



# CARIBBEAN INSTITUTE FOR HEALTH RESEARCH

*Departmental Report August 2020 - July 2021*

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We present some selected highlights from the Mona units of the Caribbean Institute for Health Research for the 2019 /20 academic year.

## ACCESS

The academic programmes of CAIHR continued with necessary adjustments to teaching and examination resulting from the COVID-19 pandemic. Online delivery of the MSc Nutrition was offered for the first time in this academic year. The new postgraduate Diploma in Health Research and Epidemiology commenced, and 3 students completed the programme with 2 electing to transfer their credits to the MSc Epidemiology degree.

## ALIGNMENT

Members of CAIHR continued their work in the Jamaica Ministry of Health and Wellness COVID-19 task force and have maintained surveillance systems for COVID-19 in the region. We have provided continuous clinical care to our patients with Sickle Cell Disease and participated in several online training programmes to improve capacity for management of this condition despite the challenges from the pandemic. We successfully obtained a research grant from the United Kingdom Research and Innovation (UKRI) funded by the Medical Research Council to determine the impact of public health control

measures and policies on metabolic & physical health and lifestyle practices of persons with NCDs. This study involves the review of routinely available laboratory and anthropometric data as well as the administration of a telephone survey to persons attending tertiary health care centres in Jamaica, Barbados and Trinidad. The Caribbean's high NCD burden and heterogeneity in the implementation of COVID-19 control measures provides a unique opportunity to investigate the effect of specific policies on NCD health practices and explore differential effects by gender, urban/rural residence and socioeconomic status. These findings can guide LMIC policy development to limit adverse effects in persons at risk of or living with NCDs while containing future COVID-19 outbreaks or other natural disasters. Professor Trevor Ferguson has been appointed Chair of the NCD Committee in March 2021. The NCD Committee will provide leadership for multisectoral action, with a goal towards advocating and recommending policies and programmes for the prevention and control of NCDs. Additionally members of CAIHR are part of this committee contributing their expertise in nutrition, policy and research to helping the committee achieve its goal. As part of The University of the West Indies – University of Glasgow Nutrition Collaboration, Dr Kwesi Marshall and Dr Debbie Thompson, (UWI-CHAIR MSc and MPhil/PhD Nutrition Co-ordinators) worked with Dr Ada Garcia and Dr Alison Parrett (University of Glasgow) to organize an online Mini-Academic Exchange on June 9, 2021. The meeting featured six nutrition-themed presentations from current PhD students, three from the University of Glasgow and three from the University of the West Indies. Other opportunities for academic exchange will be identified that can help improve student access to a wider range of nutrition expertise and research opportunities. Ms. Cherie-Ann Small, our Institute Manager, established a partnership between The UWI (Office of Global Affairs and CAIHR) and the African-Caribbean Churches of the UK Diaspora as part of a Diaspora Education and Empowerment initiative. This resulted in two symposia being delivered over the last academic year.

- History, Heritage and Identity Symposium: Keynote by Professor Hilary Beckles, delivered online on UWI-TV November 12, 2020. <http://jeremiahglobal.org/impact/history-heritage-identity/>
- Overcoming the Burden of Disease Symposium: Keynotes by Professor Hilary Beckles and Professor Kevin Fenton. This second installment premised on CAIHR's formidable body of research on Non-Communicable Diseases and Nutrition Intervention was delivered online on April 22, 2021 on YouTube. <http://jeremiahglobal.org/impact/overcoming-the-burden-of-disease/>

A third symposium is being planned for the upcoming year.

# AGILITY

In September 2020 the UWI received its largest prime award from the National Institutes of Health (US\$ 6.0) for the CATCH study. This 6 year study with a 2 year planning phase will fund the implementation of a team based approach to hypertension care in Jamaica and Columbia. The UWI will be responsible for managing the entire study budget and report directly to the NIH on the projects progress. CAIHR continues to identify and obtain external grant funding relevant to our research strategy and regional needs from local and international agencies and donors including the US National Institutes of Health (NIH), International atomic energy agency, the UK Global Challenge Research Fund, the Inter-American Development Bank, The Wellcome Trust and several others. These funds are essential to maintain our research productivity and excellence and have allowed us to retain critical staff at a time when there is a freeze on many UGC posts and significant economic fallout from the COVID-19 pandemic. It is therefore critical that we maintain our standards for reporting and research excellence to allow other investigators and the next generation of scientists to build on these efforts. We will continue in our efforts to increase enrolment in self-financing programmes to have other sustainable means of income generation.

# ACCESS

## STUDENTS

One PhD Nutrition candidate completed the programme in the last academic year. Only one candidate completed the MSc Epidemiology in the last academic year – primarily a result of delays in teaching and examination resulting from the pandemic.

## PUBLICATONS

### BOOKS AND MONOGRAPHS

1. Taylor, M. A., T. S. Stephenson, F. S. Whyte, L-A. Roper, Potopsingh, D. Campbell, A. A. Chen, P. Clarke, **G. Gordon-Strachan**, O. Grey, T. Hall, R. Koon Koon, I. Mclymont-Lafayette, E. Myers, H. Pinnock, R, A. Rangolan, D. Rankine, G. Robin, I. Smith, R. A. Smith, N. Spencer, K. Stephenson, and J. Taylor, 2021: (Re)Imagining a Climate Resilient Future: A Caribbean Approach. In SALISES Sustainable Caribbean Futures Book Series, Vol 1: Re-ordering Caribbean Futures in the Fires of Global Change. Editors: Prof Richard Bernal, Dr. Hamid Ghany, Dr. Natalie Dietrich Jones and Dr. Pat Northover.
2. **Thomas D, Taylor-Bryan C, McFarlane S, Badaloo A.** (2021). 'Public policy challenges for the control of childhood obesity in Latin America and the Caribbean'. In Emescam University (Ed), Public policies in childhood: Latin American and Caribbean countries. Editora Emescam Awaiting DOI

