

DEPARTMENT OF MICROBIOLOGY

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WORK OF THE DEPARTMENT



Microbiology Department carried out its teaching, research and service programmes throughout academic year 2005/2006 with enthusiasm and success. The department encountered the usual economic limitations to its activities. There was a 3.3% decrease in the number of clinical microbiology specimens processed during academic year 2005/2006 (59,707) compared to 2004/2005 (61,759). Paradoxically there was a matching 3.2% (4,048,022 units compared to 3,921,785 units) increase in workload over 2004/2005.

Income generating projects included diagnostic laboratory services provided to private entities and extra-departmental/extra-mural research projects. Academic staff carried out a substantial amount of extra-departmental teaching of medical microbiology to students in different healthcare training programmes in the University.

The reports of human cases of avian influenza in Asia during 2005/2006 and the risk of an influenza pandemic contributed to the Department's activities. Three members of the academic staff served on Ministry of Health committees concerned with formulating a National contingency plan to face an eventual influenza pandemic. The virus laboratory at Microbiology Department, being the only such facility in Jamaica, was visited and assessed by a technical advisory team from Pan American Health Organization/World Health Organization (PAHO/WHO). The team made recommendations for upgrading the biosafety level of the laboratory, currently BSL-2, to BSL-3 to handle highly pathogenic organisms such as the H5N1 Influenza virus. Consequently PAHO/WHO had advised that Jamaica had been recommended to act as a satellite laboratory for human specimens for the Caribbean region. If this

is to be realized the recommendations of the report will need to be implemented.

The per capita publication output for the 10-member academic staff improved to 2.0 during 2005/2006 compared to 1.1 during 2004/2005. Microbiology Department continued to receive favourable students' assessments of its undergraduate course (mean score 4.3) and lecturers (mean score 4.5).

Several members of staff holding temporary positions were appointed during the course of the year. Cheryl Blackwood was appointed senior secretary effective August 1, 2005, Leon Stewart and Mark Nugent, laboratory attendant, August 1 and November 1, 2005, respectively and Terry Ann Milford, senior medical technologist, May 1, 2006. Claudine Thompson and Wendy Waugh were promoted to senior medical technologist II effective October 1, 2005 and May 1, 2006, respectively. George Cowie was promoted to senior laboratory attendant effective January 1, 2005. Kere Ann Lindsay-Nelson, senior medical technologist, resigned effective February 1, 2006.

There were indications from the Projects Office that the refurbishment of the Department would possibly begin in the 2006/2007 academic year. The Department plans to optimize strategies to enhance its postgraduate programmes, procure research grants and identify new income generating activities.

PAPERS PRESENTED

- **P Akpaka**, M Tulloch-Reid, A Justiz-Vaillant, MF Smikle. "Prevalence of human immunodeficiency virus infection in pulmonary tuberculosis patients in Jamaica." Faculty of Medical Sciences 14th Annual Research Conference, Kingston, Jamaica. November, 2005.
- **M Tulloch-Reid**, M Boyne, MF Smikle, E Choo-Kang, R Parkes, R Wright-Pascoe, EN Barton, RJ Wilks, D Williams. "Glycaemic and metabolic control in youth with diabetes mellitus in Jamaica." Faculty of Medical Sciences 14th Annual Research Conference, Kingston, Jamaica. November, 2005.
- **A Watt**, MF Smikle, H Fletcher, M Jackson, N McFarlane-Anderson. "Sexually transmitted infections in pregnant women attending antenatal clinic at the University Hospital of the West Indies, Jamaica." Caribbean Health Research Council 51st Annual

