

TROPICAL MEDICINE RESEARCH INSTITUTE (TMRI)

Professor Susan Walker, BSc *Bristol*, MSc, PhD *Lond*
– Director

Overview

The Institute comprises 3 units on the Mona campus: Epidemiology Research Unit, Sickle Cell Unit and Tropical Metabolism Research Unit, and the Chronic Disease Research Centre at Cave Hill. The Mona units are the focus of this report, however we include information on publications, income generation and public service from the annual report of the Chronic Disease Research Centre. The full report for the centre is submitted through the Dean Faculty of Medical Sciences, to the Cave Hill Principal.



The TMRI contributes substantially to the strategic objectives of the UWI through: Research and Innovation, and Graduate Studies, the latter through Masters and Doctoral programmes in Nutrition and Epidemiology. The Institute also provides significant outreach to communities through clinical service primarily through the Sickle Cell Clinic and monthly clinics in Black River and Montego Bay, management of severely malnourished children on the TMRU ward, and specialist clinical nutrition services to the UHWI.

Academic Programmes

The Institute offers Masters and Doctoral programmes in Nutrition and in Epidemiology. The MSc programmes were not offered in 2011/12 but will be offered in the next academic year. We continue our training at the doctoral and post-doctoral levels through research fellowships within the

TMRI and in collaboration with the Faculty of Medical Sciences, Mona. The FMS fellowships allow two-year placement of FMS faculty in the TMRI for training in research with the goal of conducting and publishing a research project during the fellowship. The longer term goal is to build research capacity in the FMS as fellows return to their departments.

Research and Publications

We continue to review our research programmes through annual scientific meetings. Current research programmes are Human Nutrition and Metabolism, Endocrinology, Genetic underpinnings of disease susceptibility and severity, Sickle Cell Disease, Child Development, Chronic Non-Communicable Diseases –Surveillance, Epidemiology and Interventions, Inflammation and Wound healing.

Collaboration across units and research programmes has increased with collaboration on disparities research and cardiovascular disease between the CDRC and ERU; between the Child Development Programme and the Chronic Disease Programme (ERU) and the Sickle Cell Research Programme; between the Sickle Cell Programme and Metabolism Programme at TMRU. Identification of further areas of synergy among programmes remains an area for focus. Presentations and publications for the academic year are listed below.

Staff of the Institute have been successful in obtaining grant funds to support research from a variety of agencies. These are listed below under Income Generation. More needs to be achieved and will require more training and mentorship of staff to increase staff capacity in obtaining grant funds through training in writing grant proposals and expansion of collaborative arrangements. These initiatives are critical to the UWI strategic objectives related to income source diversification and funding partnerships and it may be useful to implement them in collaboration with other UWI initiatives in this area.

Public Service

Staff contribute to numerous professional organisations and provide technical advice to the Ministries of Health and Education, to regional

institutions and societies and to international agencies such as the Pan American Health Organisation. Details are listed under Public service below.

PAPERS PRESENTED

- Anderson M, Asnani M. “ “You just have to live with it”: Life with Sickle Cell Disease in Jamaica”. 2nd Caribbean Network of Researchers in Sickle Cell Disease and Thallasemias (CAREST) conference. Nov. 27-30, 2011 in Pointe-A-Pitre, Guadeloupe.
- **Asnani M**, Anderson M. “Stigma and Discrimination: Adding to the burden of living with Sickle Cell Disease”. Centers for Disease Control 2nd meeting of the WiSSH (Worldwide initiative on Social Studies on Hemoglobinopathies) group. Atlanta, Georgia, U.S.A. March 16, 2012.
- **Asnani M, Reid M**. “The Adult Renal programme in SCD in Jamaica”. 2nd Caribbean Network of Researchers in Sickle Cell Disease and Thallasemias (CAREST) conference. Nov. 27-30, 2011 in Pointe-A-Pitre, Guadeloupe.
- **Asnani M, Younger N, Bhatt K, Reid M**. “Social functioning and risky behaviours of Jamaican adolescents with Sickle Cell Disease”. Centers for Disease Control 2nd National conference on Blood Disorders in Public Health. Atlanta, Georgia, U.S.A. March 12- 14, 2012.
- **Asnani M**. “Ethical issues and the Patient-Physician Relationship”. Annual Regional Caribbean College of Family Physicians conference, Kingston, Jamaica. February 12, 2012.
- **Badaloo A, Forrester TE, Reid M**, Jahoor, F. “VLDL-apoB-100 synthesis rate in severely malnourished children is similar to when nutritionally repleted. Caribbean Health Research Council 57th Annual Scientific Meeting, Cayman, April 2012
- **Badaloo, A**. “Nutrition and the immune system.” Faculty of Medical Sciences 20th Annual Research Conference and Workshop. November 11, 2011, Jamaica.