## REFEREED JOURNAL ARTICLES

1. **Asnani MR, Francis D, Knight-Madden J, Chang-Lopez S, King L, Walker S.** Integrating a problem-solving intervention with routine care to improve psychosocial functioning among mothers of children with sickle cell disease: A randomized controlled trial. *PLoS One*. 2021 Jun 9;16(6):e0252513. doi: 10.1371/journal.pone.0252513. PMID: 34106974; PMCID: PMC8189456.
2. **Asnani V, Black KM, Harris J, Knight-Madden J, Asnani M.** Use of the daycare ward for the management of acute complications of sickle cell disease in Jamaica: A retrospective review. *Int J Clin Pract*. 2021 Jan;75(1):e13755. doi: 10.1111/ijcp.13755. PMID: 33058372.
3. **Bailey A, Govia I, McKenzie J, Richards S, Coleman S, Tulloch-Reid MK, Ragin C, Ashing K.** Staff and participant perceptions of optimal recruitment and retention strategies for biomedical cohort studies in the Caribbean. *Cancer Causes Control*. 2021 Aug;32(8):849-857. doi: 10.1007/s10552-021-01438-w. Epub 2021 May 7. PMID: 33961148; PMCID: PMC8103112.
4. **Bailey A, Harris MA, Bogle D, Jama A, Muir SA, Miller S, Walters CA, Govia I.** Coping With COVID-19: Health Risk Communication and Vulnerable Groups. *Disaster Med Public Health Prep*. 2021 Jul 12:1-6. doi: 10.1017/dmp.2021.225. Epub ahead of print. PMID: 34247692; PMCID: PMC8446589.
5. **Baker-Henningham H, Bowers M, Francis T, Vera-Hernández M, Walker SP.** The Irie Classroom Toolbox, a universal violence-prevention teacher-training programme, in Jamaican preschools: a single-blind, cluster-randomised controlled trial. *Lancet Glob Health*. 2021 Apr;9(4):e456-e468. doi: 10.1016/S2214-109X(21)00002-4. Epub 2021 Feb 22. PMID: 33631132; PMCID: PMC7966677.
6. **Baker-Henningham H, Scott Y, Francis T, Walker SP.** Effects of a Teacher-Training Violence Prevention Program in Jamaican Preschools on Child Behavior, Academic Achievement, and School Attendance in Grade One of Primary School: Follow up of a Cluster Randomized Trial. *Front Psychol*. 2021 Jun 3;12:652050. doi: 10.3389/fpsyg.2021.652050. PMID: 34149536; PMCID: PMC8210533.
7. **Bamgbade OA, Onongaya V, Anomneze-Collins A, Omoniyi DA, Simmonds-Brooks P, Richards RN.** Delayed surgical diagnosis and treatment of severe sickle cell arthropathy: The need to raise clinicians' awareness. *Journal of Taibah University Medical Sciences*. 2021 May 31.
8. **Bartlett R, Ramsay Z, Ali A, Grant J, Rankine-Mullings A, Gordon-Strachan G, Asnani M.** Health-related quality of life and neuropathic pain in sickle cell disease in Jamaica. *Disabil Health J*. 2021 Oct;14(4):101107. doi: 10.1016/j.dhjo.2021.101107. Epub 2021 Apr 15. PMID: 33867318.
9. **Brentani A, Walker S, Chang-Lopez S, Grisi S, Powell C, Fink G.** A home visit-based early childhood stimulation programme in Brazil-a randomized controlled trial. *Health Policy Plan*. 2021 Apr 21;36(3):288-297. doi: 10.1093/heapol/czaa195. PMID: 33496330.
10. **Breuer E, Comas-Herrera A, Freeman E, Albanese E, Alladi S, Amour R, Evans-Lacko**

- S, Ferri CP, **Govia I**, Iveth Astudillo García C, Knapp M, Lefevre M, López-Ortega M, Lund C, Musyimi C, Ndetei D, Oliveira D, **Palmer T**, Pattabiraman M, Sani TP, Taylor D, Taylor E, Theresia I, Thomas PT, Turana Y, Weidner W, Schneider M. Beyond the project: Building a strategic theory of change to address dementia care, treatment and support gaps across seven middle-income countries. *Dementia* (London). 2021 Jul 1;14713012211029105. doi: 10.1177/14713012211029105. Epub ahead of print. PMID: 34196585.
11. Brown RH, Eisner M, Valdebenito S, **Walker S**, Tomlinson M, Hughes C, Ward CL, Osafo J, Sikander S, Fearon P, Dunne MP, Madrid B, Baban A, Van Thang V, Fernando AD, Murray AL. What Research Questions Should the Next Generation of Birth Cohort Studies Address? An International Delphi Study of Experts. *Acad Pediatr*. 2021 Jan-Feb;21(1):43-52. doi: 10.1016/j.acap.2020.03.011. Epub 2020 Apr 6. PMID: 32272232.
  12. Campbell EH, Poudevigne M, **McFarlane S**, Dilworth L, Irving R. Evidence That Sleep Is an Indicator of Overtraining during the Competition Phase of Adolescent Sprinters. *J Sports Med* (Hindawi Publ Corp). 2021 Apr 3;2021:6694547. doi: 10.1155/2021/6694547. PMID: 33884272; PMCID: PMC8041504.
  13. Creamer EG, Guetterman TC, **Govia I**, Fetters MD. Challenging procedures used in systematic reviews by promoting a case-based approach to the analysis of qualitative methods in nursing trials. *Nurs Inq*. 2021 Apr;28(2):e12393. doi: 10.1111/nin.12393. Epub 2020 Dec 17. PMID: 33332712.
  14. Cunningham-Myrie C, Theall KP, **Younger-Coleman N**, Greene LG, Lyew-Ayee P, **Wilks R**. Associations of neighborhood physical and crime environments with obesity-related outcomes in Jamaica. *PLoS One*. 2021 Apr 5;16(4):e0249619. doi: 10.1371/journal.pone.0249619. PMID: 33819299; PMCID: PMC8021199.
  15. Cunningham-Myrie CA, **Younger NO**, Theall KP, Greene LG, Lyew-Ayee P, **Wilks R**. Understanding neighbourhood retail food environmental mechanisms influencing BMI in the Caribbean: a multilevel analysis from the Jamaica Health and Lifestyle Survey: a cross-sectional study. *BMJ Open*. 2020 Aug 23;10(8):e033839. doi: 10.1136/bmjopen-2019-033839. PMID: 32830113; PMCID: PMC7445353.
  16. Douglas KO, Cayol C, Forbes KM, **Samuels TA**, Vapalahti O, Sironen T, Gittens-St Hilaire M. Serological Evidence of Multiple Zoonotic Viral Infections among Wild Rodents in Barbados. *Pathogens*. 2021 May 28;10(6):663. doi: 10.3390/pathogens10060663. PMID: 34071689; PMCID: PMC8229225.
  17. Douglas KO, **Samuels TA**, Iheozor-Ejiofor R, Vapalahti O, Sironen T, Gittens-St Hilaire M. Serological Evidence of Human Orthohantavirus Infections in Barbados, 2008 to 2016. *Pathogens*. 2021 May 8;10(5):571. doi: 10.3390/pathogens10050571. PMID: 34066699; PMCID: PMC8151097.
  18. Dubey B, Jackson M, Zeigler-Johnson C, Devarajan K, Flores-Obando RE, McFarlane-Anderson N, **Tulloch-Reid M**, Aiken W, Kimbro K, Reed D, Kidd LR, Gibbs D, Kumar S, Ragin C. Interactive effect of TLR SNPs and exposure to sexually transmitted infections



