

## DEPARTMENT OF BASIC MEDICAL SCIENCES



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Head of Department

### WORK OF THE DEPARTMENT

The Department of Basic Medical Sciences hosted UWI's first Biomolecular Sciences Conference on Friday, January 16, 2015 at the Faculty of Medical Sciences Teaching and Research Complex. Presenters hailed from the USA and the Caribbean. The guest speaker, Professor William Cole of Cardiovascular Research, Physiology & Pharmacology, University of Calgary, Canada delivered the plenary lecture on "Keeping your head under pressure: mechanisms of cerebral blood flow auto-regulation and dysfunction in disease".

The Department of Basic Medical Sciences Quality Assurance Review will be held in Semester 1, Academic Year 2015–2016. The period set for the review is November 2–6, 2015.

A new course, BIOC1016 – Anti-doping in Sports, was mounted in the Department in collaboration with the World Anti-doping Agency

(WADA) with an initial registration was of 41 undergraduate and 10 postgraduate students. Students were from the Faculties of Medical Sciences, Science & Technology, Law and Education & Humanities.

The Faculty of Science and Technology Microbiology major programme, which is offered by the Department of Basic Medical Sciences, was reviewed to eliminate overlap and provide students with a greater appreciation of the reach of microbiology in critical areas of Research (high-throughput sequencing), Health-care (tracking pathogens), and Industry (food and drug development). Pre-recorded guest lectures by experts in microbiology (courtesy of the American Society for Microbiology) have been included in the laboratories and have served to buttress the theoretical and practical experiences of the students.

Through Dr. Paul Brown's efforts as Country Ambassador to Jamaica for the American Society for Microbiology (which has close to 50% of members in over 100 countries outside of the USA) and Chair of the Ambassador Leadership Circle (includes nine Ambassadors), the institution's name is known worldwide and is associated with leadership in Microbiology and facilitating increased networking opportunities among scientists in many under-served populations. Through this network, two PhD students have benefited from partnerships with the University of Richmond, Virginia, USA and the University of Waterloo, Canada. With the agreement signed between the UWI and University of Minnesota, it is hoped that several students and staff will be able to participate in joint research projects and other initiatives.

The Department's operations at the WJC site continued with streaming of lectures, tutorials and some practical exercises between Mona and WJC, though some technical challenges to the quality and flow of information continued to impede the processes.

#### **STAFF AWARDS AND PROMOTIONS**

Dr. Paul Brown was appointed Chair of the Inaugural Ambassador Leadership Circle, American Society for Microbiology. He also received a certificate for Excellence in Reviewing (2014) from the *Journal of Infection and Public Health* (Elsevier).

## Department of Basic Medical Sciences

Dr. Marshalyn McKoy received training in Technology Transfer at National Institutes of Health, USA (May–June, 2015).

Dr. Jacqueline Campbell received Clinical Trials Training conducted by Atlanta Premier Site Management Organization held February 12–13, 2015 at Caribbean School of Medical Sciences, 8 Waterloo Road, Kingston 10, Jamaica.

Dr. Mohammad Kutub Ali received training on Zebrafish Genetic Screening and mutant Selection, Generation of Transgenic Zebrafish through Microinjection of viral gene construct at the single cell stage of fertilized egg and screening of zebrafish water-borne diseases from Indian Institute of Science Education and Research (ISER), Pune, India on 20th June to 14th August, 2015.

Miss Paula McCarthy, Miss Shakika Nugent, Miss Donna Reddie, Miss Mileesa Stewart, Miss Audrey Brown, Mr. Colin Green received training in the Computer Literacy 101 workshop held in April 2015, organized by the Human Resource Division.

Miss Paula McCarthy received training in the Sanitation Practices Workshop on Tuesday, March 10, 2015, which was organized by the Human Resource Division, UWI, Mona.

Mr. Richard Smith and Mr. Jevan Howden audited the Chemical Analysis course provided by the Department of Chemistry summer school programme, June 1 to July 31, 2015.

Ms. Garsha McCalla visited Prof. William Cole's Lab at the University of Calgary, June–August, 2015 to do training in the Western Blotting Technique.

Dr. Sharmella Roopchand-Martin received a scholarship for pursuing a certificate in Biomedical Research Ethics through the Caribbean Research Ethics Education Initiative which is funded by a NIH-Fogarty grant. The programme began April 2015.

Dr. Natala Burnett attended a plant tissue culture training course SAGARPA/ IICA, Mexico – Caribbean Training Programme: In vitro Clonal Propagation of Tropical Plants. June, 2015 at The University of

the West Indies, St. Augustine Campus.

Dr. Jean-Pierre Louboutin has been doing collaborative work with Gene Therapy Program, University of Pennsylvania, Philadelphia, USA – Mid December 2014-Mid January 2015 and Mid July-Mid August 2015, Weekly Lab Meetings by teleconference as well as the Department of Pharmacology, College of Medicine, Drexel University, Philadelphia, USA – Mid December 2014-Mid January 2015 and Mid July-Mid August 2015.

Ms. Sonja Williams obtained a Doctor of Physical Therapy degree (DPT) from Nova Southeastern University in May 2015.

#### **PAPERS/POSTERS PRESENTED AT SCIENTIFIC MEETINGS**

- Alexander-Lindo, L R, Daley-Beckford, D, Yee, T, and Reese, P. Oral Hypoglycemic and Hypotensive Agents from *Eucalyptus camaldulensis* (Myrtaceae). The Eight International Society for the Development of Natural Products Symposium, Shanghai, China, October 10–11, 2014.
- Alexander-Lindo, Lisa, Daley-Beckford, Denise, Yee, Trevor and Reese, Paul (2014). Hypoglycemic and Hypotensive Compounds Isolated from *Eucalyptus camaldulensis* (Myrtaceae). Society for Scientific Advancement (SoSA) 3rd Annual Conference, Mona Visitors Lodge, Mona Campus, November 21, 2014.
- Ali, M. K. (2014). Alcohol overshadows but not eliminates nicotine effect in alcohol-nicotine co-treated zebrafish. UWI Faculty of Medical Sciences 23rd Annual Research Conference, Kingston, Jamaica, November 5–7, 2014.
- Barrett-Brown, P. and Ragoobirsingh, D. (2014). Evidenced Based Patients' Health Outcomes: A Focus on People with Diabetes in Western Jamaica. Ministry of Health Research Conference, November 27–28, 2014, Jamaica Conference Centre Kingston, Jamaica.
- Blair, T, Thomas, E, Singh, P. (2014). Investigation of the effect of *Cassia occidentalis* (dandelion) extracts on diuresis. *West Indian Medical Journal* Nov 2014 63(4):43 (P-17).

