

DEPARTMENT OF BASIC MEDICAL SCIENCES

Dr. Wayne McLaughlin, BSc *Waterloo*, PhD *UWI*
– Head of Department

WORK OF THE DEPARTMENT



In the 2005/2006 academic year Dr. Wayne McLaughlin succeeded Dr. Oswald Simon as Head of Department. The main objectives of the 2005/2006 academic year were to increase publication output, increase grant proposals and improve fiscal management to reduce over expenditure and most importantly to participate in the accreditation process of the faculty. We wish to extend special thanks to Dr.

James Mills for his dedication and hard work in this process. In the area of research and publication it was also a busy one for both the academic staff and their postgraduate students. The members of the department participated in several conferences and there was a significant increase in publications. The per capita publication rate for the department was 1.24, up from 0.6 the previous year. Several academic staff and postgraduate students were successful in getting research funds from the Principal's New Initiative Funds, the School for Graduate Studies and Research, and external funding agencies amounting to approximately US\$174,000. Dr. Maxine Gossell-Williams was the most successful academic staff member with a sub-contract from University of North Carolina for US\$58,299.00 to continue her work on choline supplementation and neuro-development. With over 80 post-graduate students research however continues to be severely under-funded. Although the Department saw an increase in its budget several measures were put in place to monitor expenditure. These included monthly management meetings and reporting on expenditure from each section on a weekly basis. A full inventory of chemicals and reagents was undertaken in the Biochemistry Section and a computerized inventory system established. This process

will be expanded to the other departmental sections in the near future.

In November 2005, the Department brought into service its state-of-the-art Forensic DNA laboratory, **Caribbean Genetics (CARIGEN)** with an ABI 3130 DNA analyser and the hiring of a Forensic DNA analyst, Mr. Compton Beecher. CARIGEN is an independent forensic DNA laboratory and has so far been involved in a landmark case by providing DNA evidence to free a man who was incarcerated for four years after being accused of rape. The facility is also playing a key role by providing laboratory courses in forensic genetics to undergraduate students in both the MBBS and the Faculty of Pure and Applied Sciences (FPAS) molecular biology courses. The laboratory is currently preparing to provide genomic sequencing services to researchers.

The past year also saw significant increases in undergraduate student enrolment in all three programmes in the department (MB BS, FPAS Biochemistry and BB Med Sci.). Last year 169 new students were accepted in the MBBS programme, 188 in FPAS biochemistry programme and 18 in the BB Med Sci programme. The department also continued to teach students in the Allied Health programmes offered to nursing and physiotherapy students. The department was also very successful in graduate expansion with 10 new students accepted into various research programs. The building of the new Physiology lecture theatre, and the refurbishing of the Pre-Clinical lecture theatre as well as the Physiology/Pharmacology laboratory were welcomed additions to the department's teaching facilities. A new undergraduate computer laboratory with 18 computer stations was established in the Department. In addition the Histology laboratory was refurbished primarily to improve the aesthetics and a new audio system installed. However, the expansion of the gross anatomy laboratory during the summer did not take place as planned. The good news is that a new Basic Medical Sciences complex is being planned and construction should begin by January 2008.

The Department said farewell to Dr. Fritz Guldner, Professor of Anatomy and Mrs. Tazhmoye Crawford-Brown, Senior Administrative Assistant. Professor Helen Asemota was on secondment for 9 months to Shaw University, North Carolina, USA while Dr. Simon went on well deserved sabbatical. The Department welcomed back Dr. Michelle Hamilton who was on leave and completed her MBBS degree. Dr. Hamilton was awarded tenure and Dr. Kerith Golden was promoted to senior lecturer. Dr. Keerti Singh joined the department as a new lecturer in Anatomy. Her main research interest is in mesterolone therapy in oligospermic males.

STAFF AWARDS

Dr. Paul Brown

- American Society for Microbiologists (ASM) - Early Career Travel Award.

Dr DalipRagoobirsingh

- Fulbright Fellowship - Non-Communicable Diseases Unit, Pan American Health Organization (PAHO) Head- quarters, Washington, D.C., USA.