- on prostate cancer risk in Jamaican men. *Prostate*. 2020 Nov;80(15):1365-1372. doi: 10.1002/pros.24067. Epub 2020 Sep 7. PMID: 32894795; PMCID: PMC7710572.
19. **Duncan-Baker T**, Chisholm Ford S, **Wilson L**, Reid M, **McFarlane S**. Burdens on caregivers of children ages one to sixteen years living with sickle cell disease attending a specialised clinic in urban, Jamaica, *Int J Child Adolesc Health* 2021;14(1):101-108..
  20. Farina N, Ibridris A, Alladi S, Comas-Herrera A, Albanese E, Docrat S, Ferri CP, Freeman E, **Govia I**, Jacobs R, Astudillo-Garcia CI, Musyimi C, Sani TP, Schneider M, Theresa I, Turana Y, Knapp M, Banerjee S; STRiDE team. A systematic review and meta-analysis of dementia prevalence in seven developing countries: A STRiDE project. *Glob Public Health*. 2020 Dec;15(12):1878-1893. doi: 10.1080/17441692.2020.1792527. Epub 2020 Jul 13. PMID: 32658604.
  21. **Ferguson TS**, **Younger-Coleman NOM**, Mullings J, Francis D, Greene LG, Lyew-Ayee P, **Wilks R**. Neighbourhood socioeconomic characteristics and blood pressure among Jamaican youth: a pooled analysis of data from observational studies. *PeerJ*. 2020 Oct 6;8:e10058. doi: 10.7717/peerj.10058. PMID: 33083129; PMCID: PMC7546221.
  22. **Francis T**, **Baker-Henningham H**. Design and Implementation of the Irie Homes Toolbox: A Violence Prevention, Early Childhood, Parenting Program. *Front Public Health*. 2020 Nov 16;8:582961. doi: 10.3389/fpubh.2020.582961. Erratum in: *Front Public Health*. 2021 Jan 13;8:630819. PMID: 33304875; PMCID: PMC7701241.
  23. **Francis T**, **Baker-Henningham H**. The Irie Homes Toolbox: A cluster randomized controlled trial of an early childhood parenting program to prevent violence against children in Jamaica. *Children and Youth Services Review*. 2021 Jul 1;126:106060.
  24. French S, **Gordon-Strachan G**, Kerr K, Bisasor-McKenzie J, Innis L, Tanabe P. Assessment of Interrater Reliability of the Emergency Severity Index After Implementation in Emergency Departments in Jamaica Using a Learning Collaborative Approach. *J Emerg Nurs*. 2021 Jan;47(1):58-65. doi: 10.1016/j.jen.2020.07.003. Epub 2020 Oct 20. PMID: 33097242.
  25. **Govia I**, Robinson JN, Amour R, Stubbs M, Lorenz-Dant K, Comas-Herrera A, Knapp M. Mapping long-term care in Jamaica: addressing an ageing population. *Sustainability*. 2021 Jan;13(14):8101.
  26. Grey K, Gonzales GB, Abera M, Lelijveld N, **Thompson D**, Berhane M, Abdissa A, Girma T, Kerac M. Severe malnutrition or famine exposure in childhood and cardiometabolic non-communicable disease later in life: a systematic review. *BMJ Glob Health*. 2021 Mar;6(3):e003161. doi: 10.1136/bmjgh-2020-003161. PMID: 33692144; PMCID: PMC7949429.
  27. Harris RM, Rose AMC, **Soares-Wynter S**, Unwin N. Ultra-processed food consumption in Barbados: evidence from a nationally representative, cross-sectional study. *J Nutr Sci*. 2021 Apr 22;10:e29. doi: 10.1017/jns.2021.21. PMID: 34094510; PMCID: PMC8141678.
  28. Harrison A, **Gordon-Strachan G**, James Bateman C, Trotman H, Olugbuyi O, Lambert

