two other manufacturers of seismic instrumentation – Reftek and Digital Technology Associates, both of Dallas, Texas. One digital Broadband station has been ordered from the latter.

### **Earthquakes Recorded**

Some 385 earthquakes were recorded by the JSN. Two hundred and nineteen (219) of these were local or near-Jamaica earthquakes. About 100 earthquakes were located using just JSN records but it is anticipated that more will be located and new events found once the data from the portable

instruments are processed. The local events had magnitudes (Mc) between 1.4 and 3.7, while the near ones were between Mc 2.6 and 4.5. The Blue Mountain Block had the highest levels of seismicity accounting for 21 earthquakes. Other areas displaying higher levels of activity included the northern Wagwater Trough, the Yallahs-Plantain Garden Fault Zone, the Rio Minho-Crawle River Fault Zone, and the Kingston area.

Eleven earthquakes were reported felt, all being minor events with intensities between 2 and 4 on the European Macroseismic Scale. Three of these were attributed to western Jamaica faults.

#### ***Other work***

A project for the JPSCo was completed in September 2000. The work involved monitoring for site response at the company's Old Harbour facility and performing a seismic hazard assessment. A report detailing work done and presenting the results was submitted to the Project coordinators, Smada (Engineering) Consultants.

In November, M. Grandison and F. Ionica visited Grand Cayman to discuss with the local authorities the status of station GCM, which was down for a number of years, and the re-establishment of seismic monitoring in the islands. A pre-proposal addressing their needs was prepared and presented to the Cayman Islands Government for funding.

In December, M. Grandison at the invitation of the Comprehensive (Nuclear) Test-Ban Treaty Organisation (CTBTO) and with the approval of the Ministry of Foreign Affairs and Foreign Trade represented the GOJ at a 4-day international regional workshop hosted by the Ministry of Foreign Affairs in Lima, Peru. At the meeting she presented a report of the status of seismic monitoring in Jamaica. Following the meeting she presented some recommendations to the Jamaican Ministry of Foreign Affairs. The cost of attending the workshop was borne by the CTBTO.

F. Ionica went on study leave in June/July 2001. Visits were made to various seismology organisations in Bucharest, Romania; Trieste and Genova, Italy and an electronics organisation, SELTA, also in Italy.

The work and research of the Unit was displayed at three exhibitions: UWI's Research Day 2000, ODPEM's Earthquake Awareness Day, and The Geological Society's Earth Day.

M. Grandison participated in three radio talk shows: My Place on KLAS FM89, Power 106 (Host Cliff Hughes) and Irie FM.

## **RESEARCH IN PROGRESS**

- F. Ionica continued monitoring seismic instruments and collecting earthquake data at the JPSCo Old Harbour site. M. Grandison analysed the data for site response characteristics and performed a site-specific seismic hazard assessment.
- Bladimir Moreno of the Cuban Seismic Network and M. Grandison collaborated to merge the databases of Jamaica and Cuba. A paper presenting relocated events in the Oriente Fracture Zone (that is the area of sea separating southern Cuba and northern Jamaica), a new crustal model for the area and seismotectonics of this imminent seismogenic feature and plate-boundary zone was researched, written and submitted for publication. This work was done at the EQU using two recently acquired SUN Ultra Sparc5 Unix workstations.
- M. Grandison began another project involving the inversion of arrival times of Jamaican earthquakes in order to arrive at an average optimal crustal model(s) for the island. The best-recorded local earthquakes were relocated and local travel time curves were constructed to obtain a priori information essential for constructing the model.
- F. Ionica continued his study of power line transmission of seismic data.

## **PAPERS PRESENTED**

- Margaret D. Wiggins-Grandison, “Preliminary Results from the New Jamaica Seismograph Network”, IAGA-IASPEI Joint Scientific Assembly, Hanoi, Vietnam, August 19 –31, 2001, (14 pp).

## **CATEGORIES OF STUDENTS**

Twelve students enrolled for the 4-credit course GL36A, Introduction to Applied Geophysics, taught by M. Grandison, out of the Geology Department. 83% passed (2 As, 6 Bs, 2 Cs, 2 failed). Once again the Computer Science Department assisted by providing Apple Computers and technical assistance for the students to do assignments on.

## DISTINGUISHED VISITORS

**Bladimir Moreno**, Centro Nacional Para Investigaciones de Sismologicas (CENAIIS), Cuba.

**Neal Lord**, University of Wisconsin at Madison, USA.

## ELECTRON MICROSCOPY UNIT

**Klaus W. Wolf, PhD – Head of Unit**

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### WORK OF THE UNIT

**D**uring the 2000/2001 academic year, the Electron Microscopy (EM) Unit of the University of the West Indies, Mona, continued its scientific services in various aspects of microscopy. Organizations involved in research, Postgraduate, Undergraduate, and High School-students all benefited from the EM Unit, either by obtaining results from light and electron microscopy or by being exposed and sensitized to diverse microscopic techniques. The EM Unit provided assistance in the fields of Light Microscopy (LM), Transmission Electron Microscopy (TEM) and Scanning Electron Microscopy (SEM) as listed (Tab. 1):

**Tab. 1: Services provided by the EM Unit in the academic year 2000/2001**

<b>Specimen</b>	<b>Technique</b>	<b>U.W.I Institution / External Partner</b>
Nematodes	LM	Dept. of Life Sciences, U.W.I. Mona
Fish eggs	LM	Dept. of Life Sciences, U.W.I. Mona
Colonies of fungi	LM	Dept. of Life Sciences, U.W.I. Mona
Herpes viruses	TEM	Dept. of Microbiology, U.H.W.I. Mona
Yeast cells	TEM	Dept. of Basic Med. Sciences, U.W.I. Mona
Yam starch	SEM	Dept. of Basic Med. Sciences, U.W.I. Mona
Spicules of Porifera	SEM	Dept. of Life Sciences, U.W.I. Mona
Echiurida	SEM	Dept. of Life Sciences, U.W.I. Mona
Radula of snails	SEM	Dept. of Life Sciences, U.W.I. Mona

Fossilized animals	SEM	Dept. of Geology and Geography, U.W.I. Mona
Thin films	SEM	Universidad Nacional Columbia
Alumina	SEM	Alumina Partners of Jamaica

Laboratory classes were conducted with postgraduate students in Chemistry as well as with undergraduate students in Virology and Developmental Biology. Tours were conducted with students from an introductory Microbiology course (BB10B) and a Youth Club. The EM Unit participated in the Research Day of the University, during which members of the public extensively toured the facility. During orientation week, a group of local students visited the EM Unit, and groups of visiting students from Columbia came on two occasions.

The research activity in the EM Unit concentrated on the surface morphology of insect eggs and four original papers have been published. Several collaborations were launched with researchers on-campus and abroad (Tab. 2):

**Tab. 2: Collaborations of staff members of the EM Unit in the academic year 2000/2001**

Subject	Collaborator
Morphology of moth eggs	Entomologists at U.W.I., Mona (Dept. of Life Sciences)
Morphology of bug eggs	Entomologist at the North Dakota State University (U.S.A.)
High resolution study of putative silk	Biologists at the Inst. of Mol. Biotechnol, Jena, (Germany)
Interpretation of optical phenomena in micrographs	Physiologist at the Inst. of Zoology, Univ. Mainz (Germany)

## RESEARCH IN PROGRESS

Gamete structure and development in insects using diverse microscopic techniques

## PAPERS PRESENTED

### Oral presentation

- **K. W. Wolf** and W. Reid, W. (2001) "Of eggs and legs: Fine structural studies in local stink and assassin bugs". Fifth Conference of the Faculty of Pure and Applied Sciences. U.W.I., Mona, Jan. 8 to 11, 2001, Kingston (Jamaica). Abstract is published in the Proceedings of

the Fifth Conference. Faculty of Pure and Applied Sciences. U.W.I., Mona. Eds. R. Robinson and D. Coore, Abstract Volume p. 41.