- **Badaloo. A.** “Application of stable isotopes in measuring Body Composition.” Caribbean Health Research Council 57th Annual Scientific Meeting, Cayman, April 2012.
- **Baker-Henningham H** (2012) “Adapting an evidence-based intervention to prevent child conduct problems in Jamaican preschools: A cluster randomised controlled trial.” Department for Social Policy and Intervention, Oxford University, UK; 14 February 14, 2012.
- **Baker-Henningham H** (2012) “Researching the Incredible Years Teacher Classroom Management Programme in Jamaica.” Conference on ‘Supporting Parents, Teachers and Children: Research and Practice’; March 7, Cardiff, UK.
- **Baker-Henningham H, Scott S, Walker S** (2012) “Preventing child conduct problems and promoting social and emotional competence: a universal intervention in Jamaican preschools.” 3ie/UCL/IFS conference on ‘Promises for Preschoolers: Early Childhood Development and Human Capital Accumulation in Developing Countries’ June 25-26, 2012, London.
- **Bortolusso Ali S, MooSang M, King L, Knight-Madden J, Reid M.** ‘Stroke recurrence in children with sickle cell disease treated with hydroxyurea following first clinical stroke’. 2ème Conférence Caribéenne sur la drépanocytose, Guadeloupe, Nov 2011.
- **Boyne MS, Thompson DS, Osmond C, Taylor-Bryan C, Soares-Wynter S, Forrester TE.** “The effect of antenatal factors and postnatal growth on serum adiponectin levels in children.” J Developmental Origins of Health and Disease, 2011; 2 (Suppl 1): S57. 7th World Congress on Developmental Origins of Health and Disease, Sept 18-21, 2011, Portland, Oregon.
- **Francis KK, Tulloch-Reid MK, Younger N, Francis DK, McFarlane SR, Wright-Pascoe R, Boyne MS, Wilks RJ, Ferguson TS.** “Relationship between self-monitoring of blood glucose and glycaemic control among patients attending a specialist diabetes clinic in Jamaica.” Poster. University Diabetes Outreach Programme 18th Annual International Conference, March 30, Ocho Rios, Jamaica. *WIMJ*, 2012; 61 (Suppl 2): 37.

- **Francis PM, Thompson DS, Boyne MS, Tennant IA, Osmond C, Forrester TE.** “Insulin sensitivity in Jamaican survivors of severe childhood malnutrition.” Poster. American Diabetes Association 72nd Scientific Sessions, June 11, 2012, Philadelphia, USA. *Diabetes* 2012; 61 (Suppl 1): A351.
- **Ferguson TS.** “Management of Cardiovascular Diseases: Assessment and Risk Factor Reduction.” Guiding and Supporting National Diabetes Quality Improvement Learning Session 3. October 28, 2011. Royal St. Lucian by Rex, St. Lucia
- **Ferguson TS.** “Management of Cardiovascular Diseases: Global Risk assessment and Clinic Treatment.” Guiding and Supporting National Diabetes Quality Improvement Learning Session 3. October 28, 2011. Royal St. Lucian by Rex, St. Lucia (Sponsored by the Pan American Health organization and Ministry of Health St. Lucia)
- **Ferguson TS.** Diabetic Foot Complications: Epidemiology and Treatment. Diabetes Educators of the Caribbean 7th Annual Clinical Conference. Sept 24-25, 2011. Kingston, Jamaica.
- **Gayle, KA, Tulloch-Reid MK, Younger N, Francis DK, McFarlane SR, Wright-Pascoe R, Boyne MS, Wilks RJ, Ferguson TS.** “Footcare and footwear practices among patients attending a specialist diabetes clinic in Jamaica.” Poster. University Diabetes Outreach Programme 18th Annual International Conference, March 30, Ocho Rios, Jamaica. *WIMJ*, 2012; 61 (Suppl 2): 36.
- **Green, C.O., Badaloo, A., Hsu, J.W., Reid, M, Taylor-Bryan, C., Forrester, T** and Jahoor, F. (2012). “Effects of Methionine supplementation on cysteine and glutathione production in malnourished infants”. *Experimental Biology* 2012, April 21-25; San Diego Convention Center, CA. FASEB 26
- **Hennis, A.J., Landis, R.C.** “Focus on Diabetic Foot”, Nation Newspaper, January 10, 2012.
- **King L., Ali S., Cunningham-Myrie C., Reid M .** “Under-5 Mortality in Jamaica Children with Sickle Cell Disease” Global Sickle Cell Disease Network Conference, March 14-15, 2012, Atlanta

- **Knight-Madden J.** ‘Sickle cell disease and asthma’. Annual Scientific Meeting, Workshop Faculty of Medical Sciences, UWI, Kingston Jamaica, October, 2011.
- **Knight-Madden JM,** Connes P, Bowers A, Nebor D, Hardy-Dessources MD, Romana M, Reid H, Pichon A, Barthélémy JC, Cumming VB, Elion J, Reid M. ‘Relationship between pulmonary disorders and the sympatho-vagal balance in adults with hemoglobin SS disease.’ Annual Scientific Meeting, Faculty of Medical Sciences, UWI, Kingston Jamaica, October, 2011.
- **Knight-Madden JM,** Connes P, Bowers A, Nebor D, Hardy-Dessources MD, Romana M, Reid H, Pichon A, Barthélémy JC, Cumming VB, Elion J, **Reid M,** CAREST study group. ‘Relationship of respiratory disease and lung function with the sympatho-vagal balance in adults with hemoglobin SS disease’. 2ème Conférence Caribéennesur la drépanocytose, Guadeloupe, Nov 2011
- **Knight-Madden JM.** ‘Sickle Cell Lung Disease’. American Thoracic Society Annual Conference. San Francisco. May 2012.
- **Knight-Madden JM.** ‘Recurrent wheeze- sickle cell disease or asthma’. 2ème Conférence Caribéennesur la drépanocytose, Guadeloupe, Nov 2011
- **Landis, R.C.** “HIV Treatment as Prevention: Analysis of 10 year viral load trends in Barbados”, 71st BAMP/UWI CME Program, Accra Beach Hotel, Barbados, May 19, 2012.
- Lutchmansingh FK, Bennett FI, **Badaloo AV,** McFarlane-Anderson N, Gordon-Strachan GM, Wright-Pascoe R, Jahoor F, Boyne MS. “Glutathione metabolism in persons with type 2 diabetes.” CHRC 57th Annual Council and Scientific Meeting, April 20, 2012, Grand Cayman. *WTMJ*, 2012; 61 (Suppl 2): 24.
- **Quimby, K. R.** “Phenotypic commitment of monocytes towards a protective phenotype (CD14posCD163high HLA-DRlow) under haemolytic conditions”. Invited Speaker, 26th International Clinical Cytometry Society Meeting in Portland, Oregon, October 17, 2011.