- M, Ashley D, Griffith A, Samms-Vaughan M. ECD - Pregnancy outcomes of a birth cohort. Are adolescent mothers really at more risk? *Psychol Health Med*. 2021 Apr 12:1-13. doi: 10.1080/13548506.2021.1909740. Epub ahead of print. PMID: 33840330.
29. Lecky FE, Reynolds T, Otesile O, Hollis S, Turner J, Fuller G, Sammy I, Williams-Johnson J, Geduld H, Tenner AG, French S, **Govia I**, Balen J, Goodacre S, Marahatta SB, DeVries S, Sawe HR, El-Shinawi M, Mfinanga J, Rubiano AM, Chebbi H, Do Shin S, Ferrer JME, Haddadi M, Firew T, Taubert K, Lee A, Convocar P, Jamaluddin S, Kotecha S, Yaqeen EA, Wells K, Wallis L. Harnessing inter-disciplinary collaboration to improve emergency care in low- and middle-income countries (LMICs): results of research prioritisation setting exercise. *BMC Emerg Med*. 2020 Aug 31;20(1):68. doi: 10.1186/s12873-020-00362-7. PMID: 32867675; PMCID: PMC7457362.
30. **McKenzie JA, Younger NO, Tulloch-Reid MK, Govia I, Bennett NR, McFarlane S, Walters R**, Francis DK, Webster-Kerr K, Grant A, Davidson T, **Wilks R**, Williams DR, **Ferguson TS**. Ideal cardiovascular health in urban Jamaica: prevalence estimates and relationship to community property value, household assets and educational attainment: a cross-sectional study. *BMJ Open*. 2020 Dec 15;10(12):e040664. doi: 10.1136/bmjopen-2020-040664. PMID: 33323436; PMCID: PMC7745314.
31. Minniti CP, **Knight-Madden J**, Tonda M, Gray S, Lehrer-Graiwer J, Biemond BJ. The impact of voxelotor treatment on leg ulcers in patients with sickle cell disease. *Am J Hematol*. 2021 Apr 1;96(4):E126-E128. doi: 10.1002/ajh.26101. Epub 2021 Feb 19. PMID: 33476432; PMCID: PMC7986764.
32. Motilal S, Paul-Charles J, **Asnani M**, Khan R, Ricketts-Roomes T, Pinder-Butler S, Herbert J, Farquharson C, Conliffe C, Standard-Goldson A, Smith K, Morris E, Maharaj RG. 2020 family medicine postgraduate examinations at The University of the West Indies: successes and challenges in the time of COVID-19 pandemic. *Postgrad Med J*. 2021 Jul;97(1149):423-426. doi: 10.1136/postgradmedj-2021-140242. Epub 2021 May 26. PMID: 34039692; PMCID: PMC8159667.
33. NCD Risk Factor Collaboration (NCD-RisC). Height and body-mass index trajectories of school-aged children and adolescents from 1985 to 2019 in 200 countries and territories: a pooled analysis of 2181 population-based studies with 65 million participants. *Lancet*. 2020 Nov 7;396(10261):1511-1524. doi: 10.1016/S0140-6736(20)31859-6. PMID: 33160572; PMCID: PMC7658740. **Ferguson TS, Tulloch-Reid MK, Younger-Coleman NO, McFarlane SR**— members of NCD Risk Factor Collaboration
34. NCD Risk Factor Collaboration (NCD-RisC). Heterogeneous contributions of change in population distribution of body mass index to change in obesity and underweight. *Elife*. 2021 Mar 9;10:e60060. doi: 10.7554/eLife.60060. PMID: 33685583; PMCID: PMC7943191. (**Ferguson TS, Tulloch-Reid MK, Younger-Coleman NO** part of NCD Risk Factor Collaboration)
35. NCD Risk Factor Collaboration (NCD-RisC). National trends in total cholesterol obscure heterogeneous changes in HDL and non-HDL cholesterol and total-to-HDL cholesterol ratio: a pooled analysis of 458 population-based studies in Asian and West-

- ern countries. *Int J Epidemiol*. 2020 Feb 1;49(1):173-192. doi: 10.1093/ije/dyz099. PMID: 31321439; PMCID: PMC7245049. (**Ferguson TS, Tulloch-Reid MK, Younger-Coleman NO, McFarlane SR**— members of NCD RisC Factor Collaboration).
36. NCD Risk Factor Collaboration (NCD-RisC). Repositioning of the global epicentre of non-optimal cholesterol. *Nature*. 2020 Jun;582(7810):73-77. doi: 10.1038/s41586-020-2338-1. Epub 2020 Jun 3. PMID: 32494083; PMCID: PMC7332422. (**Ferguson TS, Tulloch-Reid MK, Younger-Coleman NO, McFarlane SR**— members of NCD RisC Factor Collaboration).
  37. NCD Risk Factor Collaboration (NCD-RisC)—Americas Working Group. Trends in cardiometabolic risk factors in the Americas between 1980 and 2014: a pooled analysis of population-based surveys. *Lancet Glob Health*. 2020 Jan;8(1):e123-e133. doi: 10.1016/S2214-109X(19)30484-X. Erratum in: *Lancet Glob Health*. 2020 May;8(5):e648. Erratum in: *Lancet Glob Health*. 2021 Jan;9(1):e23. PMID: 31839128; PMCID: PMC7025323. (**Ferguson TS, Tulloch-Reid MK, Younger-Coleman NO, McFarlane SR**— members of NCD RisC Factor Collaboration).
  38. Nwankwo EM, **Govia IO**. Migration and the Health of Non-migrant Family: Findings from the Jamaica Return(ed) Migrants Study. *J Immigr Minor Health*. 2021 Jul 16. doi: 10.1007/s10903-021-01239-y. Epub ahead of print. PMID: 34269990.
  39. Nwokocha M, Beaney T, Holder C, Thaxter Nesbeth K, Whyllie N, Leitch J, **Ferguson T**, Hosang M, Riley V, Soyibo A, Oshi D, Brown P, Paul T, Wilks R, Poulter NR, Nwokocha C. May Measurement Month 2019: an analysis of blood pressure screening results from Jamaica. *Eur Heart J Suppl*. 2021 May 20;23(Suppl B):B82-B85. doi: 10.1093/eurheartj/suab036. PMID: 34054366; PMCID: PMC8141955.
  40. Odunitan-Wayas FA, Wadende P, Mogo ERI, Brugulat-Panés A, Micklesfield LK, **Govia I**, Mapa-Tassou C, Mukoma G, **Smith JA**, Motlhalhedi M, Wasnyo Y, Were V, Assah F, Okop KJ, Norris SA, Obonyo C, Mbanya JC, **Tulloch-Reid MK**, King AC, Lambert EV, Oni T. Adolescent Levers for a Diet and Physical Activity Intervention Across Socioecological Levels in Kenya, South Africa, Cameroon, and Jamaica: Mixed Methods Study Protocol. *JMIR Res Protoc*. 2021 Jul 13;10(7):e26739. doi: 10.2196/26739. PMID: 34255729; PMCID: PMC8317027.
  41. Oni T, Assah F, Erzse A, Foley L, **Govia I**, Hofman KJ, Lambert EV, Micklesfield LK, Shung-King M, **Smith J**, Turner-Moss E, Unwin N, Wadende P, Woodcock J, Mbanya JC, Norris SA, Obonyo CO, **Tulloch-Reid M**, Wareham NJ; GDAR network. The global diet and activity research (GDAR) network: a global public health partnership to address upstream NCD risk factors in urban low and middle-income contexts. *Global Health*. 2020 Oct 19;16(1):100. doi: 10.1186/s12992-020-00630-y. PMID: 33076935; PMCID: PMC7570103.
  42. Oni T, Micklesfield LK, Wadende P, Obonyo CO, Woodcock J, Mogo ERI, Odunitan-Wayas FA, Assah F, Tatah L, Foley L, Mapa-Tassou C, Bhagtani D, Weimann A, Mba C, Unwin N, Brugulat-Panés A, Hofman KJ, **Smith J, Tulloch-Reid M**, Erzse A, Shung-King M, Lambert EV, Wareham NJ. Implications of COVID-19 control mea-



