



DEPARTMENT OF PATHOLOGY

Dr. Tracey Gibson Head Of Department

MBBS, DM (Pathology), MSc Medical Genetics

OVERVIEW

Three unique medical specialties - Anatomical Pathology, Chemical Pathology and Haematology/ Oncology – are consolidated to form the Department of Pathology at The University of the West Indies, Mona, with each of these specialties forming its own sub-department. Together, the sub-departments offer a variety of clinical and laboratory services and undertake an extensive range of teaching, learning, clinical service and research activities, through the various laboratories and units that they operate. Although the staff attrition and infrastructural issues experienced in the previous academic year continued into the 2021 – 2022 academic year, the department managed to successfully engage undergraduate and post-graduate students in high-quality teaching and learning activities, participate in research projects, including multinational collaborations, continue publishing research, and deliver presentations at scientific meetings and public education lectures.

ACCESS

STUDENTS

Undergraduate Programmes

As a result of the continued COVID-19 pandemic, undergraduate teaching and learning activities for MBBS (Years 1 – 3), DDS and BBMedSci students continued to be conducted online. The MBBS Year 4 Clerkship, administered jointly with the Department of Microbiology, also continued as an online activity, except for the attendance of students at autopsy examinations. However, in keeping with the University's return to face-to-face

teaching in the summer of 2022, the department resumed face-to-face teaching for the MBBS Year 4 Clerkship, commencing on July 25, 2022. As this will enhance the exposure of students to practical aspects of Pathology, it should improve their clinical application of the theoretical knowledge gained in the earlier years of the MBBS programme.

Graduate Programmes

Doctor of Medicine (DM) programmes -The recent acquisition of new digital microscope photography equipment will improve the quality of teaching/learning.

MPhil/PhD Chemical Pathology

Two students continued in the MPhil/PhD programme in Chemical Pathology in the 2021/2022 academic year, and both have commenced their research projects.

PUBLICATION

In keeping with traditional protocols, the department continued to utilize its various units and laboratories to generate research activities, some of which have been translated into publications. The 2021/2022 academic year saw a decline in publications compared to the previous academic year, but several activities have been either planned or established, to improve the quality and quantity of research. These include upcoming participation of junior staff members in the mentorship programme of the Faculty of Medical Sciences, interdepartmental and inter-institutional collaborations, and the increased engagement of technological staff members and graduate students in research activities, as outlined below:

Jamaica Cancer Registry (JCR)

A collaborative opportunity that will allow the commencement of cancer mortality (rather than just cancer incidence) registration, and therefore provide more data for analysis and publication, has been explored and will hopefully be fully established in 2023/2024.

Sick Kids-Caribbean Initiative (SCI)

The registration of childhood cancer cases in the SCI hospital-based paediatric cancer registry housed within the Department of Pathology, continued in the 2021/2022 academic year. Members of staff are involved in the preparation of collaborative research papers.

National Institutes of Health (NIH) collaboration

The NIH-funded Human T-cell Lymphotropic Virus, Type 1 (HTLV-I) project has, over the years of its existence, generated numerous research publications, several of which have formed the basis for the institution of health policies. Although this project officially ended in October 2021, after 38 years, the data gathered will continue to be analysed, and the results published.

Collaborative research projects with Fox Chase Cancer Center, Philadelphia, USA. Members of the academic staff in the Department of Pathology continued to work with the Fox Chase Cancer Center in undertaking the following research projects, which have been approved by the Mona Campus Research Ethics Committee (MCREC): "The Jamaica Sherlock Lung Cancer Study: Tracing lung cancer mutational processes in never smokers" "Impact of African ancestry on DNA polymerase beta (POLB) protein expression and survival in patients with oral cavity and laryngeal squamous cell carcinoma" Establishment of a collaborative research group involving Pathology and the Caribbean Institute for Health Research (CAIHR). Researchers in the Department of Pathology and CAIHR have established a research group dedicated to cancer. Preliminary work involving the preparation of research proposals is underway. Some of the planned research will involve members of the technological staff.

Increased engagement of graduate students in research activities

DM Students

1. Publication of work from the research projects conducted by these students in partial fulfilment of their degrees.
2. Participation in research projects in the Jamaica Cancer Registry.

