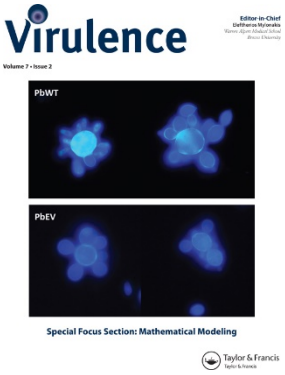
CELEBRATES SCIENCE

OCTOBER 2016

THE SOUTH AFRICAN MEDICAL RESEARCH COUNCIL INFORMATION SERVICES DIVISION

TOP 5 ARTICLES

Director: Prof Paul van Helden



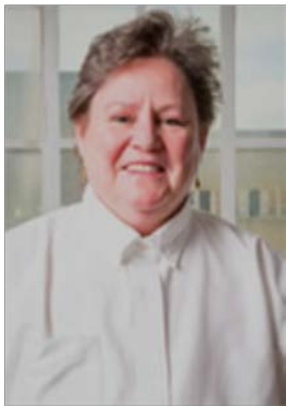
Article:

Leisching G, **Pietersen RD**, van Heerden C, **van Helden P**, **Wiid I**, **Baker B**. RNAseq reveals hypervirulence-specific host responses to M. tuberculosis infection. Virulence. 2016 Oct 20: 1-11. [Original]
DOI: 10.1080/21505594.2016.1250994
Impact Factor: 5.418

Summary:

The distinguishing factors that characterize the host response to infection with virulent Mycobacterium tuberculosis (M.tb) are largely confounding. We present an infection study with 2 genetically closely related M.tb strains that have vastly different pathogenic characteristics. The early host response to infection with these detergent-free cultured strains was analyzed through RNAseq in an attempt to provide information on the subtleties which may ultimately contribute to the virulent phenotype. Murine Bone Marrow Derived Macrophages (BMDMs) were infected with either a hyper- (R5527) or hypovirulent (R1507) Beijing M. tuberculosis clinical isolate. RNAseq revealed 69 differentially expressed host genes in BMDMs during comparison of these 2 transcriptomes. Pathway analysis revealed activation of the stress-induced and growth inhibitory Gadd45 signaling pathway in hypervirulent infected BMDMs. Upstream regulators of interferon activation such as and IRF3 and IRF7 were predicted to be upregulated in hypovirulent-infected BMDMs. Additional analysis of the host immune response through ELISA and qPCR included the use of human THP-1 macrophages where a robust proinflammatory response was observed after infection with the hypervirulent strain. RNAseq revealed 2 early-response genes (ier3 and saa3) and 2 host-defense genes (oasl1 and slpi) that were significantly upregulated by the hypervirulent strain. The role of these genes under M.tb infection conditions are largely unknown but here we provide validation of their presence with use of qPCR and Western blot. Further analysis into their biological role during infection with virulent M.tb is required.

Director: Prof Lynette Denny



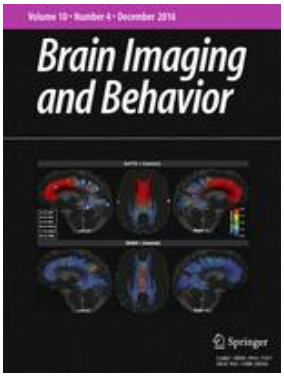
Article:

Ujma S, Horsnell WG, **Katz AA**, Clark HW, **Schafer G**. Non-pulmonary immune functions of surfactant proteins A and D. Journal of Innate Immunity. 2016 Oct 29. [Review]
DOI: 10.1159/000451026
Impact Factor: 4.273

Summary:

Surfactant proteins A (SP-A) and D (SP-D) are established as essential components of our innate immune system for protecting the lung from pathogens and allergens. They essentially exert their protective functions by regulating pulmonary homeostasis. Both proteins are however widely expressed throughout the body, including the female reproductive tract, urinary tract, gastrointestinal tract, the eye, ear, nasal compartment, central nervous system, the coronary artery and the skin. The functions of SP-A and SP-D at these sites are a relatively underinvestigated area, but it is emerging that both SP-A and SP-D contribute significantly to the regulation of inflammation and protection from infection at these sites. This review presents our current understanding of the roles of SP-A and SP-D in non-pulmonary sites.