- asures for diet and physical activity, and lessons for addressing other pandemics facing rapidly urbanising countries. *Glob Health Action*. 2020 Dec 31;13(1):1810415. doi: 10.1080/16549716.2020.1810415. PMID: 32867606; PMCID: PMC7480567.
43. Orrigio K, Pierre RB, Gordon-Harrison D, Lewis-O'connor K, **Gordon-Strachan G**, Christie CDC. Sexual Abuse and Sexually-Transmitted HIV/AIDS in Jamaican Children and Adolescents Aged 6-19 Years. *J Infect Dev Ctries*. 2021 Jul 31;15(7):989-996. doi: 10.3855/jidc.12156. PMID: 34343124.
  44. Owolabi MO, Thrift AG, Martins S, Johnson W, Pandian J, Abd-Allah F, Varghese C, Mahal A, Yaria J, Phan HT, Roth G, Gall SL, Beare R, Phan TG, Mikulik R, Norrving B, Feigin VL; Stroke Experts Collaboration Group. The state of stroke services across the globe: Report of World Stroke Organization-World Health Organization surveys. *Int J Stroke*. 2021 May 27;17474930211019568. doi: 10.1177/17474930211019568. Epub ahead of print. PMID: 33988062. (Tulloch-Reid MK-is a member of the Stroke Experts Collaboration Group)
  45. **Ramsay Z, Bartlett R**, Ali A, Grant J, **Gordon-Strachan G**, Asnani M. Sickie Cell Disease and Pain: Is it all Vaso-occlusive Crises? *Clin J Pain*. 2021 Aug 1;37(8):583-590. doi: 10.1097/AJP.0000000000000949. PMID: 34008506.
  46. **Ramsay Z, Gabbadon CH, Asnani M**. Numb chin syndrome in sickle cell disease: a case series of Jamaican patients. *Ann Hematol*. 2021 Apr;100(4):913-919. doi: 10.1007/s00277-021-04423-0. Epub 2021 Jan 22. PMID: 33479847.
  47. **Ramsay ZJA, Bartlett RE, Clarke CA, Asnani MR, Knight-Madden JM, Gordon-Strachan GM**. How Free Is Free Health Care? An Assessment of Universal Health Coverage Among Jamaicans with Sickle Cell Disease. *Health Equity*. 2021 Apr 21;5(1):210-217. doi: 10.1089/heq.2021.0002. PMID: 33937607; PMCID: PMC8080932.
  48. **Rankine-Mullings A**, Reid M, Soares D, **Taylor-Bryan C, Wisdom-Phipps M, Aldred K**, Latham T, Schultz WH, **Knight-Madden J, Badaloo A**, Lane A, Adams RJ, Ware RE. Hydroxycarbamide treatment reduces transcranial Doppler velocity in the absence of transfusion support in children with sickle cell anaemia, elevated transcranial Doppler velocity, and cerebral vasculopathy: the EXTEND trial. *Br J Haematol*. 2021 Jul 22. doi: 10.1111/bjh.17698. Epub ahead of print. PMID: 34291449.
  49. **Rankine-Mullings AE**, Logan TM, **King LG**, Cunningham-Myrie CA, Scott CR, **Knight-Madden JM**. The risk of acute events among patients with sickle cell disease in relation to early or late initiation of care at a specialist center: evidence from a retrospective cohort study. *BMC Pediatr*. 2020 Aug 8;20(1):373. doi: 10.1186/s12887-020-02270-y. PMID: 32770992; PMCID: PMC7414688.
  50. **Rankine-Mullings AE**, Owusu-Ofori S. Prophylactic antibiotics for preventing pneumococcal infection in children with sickle cell disease. *Cochrane Database Syst Rev*. 2021 Mar 8;3(3):CD003427. doi: 10.1002/14651858.CD003427.pub5. PMID: 33724440; PMCID: PMC8092646.
  51. Royal CD, Babyak M, Shah N, Srivatsa S, Stewart KA, Tanabe P, Wonkam A, **Asnani**

- M. Sickle cell disease is a global prototype for integrative research and healthcare. *Advanced Genetics*. 2021 Mar;2(1):e10037.
52. Schulze KV, Swaminathan S, Howell S, Jajoo A, Lie NC, Brown O, Sadat R, Hall N, Zhao L, **Marshall K**, May T, Reid ME, **Taylor-Bryan C**, Wang X, Belmont JW, Guan Y, Manary MJ, Trehan I, McKenzie CA, Hanchard NA. Edematous severe acute malnutrition is characterized by hypomethylation of DNA. *Nat Commun*. 2019 Dec 19;10(1):5791. doi: 10.1038/s41467-019-13433-6. PMID: 31857576; PMCID: PMC6923441.
53. **Smith JA, Chang SM**, Lopez Boo F, Ferro MP, **Walker SP**. Are Benefits From a Parenting Intervention Delivered Through the Health Services Sustainable? Follow-Up of a Randomized Evaluation in Jamaica. *Acad Pediatr*. 2021 May-Jun;21(4):638-645. doi: 10.1016/j.acap.2021.01.003. Epub 2021 Jan 9. PMID: 33434700.
54. **Sobers NP**, Bishop L, Ng SW, **Soares-Wynter S**, Greaves NS, **Murphy MM**. Understanding the need for a whole-of-society approach in school nutrition policy implementation: a qualitative analysis. *Implement Sci Commun*. 2021 Jul 17;2(1):79. doi: 10.1186/s43058-021-00184-z. PMID: 34274014; PMCID: PMC8285724.
55. Stewart KA, **Parshad-Asnani M**, Wonkam A, Bollinger J, Ngo Bitoungui V, Wonkam-Tin-gang E, Powell J, Desronvil K, Benson KRK, Clark A, Katz M, Martin B, Peterseim C, Williams C, Young N, Shah N, Tanabe P, Babyak M, Royal CDM. "Pain is Subjective": A Mixed-Methods Study of Provider Attitudes and Practices Regarding Pain Management in Sickle Cell Disease Across Three Countries. *J Pain Symptom Manage*. 2021 Mar;61(3):474-487. doi: 10.1016/j.jpainsymman.2020.08.029. Epub 2020 Sep 1. PMID: 32889040.
56. **Thompson DS**, Bourdon C, Massara P, Boyne MS, Forrester TE, Gonzales GB, Banda-ma RHJ. Childhood severe acute malnutrition is associated with metabolic changes in adulthood. *JCI Insight*. 2020 Dec 17;5(24):e141316. doi: 10.1172/jci.insight.141316. PMID: 33201860; PMCID: PMC7819749.
57. Valdebenito S, Murray A, Hughes C, Băban A, Fernando AD, Madrid BJ, Ward C, Osafo J, Dunne M, Sikander S, **Walker SP**, Thang VV, Tomlinson M, Fearon P, Shenderovich Y, Marlow M, Chaturika D, Taut D, Eisner M. Evidence for Better Lives Study: a comparative birth-cohort study on child exposure to violence and other adversities in eight low- and middle-income countries - foundational research (study protocol). *BMJ Open*. 2020 Oct 10;10(10):e034986. doi: 10.1136/bmjopen-2019-034986. PMID: 33039982; PMCID: PMC7552842.
58. Whyte N, Morrison-Blidgen B, **Asnani M**. Priapism in Sickle Cell Disease: An Evaluation of the Knowledge of an at Risk Population in Jamaica. *Sex Med*. 2021 Jun;9(3):100339. doi: 10.1016/j.esxm.2021.100339. Epub 2021 May 12. PMID: 33991817; PMCID: PMC8240165.
59. **Williamson GA**, Rodrigo S, **Guthrie-Dixon N**, Blackman E, Beck JR, Hambleton I, Bailey A, Paul T, Ragin CC, **Tulloch-Reid MK**. A cross-sectional analysis of investigator needs for non-communicable disease research at the University of the West Indies, Mona. *Rev Panam Salud Publica*. 2021 Apr 6;45:e35. doi: 10.26633/RPSP.2021.35.