- Brown, P D (2014). Getting to zero: Hospital acquired infections and Ethics. Bioethics Society of the English-speaking Caribbean Workshop and Forum, Kingston, Jamaica. September 12–13, 2014. (Invited speaker)
- Brown, P D (2015). Tackling AMR at country level: good practice in the use of antimicrobials for animal health. Wilton Park meeting on Antimicrobial resistance in humans and animals in low and middle income countries: How can knowledge and action be strengthened at national level? Steyning, West Sussex, UK, March 13–15, 2015. (Invited speaker).
- Cameron, C, Jacob, AS, Thomas, EA and Levy, AS. Preliminary Investigation of the Anti-asthmatic Properties of the Aqueous Extract of *Justicia pectoralis* (Fresh Cut). *West Indian Medical Journal* 2014; 63 (Suppl 4), 38, Abstract P-3.
- Davis, R and Brown, P D (2014). Fitness cost and virulence potential of *Pseudomonas aeruginosa* from respiratory origin. UWI Faculty of Medical Sciences 23rd Annual Research Conference, Kingston, Jamaica, November 5–7, 2014.
- Foster, S, Alexander-Lindo, R, Omoruyi, F, Bustamante, J and Dilworth, L. The Effects of Inositol and Inositol Hexakisphosphate (IP6) Combination on Blood Glucose Concentration and Lipid Metabolism in Type 2 Diabetes Mellitus Sprague-Dawley Rats University Diabetes Outreach Programme (UDOP) 21st International Conference New Developments in Diabetes & Kidney Disease. March 26–28, 2015. **Prize for best poster.**
- Golding, C, Dietrich, D, James, K, and McKoy, M. (2014). Ocular conditions and co-morbid chronic diseases at an ophthalmology clinic in St Andrew, Jamaica. Presented at Faculty of Medical Sciences 23rd Annual Research Conference held November 2014 at U.W.I., Mona, Kingston, Jamaica. In: *West Indian Med J* 2014; 63 (Suppl. 4): 56(P - 49).
- Gordon, Carron (2015). Oral presentation at the Caribbean Neurological Society Conference held at Montego Bay Convention Center in January 2015.

- Knight, K, Thomas, P, McKoy, M. (2014). Investigation of the effects of *Moringa oleifera* seeds on serum cholesterol concentration in rats. Presented at Faculty of Medical Sciences 23rd Annual Research Conference held November 2014 at UWI, Mona, Kingston, Jamaica. In: *West Indian Medical Journal* 2014; 63 (Suppl. 4): 55 (P-46).
- Marshall, D. and Brown, S. (2015). The characterization of *Bacillus thuringiensis* from Jamaican soil. The 10th Faculty of science and Technology Conference. June 9–11, 2015.
- Mason, T, Verley, M, Gossell-Williams, M, Thorbourne, A, Walcott-Mitchell, A, Hoe, K, Lee, M. (2014). The evaluation of the changes in serum creatinine associated with intravenous administration of gentamicin. *West Indian Medical Journal* 2014; 63 (Suppl 4), 41, Abstract P-11.
- Moodie-Henry, B, Singh, P, Reese, P, Facey, P. (2015). A new prenylated, A-polar compound (AGSO7) mediates vasoconstriction through Alpha-1 receptors, and inhibited Norepinephrine induced contractions on Thoracic Aortic Rings. *FASEB J* 2015, 29:783.10 (Abstract)
- Morris, Michelle, Gossell-Williams, Maxine and Nwokocha, Chukwuemeka (2015). Serotonin 5-HT<sub>2C</sub> Receptor of the Rat Detrusor Muscle: Evaluation of the Atypical Antipsychotics Olanzapine and Ziprasidone on the Isolated Rat Detrusor Muscle. *FASEB J* 2015; 29, 1023.5.
- Nelson, G., McNaught-Mitchell, M., Roopchand-Martin, S., Gordon, C. (2014). The Effects of an Aerobic Exercise Programme Using Video-gaming on the Fitness Level of Cardiac Patients. Annual Conference European Society of Cardiology, Barcelona, Spain.
- Procopé, A, Campbell, J, Gossell-Williams, M, Elliott, V. (2014). An investigation into the association of age, gender, ethnicity, body mass index and concomitant medication on international normalized ratio levels in person on warfarin therapy. *West Indian Medical Journal* 2014; 63 (Suppl 4), 42, Abstract P-15