PAPERS PRESENTED

- Bahado-Singh, P.S., Wheatley, A. O., Osagie, A.U., Boyne, M., Morrison, E.Y. St. A, Ahmad, M.H. and Asemota, H.N. (2006) Glycemic Indices of some commonly eaten Caribbean foods and dietary intervention using low glycemic index foods to achieve normoglycemia in type 2 Diabetics. Morgan State University 2nd International Complimentary and Alternative Medicine Conference, Baltimore, U.S.A. – May 26 - 27, 2006.
- Bahado-Singh, P.S., Wheatley, A. O., Osagie, A.U., Boyne, M., Choo-Kan, E., Morrison, E.Y.St.A, Ahmad, M.H. and Asemota, H.N. (2006) Effect of low glycemic index dietary advice on glycemic control and inflammatory markers in adult type 2 diabetics in Jamaica. Northern Caribbean University 7th Science Symposium, Mandeville, Jamaica.
- Brown, P.D. (2006). Methicillin resistance among isolates of *Staphylococcus aureus* from community and hospital sources in Jamaica. 12th International Congress on Infectious Diseases, Lisbon, Portugal. June 15-18, 2006.
- Brown P.D. (2006). Trends in laboratory diagnosis and notifications of human leptospirosis. PAHO/WHO Seminar on leptospirosis, Kingston and Montego Bay, August 3-4, 2006
- Brown, P.D. (2006). Antimicrobial resistance. Jamaica Medical Doctors Association Annual Symposium, Kingston, August 10, 2006.
- Campbell J., Levy A., and O. Simon. (2006) An investigation of the anti-inflammatory potential of pimento diocia in a rat arthritic

- models. 2006 Conference of the Federation of American Society for Experimental Biology.
- Gossell-Williams M, Laidley D, McDaniels E, Jarrett, M and Thomas-Osbourne P. Survey of Pharmacists' attitudes towards herbal products, nutraceuticals and dietary supplements. Pharmaceutical Society of Jamaica Retreat June 23-25, 2006 Sunset Jamaica Grande St. Ann Jamaica.
 - Gossell-Williams M, Williams- Johnson J, Simon O. Trends from the UHWI of non-fatal intentional and accidental self poisoning with benzodiazepines tricyclic antidepressants, paracetamol and non-steroidal anti-inflammatory drugs (2006) Caribbean Poison Information Network Conference June 3, 2006. Terra Nova Hotel, Kingston Jamaica.
 - Gossell-Williams, M, Fletcher H, Dacosta K, Zeisel S, Jacob, Anderson-McFarlane N. Influence of pregnancy on the fatty acid composition of plasma phosphatidylcholine and on plasma choline concentrations in humans. 2006 Experimental Biology meeting April 1-5.
 - Martin, S., P. D. Brown (2006). Antimicrobial activities of some actinomycetes isolated from plant leaves in Jamaica: a student-centred research project. American Society for Microbiology Conference for Undergraduate Educators, Orlando, Florida, USA, May 19 - 21, 2006.
 - Martin, S., P. D. Brown (2006). Antimicrobial activities of some actinomycetes isolated from plant leaves in Jamaica. 12th International Congress on Infectious Diseases. Lisbon, Portugal, June 15 - 18, 2006.
 - McFarlane-Anderson, N. (2005). Use of new technologies in investigating diseases in Jamaica. Proceedings TWOWS Conference, Bangalore, India, 2005.
 - McFarlane-Anderson, N. (2006) When life begins. Perinatal Conference, UHWI Mona, February 2006.
 - McFarlane-Anderson, N. (2006) Research ethics: National guidelines. 2nd Research Ethics Conference, UWI Mona, May 2006.
 - Ragoobirsingh, D. and A. Barceló (2006) A Diabetes Education Curriculum for the Caribbean UWI Diabetes Outreach Project

12th International Conference on Diabetes, March 2-5, 2006, Ocho Rios, Jamaica.