- **Quimby K.R, Flower C, Hambleton I, Landis RC, Hennis A.** “Comparison of the Systemic Lupus Erythematosus Activity Questionnaire and the Systemic Lupus Erythematosus Disease Activity Index in the Black Barbadian Population”. *WIMJ*, 2012; 61 (suppl 2): 45
- **Quimby K.R, Hambleton I, Hennis A, Flower C, Landis RC.** “Novel Inflammatory Factors and Disease Activity in SLE”. *WIMJ*, 2012; 61 (suppl 2): 46
- **Quimby KR, Flower C, Hambleton I, Landis RC, Hennis A.** “Comparison of the Systemic Lupus Erythematosus Activity Questionnaire and the Systemic Lupus Erythematosus Disease Activity Index in the Black Barbadian Population”. Poster. 57th annual CHRC/ARPHA scientific meeting in Grand Cayman, April 19-21, 2012
- **Quimby KR, Hambleton I, Hennis A, Flower C, Landis RC.** Novel Inflammatory Factors and Disease Activity in SLE. Poster. 57th annual CHRC/CARPHA scientific meeting in Grand Cayman, April 19-21, 2012
- **Soares-Wynter S, Barnett AT, Thompson DS, Boyne MS, Osmond C, Hanson MA, Gluckman PD, Forrester TE.** “Body composition in adult survivors of severe childhood malnutrition.” *J Developmental Origins of Health and Disease*, 2011; 2 (Suppl 1): S113. 7th World Congress on Developmental Origins of Health and Disease, Sept 18-21, 2011, Portland, Oregon.
- **Tennant IA, Barnett AT, Kips J, Thompson DS, Boyne MS, Chung EE, Chung AP, Osmond C, Hanson MA, Gluckman PD, Segers P, Cruickshank JK, Forrester TE.** “Cardiovascular function in adult survivors of severe childhood malnutrition.” *J Developmental Origins of Health and Disease*, 2011; 2 (Suppl 1): S31. 7th World Congress on Developmental Origins of Health and Disease, Sept 18-21, 2011, Portland, Oregon.
- **Thompson DS, Boyne MS, Osmond C, Byrne CD, Barnett AT, Hanson MA, Gluckman PD, Forrester TE.** “Comparing insulin sensitivity in adult survivors of malnutrition.” *J Developmental Origins of Health and Disease*, 2011; 2 (Suppl 1):

S113. 7th World Congress on Developmental Origins of Health and Disease, Sept 18-21, 2011, Portland, Oregon.

- **Thompson DS, Boyne MS, Osmond C, Ferguson TS, Tulloch-Reid MK, Wilks RJ, Barnett AT, Forrester TE.** “Fasting indices do not correlate with dynamic measures of insulin sensitivity in Afro-Caribbean adults.” Poster. American Diabetes Association 72nd Scientific Sessions, June 11, 2012, Philadelphia, USA. *Diabetes* 2012; 61 (Suppl 1): A420.
- **Walker S** (on behalf of the Global Child Development Group) “Making Early Childhood Interventions Effective.” Launch of the Lancet Series on Child development. The World Bank, Washington D.C, September 26, 2011
- **Walker S, Chang SM, Grantham-McGregor S, Osmond C, Lopez-Boo F.** “Do early childhood experiences affect development in the next generation? Preliminary findings from the Jamaica intergenerational study” Conference ‘Promises for Preschoolers: Early Childhood Development and Human Capital Accumulation’ London June 25-26, 2012
- **Younger Coleman N, Waugh A, Mullings J, Figueroa P, Tulloch-Reid M, Ferguson T, Walters C, Bennett F, Forrester T, Ward E, Ashley D, Wilks R.** “Delayed Entry and Variable Entry time: Do they matter (in the analysis of Survival Data)?” 22nd International Statistics Symposium, July 17-12, 2012, Bucaramanga, Colombia, South America.

PUBLICATIONS

Peer-Reviewed Journal Articles

WIMJ = West Indian Medical Journal

- * **Asnani M, McCaw-Binns A, Reid M.** “Excess Risk of Maternal Death from Sickle Cell Disease in Jamaica: 1998-2007”. *PLoS ONE* Oct 2011. 6(10).
- * **Badaloo A, Hsu JW, Taylor-Bryan C, Green C, Reid M, Forrester T, Jahoor F.** “Dietary cysteine is used more efficiently by children with severe acute malnutrition with