PMID: 33833787; PMCID: PMC8021206.

60. **Wright AS, Tulloch-Reid MK, Chang SM, Walker SP.** Maternal characteristics influence infant feeding styles in Caribbean women. *Public Health Nutr.* 2021 May 28:1-12. doi: 10.1017/S1368980021002391. Epub ahead of print. PMID: 34047268.

## TECHNICAL REPORTS

1. **Gordon-Strachan, G., Guthrie-Dixon, N., McFarlane, S.,** Augustus, E., **Anderson S., 2021.** Impact of Climate Change on the Health Sector Component In State of the Jamaica Climate Report 2019. The Climate Studies Group, University of the West Indies, Mona.
2. **Gordon-Strachan G. 2020.** An evaluation of Western Regional Health Authority Maternal Mortality 2016-2019. Ministry of Health, Programme for the Reduction of Maternal and Child Mortality (ProMAC) Funded by the European Union.

Chang-Lopez S, Walker SP Grantham-McGregor SM, Powell CA, (2020) Parent Manual: Activities for children up to age 3 years. Caribbean Institute for Health Research, The University of the West Indies; Social Protection and Health Division, Inter-American Development Bank. © The University of the West Indies, 2020

## PUBLISHED PROTOCOLS / PREPRINTS

1. **Bennett NR, Ferguson TS, Younger-Coleman NO,** Francis DK, **Anderson SG,** Harris EN, MacLeish MY, Wilks RJ. Socioeconomic and gender disparities in tobacco smoking among Jamaican adults from a national health survey. *medRxiv.* 2021:2021.01.04.21249206.
2. **Ferguson TS,** Royal-Thomas TY, Chin-Harty L, Thame MM, Forrester TE, Osmond C, Boyne MS, Wilks RJ. Effect Of Linear Growth Rate and Change in Body Mass Index In Childhood And Adolescence On Blood Pressure In Afro-Caribbean Youth: The Vulnerable Windows Cohort Study. *medRxiv.* 2021:2021.04.17.21255680.

# ALIGNMENT

## PAPERS PRESENTED

There were over 40 papers presented at local and regional conferences including over 10 presentations of the Caribbean Public Health Agencies first Virtual Conference in June 2021. Dr. Zachary Ramsay was awarded the inaugural Donald Simeon Prize for his presentation Ramsay Z, Bartlett R, Ali A, Grant J, Gordon-Strachan G, Asnani M. "Quantitative Sensory Testing in the Assessment of Neuropathic Pain among Jamaicans with Sickle Cell Disease." Oral presentation at 65th Annual CARPHA Health Research Conference Virtual Conference. June 16- 19, 2021.

## NON-REFEREED ARTICLES

**Soares-Wynter S.** We have a right to know what is in our food” Commentary published in The Gleaner. March 9th. 2021

**Gray Brown A.** “Protecting our children from the marketing of unhealthy foods” Commentary published in The Gleaner November 28<sup>th</sup>, 2020.

**Marshall K.** What’s in Our Food? Addressing Obesity Prevention through Front-of-package Labelling”. Published in the Jamaica Gleaner September 13, 2020

## INVITED LECTURES

Members of CAIHR gave over 15 invited talks in areas ranging from sickle cell disease and other NCD management as well as Climate and Health.

## PUBLIC SERVICE

### Carolyn Taylor-Bryan

- Participated in Early Childhood Commission – Partners Forum and National Strategic Plan, November 19<sup>th</sup> and 26<sup>th</sup>, 2020
- Judge for the Donald Simeon Prize at the CARPHA 2021 Conference. June 2021
- Member, National Infant and Young Child Feeding Committee

### Ishtar Govia

- Member, Board of Directors, Jamaica Mental Health Advocacy Network
- Member, Board of Directors, Alzheimer’s Jamaica
- Member, Spanish Town Hospital Management Committee
- Member, Caribbean Alliance of National Psychological Association Executive Committee
- Member, MOHW COVID-19 task force

### Jennifer Knight-Madden

- Co-chair National Institutes of Health (NIH) Data Safety Monitoring Board (DSMB) for the Realizing Effectiveness Across Continents with Hydroxyurea (REACH) trial October 2017 – Present.
- Co-chair National Institutes of Health (NIH) Data Safety Monitoring Board (DSMB) for the Enhancing Preventive Therapy of Malaria In children with Sickle Cell Anemia in East Africa (EPITOMISE) trial. November 2018- Present.
- Member, Scientific Advisory Committee, Global Alliance of SCD Organizations (GASCO)
- Co-Chair Sickle Cell Technical Working Group (national)



- Member, National NCD Committee
- Co-Chair the Surveillance, Monitoring & Evaluation, Research sub-committee of the National NCD Committee
- Member, Advisory Panel on Ethics and Medico-Legal Affairs, Ministry of Health & Wellness (National)
- Member Medical Facilities Committee, Bureau of Standards Jamaica
- Executive Member, PTA, St. Andrew High School for Girls
- Member, Board of Management, St Andrew High School for Girls

### **Recognition:**

- 1st ever National NCD Award of Excellence to SCU July 2021 at the NCD Program Review and Conference.