Director: Prof Dan Stein



Article:

Roos A, **Fouche JP**, **Stein DJ**. Brain network connectivity in women exposed to intimate partner violence: A graph theory analysis study. Brain Imaging and Behavior. 2016 Oct 18. [Original]

DOI: 10.1007/s11682-016-9644-0

Impact Factor: 3.667

Summary:

Evidence suggests that women who suffer from Intimate Partner Violence (IPV) and Posttraumatic Stress Disorder (PTSD) have structural and functional alterations in specific brain regions. Yet, little is known about how brain connectivity may be altered in individuals with IPV, but without PTSD. Women exposed to IPV (n = 18) and healthy controls (n = 18) underwent structural brain imaging using a Siemens 3T MRI. Global and regional brain network connectivity measures were determined, using graph theory analyses. Structural covariance networks were created using volumetric and cortical thickness data after controlling for intracranial volume, age and alcohol use. Nonparametric permutation tests were used to investigate group differences. Findings revealed altered connectivity on a global and regional level in the IPV group of regions involved in cognitive-emotional control, with principal involvement of the caudal anterior cingulate, the middle temporal gyrus, left amygdala and ventral diencephalon that includes the thalamus. To our knowledge, this is the first evidence showing different brain network connectivity in global and regional networks in women exposed to IPV, and without PTSD. Altered cognitive-emotional control in IPV may underlie adaptive neural mechanisms in environments characterized by potentially dangerous cues.

Director: Prof Charles Parry

Article:

Schneider M, Chersich M, Temmerman M, **Parry CD**. Addressing the intersection between alcohol consumption and antiretroviral treatment: Needs assessment and design of interventions for primary healthcare workers, the Western Cape, South Africa. Globalization and Health. 2016 Oct 26; 12(1): 65. [Original]
DOI: 10.1186/s12992-016-0201-9
Impact Factor: 2.540

Summary:

Background: At the points where an infectious disease and risk factors for poor health intersect, while health problems may be compounded, there is also an opportunity to provide health services. Where Human Immunodeficiency Virus (HIV) infection and alcohol consumption intersect include infection with HIV, onward transmission of HIV, impact on HIV and Acquired Immunodeficiency Syndrome (AIDS) disease progression, and premature death. The levels of knowledge and attitudes relating to the health and treatment outcomes of HIV and AIDS and the concurrent consumption of alcohol need to be determined. This study aimed to ascertain the knowledge, attitudes and practices of primary healthcare workers concerning the concurrent consumption of alcohol of clinic attendees who are prescribed antiretroviral drugs. An assessment of the exchange of information on the subject between clinic attendees and primary healthcare providers forms an important aspect of the research. A further objective of this study is an assessment of the level of alcohol consumption of people living with HIV and AIDS attending public health facilities in the Western Cape Province in South Africa, to which end, the study reviewed health workers' perceptions of the problem's extent. A final objective is to contribute to the development of evidence-based guidelines for AIDS patients who consume alcohol when on ARVs. The overall study purpose is to optimise antiretroviral health outcomes for all people living with HIV and AIDS, but with specific reference to the clinic attendees studied in this research.

Methods: Overall the research study utilised mixed methods. Three group-specific questionnaires were administered between September 2013 and May 2014. The resulting qualitative data presented here supplements the results of the quantitative data questionnaires for HIV and AIDS clinic attendees, which have been analysed and written up separately. This arm of the research study comprised two, separate, semi-structured sets of interviews: one face-to-face with healthcare workers at the same primary healthcare clinics from which the clinic attendees were sampled, and the other with administrators from the local government health service via email. The qualitative analysis from the primary healthcare worker interviews has been analysed using thematic content analysis.

Results: The key capacity gaps for nurses include the definition of different patterns and volumes of alcohol consumption, resultant health outcomes and how to answer patient questions on alcohol consumption while on antiretroviral treatment. Not only did the counsellors lack knowledge regarding alcohol abuse and its treatment, but they were also they were unclear on their role and rights in relation to their patients. Doctors highlighted the need for additional training for clinicians in diagnosing alcohol use disorders and information on the pharmacological interventions to treat alcoholism.

Conclusion: Pertinent knowledge regarding patient alcohol consumption while taking ARVs needs to be disseminated to primary healthcare workers.