- edema compared with those without edema.” *Am J Clin Nutr.* 2012 Jan; 95(1):84-90.
- * **Badaloo AV, Forrester T, Reid M, Jahoor F.** “Nutritional repletion of children with severe acute malnutrition does not affect VLDL apolipoprotein B-100 synthesis rate.” *J Nutr.* 2012 May; 142(5): 931-5.
 - * **Badaloo, A., Hsu, J.W., Taylor-Bryan, C., Green, C., Reid, M., Forrester, T., and Jahoor, F.** (2012).“Dietary cysteine is used more efficiently by children with severe acute malnutrition with edema compared with those without edema”. *Am J Clin Nutr,* 2012; 95:84-90.
 - * **Baker-Henningham H** (2011) “Transporting evidence-based interventions across cultures: Using focus groups with teachers and parents to inform the implementation of the Incredible Years Teacher Training Programme in Jamaica.” *Child Care, Health and Development* 37(5): 649-661.
 - * **Baker-Henningham H, Scott S, Jones K, Walker S.** (2012) “Reducing child conduct problems and promoting social skills in a developing country: a cluster-randomised controlled trial.” *British Journal of Psychiatry* published, April 12, 2012.
 - * **Bortolusso Ali S, MooSang M, King L, Knight-Madden J, Reid M.** ‘Risk of stroke recurrence in children with sickle cell disease treated with Hydroxyurea following first clinical stroke’. *Am J Hematol.* 2011 Oct; 86(10): 846-50.
 - * Cao D, Jiao X, Liu X, **Hennis A,** Leske MC, Nemesure B, Hejtmancik JF. CDKN2B Polymorphism Is Associated with Primary Open-Angle Glaucoma (POAG) in the Afro-Caribbean Population of Barbados, West Indies. *PLoS One.* 2012; 7(6): e39278. Epub 2012 Jun 27.
 - * Chiang CW, Gajdos ZK, Korn JM, Butler JL, Hackett R, Guiducci C, Nguyen TT, Wilks R, **Forrester T,** Henderson KD, Le Marchand L, Henderson BE, Haiman CA, Cooper RS, Lyon HN, Zhu X, **McKenzie CA,** Palmert MR, Hirschhorn

- JN. "The efficacy of detecting variants with small effects on the Affymetrix 6.0 platform using pooled DNA". *Hum Genet.* 2011 Nov; 130(5):607-21. Epub 2011 Mar 22.
- * Cho G, **Hambleton IR**. Regular long-term red blood cell transfusions for managing chronic chest complications in sickle cell disease. *Cochrane Database Syst Rev.* 2011 Sep 7;(9).
 - * **Cumberbatch CG, Younger NO, Ferguson TS, McFarlane SR, Francis D, Wilks RJ, Tulloch-Reid MK**. Reported Hours of Sleep, Diabetes Prevalence and Glucose Control in Jamaican Adults: Analysis from the Jamaica Lifestyle Survey 2007/08. *International Journal of Endocrinology*, vol. 2011, Article ID 716214, 8 pages, 2011. Available at:<http://www.hindawi.com/journals/ije/aip/716214>
 - * Davis MF, Baron P, Price LB, Williams DL, Jeyaseelan S, **Hambleton IR**, Diette GB, Breyse PN, McCormack MC. Dry collection and culture methods for recovery of methicillin-susceptible and methicillin-resistant *Staphylococcus aureus* strains from indoor home environments. *Appl Environ Microbiol.* 2012 Apr; 78(7):2474-6. Epub 2012 Jan 27.
 - * Fakri RM, Al Ani AM, **Rose AM**, Alras MS, Daumas L, Baron E, Khaddaj S, Hérard P. "Reconstruction of non-union tibial fractures in war-wounded Iraqi civilians, 2006-2008: Better Late Than Never." *J Orthop Trauma* 2012 Jul; 26(7):e76-82.
 - * **Ferguson TS, Tulloch-Reid MK, Younger NOM, Wright-Pascoe, RA, Boyne MS, McFarlane SR, Francis DK, Wilks RJ**. "Cardiovascular disease among patients attending a specialist diabetes clinic in Jamaica." *Research Reports in Clinical Cardiology* 2011; 2:41-50.
 - * **Ferguson TS, Tulloch-Reid MK, Younger NO, McFarlane SR, Francis DK, Wilks RJ**. Prehypertension in Jamaica: A Review of Data from Recent Studies. *WIMJ*, 2011;4:422-426
 - * **Ferguson TS, Tulloch-Reid MK, Cunningham-Myrie CA, Davidson-Sadler T, Copeland S, Lewis-Fuller, Wilks RJ**.

Chronic disease in the Caribbean: Strategies to respond to the region's public health challenge: What can we learn from Jamaica's experience? *WTMJ*, 2011; 60; 4: 390-403

- * **Ferguson TS, Francis DK, Tulloch-Reid MK, Younger NOM, McFarlane SR, Wilks RJ.** An update on the burden of cardiovascular disease risk factors in Jamaica: Findings from the Jamaica Health and Lifestyle Survey 2007-2008. *WTMJ*, 2011; 60;4:415-421
- * **Ferguson TS.** Castor Bean Ingestion and Ricin Toxicity in a Case of Attempted Suicide. *WTMJ*, 2011; 60 (5):596
<http://ojs.mona.uwi.edu/index.php/wimj/article/view/2929/2688>
- * **Ferguson TS.** Screening for Prostate Cancer: A Randomised Controlled Trial in Men of African Ancestry is Needed *WTMJ*, 2012; 61;1:112-113
- * **Ferguson TS, Tulloch-Reid MK, Gordon-Strachan G, Hamilton P, Wilks RJ.** National Health Surveys and Health Policy: Impact of the Jamaica Health and Lifestyle Surveys and the Reproductive Health Surveys. *WTMJ*, 2012;61;4
<http://ojs.mona.uwi.edu/index.php/wimj/article/view/3322/3007>
- * Flower C, **Hennis AJ, Hambleton IR, Nicholson GD, Liang MH;** and the The Barbados National Lupus Registry Group. Systemic lupus erythematosus in an African Caribbean population: Incidence, clinical manifestations, and survival in the Barbados National Lupus Registry. *Arthritis Care Res (Hoboken)*. 2012 Aug; 64(8):1151-8.
- * Flower CH, **Hennis AJ, Liang MH.** Report of an international symposium on narrowing the Gap in the treatment and study of SLE worldwide: minimum best practices in the management and monitoring of moderate to severe SLE and improving outcomes in constrained environments. *Curr Rev Musculoskelet Med*. 2011 Sep; 4(3):105-12.