- Powell, S., R L Lindo, T.Dasgupta, D C Crans. Blood glucose lowering effect of vanadium dipicolinate $\text{NH}_4 \{ \text{VO} [\text{dipic-Cl}] \text{H}_2\text{O} \}$ on normal and Streptozotocin-induced diabetic rats. Faculty of Medical Sciences 14th Annual Research Conference and Workshop on Clinical Trials: Building Capacity and Competence, November 16-18, 2005.
- Reddy, Munitha K., Ruby Lisa Alexander-Lindo and Muraleedharan G.Nair. Relative Potencies of Natural Food Colors Based on Lipid Peroxidation, Cyclooxygenase Enzymes and Human Tumor Cell Proliferation Inhibitory Activities. 46th Annual Meeting of the American Society of Pharmacognosy, Oregon State University, Corvallis, Oregon, July 23-27th, 2005.
- Singh PDA, Shirley-Singh D and Singh-Gandretti, PE (2006) Cardiovascular effects of two plant extracts used in folklore medicine by Caribbean ethnic populations. 21st Annual Interdisciplinary Conference on Hypertension and Related Cardiovascular Risk Factors in Ethnic Populations, ISHIB, Atlanta, p. 50.
- Young, L. (2005) Effects of estrogen and testosterone on the rate of learning and extinction time in negative patterning discrimination in aged male rats. 35th Annual International Meeting of the Society of Neuroscience (SfN) November 11-16, 2005 Washington D.C. USA.

Presentations made at the Faculty of Medical Sciences Annual Conference, November 16 - 18, 2005.

- Gossell-Williams, M., H Fletcher, S Zeisel, N. McFarlane-Anderson, A Jacob, J Patel Longitudinal Assessment of plasma choline and metabolites in pregnant women attending the antenatal clinic at UHWI.
- Grant, JA., YA Jackson, M Gossell-Williams. The synthesis and Pharmacological Activity of some Novel 1, 3- Diazepinium Chlorides.

Presentations made at Therapeutic Patient Education 2006, April 27- 30, 2006, Florence, Italy.

- Less, L., G. Xuereb and D. Ragoobirsingh: Jamaica's Status Progress within Dawn's call to action.
- Ragoobirsingh, D. and A. Barceló (2006) Diabetes Education Curriculum for the Caribbean
- Xuereb, G., L. Less and D. Ragoobirsingh (2006) Lay Educators for People With Diabetes: The Caribbean Experience.
- Xuereb, G., and D. Ragoobirsingh: Best Care and Practices in the Caribbean.

7th Biannual Scientific Conference of the Faculty of Pure and Applied Sciences, UWI, Mona, Kingston, Jamaica, May 17- 19, 2005.

- Campbell, S., R. L. Lindo and Tara Dasgupta (2005). The Effect of Reducing Agents on the Bioactivity of S- Nitrosocaptopril.
- Earle-Barrett, S.T., Wheatley, A.O. and Asemota, H. N. (2005) RAPD fingerprinting of twenty-five Jamaican *Dioscorea* cultivars.
- Powell, M., Wheatley, A.O., Williams, N., Omoruyi, F., Asemota, H.N. and Tennat, P.F. (2005) Safety assessment of transgenic papaya (*Carica papaya*) in rat models: Histopathology studies.
- Powell, S-A., R. L. Lindo, Tara Dasgupta, D. Crans. Insulin-Enhancing Effects of Vanadium Dipicolinate (NH₄[dipic-Cl].H₂O) on Type1 STZ-Induced Diabetes Rats.
- Riley, C.K., Adebayo, A.S., Wheatley, A.O., Ahmad, M.H. and Asemota, H.N. (2005) Micrometrics of some Jamaica yam (*Dioscorea* spp.) starch powders and implications in tablet and capsule formulations

PUBLICATIONS

Books and monographs

- * Morrison E and D. Ragoobirsingh (2006). "The Epidemiology of Diabetes in the Caribbean". In: World Book on Epidemiology of Diabetes, John Wiley & Sons Publishing Company London, England.
- * Ragoobirsingh R and Ann Fullick (2006) "Human and Social Biology for Caribbean Secondary Education Certificate". Pearson/Longman Publishing for the Caribbean, London, England.

- * Barcelo, A., C.D. Karkashian, E. Duarte de Munoz and D. Ragoobirsingh (2006) “Atlas of Diabetes Education in Latin America and The Caribbean”. Pan American Health Organization Publication, Washington, DC, USA.