- Council and Scientific Meetings. St Kitts and Nevis. April, 2006.
- AM Nicholson, **S Ledgister**, T Williams, S Robinson, P Gayle, T Lindo, D Castle, K Shaw, S Moonah. "The Epidemiology of infections in the intensive care unit at the University Hospital of the West Indies, Kingston for the year 2004." Caribbean Health Research Council 51st Annual Council and Scientific Meetings. St Kitts and Nevis. April, 2006.
 - **D Lyn**, JU Igietseme, K DeCeulaer, N Christian, EN Barton, CM Black, M Smikle. "Association of reactive arthritis with non-HLA-B27 alleles in Black Jamaicans." American Society for Microbiology 106th General Meeting. Orlando, Florida. May, 2006.
 - **M Smikle**, K DeCeulaer, N Christian, O Heslop, G Dowe, P Singh, JU Igietseme, CM Black, D Lyn. "Prevalence of Chlamydia trachomatis on infection related arthritis in Jamaica." American Society for Microbiology 106th General Meeting. Orlando, Florida. May, 2006.
 - **NC Bodonaik**, L Rainford. "Antibiotic resistance in strains of Neisseria gonorrhoeae encountered in Jamaica." 12th International Congress on Infectious Disease. Lisbon, Portugal. June, 2006.
 - **NC Bodonaik**, L Rainford "Penicillin and tetracycline resistant phenotypes of Neisseria gonorrhoeae encountered at the University Hospital of the West Indies." 12th International Congress on Infectious Disease. Lisbon, Portugal. June, 2006.
 - **NC Bodonaik**, PE Akpaka. "Change in the incidence of gentamicin resistance in 20 years in a tertiary care teaching hospital." 12th International Congress on Infectious Disease. Lisbon, Portugal. June, 2006.
 - **NC Bodonaik**, O Heslop, RW Sue-Ho. "Penicillin resistance in strains of *Streptococcus pneumoniae*: laboratory based surveillance data." 12th International Congress on Infectious Disease. Lisbon, Portugal. June, 2006.
 - **MK Tulloch-Reid**, MS Boyne, MP Smikle, EG Choo-Kang, RH Parkes, RA Wright-Pascoe, EN Barton, RJ Wilks, DE Williams. "Clinical and laboratory predictors of diabetes type in youth onset

diabetes.” American Diabetes Association 66th Annual Scientific Sessions Meeting. Washington DC. June, 2006.

- MP Smikle, **MK Tulloch-Reid**, MS Boyne, EG Choo-Kang, RH Parkes, RA Wright-Pascoe, EN Barton, RJ Wilks, DE Williams. “Autoantibodies in a Black Population with youth onset diabetes.” American Diabetes Association 66th Annual Scientific Sessions Meeting. Washington DC. June, 2006.
- **MK Tulloch-Reid**, MS Boyne, MP Smikle, EG Choo-Kang, RH Parkes, RA Wright-Pascoe, EN Barton, RJ Wilks, DE Williams. “Cardiovascular risk in a Black Population with youth onset diabetes.” American Diabetes Association. 66th Annual Scientific Sessions Meeting. Washington DC. June, 2006.

PUBLICATIONS

WIMJ = *West Indian Medical Journal*

Refereed Journal Articles

- * I Tennant, H Harding, M Nelson, **K Roye-Green**. “Microbial isolates from patients in an intensive care unit and associated risk factors.” *WIMJ*, 54, 4 (2005):225-231.
- * CA Waugh, S Shafir, M Wise, RD Robinson, ML Eberhard, **JF Lindo**. “Human *Angiostrongylus cantonensis*, Jamaica.” *Emerging Infectious Diseases* 11, 12 (2005): 1977-1978.
- * J Lorenzo-Morales, **JF Lindo**, E Martinez, D Calder, E Figueruelo, B Valladares, A Ortega-Rivas. “Pathogenic *Acanthamoeba* strains from water sources in Jamaica West Indies.” *Annals Tropical Medicine Parasitology*. 99, 8 (2005):751-758
- * **OD Heslop, MF Smikle, D Deer, NA Christian, IE Vickers**, KM Harvey, JP Figueroa, CD Christie, B Bain, EN Barton. “Human immunodeficiency virus type-1 (HIV-1) subtypes in Jamaica.” *WIMJ*, 54, 5 (2005): 279-282.
- * **IE Vickers**, H Alveranga, **MF Smikle**. “Clinical and epidemiological characteristics of adult and adolescent patients newly diagnosed with the human immuno- deficiency virus at a Jamaican clinic for sexually transmitted infections.” *WIMJ*, 54, 6 (2005):360-363.