Other graduate students

The Cytogenetics Laboratory continues to host and supervise research projects for Masters level graduate students at The UWI, Mona, and efforts

are being made to publish these works.

Projects aimed at increasing industry and government's access to research output

1. One researcher in the Department of Pathology is participating in a study entitled "Determination of Biological Passports for College/University Athletes in Jamaica". The findings of the study will be made available to the Ministry of Culture, Gender, Entertainment and Sports, in the hope that it may be useful for anti-doping agencies and general monitoring of our athletes.

Research published during the 2021/2022 academic year:

Book Chapter

1. McGrowder, D., Anderson-Jackson, L., Dilworth, L., Mohansingh, S., Cross, M. A., Bryan, S., Miller, F., Wilson-Clarke, C., Nwokocha, C., Alexander-Lindo, R., & McFarlane, S. (2022). "The clinical usefulness of prostate cancer biomarkers: Current and future directions." In G. Kais, & Y. Hamdi (Eds.), *Cancer Bioinformatics [Working Title]*. IntechOpen. <https://doi.org/10.5772/intechopen.103172>

Refereed Journal Articles

1. George SHL, Donenberg T, Alexis C, DeGennaro Jr V, Dyer H, Yin S, Ali J, Butler R, Chin SN, Curling D, Lowe D, Lunn J, Turnquest T, Wharfe G, Cerbon D, Barreto-Coelho P, Schlumbrecht MP, Akbari M R, Narod SA, Hurley J. "Gene sequencing for pathogenic variants among adults with breast and ovarian cancer in the Caribbean." *JAMA Network Open* 2021;4(3):e210307. doi:10.1001/jamanetworkopen.2021.0307

2. James T., Richards A., Lowe D., Reid W., Watson T., Pepple D. – "The in vitro effect of delta9tetrahydrocannabinol and cannabidiol on whole blood viscosity, elasticity and membrane integrity." *Journal of Cannabis Research* 2022; 4: 15. <https://doi.org/10.1186/s42238-022-00126-z>

3. Auguste A, Gathere S, Pinheiro PS, Adebamowo C, Akintola A, Alleyne-Mike K, Anderson SG, Ashing K, Awittor FK, Awuah B, Bhakkan B, Deloumeaux J, du Plessis M, Ekanem I-O A, Ekanem U, Ezeome E, Felix N, Gachii AK, Gaete S, Gibson T, Hage R, Harrison S, Igbinoba F, Iseh K, Kiptanui E, Korir A, Lawson-Myers H, Llanos A, Luce D, McNaughton D, Odutola M,

Omonisi A, Out T, Peruvien J, Raheem N, Roach V, Sobers N, Uamburu N, Ragin C. "Heterogeneity in head and neck cancer incidence among black populations from Africa, the Caribbean and the USA: Analysis of cancer registry data by the AC3." *Cancer Epidemiology* 2021; 75: 102053. <https://doi.org/10.1016/j.canep.2021.102053>.

4. Tapper M, McGrowder DA, Dilworth L, Soyibo A. "Prospective Comparison of 24-Hour Urine Creatinine Clearance with Estimated Glomerular Filtration Rates in Chronic Renal Disease Patients of African Descent." *Medicines (Basel)*. 2021 Sep 1;8(9):48. doi: 10.3390/medicines8090048.

5. McGrowder DA, Miller FG, Vaz K, Anderson Cross M, Anderson-Jackson L, Bryan S, Latore L, Thompson R, Lowe D, McFarlane SR, Dilworth L. "The Utilization and Benefits of Telehealth Services by Health Care Professionals Managing Breast Cancer Patients during the COVID-19 Pandemic." *Healthcare*. 2021; 9(10):1401. <https://doi.org/10.3390/healthcare9101401>

6. Miller F, McGrowder D, Vaz K, McLean-Miller K. "Dietary supplements, harmful or good for athletes?" *Journal of Sports and Physical Education Studies*, (2022), 21(1): 10-20. doi:10.32996/jspes.22.2.2.2

7. Nwokocha C, Palacios J, Ojukwu VE, Nna VU, Owu DU, Nwokocha M, McGrowder D, Orie NN. "Oxidant-induced disruption of vascular K⁺ channel function: Implications for diabetic vasculopathy." *Arch Physiol Biochem*. 2022;1-12. doi: 10.1080/13813455.2022.2090578.