- Ragoobirsingh, D. (2014). Obesity: A Caribbean Dilemma. The Seventh Annual Bernard A. Sorhaindo Memorial Lecture, August 21, 2014, Fort View Hotel, Roseau, Dominica.
- Ragoobirsingh, D. (2015). Diabetes and Folklore – The Jamaican Experience, Apostolic Church Headquarters, July 19, 2014, Slipe Road, Kingston, Jamaica.
- Reboe M, Levy A, Rathinavelu A, Sivanesan D. Y15 Enhances the Cytotoxic Profile of Cisplatin, Paclitaxel and Vitamin E in Platinum Resistant Ovarian Cancer Cells. *The FASEB Journal* 2015; vol. 29 no. 1 Supplement 785.1
- Reboe M, Waite T, Levy A, Rathinavelu A, Sivanesan D. Y15 and pyridoxal 5' phosphate enhances the cytotoxic profile of cisplatin and paclitaxel in platinum resistant ovarian cancer cells. In: Proceedings of the 106th Annual Meeting of the American Association for Cancer Research 2015; April 18–22; Philadelphia, PA. Philadelphia (PA): AACR.
- Roopchand-Martin, S., McLean, R., Gordon, C., Nelson, G. (2014) Wii Balance Training for Community Dwelling Elderly Persons. *American Congress for Rehabilitation Medicine*.
- Shetty, K, Strayer, D S, Louboutin, J P. (2014). Migration of bone marrow-derived cells to the vasculature of organs is enhanced by moderate intake of alcohol *West Indian Medical Journal*, 63 (Suppl. 4):31, 2014.
- Smith, R and Singh, P. (2014). The effect of a combination of *Allium sativum* and *Solanum lycopersicum* on a precancerous model of colorectal cancer. *West Indian Medical Journal* 2014 63(4):47 (P-27).
- Stephenson, S, Brown, P D (2014). Distribution of uropathogenic virulence factors among antimicrobial-resistant and susceptible *Escherichia coli* implicated in urinary tract infections. UWI Faculty of Medical Sciences 23rd Annual Research Conference, Kingston, Jamaica, November 5–7, 2014.

- Thompson, T and Brown, P D (2014). Lack of association of quorum sensing genes with pathogenicity in *Staphylococcus aureus* using a *Caenorhabditis elegans* model. UWI Faculty of Medical Sciences 23rd Annual Research Conference, Kingston, Jamaica, November 5–7, 2014.
- Waite T, Levy AS, et al. Saquinavir enhances the cytotoxic profile of cisplatin in platinum resistant ovarian cancer cells. *West Indian Medical Journal* 2014; 63 (Suppl 4 ): 56
- Waite T, Reboe M, Levy A, Rathinavelu A, Sivanesan D (2015). A comparative efficacy study of SAQUINAVIR in combination with cisplatin or paclitaxel in platinum resistant ovarian cancer cell line. In: Proceedings of the 106th Annual Meeting of the American Association for Cancer Research 2015; Apr 18–22; Philadelphia, PA. Philadelphia (PA): AACR; 2015.
- Waite T, Reboe M, Levy A, Rathinavelu A, Sivanesan D. Vitamin B6 and focal adhesion kinase inhibitor Y15 enhances the cytotoxic effects of cisplatin + paclitaxel in platinum resistant ovarian cancer cells. *West Indian Medical Journal* 2014 63 (Suppl 4 ): 59
- Young, L., Smith, B, and Webber-Waugh, A (2014). Supplementation with virgin coconut oil improves cognition in ageing female rats. Poster (P-6) presented at the 23rd Annual Research Conference and Workshop on Evidence-Based Practice – Bridging the Gap Between the Bench, Bed and Beyond, November 2–7, 2014.
- Knight, K, Thomas, P, McKoy, M. *Moringa oleifera* seeds increase serum cholesterol concentration in rats. Presented at 60th Annual CARPHA Health Research Conference held June 25–27, 2015 at St. George’s University, Grenada.
- Davis, R and Brown, P. D. (2014). Fitness cost and virulence potential of *Pseudomonas aeruginosa* from respiratory origin. UWI Faculty of Medical Sciences 23rd Annual Research Conference, Kingston, Jamaica, November 5–7, 2014. *West Indian Medical Journal*. 63 (Suppl. 4): 51 (Abstract).
- Bowers, A, Duncan, W, Pepple, D, Knight-Madden, J (2014). Red



blood cell deformability is reduced in homozygous sickle cell disease patients with chronic leg ulcers. *West Indian Medical Journal* 63 (Suppl 4): 36.

- Laws, D, Strayer, D S, Louboutin, J P (2014). Bone marrow-derived cells participate in neurogenesis in the adult brain. *West Indian Medical Journal*, 63 (Suppl. 4):52, 2014.
- McCalla, Garsha (2014). Ethical issues in animal research. UWI Ethics Symposium. Grey matters in clinical ethics: Managing risks in health care practice and research. Faculty of Medical Sciences Teaching and Research Complex, University of the West Indies, Mona, Kingston, November 2, 2014.
- Stephenson, S and Brown, P. D. (2014). Distribution of uropathogenic virulence factors among antimicrobial-resistant and susceptible *Escherichia coli* implicated in urinary tract infections. UWI Faculty of Medical Sciences 23rd Annual Research Conference, Kingston, Jamaica, November 5–7, 2014. *West Indian Medical Journal*. 63 (Suppl. 4): 30 (Abstract).
- Thompson, T and Brown, P. D. (2014). Lack of association of quorum sensing genes with pathogenicity in *Staphylococcus aureus* using a *Caenorhabditis elegans* model. UWI Faculty of Medical Sciences 23rd Annual Research Conference, Kingston, Jamaica, November 5–7, 2014. *West Indian Medical Journal*. 63 (Suppl.4): 31 (Abstract)

#### CONFERENCES ATTENDED

- Dr. Paul Brown attended the 23rd annual FMS Research Conference and Workshop on Evidence-based practice – Bridging the Gap between the Bench, Bed and Beyond held November 2–7, 2014 (Acted as Chair for the Conference).
- Dr. Paul Brown attended the American Society for Microbiology General Meeting in New Orleans, Louisiana, USA, held May 30–June 2, 2015