#### **Poster presentation**

- **C. Murphy**, W. Reid, E. Garraway and K.W. Wolf (2001) Scanning- and Transmission-electron microscopy of the eggshell in *Utetheisa ornatrix* (Lepidoptera: Arctiidae). Fifth Conference of Faculty of Pure and Applied Sciences. U.W.I., Mona, Jan. 8 to 11, 2001, Kingston (Jamaica). Abstract is published in the Proceedings of the Fifth Conference. Faculty of Pure and Applied Sciences. U.W.I., Mona. Eds. R. Robinson and D. Coore, Abstract Volume p. 113.
- **K. W. Wolf** and W. Reid, W. (2001) Scanning electron microscopy of eggs in the assassin bug *Sinea diadema* (Hemiptera: Reduviidae). Annual Meeting of the German Zoological Society, June 4 to 8, 2001, Osnabrück (Germany). Abstract is published in a Supplement (Abstract Volume) of Zoology 104 (2001) p. 14.

#### **PUBLICATIONS**

##### **Refereed**

##### **K.W. Wolf, C. Murphy, W. Reid and E. Garraway.**

- \* “Fine structure of the eggshell in *Utetheisa ornatrix* (Lepidoptera: Arctiidae)”. *Invertebrate Reproduction and Development* 30 (2000) 85-94

##### **K.W. Wolf and W. Reid.**

- \* “The architecture of an anterior appendage in the eggs of the assassin bug, *Zelus longipes* (Hemiptera: Reduviidae)”. *Arthropod Structure and Development* 29 (2000) 333-341
- \* “Egg morphology and hatching in *Mormidea pictiventris* (Hemiptera: Pentatomidae)”. *Canadian Journal of Zoology* 79 (2001) 726-736
- \* “Surface morphology of legs in the assassin bug *Zelus longipes* L. (Hemiptera: Reduviidae): A scanning electron microscopy study with an emphasis on the hairs and pores” *Annals of the Entomological Society of America* 94 (2001) 457-461



## **Non-Refereed**

### **K.W. Wolf**

- \* “Cytoskelett” *Grundstudium Biologie. Biochemie, Zellbiologie, Ökologie, Evolution*. Ed. by K. Munk, Heidelberg, Berlin: Spektrum Akademischer Verlag, 2000, 11 - 1 to 11 - 26 (in German)
- \* “Zellteilung”. *Grundstudium Biologie. Biochemie, Zellbiologie, Ökologie, Evolution*. Ed. by K. Munk, Heidelberg, Berlin: Spektrum Akademischer Verlag, 2000, 13 - 1 to 13 - 20 (in German)
- \* a micrograph of a meiotic chromosome (9.15, p. 170) was contributed to the chapter “Chromosomes, the Cell Cycle and Cell Division” in the General Biology textbook entitled *Life* by E.K. Purves et al., Sunderland, MS: Sinauer Associates, 2001

## **PUBLIC SERVICE**

### **Dr. K.W. Wolf**

- acted as an ad hoc referee for “Arthropod Structure and Development”, a scientific journal published by Elsevier (Amsterdam, The Netherlands)

## **DISTINGUISHED VISITORS**

**Prof. Peter Calow**, University of Sheffield, U.K.

**Prof. A.C. Karim**, University of Manitoba, Canada

**Prof. Charles McDavid**, U.W.I., St. Augustine

**Dr. Valery Forbes**, Roskilde University, Denmark

**Dr. Martin Petric**, Hospital for Sick Children, Toronto, Canada

**Mr. Mike Robinson**, Hofstra University Marine Lab, St. Ann’s Bay, Jamaica

# INSTITUTE OF CARIBBEAN STUDIES

**Joseph Pereira, BA, DipEd *UWI*, MA *Qu* – Director**

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## CULTURAL STUDIES

**P**erhaps the most significant work of the Institute in the 00/01 period was the continued development of teaching in Cultural Studies. A second intake of graduate students into the MPhil/PhD programme saw five students staying the course in **AR600 – Colloquium in Cultural Studies**, and six students from the preceding year progressing with their research projects. In addition, summer courses were put on for the BA in 2 new courses. **AR25A – Introduction to Caribbean Cultural Studies**, and **AR25F – Caribbean Films and their Fictions**. Approval was also given

for two further newly-designed courses. **AR25R – The Culture of Rastafari**; and **AR25X – African Religious Retentions in the Caribbean**. All of this is being handled by part-time arrangements, and it is clear that a full-time appointment is now needed to develop beyond this stage so that we can offer a Major and Minor in the discipline.

## **RESEARCH PROPOSALS AND ACTIVITIES**

A comprehensive cross-campus Cultural Studies Project Document was produced by Dr. Hazel Simmons-McDonald of Cave Hill out of lengthy cross-campus discussions and input. These Project Proposals are being put forward to various agencies for funding consideration, and it is anticipated that some success will result in implementation of specific Projects.

Through the Vice-Chancellor's initiative, funds were secured from the Ford Foundation for the Cultural Studies Initiative region-wide, and the ICS will receive assistance from this for activities including

- Postgraduate Student Bursaries (one awarded to Mona to Claudette Anderson, entering the Cultural Studies programme).
- The Second Conference on Caribbean Culture, being organized for January 2002 and honouring **Kamau Brathwaite**.
- Short-term visits from Writers and Artistes.
- Distinguished Lecture series.
- Equipment and material acquisition.

Additionally proposals were developed in another effort by the Vice-Chancellor for Rockefeller support for longer-stay Writers/Artistes in residence.

The Coordinator of the Reggae Studies Unit (RSU), Dr. Carolyn Cooper, was awarded a Research Fellowship under which "Ibo" Cooper was appointed in May, 2001 to carry out this Fellowship researching the development of Reggae with emphasis on its musical evolution.

Mortimo Planno, noted Rastafari elder, was appointed Honorary Research Fellow in the Institute for the year, and assisted graduate and undergraduate students in their research on Rastafari. The ICS collaborated in a project to edit some of Bro. Planno's papers.

## **PUBLIC LECTURES AND INTELLECTUAL ACTIVITY**

### **Reggae Studies Lecture 2000 Series**

- Dr. Cooper arranged a successful and well-attended series of presentations by a range of practitioners and scholars of the music, including Mutabaruka, David Katz and Derrick Harriott.

#### **Bob Marley Lecture**

- The Fourth Annual Bob Marley Lecture sponsored by the RSU, was delivered in February 2001 by Dr. Carolyn Cooper on “More Fire: Chanting Down Babylon from Bob Marley to Capleton”.

#### **Walter Rodney Lecture**

- The Second Annual Walter Rodney Lecture sponsored off-campus by the ICS was delivered by Ms. Antoinette Haughton-Cardenas, and entitled “We Learn but we do not Change”.
- Colin Channer, outstanding Jamaican novelist, gave readings from his works and conducted a Writing Workshop under ICS sponsorship in November, 2000.
- Also in that month, Prof. Francisco Scarano gave a lecture on Puerto Rico entitled “Margins of Empire”.
- Lez Henry, doctoral candidate from Goldsmith’s College conducted a seminar on “Black British Reggae”.
- Mr. Jerry Small gave a lecture on “The Dancehall of Politics” in May 2001.