- * **Forrester TE, Badaloo AV, Boyne MS, Osmond C, Thompson D, Green C, Taylor-Bryan C,** Barnett A, **Soares-Wynter S,** Hanson MA, Beedle AS, Gluckman PD. “Prenatal factors contribute to the emergence of kwashiorkor or marasmus in severe undernutrition: evidence for the predictive adaptation model.” *PLoS One* 2012; 7: e35907.
- * Gayle KA, **Tulloch-Reid MK, Wilks RJ, Ferguson TS.** The slipping slipper sign: a simple test with high specificity and positive predictive value for peripheral neuropathy among diabetic patients. *Clinics and Practice* 2012; volume 2:e51
- * **Green, C.O.,** Wheatley, A.O., McGrowder, D.A., Dilworth, L.L. and Asemota, H.N (2012). “Modulation of antioxidant enzymes activities and lipid peroxidation products in diet-induced hypercholesterolemic rats fed Ortonique peel PMFs extract”. *J Appl Biomed.* 10(2): 91-102. ISSN 1214-0287
- * Harrison DK, **Greenidge AR, Landis RC.** Skin SO2 measurement using visible lightguide spectrophotometry in a black population: a feasibility study. *Adv Exp Med Biol.* 2011; 701: 277-82.
- * Hou N, Zheng Y, Gamazon ER, Ogundiran TO, Adebamowo C, Nathanson KL, Domchek SM, Rebbeck TR, Simon MS, John EM, **Hennis A,** Nemesure B, Wu SY, Leske MC, Ambs S, Niu Q, Zhang J, Pierce B, Cox NJ, Olopade OI, Huo D. Genetic susceptibility to type 2 diabetes and breast cancer risk in women of European and African ancestry. *Cancer Epidemiol Biomarkers Prev.* 2012 Mar; 21(3): 552-6. Epub 2012 Jan 11.
- * Huo D, Zheng Y, Ogundiran TO, Adebamowo C, Nathanson KL, Domchek SM, Rebbeck TR, Simon MS, John EM, **Hennis A,** Nemesure B, Wu SY, Leske MC, Ambs S, Niu Q, Zhang J, Cox NJ, Olopade OI. Evaluation of 19 susceptibility loci of breast cancer in women of African ancestry. *Carcinogenesis.* 2012 Apr; 33(4):835-40. Epub 2012 Feb 22.

- * International Consortium for Blood Pressure Genome-Wide Association Studies, including **Forrester T, McKenzie CA**. “Genetic variants in novel pathways influence blood pressure and cardiovascular disease risk”. *Nature*. 2011 Sep 11; 478(7367):103-9.
- * Jackson MD, **Walker S, Younger NM, Bennett FI**. (2011) Use of a food frequency questionnaire to assess diets of Jamaican adults: validation and correlation with biomarkers *Nutrition Journal* 2011, 10:28 (9 April 2011)
<http://www.nutritionj.com/content/10/1/28>
- * Jackson MD, **Walker SP**, Simpson-Smith CM, Lindsay CM, Smith G, McFarlane-Anderson N, Bennett FI, Coard KCM, Aiken WD, Tulloch T, Paul TJ, Wan RL.(2012) Association of whole blood fatty acids and dietary intakes with prostate cancer in Jamaica. *Cancer Causes & Control* 23, 23-33.
- * Kahwa EK, Waldron NK, **Younger NM**, Edwards NC, **Knight-Madden JM**, Bailey KA, Wint YB, Lewis-Bell KN. “Asthma and Allergies in Jamaican Children age 2-17 years: a cross-sectional prevalence survey”. *BMJ Open*. 2012.
- * Kieling C, **Baker-Henningham H**, Belfer M, Conti G, Ertem I, Omigbodun O, Rohde LA, Srinath S, Ulkuer N, Rahman A. (2011) “Child and adolescent mental health worldwide: evidence for action.” *The Lancet* 378(9801): 1515-1525.
- * King L, Fraser R, Forbes M, **Grindley M, Ali S, Reid M**. “Newborn Screening in Jamaica: Inaccurate Reference” *American Journal of Preventive Medicine*, May 2012; 42(6): e101
- * **Knight-Madden J**, Connes P, **Bowers A**, Nebor D, Hardy-Dessources M, Romana M, Reid H, Pichon A, Barthélémy J, Cumming V, Elion J, Reid M. ‘Is there a relationship between pulmonary and atopic disorders and the sympatho-vagal balance in adults with sickle cell disease?’ *Clin Hemorheol Microcirc*. 2012 Mar 29. [Epub ahead of print]