- Dr. Lauriann Young-Martin attended the Research Methods Workshop for Academics covering New Methods of Analysis and Converting Research to Publications, held on July 14, 2014 and organized by the School of Graduate Studies & Research, UWI, Mona.
- Dr. Lauriann Young-Martin attended the 23rd annual FMS Research Conference and Workshop on Evidence-based practice – Bridging the Gap between the Bench, Bed and Beyond held November 2–7, 2014.
- Dr. Lauriann Young-Martin attended the Research Methods Workshop for Academics covering New Methods of Analysis and Converting Research to Publications, held on July 14, 2015 and organized by the Mona School of Graduate Studies & Research, Mona Office of Research & Innovation and Open Campus.
- Drs. Sophie Turfus and Rachael Irving attended the “Innovation and Implementation in Anti-doping” Partnership for Clean Competition (PCC) Conference. (21st-22nd April 2015, Major League Baseball Conference Center, New York, USA).
- Dr. Sharmella Roopchand-Martin presented at Guyanese Physiotherapy Association Dinner. Topic – Introduction to Vestibular Rehabilitation 2014 (October).
- Dr. Sharmella Roopchand-Martin was invited to present to the rehabilitation staff in Guyana on Video gaming applications in rehabilitation 2014 (December).
- Mrs. Carole Lindsay presented at the 3rd Biennial National Conference on Science & Technology Scientific Research Council. Topic – Chemical Profiling of the Jamaican Marijuana (November 2014)
- Mrs. Carole Lindsay attended the 67th Annual Scientific Meeting of the American Academy of Forensic Sciences. Orlando Florida February 16–21, 2015.
- Dr. Martin attended the American College of Rehabilitation Medicine in Toronto, Canada in October where she did a poster presentation.
- Ms. Nelson attended the European Society of Cardiology Conference held in Barcelona, August 2014, where she did a poster presentation

- Dr Pearson visited the University of Nairobi and met the Vice-Chancellor, Professor Peter M.F. Mbithi, Deputy Vice-Chancellor of Academic Affairs, Professor Henry W. Mutoro, Dr. Geoffrey G.M. Maloiy, Professor of Animal Physiology, and the staff of the Department of Biochemistry. Previous links with the University of Nairobi include a former member of academic staff of Biochemistry at Mona who had moved from Nairobi: Dr. Bupinder “Bupi” Singh Bharaj (now in Toronto) and Dr. Michael Rowe who was mentored by Professor Maloiy while researching animal gait physiology in Kenya. It was agreed that a Memorandum of Understanding would be potentially acceptable to bind the two universities together.
- Young-Martin, L. (2014). Drug Use in Jamaica: Addiction, Drug Craving and Treatment was presented at the Latin American Research Network in Drug Addiction (LARNEDA) III International Symposium on Motivated Behaviors and Neuroplasticity: Role in Addiction, held on November 20–22, 2014 at El Capitolio, San Juan, Puerto Rico.

#### BOOKS AND BOOK CHAPTERS

- Cawich SO, Gardner, Naraynsingh V, Dan D, Shetty R. Book Chapter: Surgical Anatomy of the Thyroid and Parathyroid Glands: A Review of Anatomic Variants and Clinical Correlates. Published in *Thyroidectomy*. Chapter 6; Pages 91-119. Editor: K Rodolfo. Nova Science Publishers; 2014. ISBN: 978-1-63321-440-8.
- Dennie, D., Louboutin, J.P., Strayer, D.S.: Migration and Differentiation of Bone Marrow Progenitor Cells in the Adult Brain. In A. Costa, E. Villalba (Eds.). *Horizons in Neuroscience Research*, vol. 22. Nova Science Publishers, Hauppauge, NY, 2015.
- Edwards, T.N., Gardner M. T., Louboutin, J.P.: Neuroanatomy of Risk-Taking. In C.E. Nathanson (Ed.). *Psychology of Risk Taking: New Research*. Nova Science Publishers, Hauppauge, NY, 2015. Hardcover. pp. 91–138.
- Edwards, T.N., Louboutin, J.P.: Role of Microglia in Neurological

Manifestations of HIV-1 and HTLV-1. In E.R. Giffard (Ed.). *Microglia: Physiology, Regulation and Health Implications*. pp. 217-240. Nova Science Publishers, Hauppauge, NY, 2015. Hardcover and ebook. pp. 217-240.

- Louboutin, J.P. and Strayer, D.S. (2015). Modulation of microglial reaction in brain injury by novel therapeutic tools based on gene therapy approaches. In Z. Liang and B. Zhang (Eds.): *Medicine Research Summaries*. Vol.7 . Nova Science Publishers, Hauppauge, NY, 2015. Hardcover and ebook. Chapter 102.
- Louboutin, J.P. (2015). Immunocytochemical assessment of blood-brain barrier structure, function and damage. In Merighi, A., Lossi, L. (Eds): *Immunocytochemistry and related techniques. Neuromethods Series* (Walz, W., Ed.). Humana Press, Springer Verlag, New York, NY, 2015. Chapter 13. pp. 225–253.
- Marusich, E., Louboutin, J.P., Strayer, D.S.: Expression of GluR6, a Kainate Receptor, in Human Lymphocytes. In E. Leone (Ed.): *Kainic acid: neurotoxic properties, biological sources and clinical applications*. Nova Science Publishers, Hauppauge, NY, 2014. Hardcover and ebook. pp. 29-38.
- Ragoobirsingh, D. WHO Guideline Development Group Nutrition Action 2013-14 et al., *WHO Guideline: Delayed umbilical cord clamping improved maternal and infant health and nutrition outcomes*. WHO Press, Geneva: World Health Organization, 2014.
- Ragoobirsingh, D. WHO Guideline Development Group Nutrition Action 2013-14 et al, *WHO Guideline: Fortification of food-grade salt with iodine for the prevention and control of iodine deficiency disorders*. WHO Press, Geneva: World Health Organization, 2014.
- Cawich SO, Gardner, Naraynsingh V, Dan D, Shetty, R. Book Chapter: Surgical Anatomy of the Thyroid and Parathyroid Glands: A Review of Anatomic Variants and Clinical Correlates. Published in *Thyroidectomy*. Chapter 6; Pages 91-119. Editor: K Rodolfo. Nova Science Publishers; 2014. ISBN: 978-1-63321-440-8.
- Davidson, T, Boyne, M, Ragoobirsingh, D et al. Guidelines for the Management of Diabetes -Ministry of Health, Jamaica, (In Press.)