### **PUBLICATIONS**

- \* The RSU published the Third Bob Marley Lecture: “**Reggae and our National Identity: The Forgotten Contribution of Peter Tosh**”, given by Dr. Omar Davies in 2000.
- \* The ICS published the inaugural Walter Rodney Lecture “**None but Ourselves...**”, delivered by Richard Small in 1999.
- \* A Project to create a series of “Testimonies” is underway, using the ICS **Being West Indian** lecture series as the first, with possible further titles being “**Rural Voices**” by Erna Brodber, and “**The Bob Marley I an’ I Know**” by Mortimo Planno.

## **LOOKING AHEAD**

It is clear that the Institute will need both full-time staffing and a dedicated budget if it is to go beyond the many activities it has been able to achieve on voluntarism so far. Teaching, research, publishing and outreach have all been developed under the ICS and RSU umbrellas over more than a decade. The Cultural Studies Initiative is likely to lead to even more activities, and it will require a consolidation and funding of a new phase of development for these entities which have the potential to be flagship areas of intellectual activity that distinguish UWI.

# **INTERNATIONAL CENTRE FOR ENVIRONMENTAL AND NUCLEAR SCIENCES (ICENS)**

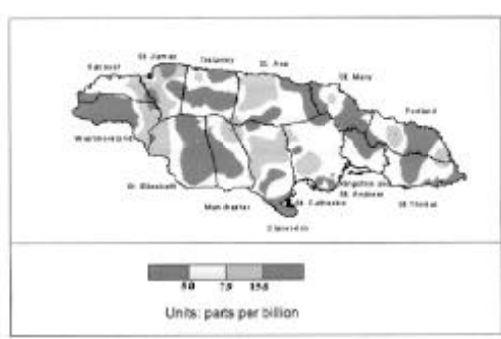
**Professor the Hon. Gerald C. Lalor, OJ, CD, MSc *Lond-UCWI*,  
PhD *Lond.* – Director General**

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## WORK OF THE CENTRE

**T**HE main research programmes during the period under review have been:

- Amelioration of lead mine-waste pollution in Kintyre.



- The detailed soil geochemistry of the parishes of St. Elizabeth and Manchester.
- Mineral contents of foods grown in central Jamaica.

The Centre continued its assistance to undergraduate and graduate programmes in the departments of Chemistry, History, Geography & Geology and Life Sciences. Neutron Activation Analysis with the SLOWPOKE-2 Reactor and X-ray Fluorescence have been the main items of interest for these departments.

Local collaborations are expanding: there is a Memorandum of Understanding with the Ministry of Agriculture and staff of their Rural Physical Planning Division (RRPD) and the Rural Development and Planning Agency (RADA), has been working with ICENS in field work, sample preparation and analysis. A ground water vulnerability project in collaboration with the Water Resources Authority (WRA) and supported through a Mona Research Fellowship, has provided useful information.

A number of international collaborations are being negotiated. Those with Colombia and Mexico have been accepted in principle and seem particularly promising.

The Centre provided a number of specialised services and assistance to government ministries, the Scientific Research Council, and a number of other private sector organisations. The personnel dosimetry service, in particular, continued to grow and enough data have been gathered to allow a small research project to begin.

## **RESEARCH IN PROGRESS**

The distribution and consequences of the high levels of some heavy metals, arsenic, cadmium, gold, mercury, and lead, which exist in certain Jamaican soils, have been the main focus of the centre. Because of the economic importance to Jamaica of agriculture, extensive examination of the mineral contents of certain foods grown in Jamaica has been undertaken to ensure that exports meet the increasingly stringent international regulations and to better understand the pathways of heavy metals to humans, and potential effects on health.

### **Hazardous elements in the Jamaican Environment**

Extensive analyses for essential and hazardous elements, including cadmium in foods and the soils in which these foods are grown, were carried out in major food growing areas of Jamaica. These are important data that will support exports, assist in the development of food standards; and better informed land use for agricultural production. Following a visit by distinguished Japanese researchers, support from the Japanese International Cooperation Agency is anticipated. Other funding prospects are being pursued.

### **Phosphorus in Jamaican Soils**

Jamaican soils are generally low in the amounts of the essential element phosphorous that are available and, therefore, require considerable quantities of phosphate fertilisers, but very little baseline data exist. In collaboration with the Rural Planning Division of the Ministry of Agriculture, an island-wide mapping of total and available phosphorous was undertaken to obtain baseline data necessary to better assess the situation.

### **Improvement of Community Health in the Hope River Valley Through Lead Abatement**

Community health, especially amongst children, for the residents of the Hope River Valley is being improved by dramatic reductions in exposure to lead, and by community education. The present research is defining the size and properties of hazardous mine waste contamination and measuring blood lead levels for action as necessary. Socio-economic surveys were carried out and, soil, air, water, sediments, dust, and food crops have been evaluated as sources of lead exposure. Mine waste is by far the greatest and

this is being isolated using largely local labour in this very poor community. The results have been most satisfactory and the work is well supported.

### **Gold in Jamaican soils**

Because of the limestone base, there are large areas in Jamaica without streams and therefore the usual exploration for gold using stream sediments is not universally applicable. The SLOWPOKE reactor can detect gold in soils in minute concentrations and these data as the map shows now allow a new look at the island's potential for gold.

Gold in small quantities is widespread in Jamaican soils and there are several areas where the soil concentrations exceed say 10 parts per billion. A striking feature is the band in the west. The possibility of using soils data for potential gold finds is promising.

### **Other Projects**

Other ongoing projects included :

- biomonitors as indicators of pollution;
- mercury and selenium concentrations in central Jamaica; and
- radioactivity in western Jamaica

### **Database Website Development**

Database development continues. The structure and access methods have been improved, better verification procedures have been put in place, and large amounts of new data are being added mainly from an OAS project that is producing many thousands of data points. Upon completion of the project, a web based public access link will be implemented for qualified users. An improved interface has been introduced to take advantage of the complex data manipulation capabilities of the database.

The ICENS web site was revamped to provide a better browsing environment and access to ICENS publication abstracts, published data and selected maps.

## **PAPERS PRESENTED**

- **Lalor, G.C., Vutchkov, M. and Davies, B.** "Cadmium in Jamaican Soils." SCOPE Workshop, *Environmental Cadmium in the Food Chain: Sources, Pathways, and Risks*, Brussels, September 2000



## PUBLICATIONS

- \* **Lalor, G.C.**, “Science in Development: The Approach Of A Small Island State In Science For The Twentyfirst Century” (A.M.Cetto, Ed.) UNESCO, Paris, 2000.
- \* **Lalor, G.C., Vutchkov, M.K., Grant, C., Preston, J., Figueiredo, A.M.G., and Favaro, D.I.T.** “INAA of Trace Elements In Biological Materials using the Slowpoke-2 Reactor in Jamaica”, *Journal of Radioanalytical and Nuclear Chemistry* (2000), 244 (2), 263-266.
- \* **Vutchkov, M., Grant, C., Lalor, C., and Preston, J.** “Standardization of the Slowpoke-2 Reactor in Jamaica for Routine NAA”. *Journal of Radioanalytical and Nuclear Chemistry* (2000), 244 (2), 355-359.
- \* **Lalor, G.C., Vutchkov, R. Rattray, K. Lewis Bell and B. Campbell**, “Blood Levels Jamaican Schoolchildren”, *Science of the Total Environment* (2001), 269-171 - 181.
- \* **Lalor, G.C., and Zhang, C.**, “Multivariate Outlier Detection and Remediation in Geochemical Databases”. *The Science of the Total Environment* (2000), 281, 99-109.

## PUBLIC SERVICE

### **Prof. G. Lalor**

- Director of Gleaner Company; Insurance Company of the West Indies Group
- Member of the Board of Governors of the ICWI Group Foundation
- Member: Council of the Third World Academy of Sciences; National Commission for Science and Technology; Jamaica Society of Scientists and Technologists; Technical Committee of the Scientific Research Council;

### **Dr. Robin Rattray**

- Secretary, Council of the Jamaican Society of Scientists and Technologists
- Member, Air and Water Quality Subcommittee, NRCA
- Director, Lions Club of Mona

**Mr. John Preston**

- Member, Land Information Council of Jamaica.