Refereed Journals Articles

- * Alexander-Lindo, M. K, Ruby Lisa and Muraleedharan G. Nair. (2005). Relative Inhibition of Lipid Peroxidation, Cyclooxygenase Enzymes and Human Tumor Cell Proliferation by Natural Food Colors. *Journal of Agricultural and Food Chemistry* 53, 9268- 9273.
- * Ashby M. K. (2006) Distribution, structure and diversity of Bacterial genes encoding two-component proteins in the *Euryarchaeota Archaea* [<http://www.archaea.ws>]
- * Ashby M. K. and Jean Houmard. (2006) Cyanobacterial two component proteins: structure, diversity, distribution and evolution. *Microbiology and Molecular Biology Reviews*. 70: 472-509.
- * Badal S, P. D. Brown and D. Ragoobirsingh (2006). Exogenous nitric oxide inhibits IRS-1 expression in rat hepatocytes and skeletal myocytes. *Journal of Biomedical Science* 13(4): 561-568.
- * Badal S, P. D. Brown and D. Ragoobirsingh (2006). Nitric oxide agents impair insulin-mediated signal transduction in rat skeletal muscle. *BMC Biochemistry* 7:17-44.
- * Brown P. D. and C. Ngeno. (2006) Antimicrobial resistance in clinical isolates of *Staphylococcus aureus* from hospital and community sources in southern Jamaica. *International Journal of Infectious Diseases* DOI:10.1016/j.ijid.2006.04.005
<http://dx.doi.org/10.1016/j.ijid.2006.04.005>
- * Brown, S., B. Been, and W. McLaughlin (2006) Detection and variability of the lethal yellowing group (16Sr IV) phytoplasma in the *Cedusa* sp. (Hemiptera: Auchenorrhyncha: Derbidae) in Jamaica. *Annals of Applied Biology*. 149: 53-62.
- * Buglyo P, Debbie C.Crans, Eszter M. Nagy, Ruby Lisa Lindo, Luqin Yang, Jason J. Smee, Wenzheng Jin, Lai-Har Chi, Michael E. Godzala III and Gail R. Willsky. (2005). Aqueous Chemistry of the Vanadium (III) (V(III)) and the V (III)-Dipicolinate Systems and a Comparison of the Effect of Three Oxidation

States of Vanadium Compounds on Diabetic Hyperglycemia in Rats. *Inorganic Chemistry* 44 (15): 5416-5427.

- * Dilworth, Lowell, Felix O. Omoruyi, Helen N. Asemota, (2006). *In vitro* availability of some essential minerals in commonly eaten processed and unprocessed Caribbean tuber crops. *BioMetals* p. 1 - 6, DOI 10.1007/s10534-006-9012-4: <http://dx.doi.org/10.1007/s10534-006-9012-4>
- * Dilworth, L., Omoruyi, F.O. and Asemota, H.N. (2005). Digestive and transport enzymes in rats fed Phytic acid extract from sweet potato (*Ipomoea batatas*) *Diabetologia Croatica* 34 (2):59-65.
- * Gossell-Williams, M., O. Simon, L. Young, M. West. (2006). Choline supplementation facilitates memory consolidation into intermediate long-term memory of young Sprague-Dawley rats. *West Indian Medical Journal*. 55(1):4-8.
- * Gossell-Williams, M., H. Fletcher, N. McFarlane-Anderson, A. Jacob, J. Patel, S. Zeisel (2005). Dietary intake of choline and plasma choline concentrations in pregnant women in Jamaica. *West Indian Medical Journal*. 54 (6): 353-359.
- * Gossell-Williams, M., A. Davis and N. O'Connor. (2006) Inhibition of testosterone-induced hyperplasia of the prostate of Sprague- Dawley rats by pumpkin seed oil *Journal of Medicine Foods* 9(2):284-6
- * Kahwa E.K, L.A. Sergeant, A. McCaw-Binns, N. McFarlane-Anderson. (2006). Anticardiolipin antibodies in Jamaican primiparae. *Journal of Obstetrics and Gynaecology* 26: 122-126.
- * McAnuff, M. A., Harding, W.W., Omoruyi, F. O., Jacobs, H., Morrison, E.Y., Asemota, H.N., (2005) Hypoglycemic effects of steroidal sapogenins isolated from Jamaican Bitter yam (*Dioscorea polygon ides*). *Food and Chemical Toxicology* 43, 1667-1672.
- * McGrowder D, K. Barrett, P. Brown and D. Ragoobirsingh (2005). Exogenous Nitric Oxide Inhibits Glucose Uptake Peripheral Tissues of Diabetic Rat Models. *Diabetologica Croatica* 34(3):77-85.
- * McGrowder D, P. Brown and D. Ragoobirsingh (2006). Therapeutic Uses of Nitric Oxide donating Drugs in the