- Louboutin, J.P., Reyes, B.A.S., Agrawal, L., van Bockstaele, E.J., Strayer, D.S.: Assessment of Apoptosis and Neuronal Loss in Animal Models of HIV-1-Associated Neurocognitive Disorder. In E.J. van Bockstaele (Ed.). *Transmission Electron Microscopy Methods for Understanding the Brain*. Humana Press, Springer Verlag, New York, NY, 2015 (In press).
- Morris, A, Ramdath, D, Ragoobirsingh, D et al. *Recommended Dietary Allowances for the Population in the English Speaking Caribbean*, (In Press.)

#### TECHNICAL REPORTS

- Young-Martin, L.E. et al. (2014) Report on a Full Accreditation Survey of the American University of Antigua College of Medicine (AUA) prepared for CAAM-HP, April 6–11, 2014, p. 1–85.
- Irving, R. (2014). Anti-doping Changing Dynamics. Report on the 2014 changes in the World Anti-doping code (WAD-C) and the impact on anti-doping regulatory agencies in the Caribbean prepared for UWI Sport and Education Centre and the Spectator Magazine, St Augustine, Trinidad.

#### ARTICLES IN PEER-REVIEWED JOURNALS

- Amarakoon, I I, Ramkissoon, A, Pierre, R, Eysaguirre, L M, Carr, J K, Blattner, W A, Roye, M E. HIV-1 Antiretroviral Drug Resistance in Pregnant Women in Jamaica: A Preliminary Report. *West Indian Medical Journal*. August, 2014. DOI: 10.7727/wimj.2014.016.
- Barrett, S, Huffman, F, Johnson, P, Campa, A, Magnus, M and Ragoobirsingh, D (2014). Physical Activity and Metabolic Risk Factors among Jamaican Adolescents. *Austin Journal of Nutrition and Food Sciences* S8:003. doi:10.4172/2155-9600. S8-003, 1–7.
- Bell, P., Hinderer, C., Louboutin, JP., Yu, H., Grant, R., Bote, E., Wilson, JM.: Motor neuron transduction after intracisternal delivery of AAV9 in a Cynomolgus macaque. *Human Gene Therapy Methods*; 26: 43-44, 2015.

- Bourne P, Hudson Davis A, Sharpe-Pryce C, Francis C, Solan I, Quarrie C, Pabarue M, Nelson S, Irving R. The effects of homicide and economics on human and social biology. A mental health challenge for a society. *Intern. J of Emergency Mental Health and Human resilience* 2015; 17(2): 495–501.
- Bourne, P, Hudson-Davis, Sharpe-Pryce C, Lawes D, Francis C, Solan I, Irving R, Watson-Coleman O, Nelson S. The Psychology of Homicide, Divorce and Issues in Marriages: Mental Health and Family Life Matters. *Intern. J of Emergency Mental Health and Human resilience* 2015; 17(2):389-405.
- Burnett, A, McKoy, M L, Singh, P (2014). Investigation of the blood-glucose lowering potential of the Jamaican Momordica. *West Indian Medical Journal* DOI: 10.7727/wimj.2014.093 [EPub: 29 Apr, 2015]
- Cameron C, Jacob AS, Thomas EA, Levy AS. Preliminary Investigations of the Anti-asthmatic Properties of the Aqueous Extract of *Justicia pectoralis* (Fresh cut). *West Indian Medical Journal* DOI: 10.7727/wimj.2014.149. [ Epub 04 May, 2015]
- Campbell JE, Gossell-Williams M, Lee MG. 2014. A Review of Pharmacovigilance. *West Indian Medical Journal* 63 (7): 771-4. DOI: 10.7727/wimj.2013.251.
- Cawich SO, Gardner MT, Shetty R, Naraynsingh V. Venous drainage Patterns of the Liver: Is it Different in the Caribbean Population? *Caribbean Medical journal.* 2015;S1:32
- Di Rago M, Saar E, Rodda LN, Turfus S, Kotsos A, Gerostamoulos D and Drummer OH. 2014. Fast targeted screening of 132 acidic and neutral drugs and poisons in whole blood using LC-MS/MS. *Forensic Science International* 243 (C): 35–43
- Edwards, T.N., Louboutin, J.P. (2014). Hematopoietic stem cell therapy and novel approaches for mucopolysaccharidoses. *Journal of Blood Disorders* 1:6, 2014.
- Edwards, T.N., Louboutin, J.P. (2014). Pathophysiology of Tropical Spastic Paraparesis/HTLV-1-Associated Myelopathy: role of animal

models. *International Journal of Neural Science and Brain Research*; 1:3–5, 2014.

- Facey A, Dilworth L, Irving R. Adipocytic contribution to lactate production in male athletes of West African descent. *New Studies in Athletics* 2014; 29(3): 57–64.
- Guermo E, Cawich SO, Gardner MT, Shetty R, Naraysingh V. Hepatic Surface Anatomy: Variations in the Caribbean Population. *Caribbean Medical journal*. 2015;S1:2-23.
- Hinderer, C., Bell, P., Gurda, B.L., Wang, Q., Louboutin, J.P., Zhu, Y., Bagel, J., O'Donnell, P., Sikora, T., Ruane, T., Wang, P., Haskins, M.E., Wilson, J.M.: Liver-directed gene therapy corrects cardiovascular lesions in feline mucopolysaccharidosis type I. *Proceedings of Nat. Academy of Sciences U S A* 111:14894-14899, 2014. doi: 10.1073/pnas. 1413645111.
- Hinderer, C., Bell, P., Gurda, B.L., Wang, Q., Louboutin, J.P., Bagel, J., O'Donnell, P., Sikora, T., Ruane, T., Wang, P., Haskins, M.E., Wilson, J.M.: Intrathecal gene therapy corrects CNS pathology in a feline model of mucopolysaccharidosis I. *Molecular Therapy*, 2014. doi:10.1038/mt.2014.135.
- Hinderer, C., Bell, P., Louboutin, J.P., Zhu, Y., Yu, H., Lin, G., Choa, R., Gurda, B., Bagel, J., O'Donnell, P., Sikora, T., Ruane, T., Wang, P., Tarantal, A., Casal, M., Haskins, M., Wilson, J.M.: Neonatal systemic AAV induces tolerance to CNS gene therapy in MPS I dogs and nonhuman primates. *Molecular Therapy*; 23:1298-307, 2015.
- Hinderer, C., Bell, P., Vite, C., Louboutin, J.P., Grant, R., Bote, E., Yu, H., Pukenas, B., Hurst, R., Wilson, J.M.: Widespread and safe gene transfer in the Central Nervous System of Cynomolgus Macaques following delivery of AAV9 into the cisterna magna. *Molecular Therapy- Methods and Clinical Development* 1: 14051, 2014. doi:10.1038/mtm.2014.51.
- Irving R. HbA1c levels in families of ethnic minorities with early onset type 2 diabetes: Glycemic Control and Ethnicity. *British*