**Mrs. Joan Thomas**

- Member, Radiation Protection Advisory Committee of Jamaica.

**Students and Training**

The Centre continued to provide training opportunities and experience to exceptional undergraduates. During the last year ten undergraduate students in science, medicine and related areas participated in the programme. Two students from Cave Hill and St Augustine campuses, who were beneficiaries under the programme the previous year, returned for another summer period. There were also new entrants from all the campuses and from UTECH. A Clemson University postgraduate student, involved in a joint programme worked on his research programme under the Centre's direction during the summer.

During the period under review, the Centre offered one internship to Mr. Noel McKenzie, an MSc student in Exploration Geology for work on gold exploration.

**DISTINGUISHED VISITORS**

**The Rt. Hon. Percival J. Patterson**, Prime Minister of Jamaica and Chairman of the Board of Governors of ICENS

**Dr. M. S. Nugbane**, Minister of Arts Culture, Science & Technology, South Africa

**Hon. Paul Robertson**, Minister of Foreign Affairs, Jamaica

**H.E. Takashi Matsumoto**, Ambassador of Japan

**H.E. T. H. Chiliza**, High Commissioner of South Africa

**H.E. Humdi Saleh**, Ambassador, Arab Republic of Egypt

**H.E. Pierre A. Berniard**, Ambassador of France

**Mr Arsenio Jiminex Polanco**, Charge d' Affairs, Dominican Republic

**Mr Gerd Jarchow**, Head of Delegation, European Commission

**Mr Jerome Dubois-Mercent**, Cultural Counsellor, Embassy of France

**Professor Jean Crusol**, Universite' Antille-Guyane

**Dr. A. Pokrovsky**, UNESCO, Paris

**R. Ruland**, Canadian High Commission

**Professor Hiroshi Saito**, Nagasaki University, Japan

**Professor Mitsuo Chino**, Akita University, Japan

**Dr. Glen Goddard**, Dean, South African Arts, Culture, Science & Technology

**Dr. Nthoana Tau-Mzamane**, Deputy Director General, Dept. of Arts, Culture, Science & Technology, South Africa

**Mrs. Joan Neil**, Director, Organization of American States

**Dr. Rufus Chaney**, United States Department of Agriculture

**Dr. V. Iyengar**, IAEA, Vienna

**Mr. Paul McGinnis**, Director Caribbean Programmes, CIDA

# **SIR ARTHUR LEWIS INSTITUTE OF SOCIAL AND ECONOMIC STUDIES (SALISES)**

**Professor Neville Duncan, BSc, MSc *UWI*, PhD *Manc***  
– Campus Director

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## **THE INSTITUTE**

**T**he task of preparing ISES to deliver MSc and MPhil/PhD programmes under a newly designed and approved content and format was successfully completed. No new student was admitted during this period but six students were still on the books pursuing MPhil/PhD degrees in Development studies. Four persons are actively pursuing this programme and three of them are expected to submit before the end of the calendar year (2001). Of the two remaining, one has applied for leave and the other is asking for an extension of time to complete.

The final seminar to complete the restructuring of the new degree programmes was held in September 2000, followed by submission through the various formal approval stages in the University, and then advertised in January 2001. The net result was an application list of some names from which places were offered to students – for the MSc and for the MPhil/PhD. This was deemed a most encouraging start.

The Derek Gordon Data Bank (DGDB) was physically re-located to the block housing the Documentation Centre and Data Bank (DDB), upstairs. Staff offices affected by this move were re-located. The physical alteration of the space was undertaken in the affected locations. Some adjustments were made to the main office to provide a better service for the new student intake.

Other student friendly activity was undertaken in July 2001 to engage with prospective students so that they could meet with the academic and non-academic staff members and have our programmes explained. At the refreshment break students had the further opportunity to meet several persons on a one-to-one basis, and were taken on a tour of the facilities.

Consultations were held with the Andrew Young School of Public Policy of the University of South Georgia, under the auspices of Pro Vice Chancellor, Professor Errol Morrison, and a set of collaborative agreements was signed.

Miss Annie Paul, Publications Officer, was on Sabbatical and Ms. Kimberley-Ann Robinson-Walcott acted as Publications Officer.

The Institute, with the agreement of the Government of Jamaica, became the repository for WTO documents and publications. There is differential access to the information.

The Mona ISES was represented at the Global Development Network's Knowledge Fair, which formed part of the activities of the World Bank sponsored annual conference held in Tokyo in December 2000. The Institute's existing and forthcoming publications were placed on display and for sale.

## **THE SECTIONS/UNITS**

### **PUBLICATIONS Department**

A proposal was prepared for an expansion of the SALISES Publications Division. A new thrust was proposed in the following areas: coordinated inter-campus publishing and marketing, and a return to Mona-based book publishing, with an aggressive exploration of e-publishing in recognition of this dynamic emerging area as being the way of the future, especially for monograph and journal publishing and publication marketing.

The Institute was also represented at the annual CSA conference held in St Maarten in late May 2001 and the conference, Rethinking Caribbean Culture, held in Barbados in early June 2001. At this conference recent issues of SES were sold and forthcoming issues, in particular forthcoming special issues, advertised. Additionally new articles were solicited. Meanwhile the Institute continued in its efforts to get rid of old stock by holding regular book and journal sales at SALISES, Mona. These were very successful, with satisfactory sales returns.

The output for the journal, *Social and Economic Studies (SES)* for the year revealed the following:

*Vol 48/4, December 1999 Vol 49/1, March 2000*

*Vol 49/4, December 2000*

*Vol 50/1, March 2001: (special issue on Economic Reforms and Poverty in Jamaica)*

*Vol 50/2, June 2001: (in production, with most articles having been edited and delivered to the formatter at the end of the period under review).*

*Vol 49/2-3*, June-September 2000: (a double issue) was produced by the Centre for Monetary Studies, St Augustine, Trinidad and Tobago.

In addition, proposals for the following special issues were received and conditionally accepted, subject to satisfactory quality and punctual delivery of final material:

*Vol 51/1, March 2002*: Special issue on Tourism

*Vol 51 (issue number to be assigned)*: Special issue on Vulnerability/Coping Strategies

*Vol 51 (issue number to be assigned)*: Special issue on Management of the Health Sector

Additionally, the following book proposals were conditionally accepted:

*Biography of Eric Williams* by Pat Mohammed – acceptance subject to submission of satisfactory final manuscript

*Evaluation of Local Government Reforms in Jamaica* by Jimmy Tindigarukayo – acceptance subject to peer reviewers' comments (being awaited at the end of the period under review).

### ***The Derek Gordon Data Bank***

The following data sets were acquired during the period

- i. External trade data for Jamaica and Trinidad
- ii. SLC for 1999
- iii. Jamaica literacy survey, 1999 (but we are not able to use it yet because the report has not been published)
- iv. St. Kitts country poverty assessment study, 2000
- v. Trinidad and Tobago Poll, 2000

A *web page* was designed and mounted on our local server. Until recently, access to the site was only available during the 40 hour work week. To date, basic information has been mounted relating to all the data sets and have begun providing basic statistics (frequencies and descriptives) for selected data sets. Information regarding the other sections of SALISES has been slow in coming and was infrequently updated during the year.

*Technical assistance and training* were provided on an *ad hoc* one-to-one training in SPSS and the section provided continuous support to post-graduate students utilizing datasets. A course in the use of SPSS was presented for one week during July 2001 at a fee of \$6000 per person.