- * **Knight-Madden J**, Patey R, Sylvester K, Hussain M, Vergani D, **Forrester T**, Greenough A. ‘Cytokine levels and profiles in children related to sickle cell disease and asthma status’. *J Interferon Cytokine Res.* 2012 Jan; 32(1):1-5.
- * **Knight-Madden JM, Hambleton IR.** Inhaled bronchodilators for acute chest syndrome in people with sickle cell disease. *Cochrane Database Syst Rev.* 2012 Jul 11;7: CD003733.
- * **Knight-Madden JM, Younger N, Francis D, McFarlane S, Reid M, Wilks R.** ‘Effectiveness of antenatal screening for sickle cell trait: The impact on women’s self-report of sickle cell trait status’. *Pathogens and Global Health;* 106(1):55-9
- * **Landis, R.C.,** de Silva, R.J. “The systemic inflammatory response to cardiopulmonary bypass”, in “Core Topics in Cardiac Anaesthesia, 2nd Edition”. Eds. Mackay J.H., Arrowsmith, J.E. Cambridge University Press. (2012), pp. 374-381.
- * Lawrence Wright MB, **Boyne MS, Osmond C,** Royal-Thomas TY, **Forrester TE.** “Developmental determinants of vascular status in a prospective Jamaican cohort of 9-12 year old children.” *J Hum Hypertens.* 2011; 25: 457-64.
- * Leske MC, Wu SY, Nemesure B, **Hennis A.** Incident open-angle glaucoma and ocular perfusion pressure. *Invest Ophthalmol Vis Sci.*, Oct 7, 2011; 52(11): 7943.
- * Less LA, Ragoobirsingh D, Morrison EY, **Boyne MS,** Anderson-Johnson P. “The Jamaican Lay Facilitators Program: a positive impact on glycaemic control.” *Diabetes Management* 2011; 1: 167-173
- * Lowe LP, Metzger BE, Dyer AR, Lowe J, McCance DR, Lappin TR, Trimble ER, Coustan DR, Hadden DR, Hod M, Oats JJ, Persson B; HAPO Study Cooperative Research Group (**Hennis A.** - member). Hyperglycemia and Adverse Pregnancy Outcome (HAPO) Study: associations of maternal A1C and

glucose with pregnancy outcomes. *Diabetes Care*. 2012 Mar; 35(3):574-80. *Epub*, Feb 1, 2012.

- * **Marshall KG**, Swaby K, Hamilton K, **Howell S**, **Landis RC**, **Hambleton IR**, **Reid M**, Fletcher H, **Forrester T**, **McKenzie CA**. A preliminary examination of the effects of genetic variants of redox enzymes on susceptibility to oedematous malnutrition and on percentage cytotoxicity in response to oxidative stress in vitro. *Ann Trop Paediatr*. 2011; 31(1):27-36.
- * Nebor D, **Bowers A**, Hardy-Dessources M, **Knight-Madden J**, Romana M, **Reid H**, Barthélémy J, Cumming V, Elion J, **King L**, Hue O, Reid M and Connes P. 'Clinical severity of sickle cell anemia and its relationships with inflammation, blood rheology and the sympatho-vagal balance *Haematologica*'. 2011 Nov; 96(11):1589-94.
- * Nemesure B, Wu SY, **Hennis A**, Leske MC; Prostate Cancer in a Black Population (PCBP) Study Group. Central adiposity and Prostate Cancer in a Black Population. *Cancer Epidemiol Biomarkers Prev*. 2012 May; 21(5):851-8. *Epub* 2012 Mar 8.
- * Ng P, Schoenfeld ER, **Hennis A**, Wu SY, Leske MC, Nemesure B. Factors Influencing Prostate Cancer Healthcare Practices in Barbados, West Indies. *J Immigr Minor Health*. 2012 Jun 6. [*Epub* ahead of print].
- * Serjeant GR, Serjeant BE, Fraser RA, **Hambleton IR**, Higgs DR, Kulozik AE, Donaldson A. Hb S- α -thalassemia: molecular, hematological and clinical comparisons. *Hemoglobin*. 2011; 35(1):1-12.
- * Sun C, Huo D, Nemesure B, **Hennis A**, Leske MC, Wu SY, Niu Q, Olopade OI, Di Rienzo A. Lack of association between common UGT2B nonsynonymous single-nucleotide polymorphisms and breast cancer in populations of African ancestry. *Int J Cancer*. 2012 Jun 1; 130(11):2740-2. *Epub* 2011 Aug 24.