*Medical journal of Medicine and Medical research: DOI.10.9734/BJMMR2015/18044.*

- Jabbari, S, Ali M.K., Emadi S (2014) Electrophoretic analysis of phospho and non-phospho protein mixtures extracted from zebrafish whole brain samples by immobilized metal affinity electrophoresis. *Journal Iranian Chemical Society*. 11:1165–1172
- Langman, V., Ellifrit, N., Sime, D., Rowe, M. and Hogue, A. (2015). Testing refrigeration trucks for the emergency evacuation of companion animals. *Journal of Applied Animal Welfare Science*. DOI: 10.1080/10888705.2015.1042153
- Lester, D.A, Richard, A.A., Younger-Coleman, N.O., Pepple, D.J. (2014). Cilostazol and blood viscoelasticity in homozygous sickle cell disease. *British Journal of Biomedical Sciences*. 71(4): 172–175. Impact factor 0.92
- Louboutin, J.P. HTLV-1-Associated Myelopathy/Tropical Spastic Paraparesis: clinical presentation and pathophysiology. *World Journal of Neurology*, 5:68-73, 2015.
- Louboutin, J.P., Agrawal, L., Reyes, B.A.S., van Bockstaele, E.J., Strayer, D.S.: Oxidative stress is associated with neuroinflammation in animal models of HIV-1 Tat neurotoxicity. *Antioxidants* 3: 414–438, 2014. doi:10.3390/antiox3020414.
- Louboutin, J.P., Strayer, D.S: Role of oxidative stress in HIV-1-Associated Neurocognitive Disorder and protection by gene delivery of antioxidant enzymes. *Antioxidants* 3:770–797, 2014. doi:10.3390/antiox3040770.
- McCalla, G, Parshad, O, Brown, P D, Gardner, M T (2015). Beta-cell regenerating potential of *Azadirachta indica* (Neem) extract in diabetic rats. *West Indian Med J*. DOI: <http://dx.doi.org/10.7727/wimj.2014.224>.
- McKoy, M, Allen, K, Richards, A & Pepple, D: The effect of cilostazol on the p50 of the oxygen-hemoglobin dissociation curve. *International Journal of Angiology* 2015; 24: 67–70.



- McKoy, M, Grant, K, Asemota, H, Simon, O & Omoruyi, F. Renal and hepatic function in hypercholesterolemic rats fed Jamaican bitter yam (*Dioscorea polygonoides*). *Journal of Dietary Supplements*, 2015, 12(2):173–83.
- McKoy, M, Thomas, P, Asemota, H, Omoruyi, F and Simon, O. Effects of Jamaican bitter yam (*Dioscorea polygonoides*) and diosgenin on blood and fecal cholesterol in rats. *Journal of Medicinal Food* 2014; 17(11): 1183-1188.
- McKoy, M., Allen, K., Richards, A., Pepple, D. (2015). The effect of cilostazol on the p50 of the oxygen-hemoglobin dissociation curve. *International Journal of Angiology*. 24: 67–70.
- Moses, K, Pepple, D and Singh, P (2015). The protective effect of epigallocatechin-3-gallate on paraquat induced haemolysis. *West Indian Medical Journal* DOI: 10.7727/wimj.2014.067 e-Published: 18 May, 2015.
- Pepple, D.J. (2014). Comparison of outcome of students' performance using the standard setting method with the absolute grading method in preclinical examination. *Nigerian Journal of Physiological Sciences* 29: 103–106.
- Richards, P.D., Richards, A.A., McKoy, M.G., Pepple, D.J. (2014). The in vitro effects of sulfadoxine/pyrimethamine and artemether/lumefantrine on the viscoelasticity of erythrocyte membrane of healthy females. *Clinical Hemorheology and Microcirculation*. 58: 507–514.
- Roopchand-Martin, S., Creary-Yan, S. (2014). Level of caregiver burden in Jamaican stroke caregivers and relationship between selected socio-demographic variables. *West Indian Medical Journal*. 63(6) October.
- Roopchand-Martin, S., McLean, R., Gordon, C., Nelson, G. (2015). Balance training with Wii Fit plus for community-dwelling persons sixty years and older. *Games for Health*, 4(3): 247–252. doi:10.1089/g4h.2014.0070.