Treatment of Cardiovascular Diseases. *International Journal of Pharmacology* 2(3):268-275.

- * McGrowder D, D. Ragoobirsingh and P. Brown (2006). Acute effects of exogenous nitric oxide on glucose uptake in skeletal muscle of normoglycaemic and diabetic rats. *Medical Science Monitor* 12(1): BR28-35.
- * McGrowder D, D.Ragoobirsingh & P.Brown (2006). Therapeutic uses of nitric-oxide-donating drugs in the treatment of cardiovascular diseases. *International Journal of Pharmacology* 2(3): 268-275.
- * McGrowder D, P. Brown and D. Ragoobirsingh (2006). Modulation of Glucose Uptake in Adipose tissues by Nitric Oxide Generating Compounds. *Journal of Biosciences* 31 (3):347-354.
- * McGrowder, D., D. Ragoobirsingh, T. Dasgupta and P. Brown (2004). The Effect of Nitric Oxide on Glucose Metabolism. *Journal of Molecular and Cellular Biochemistry*. 263, 29-34.
- * Miles T, W. McLaughlin and P. D. Brown (2006). Antimicrobial resistance of *Escherichia coli* from broiler chickens and humans. *BMC Veterinary Research* 2:7.
- * Morrison, S. S., Mullineaux, C. W., and Ashby, M. K. (2005). The influence of acetyl phosphate on DspA signalling in the cyanobacterium *Synechocystis* sp. PCC6803. *BMC Microbiology*, 5: 47.
- * Murray, CSG, Singh PDA, Coard KCM and Aiken WK (2006) An investigation of the ability of Lescol® (fluvastatin) to initiate programmed cell death in human prostate cancer. *West Indian Med Journal* 55(S2): 63.
- * Myrie, W. A., L. Paulraj, M. Dollet, D. Wray, B. O. Been, and W. McLaughlin (2006). First report of coconut lethal yellowing disease caused by phytoplasma on Nevis Island. *Plant Disease*. 90: 834.
- * Nichols S. D, Boyne MS, Thame M, Osmond C, Wilks RJ, Bennett FI, McFarlane-Anderson N, Young RE, Forrester TE. (2005) Cold-induced elevation of forearm vascular resistance is

inversely related to birth weight. *Journal of Human Hypertension* 19:309-14.

- * O'Connor A, McFarlane-Anderson N, Duff EM, Wright-Pascoe R., Wint Y. B.(2006) High levels of F2-isoprostanes in Jamaican adults with diabetes mellitus. *International Journal of Diabetes and Metabolism* 14: 51-54.
- * Ragoobirsingh D, E. Y. St. A Morrison, P. Johnson and E. Lewis-Fuller (2006). Dietary Intake and Chronic Diseases in Jamaica-An Island-wide Survey. *Journal of Food, Agriculture and Environment*. 4(2): 31-33.
- * Reddy, M. K., Ruby Lisa Alexander-Lindo and Muraleedharan G.Nair. (2005). Relative Inhibition of Lipid Peroxidation, Cyclooxygenase Enzymes and Human Tumor Cell Proliferation by Natural Food Colors. *Journal of Agricultural and Food Chemistry* 53, 9268- 9273.
- * Russell K. R. M, E. Y. St. A. Morrison and D. Ragoobirsingh (2005). The Effect of Annatto on Insulin Binding Properties in the Dog. *Phototherapy Research* 19, 433-436.
- * Williams O. J., G. S. V. Raghavan, K. D. Golden and Y. Gariepy (2005). Modified atmosphere storage of Cavendish bananas using silicone membrane and diffusion channel systems. *Postharvest Biology and Technology*. 35 (3), 309 – 317.
- * Wissart, J., Omkar Parshad Santosh Kulkarni and (2005). Prevalence of Pre-and postpartum depression in Jamaican women. *BMC Pregnancy and Childbirth*, 5:15.