Director: Prof Helen Schneider

HUMAN RESOURCES FOR HEALTH

Article:

Schneider H, Okello D, Lehmann U. The global pendulum swing towards community health workers in Low- and Middle-Income Countries: A scoping review of trends, geographical distribution and programmatic orientations, 2005 to 2014. Human Resources for Health. 2016 Oct 26; 14(1): 65. [Review]
DOI: 10.1186/s12960-016-0163-2
Impact Factor: 2.416

Summary:

Background: There has been a substantial increase in publications and interest in Community Health Workers (CHWs) in Low- and Middle-Income Countries (LMIC) over the last years. This paper examines the growth, geographical distribution and programmatic orientations of the indexed literature on CHWs in LMIC over a 10-year period.

Methods: A scoping review of publications on CHWs from 2005 to 2014 was conducted. Using an inclusive list of terms, we searched seven databases (including MEDLINE, CINAHL, Cochrane) for all English-language publications on CHWs in LMIC. Two authors independently screened titles/abstracts, downloading full-text publications meeting inclusion criteria. These were coded in an Excel spreadsheet by year, type of publication (e.g. review, empirical), country, region, programmatic orientation (e.g. maternal-child health, HIV/AIDS, comprehensive) and CHW roles (e.g. prevention, treatment) and further analysed in Stata14. Drawing principally on the subset of review articles, specific roles within programme areas were identified and grouped.

Findings: Six hundred seventy-eight publications from 46 countries on CHWs were inventoried over the 10-year period. There was a sevenfold increase in annual number of publications from 23 in 2005 to 156 in 2014. Half the publications were reporting on initiatives in Africa, a third from Asia and 11 % from the Americas (mostly Brazil). The largest single focus and driver of the growth in publications was on CHW roles in meeting the Millennium Development Goals of maternal, child and neonatal survival (35 % of total), followed by HIV/AIDS (16 %), reproductive health (6 %), non-communicable diseases (4 %) and mental health (4 %). Only 17 % of the publications approached CHW roles in an integrated fashion. There were also distinct regional (and sometimes country) profiles, reflecting different histories and programme traditions.

Conclusions: The growth in literature on CHWs provides empirical evidence of ever-increasing expectations for addressing health burdens through community-based action. This literature has a strong disease- or programme-specific orientation, raising important questions for the design and sustainable delivery of integrated national programmes.

1. INTRAMURAL RESEARCH UNITS

Alcohol, Tobacco and Other Drug

1. May PA, Marais AS, de Vries MM, Kalberg WO, Buckley D, Hasken JM, Adnams CM, Barnard R, Joubert B, Cloete M, Tabachnick B, Robinson LK, Manning MA, Jones KL, Bezuidenhout H, Seedat S, **Parry CDH**, Hoyme HE. The continuum of fetal alcohol spectrum disorders in a community in South Africa: Prevalence and characteristics in a fifth sample. Drug and Alcohol Dependence. 2016 Oct 06. [Original]
   DOI: 10.1016/j.drugalcdep.2016.09.025
   Impact Factor: 3.349

2. **Myers B**, Govender R, Manderscheid R, **Williams PP**, **Johnson K**, Koch JR. Need for and readiness to implement a performance measurement system for South Africa's substance abuse treatment services. International Journal of Mental Health and Addiction. 2016 Oct 06. [Original]
   DOI: 10.1007/s11469-016-9706-y
   Impact Factor: 1.018

3. Norman IJ, Bergin M, **Parry CD**, van Hout MC. Best practices and innovations for managing codeine misuse and dependence. Journal of Pharmacy & Pharmaceutical Sciences. 2016 Oct 27. [Original]
   DOI: 10.18433/J3T89K
   Impact Factor: 2.330

4. **Schneider M**, Chersich M, Temmerman M, **Parry CD**. Addressing the intersection between alcohol consumption and antiretroviral treatment: Needs assessment and design of interventions for primary healthcare workers, the Western Cape, South Africa. Globalization and Health. 2016 Oct 26; 12(1): 65. [Original]
   DOI: 10.1186/s12992-016-0201-9
   Impact Factor: 2.540

Biostatistics

1. Musekiwa A, **Manda SO**, Mwambi HG, Chen DG. Meta-analysis of effect sizes reported at multiple time points using general linear mixed model. PLoS One. 2016 Oct 31; 11(10): e0164898. [Original]
   DOI: 10.1371/journal.pone.0164898
   Impact Factor: 3.057