Staff of the Databank provided data management support (ranging from data entry to analysis) for studies undertaken by the Institute and other Departments of the University.

### **Administration**

A considerable amount of physical adjustment and upgrade of the Institute was undertaken under the supervision of the Secretariat to ensure a satisfactory teaching and research environment as well as a pleasant ambiance. This was substantially in progress under the period of review. New and embellished allocation of duties and responsibilities were undertaken to ensure a smooth inauguration of the graduate teaching programme.

### **RESEARCH IN PROGRESS**

#### **Dr. Aldrie Henry-Lee**

- “Conflict Management, Gender and reproductive Health in Two Inner City Communities in Jamaica” (Ford Foundation Funding).
- “Gender, Equity and Health” (PAHO Funding)
- “Social Assessment in Belize” (DFID Funding)
- “Poverty in the Caribbean” (CDB Funding)
- “Assessing Health Seeking Behaviour among UWI Staff at the Mona Campus”

#### **Dr. Nikolaos Karagiannis**

- Book project with Dr. Michael Witter on “The Caribbean, the FTAA and the Reality”.

#### **Dr. Patricia Northover**

- Sugar and Change: Institutional Governance and Competitive Performance in the Jamaica Sugar Industry.

#### **Dr. Philip D. Osei**

- “Modernizing Local Government in Jamaica: Strategies, Policy Choice and Outcomes”
- “The Effectiveness of Anti-Corruption Measures in Four African and Caribbean Countries”.

## **PAPERS PRESENTED**

### **Professor Neville C. Duncan**

- “Social and Political Problems of the Anglophone Caribbean” and “Governance, Democracy and Civil Society in the Anglophone Caribbean”, Social Policy and Management Formation Course, IDB, August 14 & 15, 2000, Washington, D.C.
- “Setting the Socio-Economic Context”, Symposium on the Work of Peggy Antrobus, Grand Barbados, November 9-10, 2000
- “British Virgin Islands: Evolution of Colonial Government Legislature”, 50<sup>th</sup> Anniversary of the Restoration of the Sitting of the Legislative Council in the Virgin Islands, 1950-2000, November 20-21, 2000, BVI, 2000
- “The Future of Capitalism and Socialism”, Annual Maurice Bishop Memorial Lecture, in St. Georges and then Grenville, March 13-14, 2001, Grenada.
- Respondent to paper presented by Leon Charles, “Processes of Engaging in Policy Development the Jamaican Reality”, Child Development Centre Conference, May 2-3, 2001.
- “Paying More Focussed Attention to Children in Public Policy”, Official Opening of the Dudley Grant Early Childhood Resource Centre, the UWI, Mona Campus, Jamaica., May 16, 2001.
- “Citizen Participation, Local Governance and Appropriate Policy Framework: A Contemporary and Futuristic View”, Constructing Democracy from the Base, UPD and IAF, July 16-17, 2001.

### **Dr. Aldrie Henry-Lee**

- “The Policy Implications of defining the Poor in Jamaica”, Caribbean Studies Association, St. Maarten, May-June, 2001
- “Integrating Research and Policy”: the researcher’s Point of View”, PAHO Seminar on Health Research and Policy, March 2001, Barbados.

### **Dr. Niklaos Karagiannis**

- “Alternative development policy for the Caribbean: The challenge of the Developmental State approach”, 28 Sept. 2000, Department. of Economics (SR4)



- “Alternative development policy for the Caribbean: The challenge of the Developmental State approach”, Workshop organised by the Post-Keynesian Economics Study Group, 18 May 2001, Leeds.
- “Key economic and politico-institutional elements of modern interventionism”, XXXII Annual Monetary Studies Conference, 30 Oct.-02 Nov. 2000, Kingston.
- “Key economic and politico-institutional elements of modern interventionism: A synopsis”, Conference on “Governance in the Contemporary Caribbean”, SALISES-UWI, St. Augustine, 14-16 March 2001.
- “Key economic and politico-institutional elements of modern interventionism”, 2001 Public Administration theory Network Conference, Leiden, The Netherlands, 21-23 June 2001
- “Key economic and politico-institutional elements of modern interventionism: A post-Keynesian synopsis”, 3<sup>rd</sup> annual Conference of the Association for Heterodox Economics, 7-8 July 2001, Open University Conference Centre, London.
- “Tobin tax: Its potential and feasibility for the Caribbean” Caribbean Studies Association Conference, 27 May–02 June 2001, St. Martin.

**Dr. Patricia Northover**

- “Institutional Governance and Economic Performance: Exploring the Links in the Jamaican Sugar Industry with Special Reference to Workplace Governance”, The UWI/Mona Conference on Human Resource Development for Competitive Advantage, September 2000.
- “Strategy and Scope: What Remains of the Role of the State in Caribbean Agriculture in the Context of the New Liberal Order”, ISES, St. Augustine, UWI Conference on Governance in the Contemporary Caribbean: The Way Forward, Trinidad, March 2001.
- “Sugar and Change: Retrospect, Prospect and possibility in Addressing Rural Poverty Alleviation and Sustainable Development”, Caribbean Studies Association Conference, on The Caribbean in Transition: Direction and Purpose for the 21st Century, St. Martin, May-June 2001

**Dr. Philip D. Osei**

- “A Critical Overview of Jamaica’s National Poverty Eradication Policy and Programme”. Development Studies Association UK, 10-12 September 2001. University of Manchester, England.
- “Executive Agencies: Intellectual background to the search for appropriate institutional forms”. Conference on ‘Executive agencies in action: A new form of governance’. UWI, Mona Campus. 19 May 2001.
- “Has poor relief declined in Jamaica? A preliminary investigation”. Caribbean Studies Association. University of St Maarten, St Maarten. 28 May-2 June 2001.
- “Modernising Local Government in Ghana and Jamaica: Perspectives on Policy Choice, Leadership, Management Styles and Outcomes”. Fifth International Research Symposium on Public Management. Barcelona, Spain. 9-11 April 2001.
- “Executive Agencies and Changing Notions of Public Accountability: The Jamaican experience”. Conference on ‘Governance in the Contemporary Caribbean: The Way Forward’. Sir Arthur Lewis Institute of Social and Economic Studies, University of the West Indies, Trinidad and Tobago. 14-16 March 2001.

**Dr. Jimmy Tindigarukayo**

“Public Participation in Local Government in Jamaica”, Conference on Governance in the Contemporary Caribbean: The Way Forward, organized by SALISES, St. Augustine, UWI, March 14-16, 2001.

- “The Squatter Problem in Jamaica”, 26<sup>th</sup> Annual Conference of the Caribbean Studies Association, Maho Bay Hotel, St. Martin, May 27-June 2, 2001.
- “Alternative Models for Evaluating the Impact of Social Interventions”, A Workshop on Domestic Violence in Jamaica, organized by the Social Welfare Training Centre and Woman Inc., June 19, 2001.

**PUBLICATIONS**

**Refereed**

**Professor Neville C. Duncan**

- \* “Caribbean Universities: Respond Positively or Concede”, in *Caribbean Perspectives*, January 2001, pp. 10-15

**Dr. Aldrie Henry-Lee**

- \* “Women’s reasons for Discontinuing Contraceptive Use within 12 Months”, *Reproductive Health Matters*, Vol. 9, No. 11, May 2001
- \* Henry-Lee, Aldrie; Chevnes, Barry; Clarke, Mary; and Rickettes, Sybil. November 2000. “An Assessment of the standard of Living and Coping Strategies of Workers in Selected Occupations who Earn Minimum Wage”. Planning Institute of Jamaica: Kingston.
- \* “The Dynamics of Poverty in Jamaica, 1989-1999”, *Social and Economic Studies*, Vol. 50, No. 1, March 2001.