Other Peer Reviewed Publications/Abstracts

WIMJ = West Indian Medical Journal

- * Bahado-Singh, P.S., Wheatley, A.O., Osagie, A.U., Boyne, M., Choo-Kan, E, Morrison, E.Y.St.A., Ahmad, M.H. and Asemota, H.N. (2006) Effect of low glycemic index foods in the management of type 2 diabetes in the Caribbean. *WIMJ* 55: (Suppl): 41 - 42.
- * Bramwell GA, Levy N, Wirenga A, Fletcher H, McFarlane-Anderson N. (2006) Folate, homocysteine and MTHFR polymorphisms in women with pre-eclampsia. *WIMJ*; 55: 21.

- * Pepple, D.J., A.M. Mullings and H.L. Reid. Fetal Haemoglobin level on pre-eclampsia. *WTMJ* 2006; 55(2): 130.A
- * Powell, S., R. L Lindo, T. Dasgupta, D. C. Crans. (2005) Blood glucose lowering effect of vanadium dipicolinate $\text{NH}_4 \{ \text{VO} [\text{dipic-Cl}] \text{H}_2\text{O} \}$ on normal and Streptozotocin-induced diabetic rats. *WTMJ* 53: (Suppl. 5).
- * Watt A, Fletcher H, Smikle M, Jackson MD, McFarlane-Anderson N. (2006) Sexually transmitted diseases in women attending the UHWI antenatal clinic. *WTMJ*; 55: 28.

INCOME GENERATION

Research Grants:

Professor Helen Asemota and Dr. Andrew Wheatley (Collaborator):

- Environmental Health Foundation – “Nutritional Supplement as a tool for harm reduction in illicit drug addiction: Derivation of mechanism of action in animal model”. J\$300,000 for 2 years.
- Campus Committee for Research and Publication and Graduate Award for Curtis Green. “Metabolic assessment of the citrus peel PMFs on diabetes associated hypercholesterolemia in rats” US\$2,000.
- Campus Committee for Research and Publication and Graduate Award for Dwayne Stennett. “In vivo metabolic effects of bitter yam (*Dioscorea polygonoides*) propriety preparation and organs integrity in animal models of hypercholesterolemia. US\$ 1554.00

Dr. Paul Brown:

- Campus Committee for Research and Publication and Graduate Award for Ewan Finlayson. “Molecular characterization of methicillin-resistant *Staphylococcus aureus* from UHWI”. US\$1,529.10.
- New Initiative Fund – “Molecular and immunological analyses of pathogenic *Leptospira* in Jamaica” US\$22,885.

Dr. Maxine Gossell- Williams

- Sub-contract from University of North Carolina – “Choline supplementation and neurodevelopment study” US\$58,299.00

Dr. Lisa Lindo:

- Campus Committee for Research and Publications and Graduate Award for Kesi Brown. “The effect of nitric oxide releasing compounds on the central nervous system, pre-eclampsia, platelet aggregation, blood glucose concentration and other haemodynamic parameters”. US\$2,000.00.
- Campus Committee for Research and Publications and Graduate Award for Tashna Gentles “The isolation, purification and elucidation of the hypoglycaemic principle’s in *Picrasma excelsa* (Bitterwood)”. US\$2,000.00.
- Campus Committee for Research and Publications and Graduate Award for Sophia Bryan “The Effects of Nitric Oxide Synthase (NOS) inhibitors on glucose metabolism and insulin levels in rats”. US\$2,000.00.