- Roopchand-Martin, S., Nelson, G., Gordon, C., Yee Sing, S. (2015). A pilot study using the XBOX Kinect for exercise conditioning in sedentary female university students. *Technology and Healthcare*. February 6, DOI: 10.3233/THC-150899 Epub ahead of print.
- Thomas, P, Gossell-Williams, M, Sewell, C A, Abel, W D, McGrowder, D, Martin, J (2015). The Impact of Cannabis Use on the Dosage of Antipsychotic Drugs in Patients Admitted on the Psychiatric Ward at the University Hospital of the West Indies. *West Indian Medical Journal Open* 2 (1): 23–27. DOI: 10.7727/wijmopen.2014.259.
- Thompson, T, Brown, P D (2014). Comparison of antimicrobial resistance, virulence gene profiles and pathogenicity of methicillin resistant and methicillin susceptible *Staphylococcus aureus* using a *Caenorhabditis elegans* infection model. *Pathog Glob Health* 108(6): 283–291.
- Xuereb, G C, Johnson, P, Ragoobirsingh, D and Morrison, E (2014). Impact of Programme to Improve Quality of Diabetes Care in the Caribbean. *Journal of Research in Diabetes* Volume 2014 (2014), Article ID 149397, DOI: 10.5171/2014, 1–13.
- Young, L., Smith, B, and Webber-Waugh, A (2014). Supplementation with virgin coconut oil improves cognition in ageing female rats. *West Indian Medical Journal* 63(Suppl. 4): 39

## INCOME GENERATION/FUNDING

### Research Grants:

#### Dr. Paul Brown

- Campus Research and Publication Fund (CRPF), UWI, Mona  
June 2015

Role: PI (Awarded to Terissa Thompson) Virulence attenuation in *Staphylococcus aureus* (MRSA) using siRNAs.(Travel grant for research visit to University of Waterloo)

US\$2000 + J\$81000 for airfare

- Principal's Special New Initiative Award, UWI, Mona July 2015  
Role: PI Investigation of Epigenetic Regulation of Antimicrobial Resistance and Virulence Expression in uropathogenic *Escherichia coli* – JM\$500,000 (US\$4348)
- CRPF, UWI, Mona May 2015  
Role: PI (Awarded to Tricia Fraser) Environmental regulation of virulence-associated genes in pathogenic *Leptospira* – US\$2862
- CRPF, UWI, Mona, January 2015  
Role: PI (Awarded to Garth Dawkins) Microbial Pathogen Risk Analysis in the Jamaican meat and poultry industries – JM\$175,000 (US\$1522)

**Dr. Lisa Lindo**

- The University of the West Indies Research Fellowship  
Research and Development of Hypoglycaemic and Hypotensive Nutraceuticals and Diabetic Condiments from Compounds Isolated from *Eucalyptus camaldulensis*. – J\$ 2.6 M (approx. US \$23,000.00)
- Postgraduate Research Fund:  
The Effects of Inositol, Inositol Hexakisphosphate (IP6) and its Combination on Type 2 Diabetes Mellitus Sprague-Dawley Rats. – US\$6,000.00
- Investigating the Effects of *Phaseolus vulgaris* L (String Beans Pod) on Blood Glucose Concentration in Normoglycaemic and Streptozotocin-Induced Type 2 Diabetic Sprague-Dawley Rats. – US\$1,668.00
- Investigating the Effects of *Ruellia tuberosa* (Duppy Gun) on the Blood Glucose Concentration and Haemodynamic parameters in Normoglycaemic and Streptozotocin-Induced Diabetic (Type 2) Sprague-Dawley Rats – US\$3,000.00

**Dr. Lauriann Young-Martin**

- Awarded a US\$1200 grant through the International Brain Research Organization (IBRO) & the Women in World Neuroscience (WWN) to attend the 22nd Puerto Rico Neuroscience Conference held on December 7, 2013 at the Pontificia Católica.
- Received an IBRO grant of US\$1200 to attend and present a paper at the III International Symposium on Motivated Behaviors and Neuroplasticity: Role in Addiction, held on November 20–22, 2014 at El Capitolio, San Juan, Puerto Rico.
- Received a Principal's Special Projects grant of \$664,234 in May 2015 to purchase chemicals and equipment for her graduate student, Ms. Monique McLeary, to initiate her graduate MPhil/PhD research project.

**Dr. Sherline Brown**

- Awarded a grant of \$JA 1.5 million from the Principal's UWI/ NIF. Antibiotic Resistance-Mediated Isolation of Scaffold-Specific Antimicrobial Producers in Jamaican Soil.

**Dr. Jean-Pierre Louboutin**

- The University of the West Indies: New Initiative Program 2014: “Oxidative stress and inflammatory processes in HTLV-1-associated myelopathy and related myositis: clinicopathological study in Jamaica, development of animal models and therapeutic approaches”.  
J\$1,500,000.

**Physical Therapy Clinic**

- Net income August 1 2014 to March 2015 = \$1,455,894.74

**Miss Peta-Gaye Thomas**

- US\$6,000.00 from the Principal to pursue training in Sleep research at Langone Sleep Centre, New York University.

**PUBLIC SERVICE**

**Dr. Andrew G. M. Pearson**

- Continues to serve as Chairman, International Standards Organisation Technical Committee 93 (Starch & its derivatives).

**Professor Wayne McLaughlin**

- Board member, Coconut Industry Board
- Board member, Seprod Limited

**Dr. C. R. Nwokocha**

- Member of the Organizing Committee of the FMSARC

**Dr. Paul Brown**

- Ambassador to Jamaica, American Society for Microbiology (ASM).
- President, WIGUT (Jamaica).
- Adjudicator, American International School of Kingston (AISK) Middle School Science Fair.5
- Member, Research Subcommittee, International Society of Infectious Diseases. Terms: Oversight of ISID's research grants & awards and fellowship programs.
- Member, American Society for Microbiology (ASM) review committee for the Makela Cassell Travel Award sponsored by FEMS.
- Member, ASM Membership Board Task Force. Terms: Review of tiered membership system.
- Chair, American Society for Microbiology (ASM) Leadership Circle. Terms: Oversight of ASM's strategic direction in terms of communication between members and Ambassadors, international grants and fellowships, and Ambassador orientation.
- External Examiner, Microbiology programme at University of Technology.

**Dr. Kerith Golden**

- Vice President, Stock Farm Road Citizens Association, Golden Spring, St Andrew.
- Member of the Board (Vice President) for Jamaica Association for Children with Learning Disabilities. 7 Leinster Road, Kingston 5.