- * **G Saunders**, N Bodonaik, MF Smikle, M Parshad-Asnami. "Ceftazidime-resistant Salmonella enteritidis in Jamaica." *WIMJ*, 54, 4 (2005): 268-269.
- * Y Bell, M Barton, M Thame, **A Nicholson**, H Trotman. "Neonatal sepsis in Jamaican neonates." *Annals Tropical Paediatrics* 25, 4 (2005):293-296.
- * V Cumming, S Ali, T Forrester, **K Roye-Green**, M Reid. "Asymptomatic bacteriuria in sickle cell disease: a cross-sectional study." *BioMed Central Infectious Diseases* 6, (2006):46.
- * **ST Jackson**, **MF Smikle**, **L Rainford**, R Wright-Pascoe. Primary cutaneous nocardiosis: an emerging pathogen associated with peripheral intravenous catheter." *WIMJ*, 55, 1 (2006):69.
- * **IE Vickers**, AR Brathwaite, **M Levy**, JP Figueroa. "Seroprevalence of sexually transmitted infections among accepted and deferred blood donors in Jamaica." *WIMJ*, 55, 2 (2006):89-94.
- * **PE Akpaka**, M Tulloch-Reid, A Justiz-Vaillant, **MF Smikle**. "Prevalence of human immunodeficiency virus infection in patients with pulmonary tuberculosis at the National Chest Hospital in Jamaica." *Pan American Journal of Public Health* 19, 1 (2006):38- 43.
- * EK Kahwa, LA Sargeant, A McCaw-Binns, N McFarlane-Anderson, **M Smikle**, T Forrester, R Wilks. "Anticar- diolipin antibodies in Jamaican primiparae." *Journal Obstetrics Gynaecology* 26, 2 (2006):122-126.
- * MJ Steiner, T Hylton-Kong, JP Figueroa, MM Hobbs, F Behets, **M Smikle**, K Tweedy, S Powell, L McNeil, A Brathwaite. "Does a choice of condoms impact sexually transmitted infection incidence? A randomized, controlled trial." *Sexually Transmitted Diseases* 33, 1 (2006):31-35.
- * A East-Innis, **L Rainford**, P Dunwell, D Barrett-Robinson, **AM Nicholson**. "The changing pattern of Tinea capitis in Jamaica." *WIMJ*, 55, 2 (2006): 85-88.
- * H Trotman, Y Bell, M Thame, **AM Nicholson**, M Barton. Predictors of poor outcome in neonates with bacterial sepsis

admitted to the University Hospital of the West Indies.” *WIMJ*, 55, 2 (2006):80-84.

- * **SN Moonah, NC Bodonaik, AM Nicholson.** “Meningitis in Jamaican adults.” *Tropical Doctor* 36, 3 (2006):189-190.
- * **IE Vickers, MF Smikle.** “The immunomodulatory effect of antibiotics on the secretion of tumour necrosis factor alpha by peripheral blood mononuclear cells in response to *Stenotrophomonas maltophilia* stimulation.” *WIMJ*, 55, 3 (2006):138-141.
- * **P Akpaka, N Christian, NC Bodonaik, MF Smikle.** “Epidemiology of coagulase-negative staphylococci isolated from clinical blood specimens at the University Hospital of the West Indies.” *WIMJ*, 55, 3 (2006): 170-173.
- * **NC Bodonaik, S Moonah.** “Coagulase negative staphylococci from blood cultures: contaminants or pathogens?” *WIMJ*, 55, 3 (2006):174-82.
- * **GL Saunders, NC Bodonaik.** “Resistance in clinical isolates of *Enterococcus faecalis* encountered at the University Hospital of the West Indies, Jamaica.” *WIMJ* 55, 3 (2006):194-6.

PUBLIC SERVICE

Professor Monica Smikle

- Member, Standards Subcommittee on Medical Laboratory Services in the Caribbean.
- Member, National Steering Committee for the CARIFORUM/EU Laboratory Development Project
- Technical Assessor, National Accreditation Company
- Member, Core Working Group, Influenza (Pandemic) Preparedness Plan Committee

Dr Sandra Jackson

- Member, Surveillance subgroup, Influenza (Pandemic) Preparedness Plan Committee

Dr Ivan Vickers

- Member, Surveillance subgroup, Influenza (Pandemic) Preparedness Plan Committee

CATEGORIES OF STUDENTS

Undergraduate

The undergraduate medical microbiology program was delivered to over 400 students in different year groups of the MBBS curriculum and BB Med Sci programmes.

Postgraduate

Six candidates were in graduate programmes in medical microbiology. These include the DM (1 candidate) PhD (2 candidates) MPhil (1 candidate) and MSc (2 candidates).

Prizes Awarded

The Louis Grant Book Prize was awarded to Rondell Graham who attained the highest score in the Microbiology component of the Pathology/Microbiology clerkship examination.

Obituary

Janet Sterling, senior scientific officer, passed on September 9, 2005. She had served the department and the University for 14 years and is sadly missed.