2. Mayaphi SH, Martin DJ, Quinn TC, Laeyendecker O, **Olorunju SA**, Tintinger GR, Stoltz AC. Detection of acute and early HIV-1 infections in an HIV hyper-endemic area with limited resources. PLoS One. 2016 Oct 20; 11(10): e0164943. [Original]
   DOI: 10.1371/journal.pone.0164943
   Impact Factor: 3.057

3. Ganie Y, Aldous C, **Balakrishna Y**, Wiersma R. Disorders of sex development in children in KwaZulu-Natal Durban South Africa: 20-year experience in a tertiary centre. Journal of Pediatric Endocrinology and Metabolism. 2016 Oct 18.
   DOI: 10.1515/jpem-2016-0152
   Impact Factor: 0.912

Centre for Tuberculosis

1. **Roos EO**, Buss P, de Klerk-Lorist LM, Hewlett J, **Hausler GA**, Rossouw L, McCall AJ, **Cooper D**, **van Helden PD**, **Parsons SD**, **Miller MA**. Test performance of three serological assays for the detection of Mycobacterium bovis infection in common warthogs (Phacochoerus africanus). Veterinary Immunology and Immunopathology. 2016 Oct 19. [Original]
DOI: 10.1016/j.vetimm.2016.10.006
Impact Factor: 1.664

2. **Leisching G**, **Pietersen RD**, van Heerden C, **van Helden P**, **Wiid I**, **Baker B**. RNAseq reveals hypervirulence-specific host responses to M. tuberculosis infection. Virulence. 2016 Oct 20: 1-11. [Original]
DOI: 10.1080/21505594.2016.1250994
Impact Factor: 5.418

3. Brüns AC, Tanner M, Williams MC, **Botha L**, O'Brien A, Fosgate GT, **van Helden PD**, Clarke J, Michel AL. Diagnosis and implications of mycobacterium bovis infection in banded mongooses (mungos mungo) in the Kruger National Park, South Africa. Journal of Wildlife Diseases. 2016 Oct 27. [Original]
DOI: 10.7589/2015-11-318
Impact Factor: 1.189

Environment and Health

1. Norval M, Coussens AK, Wilkinson RJ, Bornman L, Lucas RM, **Wright CY**. Vitamin D status and its consequences for health in South Africa. International Journal of Environmental Research and Public Health. 2016 Oct 18; 13(10): 1019. [Review]
DOI: 10.3390/ijerph13101019
Impact Factor: 2.035

Health Systems

1. Giorgio M, **Townsend L**, **Zembe Y**, Cheyip M, Guttmacher S, Kapadia F, **Mathews C**. The relationship between social support, HIV serostatus, and perceived likelihood of being HIV positive among self-settled female, foreign migrants in Cape Town, South Africa. Journal of Immigrant and Minority Health. 2016 Oct 19: 1-8. [Original]
DOI: 10.1007/s10903-016-0514-z
Impact Factor: 1.579

2. Maskew M, Fox MP, Evans D, **Govindasamy D**, Jamieson L, Malete G, Mongwenyana C, Technau K. Insights into adherence among a cohort of adolescents aged 12-20 years in South Africa: Reported barriers to antiretroviral treatment. AIDS Research and Treatment. 2016 Oct 27; 2016: 4161738. [Original]
DOI: 10.1155/2016/4161738
Impact Factor: None

3. Groenewald C, **Bhana A**. Substance abuse and the family: An examination of the South African policy context. Drugs: Education, Prevention and Policy. 2016 Oct 27: 1-8. [Original]
DOI: 10.1080/09687637.2016.1236072
Impact Factor: 0.762

HIV Prevention

1. Hoffman S, Exner TM, Lince-Deroche N, Leu CS, **Phillip JL**, Kelvin EA, Gandhi AD, Levin B, **Singh D**, Mantell JE, Blanchard K, **Ramjee G**. Immediate blood draw for $CD4^+$ cell count is associated with linkage to care in Durban, South Africa: Findings from pathways to engagement in HIV care. PLoS ONE. 2016 Oct 05; 11(10): e0162085. [Original]
DOI: 10.1371/journal.pone.0162085
Impact Factor: 3.057