**Dr. Nikolaos Karagiannis**

- \* “The Development of the Bahamian Economy at the Crossroads”, *Social and Economic Studies*, vol.9:4, 2001
- \* “Creating Industrial Production in the Bahamas: The Challenge of the Developmental State Approach”, *Regional Development Studies*, Vol.7, United Nations-Centre for Regional Development, June 2001.

**Dr. Philip D. Osei**

- \* “Has Poor Relief Declined in Jamaica? A Preliminary Investigation”. *Social and Economic Studies*, Vol.50, No.1, March 2001, pp.

**Other Publications**

**Dr. Neville C. Duncan**

- \* “Evolution of Legislative Systems and Alternative Models for the Millennium”, in *Empowerment Through Representation*, published on the occasion of the 50<sup>th</sup> Anniversary of the Restoration of the Sitting of the Legislative Council in the Virgin Islands (1950-2000). 1st printing, 20<sup>th</sup> November, 2000, Legislative Commemorative Committee, Virgin Islands, 2000, pp.401-413.
- \* “*El Caribe, entre la ciudad-global y la provincia-global*”, entrevista con Neville Duncan, por Jaime Bonilla Godoy, in *Agaita, Revista*

*del Observatorio del caribe Colombiano, Aguaita cuatro, Diciembre 2000, pp. 16-27.*

- \* “Governance and Caribbean Elections” in *Caricom PERSPECTIVE*, Issue no. 70, June 2001, pp. 72-74.

**Dr. Nikolaos Karagiannis**

- \* “The Potential for Industrial Development in the Bahamas: The Challenge of the Developmental State Approach”, *Caribbean Dialogue*, Vol.5:4, Fall 2000.
- \* “The Bahamian Budget and Budget Communication 2000-2001: Some Comments”, *Financial Digest*, Summer 2000.
- \* “The Blacklisting of the Bahamas: A Brief Commentary”, *Financial Digest*, Fall 2000.
- \* “Budget and Budget Communication 2000-2001 of the Commonwealth of Bahamas: A Brief Commentary”, *Bahama Journal*, Summer 2000
- \* “The Bahamian Budget and Budget Communication 2000-2001: A commentary”, *Financial Digest*, Summer 2001.

**Dr. Philip D. Osei**

- \* Book Review: Growth in Ghana: a Macroeconometric model Integrating Agriculture, by Daniel Bruce Sarpong, Aldershot: Ashgate, 1997, in *Journal of Modern African Studies*, Vol.39:1, p.183.

Book Review: Ghana: the Background, the Issues and the People, Rachel Naylor, Oxford, in *the Journal of Modern African Studies*, Vol.39:1, p.183.

**PUBLIC SERVICE**

**Professor Neville C. Duncan**

- Editorial Board, *Pensamiento Proprio*
- Board Member, Junta Directivo, CRIES

**Dr. Patricia Northover**

- Board member, *National Biosafety Committee*

- Board member, *Jamaica Deposit Insurance Corporation*
- Board Member, *United Way*

**Dr. Jimmy Tindigarukayo**

- Member Executive Committee, *Senior Common Room, UWI*
- Board Member, *The Association for Settlement and Commercial Enterprise for National Development*

## **THE BIOTECHNOLOGY CENTRE**

**Professor M. Ahmad, BSc Bhagal, MSc, PhD IARI – Director**

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### **WORK OF THE CENTRE**

**D**r. Wayne McLaughlin, Head of the Biochemistry Section, Department of Basic Medical Sciences acted as Director of the Biotechnology Centre in the absence of Professor Mohammed Ahmad who was on sabbatical leave for the academic year.

The Biotechnology Centre, with the cooperation and dedication of its staff, advanced the work of the Centre through education, supervision and training of postgraduate and undergraduate students. Throughout the year members of staff participated in a number of workshops, seminars and media presentations on current issues in Biotechnology. This is an ongoing effort by the Biotechnology Centre to disseminate information on Biotechnology and increase national awareness of this area of research.

Over fifty medicinal plants are now growing successfully at the Centre as a part of our current research on indigenous medicinal plants. The objective of this project is to develop a gene bank of indigenous medicinal plants for their conservation and to increase their quantity for supply to farmers and researchers. The plants are also being grown to extract the medicinal products to enhance medical and pharmaceutical research. The principal investigators are Prof. M. H. Ahmad and Dr. Sylvia Mitchell.

After a period of sensitization of the public about the use and benefits of the neem plant, the Biotechnology Centre started distribution of the plants to local farmers and hoteliers who use them for medicinal and or ornamental purposes within their environment. The use of neem as a Biopesticide, is one aspect of research being done on medicinal plants project.

Members of staff of Serge Island Limited were trained to perform an advanced method of budding and plant grafting to be used to improve their orange orchard. The training was conducted by Mr. Clovis Palmer, a postgraduate student with the assistance of Miss Suzette Curtello, Laboratory Technician.

The project on transgenic papaya for commercial production progressed steadily through the year. A third field trial was established at Brampton Farm, Old Harbour, with the transgenic papaya varieties that show potential for the commercial market. Inheritance of the resistance traits observed with the parental varieties will be assessed as well as safety of the transgenic product. The latter aspect of this project on the breeding and field testing of virus resistant papaya using modern DNA technology will be conducted in collaboration with the Departments of Chemistry and Basic Medical Science.

Dr. Andrew Wheatley Research Fellow with the Biochemistry unit, Basic Medical Sciences and the Biotechnology Centre and Dr. Helen Asemota in the Biochemistry Section and the Biotechnology are conducting research on the production of high yielding yam planting materials through the use of tissue culture. Dr. Wheatley is also examining the transformational changes associated with the production of yam tissue culture plants. Other research efforts being undertaken include looking at the molecular basis of sprouting in yam and the characterization of Jamaican yam starches.

The Biotechnology Centre was connected by fibre optics into the Local Area Network (LAN) on the Campus. All the laboratories and offices in the building now have online access to the internet which should enhance research and communication capabilities of the Centre.

The Biotechnology Centre was awarded the sum of USD\$10,000.00) for research on "Molecular Characterization of papaya ringspot virus type -

P”. The project’s principal investigator is Dr. Paula Tennant, and the award was made on behalf of Miss Melaine Chin, an M Phil student on the project.

OAS-SEDI granted US\$1500 under the project for the Co-operation in Development and Transfer of Biotechnology for Sustainable Development in the Caribbean. The grant was made for the collection and propagation of fifty (50) medicinal plants from Jamaica and the work was undertaken and completed by Dr. Sylvia Mitchell. Under the same OAS-SEDI collaboration, an additional forty seven thousand dollars (US\$47,000.00) was received through the NCST for developing resistant varieties of pepper to potyviruses.

## **RESEARCH IN PROGRESS**

### **Prof. M. H. Ahmad and Dr. Sylvia Mitchell**

- The use of neem oil as biopesticide
- Tissue Culture of medicinal plants

### **Dr. Paula Tennant**

- Development of transgenic papaya with resistance to papaya ring spot virus (PRSV)

### **Dr. Wayne McLaughlin**

- Molecular biology, epidemiology of geminiviruses infecting tomato and peppers in the Caribbean

### **Dr. Marcia Roye**

- Molecular biology and epidemiology of whitefly-transmitted geminiviruses infecting crops and weeds.

### **Dr. Helen Asemota**

- Bioengineering of yams and biochemical studies on yam extracts for medicinal value
- Protoplast isolation and gene manipulation from plant cell culture

### **Dr. Andrew Wheatley**

- Commercial production of yam plantlets through tissue culture
- Molecular basis of sprouting in yam and the characterisation of Jamaican yam starches.