- * Sun C, Huo D, Southard C, Nemesure B, **Hennis A**, Cristina Leske M, Wu SY, Witonsky DB, Olopade OI, Di Rienzo A. A signature of balancing selection in the region upstream to the human UGT2B4 gene and implications for breast cancer risk. *Hum Genet.* 2011 Dec; 130(6):767-75. *Epub*, Jun 10, 2011.
- * Tayo BO, Luke A, **McKenzie CA**, Kramer H, Cao G, Durazo-Arvizu R, **Forrester T**, Adeyemo AA, Cooper RS. “Patterns of sodium and potassium excretion and blood pressure in the African Diaspora”. *J Hum Hypertens.* 2012 May; 26(5):315-24. *Epub*, May 19, 2011.
- * **Walker S**, Wachs T, Grantham-McGregor S, Black M, Nelson C, Huffman S, **Baker-Henningham H**, **Chang S**, Hamadani J, Lozoff B, Meeks Gardner J, **Powell C**, Rahman A, Richter L (2011) “Inequality begins in early childhood: Risk and protective factors for early child development.” *The Lancet* 378(9799): 1325-1328.
- * **Walker SP**, **Chang SM**, Vera-Hernández M, Grantham-McGregor S. (2011) Early childhood stimulation benefits adult competence and reduces violent behavior. *Pediatrics* 127, 849-57
- * Ward SN, **Boyne MS**, McGrowder D, Gibson TN, **McKenzie CA**. “The predictive value of urinary vanillylmandelic acid testing in the diagnosis of pheochromocytoma at the University Hospital of the West Indies.” *WTMJ.* 2011;60:141-7.
- * Zhang J, Fackenthal JD, Zheng Y, Huo D, Hou N, Niu Q, Zvosec C, Ogundiran TO, **Hennis AJ**, Leske MC, Nemesure B, Wu SY, Olopade OI. Recurrent BRCA1 and BRCA2 mutations in breast cancer patients of African ancestry. *Breast Cancer Res Treat.* 2012 Jul; 134(2): 889-94. *Epub*, Jun 28, 2012.
- * Zheng Y, Ogundiran TO, Adebamowo C, Nathanson KL, Domchek SM, Rebbeck TR, Simon MS, John EM, **Hennis A**, Nemesure B, Wu SY, Leske MC, Ambbs S, Niu Q, Zhang J, Cox NJ, Olopade OI, Huo D. Lack of association between common single nucleotide polymorphisms in the TERT-CLPTM1L

locus and breast cancer in women of African ancestry. *Breast Cancer Res Treat.* 2012 Feb; 132(1):341-5. Epub, 2011 Nov 29.

Non-Peer-Reviewed Journal Articles and reports

- * **Baker-Henningham H**, Grantham-McGregor S, **Walker S** (2011) “Early child development in developing countries: The role of nutrition and stimulation.” In Inclusive Early Childhood Development: an Underestimated component within poverty reduction. Essen, Institute for Inclusive Development, 2011, pg: 48-66.
- * Principal Contributors: Eva Lewis-Fuller; Sonia Copeland; Tamu Davidson; **Trevor Ferguson** Draft Strategic Plan for Non-Communicable Disease (NCD) Prevention and Control in Jamaica 2012-2017. Submitted to Ministry of Health (Jamaica) February 1, 2012

Books and Monographs

- * **Walker SP** “Promoting Equity through Early Child Development Interventions for Children from Birth through Three Years of Age.” In: No Small Matter. The impact of poverty, shocks and human capital investments in early childhood development. Alderman H (Ed.) Washington DC: The World Bank, 2011 pp 115-154.
- * **Walker SP, Chang SM**. “Intra-uterine growth restriction in developing countries: Impact on child mental development and behavior.” In: Handbook of Growth and Growth Monitoring in Health and Disease. Preedy VR (Ed). Springer Science + Business Media, LLC. 2012 pp 147-158.

INCOME GENERATION

Title: Management of Severe Acute Malnutrition during Early Life; Addressing Nutritional Requirements by Stable Isotope Techniques.

Funding Agency: IAEA, Contract No: 15268

Principal Investigator: **Asha Badaloo**

Period of Award: Sep 2008 – Sep 2012

Value: €60,000.00

Title: An assessment of protein requirement in adults with sickle cell disease

Funding Agency: Caribbean Health Research Council;

Co-Principal Investigator: **Asha Badaloo**

Period of Award: March 2009 - ongoing

Value: US\$5,775.00

Title: Glutathione homeostasis and oxidant damage in kwashiorkor: Role of sulphur amino acids in GSH deficiency in childhood malnutrition.

Funding Agency: NIH, Contract No: 5R01 DK056689

Investigator: **Asha Badaloo**

Principal Investigator: **Terrence Forrester**

Period of Award: 2008-2013

Value: US\$1,125,000

The association of cortisol awakening response with blood pressure and adiposity in Afro-Caribbean children. Caribbean Health Research Council grant US\$2,850.00

Principal Investigator: **Michael Boyne**

1R03TW008695-01A1 PI: Cooper 07/01/2011 – 06/30/2014 USD96 000 FIC/NIH

Title: Variation in Severity of Sickle Cell Disease among the Yoruba

The goal of this study is to establish a research collaboration between investigators at the University College Hospital (UCH), Ibadan, Nigeria, the University of the West Indies (UWI), Mona, Kingston, Jamaica, and Loyola Medical School (Chicago, IL) to build capacity for genetic and clinical studies of SCD at UCH, Ibadan

PI (Jamaica): **Colin McKenzie**

2R01HL053353-12A1 PI: Cooper 06/15/2009-04/30/2014 USD 1 000 000 NIH/NHLBI f

Title: Genetics of Hypertension in Blacks

The goal of this study is to conduct a genome-wide association study of hypertension in Nigerians of Yoruba ethnicity.

Consultant: **Colin McKenzie**

The Wellcome Trust, London, UK

Promoting young children's social and emotional competence and preventing conduct problems: Follow-up of a cluster randomised controlled trial

Duration: April 2011 – March 2014

Investigators: **H Baker-Henningham, S Walker**, S Scott

Value: UK £351,892

US\$10,000 received from Caribbean Health Research Council (CHRC) for study: "Utility of Cystatin-C estimating equations in determining glomerular filtration rate in sickle cell disease". September 2011.

PI: **Monika Parshad-Asnani**

2011-2013 The Inter-American Development Bank. Pilot of parenting interventions in the Caribbean

Investigators: **S Walker, S Chang, C Powell, H Baker-Henningham**, S. Grantham-McGregor, F Lopez-Boo

US\$750,000

2009-2012 The Inter-American Development Bank. Intergenerational impacts of early childhood experiences.