8. Peters KA, Roberts PO, Cornwall DA, Mitchell DI, Thompson RK. "Clinicopathological Factors Affecting Breast Cancer Survival in Jamaican Women: A Retrospective Review." *J Racial Ethn Health Disparities*. 2022 Mar 9. doi: 10.1007/s40615-022-01273-y.

ALIGNMENT

PAPERS PRESENTED

1. Chin SN. "Breast Cancer - The Jamaican perspective." *The Olive Branch of Hope Symposium*, Toronto, Canada, October 16, 2021

2. Chin SN. "Breast Cancer - Risk assessment & Risk reduction." *Jamaica Cancer Society Breast Cancer Symposium*, October 24, 2021

3. Chin SN. "Castration-resistant Prostate Cancer: Current challenges & future directions." *Jamaican Association of Clinical Pathologists 21st Annual Symposium*, November 14, 2021

4. Lowe D. "Approach to the Management of Metastatic Adenocarcinoma of the Lung." *Annual symposium (virtual) of the Caribbean College of Family Physicians*, February 13, 2022

5. Lowe D. *Case Discussions: "Treatment of Newly Diagnosed Multiple Myeloma - A Caribbean Perspective."* Janssen Oncology Medical Affairs Virtual Seminar, September 22, 2021
6. Lowe D. *Case Discussions: "Treatment of Relapsed/Refractory Multiple Myeloma – A Caribbean Perspective"* Janssen Oncology Medical Affairs Virtual Seminar, September 29, 2021)
7. Thompson R. *"Prostate cancer reporting: Where are we now?"* Jamaican Association of Clinical Pathologists 21st Annual Symposium, November 14, 2021
8. Thompson R. *"Sampling in the Upper GI Tract."* Association of West Indian Gastroenterologists. Royalton, Trelawny April 28-30, 2022

PUBLIC SERVICE

Cytopathology Consultation for the Jamaica Cancer Society:

Dr. T. Gibson, Dr. J. Jaggon, Dr. S. Shirley, Dr. R. Thompson, Dr. M. Bromfield, Dr. S. Spencer and Dr. S. Green,

Dr. S. Chin

- 1.Member, Anti-Cancer Research Jamaica
- 2.Member, Jamaica Cancer Care and Research Institute
- 3.Member, Oncology Advisory Board, Expert Panel of Physicians, National Health Fund
- 4.Member, National Screening Guidelines Committee on Chronic Non-communicable Diseases, Ministry of Health & Wellness
- 5.Member, Advisory Committee, Cancer Commemorative Events, Non-Communicable Disease and Injury Prevention Unit, Ministry of Health & Wellness

Dr. D. Lowe

- 1.Chairman - Cancer Working Group Sub-committee, Ministry of Health and Wellness

Dr. D. McGrowder

- 1.Member, Accreditation Evaluation Committee, Jamaica National Agency for Accreditation (JANAAC).

Dr. L. Dilworth

- 1.Past President - The Rotary Club of New Kingston

- 2.Board member - University Council of Jamaica
Chairman - Accreditation and Development Sub-Committee
- 3.Board member - Council of Community Colleges of Jamaica
- 4.Board member - North-East Regional Health Authority

Dr. D. Brady West

- 1.Member of the National Bioethics Committee of Jamaica

Dr. M. Nwokocha

- 1.Participant in the Coagulation Factor Concentrates donor programme of the World Federation of Haemophilia (WFH)
- 2.Participant in the Hemlibra (Emicizumab) programme (World Federation of Haemophilia) for patients with Haemophilia

AGILITY

INCOME GENERATION

The department continued its clinical service and income generating activities, maintaining competitiveness in the marketplace, by retaining ISO 15189 accreditation for another year.

Laboratories

Histology: 4,834 surgical cases (generating 35,177 tests) and 1,098 immunohistochemistry tests

Cytology: 1,536 gynaecological and 574 non-gynaecological cases

Cytogenetics: Closed temporarily. Scheduled to resume operations in October/November 2022.

Chemical Pathology: 897,135 tests

Routine Haematology: 97,753 tests

Blood Bank: 3,330 blood donors processed and 8,195 tests performed

Flow Cytometry: 83 tests

Autopsy Service

111 autopsies (32 perinatal and 79 adults)