## **PAPER PRESENTED**

### **Mitchell, S.A.**

- “Medicinal plant research at the UWI: A critical analysis”. Fifth Annual Natural Science Conference, January 8 – 11, University of the West Indies, (2001)

### **Chin, M., Tennant, P and Ahmad, M.H.**

- “Biological and molecular characterization of Papaya Ringspot virus isolates (Type P) from selected areas in Jamaica”. Fifth Annual Natural Science Conference, January 8-11, University of the West Indies. (2001).

### **Turner, S., Tennant, P. and Ahmad, M. H.**

- “Evaluation of *Carica* species for resistance to the Papaya Ringspot Virus”. Fifth Annual Natural Science Conference, January 8-11, University of the West Indies. (2001)

### **Wheatley, A.O. and Asemota, H.N.**

- “Differential Expression of Yam (*Dioscorea alata*) Genes During the Development of Salt Tolerance”. 14<sup>th</sup> Annual Natural Science Conference on Science and Technology, November 23-24, Scientific Research Council, (2000).

## **PUBLICATIONS**

### **Refereed**

- \* Roye, M. E., Henry, N. M., Burrell, P. D., McLaughlin, W. A., Nakhla, M. K. and D. P. Maxwell (2000). “A new tomato-infecting begomovirus in Barbados.” *Plant Disease* 84: 1342.

## **PUBLIC SERVICE**

### **Prof. M. H. Ahmad**

- Board Member, National Commission on Science and Technology (NCST)



- Member, Editorial Board of the World Journal of Biotechnology
- Member, Editorial Board of the Jamaica Journal of Science and Technology
- Co-Chairman, Caribbean Biotechnology Network sponsored by UNESCO

**Dr. Wayne McLaughlin**

- Microbiology Committee, Jamaica Bureau of Standards
- Board Member, Scientific Research Council
- Member, National Biosafety Committee (NCST)

**Dr. Helen Asemota**

- Member, Biodiversity Committee

**Dr. Paula Tennant**

- Board Member, Papaya Growers Association

**Dr. Andrew Wheatley**

- Member, National Watershed Management Committee

## **CATEGORY OF STUDENTS**

Messrs. Cliff Riley and Lowell Dilworth were accepted to pursue a MPhil degree in Biotechnology effective September, 2000. They are working on commercial production of yam plantlets through tissue culture and the molecular basis of sprouting in yam and the characterization of Jamaican yam starches. Their main supervisor is Dr. Helen Asemota.

## **DISTINGUISHED VISITORS**

**Dr. Dan Gagnier**, Vice President of Corporate Affairs of Alcan Limited visited the Centre and toured its facilities. He also held discussions with **Drs. Wayne McLaughlin** and **Andrew Wheatley** on the possibility of funding of the ongoing yam project and pepper projects at the Centre.

## **OBITUARY**

Miss Lorna Davis, Laboratory Attendant at the Biotechnology Centre since 1990, passed away in March 2001.

# **TROPICAL MEDICINE RESEARCH INSTITUTE**

**Professor Terrence Forrester, MSc *Med Coll, Wisc*, MB BS, PhD,  
DM *UWI* – Director**

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## **BACKGROUND INFORMATION**

### **Goals**

**T**he Tropical Medicine Research Institute (TMRI), through choice of research area, research activity, and use of research information seeks to contribute to improvement in the health status of Caribbean peoples.

### **Objectives**

The Tropical Medicine Research Institute was established on October 1, 1999 by The University Of The West Indies to achieve the following main objectives.

- To increase the output of research in major areas affecting the health of regional peoples
- To increase the number of trained research scientists working in health
- To facilitate the uptake of research into policy, programmes and practice

Directors of the TMRI Units review and revise the plans and programmes at their quarterly meetings. Reporting is done annually as part of the Unit and Institute reports to Faculties, Principals, the School for Graduate Studies & Research and the Vice Chancellor.

Policy oversight and review for the TMRI is the purview of the Board for Graduate Studies & Research. In addition, once a year, the TMRI reports to the Vice Chancellor's Advisory Committee on governance for the TMRI.

The ability of the Institute to deliver in balanced fashion on its Campus, National and Regional mandates is in large measure related to the extent that it operates within a regional structure, like the UWI School for Graduate Studies & Research.

#### **1. Increasing Research Output**

#### **2. Increasing Training at Postgraduate and Post Doctoral Levels**

#### **3. Getting Research into Policy, Programmes and Practice**

#### **4. Creating an Efficient and Effective Administration**

#### **1. Increasing Research output**

##### **a. Critical Mass**

The TMRI has made some progress in strengthening specific research disciplines, notably Epidemiology, Biostatistics and Laboratory Science.

### ***Epidemiology***

The Epidemiology Research Unit, was established October 1, 1999 and has pursued dual strategies for building critical mass, recruitment and training. The Unit expects to be joined by Dr. George Miller, Wolfson Institute of Epidemiology, London in 2002, and Dr. Marshall Tulloch-Reid, a UWI graduate who is currently completing fellowship training at the NIH. Dr. Tulloch-Reid should join the Unit in the following year. The ERU moved into new quarters in December 2000; this site is the old MRC Epidemiology Research Unit.

### ***Biostatistics***

The Institute is collaborating with the Department of Mathematics, Mona Campus, and the University of South Carolina and Loyola University of Chicago to establish an MSc Biostatistics programme. The four year collaboration will see UWI academic staff being trained to ensure the sustainability of the programme. It is planned to extend the programme to the UWI St. Augustine Campus.

Under this programme also, the Institute has upgraded the skills of two of our statisticians, Miss. Hedi Broome from the CDRC, Barbados, and Dr. Novie Younger from the TMRI's Mona Units. The first 2 students will complete their MSc training in December 2001. Dr. Younger has since returned to MUSC for a formal post doctoral fellowship.

### ***Laboratory Science***

The Medical Research Council, UK, and the UWI have jointly funded an extensive renovation of the TMRI laboratories located at the Tropical Metabolism Research Unit. The TMRU buildings have been subjected to extensive renovation and newly equipped and completely retrofitted labs for Biochemistry, Clinical Chemistry, Metabolism and Molecular Genetics have been put in place. Research laboratories currently housed at the Sickle Cell Unit have been relocated to this site in order to achieve critical mass for the laboratory aspects of this work e.g. in molecular genetics. The TMRU 13-bed Paediatric Ward where rehabilitation of severely malnourished children is done are also to be refurbished by December 2001.

### **c. Facilitation Collaboration**

Since the TMRI was established, there has been a steady increase in the extent of collaboration between Units; this has so far involved mainly the ERU, SCU and TMRU on the Mona Campus. Collaborative links are also

being built with the CDRC which joined the TMRI in July 2000. Such efforts will be strengthened when the informatics platform becomes operational.

### ***Informatics***

The Institute has been collaborating with PricewaterhouseCoopers, Jamaica and the UWI, Mona Informatics to develop, refine and implement an informatics plan capable of supporting close collaboration in research and administration. The recommendation calls for the employment of additional IT staff to implement the programme, and two such appointments will be made in December 2001.

## **2. Expanding Training Programmes**

### **Taught Programmes**

#### ***MSc Nutrition***

The MSc Nutrition course is currently undergoing review. Both content and delivery are being reviewed and special emphasis is being placed on use of educational technology to improve student learning. The revised course will be rolled out in 2002.

#### ***MB BS & MPH***

The TMRI has been asked by the Faculty of Medical Sciences, Mona to deliver courses on Statistics and Epidemiology for these two programmes, and has collaborated with the Department of Social & Preventive Medicine to do so. The TMRI perspective is to develop these three courses (MB BS, MPH, and MSc Nut.) so that they articulate as parts 1, 2 and 3 of an integrated quantitative methods course. These courses have now been designed and are being run.