Professor Norma McFarlane-Anderson

- New Initiative Funding – “Human Papilloma Virus (HPV) infection among pregnant and non-pregnant women in Jamaica. US\$ 21,750.
- Campus Committee for Research and Publications and Graduate Award for Angella Watt. “Investigating the prevalence of human papillomavirus (HPV) in pregnant and non-pregnant women in Jamaica. US\$2000.00.
- Campus Committee for Research and Publications and Graduate Award for Garfield Simon to visit to London Metropolitan University (LMU) for 3 three months to conduct research on phytoestrogen in common Jamaica foods. J\$58,345.00. LMU also provided subsistence of Sterling 1000/month.
- Campus Committee for Research and Publications and Graduate Award for Angela Dawkins. “Phytoestrogen level in post menopausal women” US\$2000.00

Dr. Wayne McLaughlin

- Integrated Pest Management (IMP) Collaborative Research Support Project (CRSP) Sub Award Co-PI from Virginia Tech - “Insect-transmitted viruses in Central America, Caribbean and sub-Saharan Africa. US\$12,650.
- Coconut Industry Board, Jamaica. “Identification and characterization of insect vector(s) of lethal yellowing (LY) disease of coconuts in Jamaica” J\$1,600,000.00.
- Ministry of Agriculture – Citrus Replanting Project “Research Services in Plant Pathology” (Jointly with Dr. Paula Tennant) US\$29,600.00.

Dr. Omkar Parshad

- Campus Committee for Research and Publications and Graduate Award for Garsha McCalla. “Anti-Diabetic Properties of Neem (*Azadirachta indica*) leaf extract on STZ induced diabetic rats" US\$722.33

Dr. Oswald Simon

- Campus Committee for Research and Publications and Graduate Award for Janet Shelly. “Investigation of pimento oil and eugenol on monoarthritic rats” US\$600.00 and J\$41,542.00

Dr. Paul Singh

- Campus Committee for Research and Publications and Graduate **Award** for Christopher Murray. “A preliminary investigation of possible apoptotic activity of fluvastatin on human prostatic adenocarcinoma”. US\$2000.00
- Mark Grey “A pharmacological investigation of the hypotensive properties of manilkara zapotal” US\$2000.00

Other income:

Summer School

- Introductory Biochemistry (BC10M) – \$139,224.52

Consultancy Fund

- Rental of Lecture Theatres \$367,758.69

PUBLIC SERVICE

Dr. Paul Brown

- Member, Technical working group on Leptospirosis, Jamaica

Mr. Michael Gardner

- Executive Member, Jamaica Historical Society

Dr. Kerith Golden

- Vice Chairman, Stock Form Road Citizens Association, Golden Spring, St. Andrew
- Member, Editorial Advisory Board for Stewarts Post harvest Review.

Dr. Maxine Gossell-Williams

- Vice President, Optimist Club of North St. Andrew
- Member, Pharmacology Section representative – Central Drug and Therapeutics Committee- Ministry of Health.

Professor McFarlane-Anderson

- Member, International Proxy Parents – Education Committee
- Member, Stella Maris HIV AIDS Ministry
- Member, Friends of Foundation for International Self Help (FISH).

Dr. Wayne McLaughlin

- Deputy Chairman, National Commission on Science and Technology, Jamaica - Biosafety Committee
- Council Member, Jamaica Society for Agricultural Sciences

Dr. Dalip Ragoobirsingh

- Chief Examiner, Caribbean Examination Council, CSEC Human & Social Biology.

Dr. Oswald Simon

- Observer, Technical Advisory Committee for the CARICOM Drug Testing Laboratory

Dr. Paul Singh

- Member, Caribbean Poison Information Network Management Committee

CATEGORIES OF STUDENTS

Undergraduate degree programmes:

MBBS:

The Class of 2009 end of year examination pass rate was 78% and the Class of 2010 end of year examination pass rate was 66%.

BB Med Sci.

The first cohort of the BBMed Sci graduated. Dianne Laidley was awarded first class honours in Pharmacology and Marlon Jarrett was awarded an Upper Second Class honours in Pharmacology.

BSc Biochemistry/Biotechnology/Molecular Biology:

The following students were awarded first class honours:

Kimberley Rudder	–	Biochemistry
Kayann Nelson	–	Biochemistry/Zoology
Sean Swaby	–	Biochemistry/Zoology
Aisha Bailey	–	Biochemistry/Zoology

Postgraduate:

The following students were awarded the PhD degree in Biochemistry:

Cliff Riley
Lowell Dilworth
Rachael Irving