Investigators: **S Walker, S Chang, S. Grantham-McGregor**

J\$2,502,187 & US\$100,000

Hyperglycemia and Adverse Pregnancy Outcome Follow Up Study (HAPO – FU). PI – Boyd Metzger, MD; Barbados site PI: **Anselm Hennis**;

Investigators: P. Michele Lashley, Angela Jennings, Tanya Gibson. Funding agency: NIDDK, NIH; US\$17million

USA-Caribbean Alliance for Health Disparities Research: PI – Louis Sullivan, MD. Barbados site PI: **Anselm Hennis**; Investigators: Lynda Williams, MBBS, Chris Hassell, MPH, **Ian Hambleton, PhD**. Funding agency: NIMHD, NIH: US \$5 million.

Barbados National Registry of Chronic Non-communicable Disease: PI: **Angela Rose**; Investigators: **Anselm Hennis, Ian Hambleton**, Tanya Martelly, Lauren Maul, Jacqueline Campbell. Funding agency Ministry of Health; \$1.4 million

Barbados National Cancer Study – Prostate Cancer: PI: Barbara Nemesure, PhD, Co-PI: **Anselm Hennis**. Funding agency: NCI, NIH. US\$3.9 million

1000 Genomes Project: Barbados arm in collaboration with Johns Hopkins University. Investigators: **Anselm Hennis**, Harold Watson, **Colin McKenzie** (TMRU, Mona), Kathleen Barnes (JHU); US\$10,000

The Health of the Nation Study: PIs: Nigel Unwin and **Angela Rose**; Investigators: **Christina Howitt**, Funding agency: European Union and Ministry of Health: \$375, 000

Substudies:

Physical Activity substudy: PIs: **Christina Howitt** and Nigel Unwin; Funding agency: Ministry of Health: \$50,000

Barbados Salt Intake Study: Investigators: **Rachel Harris and Anselm Hennis; Suzanne Soares-Wynter**; Funding: European Union and Ministry of Health; Bds \$170,000.

Renal disease substudy: PIs: **Christina Howitt** and **Anselm Hennis**: Funding agency: Mr. Andrew Bynoe; \$30,000

Expression of the hemoglobin scavenging mechanism in sickle cell disease compared to glucose-6-phosphate deficiency. PI: **Kim Quimby**; Funding agency: Sir Arnott Cato Foundation; \$5,400

Survivorship in breast and prostate cancer: Investigators: Lynda Williams, **Natassia Rambarran**, Celia Greaves, **Anselm Hennis**. Funding agency: Ministry of Health; \$225,000

Clive Landis raised US\$68,000 from regional bodies, international foundations, diagnostic companies and local sponsors to host the 9th

CCAS Caribbean International HIV/AIDS Workshop in 2012. Mr. Edmund Cohen, UK, donated \$24,000 to support the ongoing work of the Edmund Cohen Vascular Research Lab.

Anselm Hennis secured a commitment from the Sagicor Insurance Company to sponsor a chair in Health Economics in the department, funded to the tune of \$850,000 over 3 years. Charitable donations were also made to the department by Insurance Corporation of Barbados, Banks Holdings Ltd., Barbados Shipping and Trading Ltd

Title: Efficacy of Combination Therapy – Hydroxyurea and Enalapril in Slowing the Progression of Sickle Nephropathy in Children

Funding Agency: Caribbean Health Research Council

Principal Investigator: **Lesley King**

Period of Award: March 2012 – ongoing

Value: US\$10,000

Title: Jamaica Amputation Prevention Project: A Clinical Audit and Intervention Study of Diabetic Foot Ulcers and Amputations.

Funding Source: UWI New Initiative Grant

Value: J\$1,500,000. Award duration: May 2012 – August 2014.

Investigators: G. Gordon-Strachan; S. Cawich, **T. Ferguson, M. Tulloch-Reid**, B. Edwards, P. Duke, **S McFarlane**, O. Bernard

PUBLIC SERVICE

Michael Boyne

- President, Caribbean Endocrine Society
- Reviewer, *Journal of Clinical Endocrinology Metabolism*

Trevor Ferguson

- Member, National Non-Communicable Disease Committee

Jennifer Knight Madden

- Journal Reviewer, The Cochrane CF and Genetic Disorders
- Member, Journal of Child Health

- Board Member, Caribbean Network of Researchers in Sickle Cell Disease and Thalassemia

Clive Landis

- Founder and President, Caribbean Cytometry & Analytical Society (CCAS)
- Honorary Director, LRU Laboratory

Angela Rose

- Lead member, Barbados National Death Certification Protocol Committee
- Member, Barbados Ministry of Health Notifiable Disease System Committee
- Member, Abstract Review Committee for the annual European Scientific Conference on Applied Infectious Disease Epidemiology

Colin McKenzie

- Director, NCB insurance Company Limited

Monika Parshad-Asnani

- Caribbean Representative, Worldwide Initiative on Social Studies in Hemoglobinopathies (WiSSH)
- Honorary Secretary, Caribbean College of Family Physicians
- Co-Chair, CME Committee. Caribbean College of Family Physicians
- Member, Accreditation & Certification Committee. Caribbean College of Family Physicians
- Member, Indian Cultural Society in Jamaica – Executive Committee

Kim Quimby

- Curriculum Coordinator, Caribbean Cytometry and Analytical Society
- Member, Organizing Committee and Editorial Board for the 71st BAMP/UWI CME