**Dr. Rachael Irving**

- Committee Member: National Sports Museum chaired by Honourable Portia Simpson-Miller, Prime Minister of Jamaica

**Prof. Dalip Ragoobirsingh**

- Diabetes Association of Jamaica (DAJ) – Consultant Diabetes Educator
- The University Diabetes Outreach Programme (UDOP) – Director Research
- University Hospital of the West Indies (UHWI) – Consultant Diabetes Educator
- Ministry of Health, Jamaica (MOH) – Panel member on Technical Advisory Committee, The Chronic Diseases and Injuries Unit, updating the National Guidelines for the management of diabetes.
- Pan American Health Organization Special Technical Committee to revise and update the nutrient requirements and recommended dietary allowances (RDAs) for the populations in the English speaking Caribbean.
- World Health Organization Guideline Development Group

**Dr. Lisa Lindo**

- Fulbright Alumni Association
- Chair: American Friends of Jamaica (AFJ) / Sue Cobb Lecture Series
- Member of Society for Scientific Advancement (SoSA)
- Member of the Planning Committee of the 10th Faculty Conference (2015), Faculty of Science & Technology, UWI, Mona. Theme: Science Technology Engineering Mathematics: The Engine of Growth

## Department of Basic Medical Sciences

- Member of the Planning Committee of Faculty of Medical Sciences Annual Research Conference (2015)
- UWI, Mona Scholarship Interviewing Panel, Chair (2006- present), Office of Student Financing

### **Dr. Lauriann Young-Martin**

- Lector and Member of the Liturgical Committee of Holy Cross Roman Catholic Church
- Member of the Fund-raising Committee of Holy Cross Church
- Member to the Women in World Neuroscience (WWN)
- Chaired a session at the 23rd Annual FMS Research conference
- Invited guest on News Talk 93 hosted by Prof. Carolyn Cooper to discuss the role of the UWI Medicinal Cannabis Research group

### **Dr. Icolyn Amarakoon**

- Chair, Technical Service Advisory Committee, Basic Medical Sciences
- Member, Working Group Hazardous Waste Management Project
- Mentor, Future Leaders of Jamaica
- Member, Society for Scientific Advancement (SoSA)
- Member, Fulbright Alumni Association

### **Dr. Sharmella Roopchand-Martin**

- Member: Jamaica Physiotherapy Association
- One day outreach clinic for children with neurological disorders done in collaboration with students from Nova Southeastern University.

### **Dr. Jean-Pierre Louboutin**

- Member of Editorial Boards of 27 journals
- Reviewer of 60 peer-reviewed journals
- Reviewer of grants for Scientific Council of Romania (Young Investigators Awards in 2015)

**Dr Audrey Jacob**

- Participated in the Read across Jamaica Day events at Immaculate Conception Preparatory School.

**Dr. Carron Gordon**

- Member: Jamaica Physiotherapy Association
- FMS Representative on the Council for Professions Supplementary to Medicine, Ministry of Health, Jamaica

**Ms. Gail Nelson**

- Member: Jamaica Association of Sports Medicine
- Members: Jamaica Physiotherapy Association
- Associate Member: Caribbean Cardiac Society

**Dr. Sonja Williams**

- Member: Jamaica Physiotherapy Association

**Ms. Gillian Hudson**

- Member: Jamaica Physiotherapy Association
- Consie Walters Cancer Care Center Executive Member; Friends of Sir John Golding Rehabilitation Center

**UNDERGRADUATE STUDENTS REGISTRATION**

**DDS**

Year 1 = 25

Year 2 = 12

Year 3 = 13

**MBBS**

Year 1 = 334

Year 2 = 365

Year 3 = 322



**BB Med Sci.**

Year 1 = 56

Year 2 = 69

Year 3 = 60

**Physical Therapy**

Year 1 = 75

Year 2 = 60

Year 3 = 65

36 students graduated in October 2014

**FST (Registrations in BMS courses)**

Year 1 = 1095

Year 2 = 305

Year 3 = 407

**POST GRADUATE STUDENTS REGISTRATION**

**Taught Masters**

MSc Forensic Science = 18

MSc Applied Pharmacology = 6

MSc Physical Therapy = 3 students enrolled for 2014-2015 and 3 graduated in October 2014

**Research**

MPhil = 27

PhD = 9

### **POSTGRADUATE DEGREES AWARDED**

- Rochell Davis, MPhil (Molecular Biology), UWI, Mona, 2014. Thesis title: Antibiotic resistance in respiratory pathogens and associated fitness burden.
- Nicolía Nelson, MPhil (Biochemistry). The isolation and identification of the active Hypoglycaemic Principle in *Sechiumedule* (Cho Cho) leaves.
- Monique Roboe, MPhil (Pharmacology). The effects of Vitamins E, B6 and FAK inhibitor Y15 in combination with Paclitaxel and Cisplatin in the treatment of Ovarian cancer cells.

### **VISITORS TO THE DEPARTMENT**

Dr. William Cole, Professor in Physiology and Pharmacology at the University of Calgary, Canada, spent the month of January 2015 as a visiting professor in Physiology to conduct collaborative work with Dr. C. R. Nwokocha. This collaboration has further facilitated Ms. Garsha McCalla, Assistant Lecturer in Physiology, to conduct part of her graduate research work in Professor's Cole's research laboratory at the University of Calgary during the summer.

Dr. Patricia Smith-Garry, the External Examiner, for the Final Professional Examination held in July 2015 visited the department from the University of East London, UK

Staff and students of the physical therapy programme at Nova Southeastern University were hosted for one day.

### **CONDOLENCES**

Dr. Hugh McLean, Senior Lecturer, Pharmacology died on July 18, 2015.

Basic medical sciences. This article is about the science of healing. For medicaments, see medication. For other uses, see [Medicine \(disambiguation\)](#).<sup>^</sup> Medicine is the science and practice of establishing the diagnosis, prognosis, treatment, and prevention of disease. Medicine encompasses a variety of health care practices evolved to maintain and restore health by the prevention and treatment of illness.<sup>^</sup> The personnel that work in these medical laboratory departments are technically trained staff who do not hold medical degrees, but who usually hold an undergraduate medical technology degree, who actually perform the tests, assays, and procedures needed for providing the specific services.