#### ***Clinical Fellowship***

This new programme was launched October 1, 1999. The TMRI has 5 such Clinical Fellowships, 4 tenable in the Sickle Cell Unit and the other in the TMRU, the two Units which have direct responsibility for patient care. Fellows have an opportunity to work directly with patients with sickle cell disease, malnutrition or patients requiring parenteral nutritional support, and to develop a research project within that clinical context. Fellows are ideally post DM, and reside in the Programme for 2 years leading to the MD degree. The market for such Fellows include the Government and University Hospitals.

### ***Post Doctoral Fellowships***

Three fellowships were created October 1, 2000. The Institute has postponed filling these vacancies pending release of funds. This is the first structured post doctoral fellowship programme in the UWI and has as one of its prime objectives, the efficient transformation of PhD graduates into independent researchers.

### **3. Getting Research Into Policy, Programmes & Practice**

The Institute continues to be represented at National and Regional levels in forums which have the potential to promote the uptake of research findings. In Jamaica and Barbados, the Institute has forged close working relationships with the Chief Medical Officers. In both of these Campus Territories, the Institute has responded to Ministry of Health identified information gaps. In Barbados, epidemiology projects have been established in order to address the chronic non-communicable diseases, and more recently, HIV/AIDS. Likewise, in Jamaica, the Epidemiology Research Unit has established projects to provide information on Chronic Diseases and wider lifestyle health risks, and mounted nutritional interventions in school at the request of the Ministry of Education. The Sickle Cell Unit provides a cord blood screening service for the Kingston Metropolitan Area on behalf of the Ministry of Health.

## **RESEARCH PROJECTS**

### **Tropical Metabolism Research Unit**

#### ***A. Metabolism***

- The limits of adaptation of functional protein synthesis in the liver to marginal nutrition.
- Effects of supplementation of aromatic amino acids on hepatic acute phase protein synthesis in severe malnutrition
- Pathogenesis of Fatty Liver disease in severe malnutrition
- Glutathione (GSH) homeostasis and oxidant damage in Kwashiorkor.
- GSH and Acute phase protein concentrations in normal children in response to infections
- The metabolic importance of urea nitrogen metabolism in relation to protein and amino acid needs of the young child.

- Body Composition , protein turnover and urea kinetics in adults.
- Body Composition , protein turnover and urea kinetics in pregnancy.
- GSH homeostasis in Sickle Cell Disease.

### ***B. Molecular Genetics***

- Genetics of angiotensin-converting enzyme
- Genetics of cardiovascular risk
- Genetic susceptibility to oedematous malnutrition
- Genetic determinants of glutathione levels in sickle cell disease
- Genetic association analysis of traits which may be conditioned by intrauterine and early life events

### ***C. Fetal Origins Of Adult Disease***

- Maternal determinants of foetal and placental growth – The Vulnerable Window Cohort Study
- Postnatal Growth and development in the Vulnerable Window Cohort Study
- Pre- and postnatal influences on blood pressure in children
- Size and proportions at birth and glucose tolerance in Jamaican children
- Left ventricular wall mass and birth weight
- Insulin-like Growth Factor-1: Evidence for fetal programming.
- Creating fetal growth curves for a Jamaican population.
- Birth weight and nephron number – The relationship to salt sensitivity.
- The maternal HPA axis and blood pressure in children.

### ***D. Cardiovascular Physiology***

- Do ethnic differences in vascular physiology contribute to stroke in Afro-Caribbean subjects?
- Salt sensitivity and blood pressure control in the African Diaspora

## **Sickle Cell Unit**

### ***A. Natural History of Sickle Cell Disease***

- Epidemiological definitions in the longitudinal analysis of homozygous sickle cell disease
- Clinic attendance patterns (1973-1999).
- Identifying patients with homozygous sickle cell disease in Jamaica: patient recruitment when neonatal screening is not available.
- Measuring patient default in cohort studies.
- The haematological steady state in homozygous sickle cell disease.
- The duration of the painful crisis in homozygous sickle cell disease.
- The prediction of outcome in homozygous sickle cell disease: external validation of current models.
- Risk factors for albuminuria.
- Mortality, cause of death, and risk factors for early death in patients with homozygous sickle cell disease in Jamaica
- Asthma as a risk factor for the acute chest syndrome and chronic sickle cell lung disease
- Determinants of uric acid levels in homozygous SS disease
- Haematology indices in alpha thalassaemia patients
- Invasive pneumococcal disease in homozygous sickle cell disease: Jamaican experience
- Two methods of pain assessment in children with sickle cell disease. Agreement of patients, doctors and nurses
- Comparison of spirometry in 2 distinct populations of children of African descent to an accepted prediction equation
- Smoking behavior in adults with sickle cell disease in Jamaica

### ***B. Genetics***

- Genetic modifiers of sickle cell disease



### ***C. Metabolism***

- Glutathione metabolism in homozygous sickle cell disease
- Energy balance in sickle cell disease.
- Dietary intake and nutritional status in sickle cell disease.
- Macronutrient metabolism in sickle cell disease.

## **Epidemiology Research Unit**

### ***A. Cardiovascular Diseases***

- The prevalence of hypertension and diabetes mellitus and their risk factors in Jamaica.
- The incidence of hypertension and diabetes.
- Nutritional epidemiology.
- The contribution of energy expenditure to the risk of obesity, hypertension and diabetes mellitus.
- The role of salt in the pathophysiology of hypertension.
- Cardiovascular disease and steroid hormone contraceptive use.
- Anticardiolipin antibodies in Jamaican women: cardiovascular disease and pregnancy.
- The genetics of diabetes (Lilly/BDA project).
- The epidemiology of stroke (collaboration with CDRC)

- National multipurpose surveys: The Jamaican national healthy lifestyle survey; Russia longitudinal monitoring survey (RLMS); the China health and nutrition survey (CHNS).
- Injury surveillance
- Aging, migration and health.

#### ***B. Health Services Research***

- The quality of care of diabetes and hypertension.
- The knowledge base of patients attending a specialist hypertension clinic and the impact of an education intervention (collaboration with Department of Advanced Nursing Education).
- Health care outcomes in a major hospital.
- Determinants of health seeking behaviour in Jamaica.

#### ***C. HTLV-1 Epidemiology***

- The epidemiology of HTLV-1 in Jamaica
  - a. Familial and genetic aspects of HTLV-1 associated diseases.
  - b. The follow-up of a cohort of subjects exposed to HTLV-1 infected blood.

#### ***D. Nutrition, Health, Development and Behaviour in Early Childhood***

- Effect of low birth weight on the development, growth and morbidity of term infants and the benefits of a psychosocial stimulation intervention.
- Extent and impact of functional isolation in Jamaican low birth weight infants.
- Integrating early childhood psychosocial stimulation into primary health care nutrition services for undernourished children
- A randomized trial of the effects of zinc supplementation with and without psychosocial stimulation on the development and behaviour of young children.
- A cross sectional survey of the use of herbs among urban and rural adults and children in Jamaica.

#### ***E. Nutrition, Health, Cognitive Ability and Behaviour in School Aged Children***

- Long term follow-up of children who were stunted in early childhood and the effects of nutritional supplementation and psychosocial stimulation.
- The effect of linear growth retardation in early childhood on cardiovascular risk factors at age 11-12 years.
- Child, family and school determinants of aggression in Jamaican school children.
- A survey of the perceptions of violence among Jamaican secondary school children.

***F. Adult Nutrition***

- Dietary and lifestyle factors related to risk of obesity and hypertension in Jamaican women. Implications for health promotion.

**RESEARCH GRANTS**





