### **Kwesi Marshall**

- Chairman of the National Food Industry Task Force (NFITF), a food and nutrition advisory and advocacy body that reports to the Ministry of Health and Wellness
- Chairman of the Nutrition Sub-committee of the National Committee on Non-communicable diseases launched March 23, 2021

### **Lesley King**

- Vaccinator for MOHW COVID-19 Vaccination Exercise
- Member of the Sickle Cell Technical Working Group

### **Marshall Tulloch-Reid**

- Member, MOHW COVID-19 task force

### **Monika Parshad-Asnani**

- Co-Chair, Caribbean Primary Care Research group (CAPCRG), Caribbean College of Family Physicians. 2015-Present
- Board Member of Caribbean Network of Researchers in Sickle Cell Disease and Thalassemia since 2014
- Member, Global Evidence Synthesis Initiative (GESI) Network of Evidence Synthesis Centers. Since May 2017
- Board Member, Indian Cultural Society in Jamaica. July 2007- Present

### **Nadia Bennett**

- Member, MOHW COVID-19 task force

## **Patrice Simmonds-Brooks**

- Board Member, Sickle Cell Trust
- Volunteer Doctor for Tony Spaulding Sporting Complex in the Arnett Gardens Community 2018-2021

## **Susan Walker**

- Member, Advisory Board, Caribbean Centre for Health Systems Research and Development
- Member, Advisory Committee on Health Research, Pan American Health Organization

## **Suzanne Soares-Wynter**

- The Heart Foundation of Jamaica Board of Directors (June 2018 – current) & Medical Sub-Committee Member (June 2020 – current)
- Caribbean Regional Technical Sub-Committee on Food Labeling. Caribbean Regional Organization on Standards and Quality (CROSQ) (June 2019–current)
- Bureau of Standards Jamaica Limited - National Mirror Committee Member (June 2019 – current) & Labelling and Technical Committee Member (June 2019 – current)
- World Health Organization (WHO) Guideline Development Group: Management of young children and adolescents with obesity for improved health, functioning and reduced disability: a primary health care approach. (April 2021 – current)
- Vital Strategies Healthy Food Policy Fellowship Fund Reviewer – August 2020- current
- Joint FAO/WHO Food Standards Programme of the Codex Alimentarius Commission
  - Codex Committee on Nutrition and Foods for Special Dietary Uses (April 2021)
- National Food Industry Task Force Ministry of Health and Wellness, Jamaica. (Core Group Consultant Member) 2019 - current
- Next Generation of Leaders for a Well-Nourished World – Member 2020-current
- Jamaica Association of Professionals in Nutrition and Dietetics (JAPINAD)
- APINAD Standards and Regulatory Committee – Member (2020-current)
- Academy of Nutrition and Dietetics (formerly, American Dietetic Association) – International Member (Current)
- International Affiliate of the American Academy of Nutrition and Dietetics (IAAND) (Current)
- Provide research support to national obesity prevention and healthy food policy initiatives (Jamaica and Barbados).

## **Trevor Ferguson**

- Second Vice President, Association of Consultant Physicians of Jamaica

- Chair, National Committee on Non-Communicable Diseases, MOHW
- Member, MOHW COVID-19 task force

# AGILITY

## INCOME GENERATION

### NEW GRANTS

1. **Funding Source:** Medical Research Council. **Title:** The impact of COVID-19 control measures on NCD risk factors and metabolic health: A comparison of 3 Caribbean countries. **Investigators:** M. Tulloch-Reid. **Period of award:** November 2020 – April 2022. **Total Value:** GBP £303,246. **2020-2021** – GBP £50,404.82
2. **Funding Source:** National Institutes of Health. **Title:** Implementing and Scaling Up a Team-based Care Strategy for Hypertension Control in Colombia and Jamaica. **Investigators:** M. Tulloch-Reid, J. Duncan, T. Ferguson, I. Govia and N. Bennett. **Period of award:** September 2020 – August 2022 (Planning Phase). **Total Value:** USD \$6.0 M, - USD \$1,187,586 for Planning Phase. **2020-2021** – USD \$134,489
3. **Funding Source:** Vital Strategies. **Title:** Vital Strategies Healthy Food Policy Fellowship. **Investigators:** C. Small. **Period of award:** August 2020 – October 2023. **Total Value:** USD \$195,154. **2020-2021** – USD \$28,707.65
4. **Funding Source:** United Nations International Children’s Emergency Fund (UNICEF). **Title:** Irie Jamaica Classroom Toolbox Hybrid and Addition of Functional Literacy and Numeracy Module **Investigators:** H. Baker-Henningham. **Period of award:** July 2021 – February 2022. **Total Value:** JMD \$9,717,500. **2020-2021** – JMD \$4,543,750
5. **Funding Source:** National Health Fund (NHF). **Title:** Jamaica salt consumption, knowledge, attitude and practice (SALT-KAP) study. **Investigators:** T. Ferguson. **Period of award:** May 2021 – November 2022. **Total Value:** JMD \$13,491,225. **2020-2021** – JMD \$3,243,0000

### ONGOING GRANTS

6. **Funding Source:** Arts & Humanities Research Council (AHRC). **Title:** Transdisciplinary data assemblages for a socio-historical understanding of the formation of Caribbean food systems **Investigators:** C. Guell, H. Altink, N. Unwin, I. Govia, K. Morrissey, R. Thurstan **Period of award:** December 2019 – December 2021 **Total Value:** GBP £18,815.19 **2020-2021** – GBP £18,815.19
7. **Funding Source:** Inter-American Development Bank **Title:** Evaluation of processes impact and costs of an evidence-based parenting program at scale in primary health

- care services **Investigators:** S. Walker, S. Chang-Lopez, J. Smith. **Period of award:** September 2019 – December 2021. **Total Value:** USD \$572,574. **2020-2021** – USD \$238,572.50
8. **Funding source:** Aruvant Sciences **Title:** Gene Transfer for Patients with Sickle Cell Disease Using a Gamma Globin Lentivirus Vector: An Open Label Phase I/II Pilot Study. **Investigator:** M. Asnani. **Period of award:** October 2019 – 2030 **Total Value:** USD \$132,345.94 direct cost + USD \$18,140.72 per patient. **2020-2021** – USD \$98,381.86
  9. **Funding Source:** UNICEF Jamaica. **Title:** Dissemination of the IRIE Classroom Toolbox. **Investigators:** H. Baker-Henningham, M. Bowers, T. Francis. **Period of award:** July 2019 – October 2020. **Total Value:** JMD \$12, 990,000. **2020-2021** – JMD \$2,390,000
  10. **Funding source:** MEDICANJA. **Title:** A prospective, randomized controlled double blind trial to assess efficacy of adjunctive cannabinoid therapy in managing pain and symptoms of cancer in patients with malignant cancer. **Period of award:** July 2019 – completion of the study; **Total Value:** JMD \$2,000,000. **2020-2021** – JMD \$200,000
  11. **Funding Source:** Lego Foundation. **Title:** Reach Up Knowledge Generation. **Investigators:** S. Walker, C. Powell, S. Chang-Lopez, J. Smith, J. Hall. **Period of award:** June 2019 – September 2021. **Total Value:** USD \$138,342.
  12. **Funding source:** Foundation Open Society Institute (FOSI). **Title:** Expanding implementation of the Reach Up Early Childhood Parenting programme. **Investigators:** C. Powell, S. Chang-Lopez, S. Walker. **Period of award:** January 2019 – December 2021 **Total Value:** USD \$215,070. **2020-2021** – USD \$11,783
  13. **Funding source:** University of North Carolina (Chapel Hill). Sub-Contract Award (5109417) **Title:** "Programme and policy options for preventing obesity in the low-middle- and transitional income countries: background research and program evaluation. **Investigator:** S. Soares-Wynter. **Period of award:** September 2017 – December 2021 **Total Award:** USD \$742,698 **2020-2021** – USD \$174,315
  14. **Funding source:** Grand Challenges Canada. **Title:** Survive and Thrive in Brazil - The Boa Vista Early Childhood Program. **Investigators:** S. Chang-Lopez and C. Powell. **Period of award:** October 2018 – November 2020. **Total Value:** USD \$33,869. **2020-2021** – USD \$5,419.04
  15. **Funding source:** National Institutes of Health. **Title:** Extending a Caribbean Based Cohort to Promote US-Caribbean Comparisons to Facilitate Research Addressing Black Health Disparities. **Investigator:** Marshall Tulloch-Reid (UWI PI), C. Ragin (PI - Fox Chase). **Period of award:** September 2018 – March 2021. **Total Value:** USD \$654,246.24 **2020-2021** – USD \$330,555



16. **Funding source:** Fondation Botnar. **Title:** Evidence for Better Lives Study - Data Innovation Pilot. **Investigator:** S. Walker (UWI PI). **Period of award:** June 2018 – March 2022. **Total Value:** GBP £42,985.
17. **Funding source:** Nova Laboratories. **Title:** A Prospective Open-Label Pharmacokinetic Study of an Oral Hydroxyurea Solution in Children with Sickle Cell Anaemia. **Investigators:** A. Rankine-Mullings (PI), M. Reid, J. Knight Madden, S. Baugh-Ranglin. **Period of award:** April 2018 – Completion of the clinical trial. **Total Value:** USD \$260,000. **2020-2021** – USD \$82,009.87
18. **Funding source:** Cincinnati Children’s Hospital Medical Centre **Title:** Expanding Treatment for Existing Neurological Disease (EXTEND). Protocol 4.2. **Investigators:** M. Reid, J. Knight-Madden, A. Rankine-Mullings. **Period of award:** February 2018 – Completion of the study. **Total Value:** USD \$125, 000. **2020-2021** – USD \$36,343
19. **Funding source:** International Development Research Centre (IDRC). **Title:** Improving Household Nutrition Security and Public Health in the CARICOM. **Investigator:** T. A. Samuels. **Period of award:** January 2018 – October 2022. **Total Value:** CAD \$4,000,000. **2020-2021** – CAD \$683,875
20. **Funding source:** Economic and Social Research Council. **Title:** Strengthening responses to dementia in developing countries (STRiDE). **Investigator:** Ishtar Govia. **Period of award:** January 2018 – December 2021. **Total Value:** GBP £225,422 plus additional amounts for research activities, training & non-staff costs. **2020-2021** – GBP £32,874.04
21. **Funding source:** International Atomic Energy Agency (IAEA). **Title:** Assessment of Risk Factors for Childhood Obesity and the Impact of an Educational Intervention on Infant Feeding, Growth and Body Composition. **Investigator:** C.Taylor-Bryan. **Period of award:** September 2017 – August 2022. **Total Value:** €50,000. **2020-2021** – €10,000
22. **Funding source:** National Institutes of Health. **Title:** Planning for a Sustainable and Robust RCRE in the Caribbean. **Investigators:** C. Ragin (Fox Chase PI), M. Tulloch-Reid (UWI PI). **Period of award:** September 2017 – February 2021. **Total Value:** USD \$232,619.
23. **Funding source:** International Atomic Energy Agency. **Title:** The assessment of the prevalence of environmental enteric dysfunction and its relationship with linear growth in urban Jamaican infants. **Investigator:** S. Whyte. **Period of award:** July 2017 – Jun 2021 **Total Value:** €35,000. **2020-2021** – €8,020.83
24. **Funding source:** NIHR Global Health Research Group. **Title:** To establish a NIHR Group on Global Diet and Activity Research (GDAR). **Investigator:** M. Tulloch-Reid (UWI PI), I. Hambleton, A. Samuels. **Period of award:** June 2017 – May 2021. **Total Value:** GBP £185,357.05 **2020-2021** – GBP £33,015.33

25. **Funding source:** Cincinnati Children's Hospital Medical Center (CHMC). **Title:** Gene transfer for patients with Sickle Cell Disease using gamma globin lentivirus vector: An open phase I/II pilot study. **Investigator:** M. Asnani (UWI PI) **Period of award:** November 2016 – November 2031. **Total Value:** USD \$74,465.10 **2020-2021 –** USD \$2,416.44
26. **Funding source:** Avicanna Inc. **Title:** Neuropathic Pain in Jamaican with Sickle Cell Disease. **Investigator:** M. Asnani and Z. Ramsay. **Period of award:** December 2018 – February 2021. **Total Value:** GBP £185,357.05
27. **Funding source:** International Atomic Energy Agency. **Title:** Bioavailability of protein from the common bean (*phaseolus vulgaris*) in Jamaican diets. **Investigator:** A. Badloo. **Period of award:** September 2015 – September 2021 **Total Value:** €50,000. **2020-2021 –** €6,944.44