Office of AIDS Research

1. Hertz T, Logan MG, Rolland M, Magaret CA, Rademeyer C, Fiore-Gartland A, Edlefsen PT, DeCamp A, Ahmed H, Ngandu N, Larsen BB, Frahm N, Marais J, Thebus R, Geraghty D, Hural J, Corey L, Kublin J, **Gray G**, McElrath MJ, Mullins JI, Gilbert PB, Williamson C. A study of vaccine-induced immune pressure on breakthrough infections in the Phambili phase 2b HIV-1 vaccine efficacy trial. Vaccine. 2016; 34(47): 5792-801. Epub 2016 Oct 15. [Original]
DOI: 10.1016/j.vaccine.2016.09.054
Impact Factor: 3.413

Non-Communicable Disease

1. Owolabi M, Olowoyo P, Miranda JJ, Akinyemi R, Feng W, Yaria J, Makanjuola T, Yaya S, Kaczorowski J, Thabane L, Van Olmen J, Mathur P, Chow C, **Kengne A**, Saulson R, Thrift AG, Joshi R, Bloomfield GS, Gebregziabher M, Parker G, Agyemang C, Modesti PA, Norris S, Ogunjimi L, Farombi T, Melikam ES, Uvere E, Salako B, Ovbiagele B; COUNCIL Initiative. Gaps in hypertension guidelines in Low- and Middle-Income versus High-Income Countries: A systematic review. Hypertension. 2016 Oct 3. [Review]
DOI: 10.1161/HYPERTENSIONAHA.116.08290
Impact Factor: 6.350

2. GBD 2015 Mortality and Causes of Death Collaborators [includes: **Kengne AP**, Matzopoulos R, Parry CD, Schutte AE, Stein DJ, Wiysonge CS]. Global, regional, and national life expectancy, all-cause mortality, and cause-specific mortality for 249 causes of death, 1980-2015: A systematic analysis for the Global Burden of Disease Study 2015. Lancet. 2016 Oct 8; 388(10053): 1459-1544. [Original]
DOI: 10.1016/S0140-6736(16)31012-1
Impact Factor: 44.002

3. GBD 2015 DALYs and HALE Collaborators [includes: **Kengne AP**, Matzopoulos R, Schutte AE, Stein DJ, Wiysonge CS]. Global, regional, and national disability-adjusted life-years (DALYs) for 315 diseases and injuries and healthy life expectancy (HALE), 1990-2015: A systematic analysis for the Global Burden of Disease Study 2015. Lancet. 2016 Oct 8; 388(10053): 1603-1658. [Original]
DOI: 10.1016/S0140-6736(16)31460-X
Impact Factor: 44.002

4. GBD 2015 Child Mortality Collaborators [includes: **Kengne AP**, Wiysonge CS]. Global, regional, national, and selected subnational levels of stillbirths, neonatal, infant, and under-5 mortality, 1980-2015: A systematic analysis for the Global Burden of Disease Study 2015. Lancet. 2016 Oct 8; 388(10053): 1725-1774. [Original]
DOI: 10.1016/S0140-6736(16)31575-6
Impact Factor: 44.002

5. GBD 2015 Risk Factors Collaborators [includes: **Kengne AP**, Matzopoulos R, Parry CD, Schutte AE , Stein DJ, Wiysonge CS]. Global, regional, and national comparative risk assessment of 79 behavioural, environmental and occupational, and metabolic risks or clusters of risks, 1990-2015: A systematic analysis for the Global Burden of Disease Study 2015. Lancet. 2016 Oct 8; 388(10053): 1659-1724. [Original]
DOI: 10.1016/S0140-6736(16)31679-8
Impact Factor: 44.002

6. GBD 2015 Maternal Mortality Collaborators [includes: **Kengne AP**, Wiysonge CS]. Global, regional, and national levels of maternal mortality, 1990-2015: A systematic analysis for the Global Burden of Disease Study 2015. Lancet. 2016 Oct 8; 388(10053): 1775-1812. [Original]
DOI: 10.1016/S0140-6736(16)31470-2
Impact Factor: 44.002

7. Mazidi M, Rezaie P, Karimi E, **Kengne AP**. The effects of bile acid sequestrants on lipid profile and blood glucose concentrations: A systematic review and meta-analysis of randomized controlled trials. International Journal of Cardiology. 2016 Oct 11. [Review]
DOI: 10.1016/j.ijcard.2016.10.011
Impact Factor: 4.638

8. **Nguyen KA**, **de Villiers A**, **Fourie JM**, Hendricks M. Challenges to implementing the food-based dietary guidelines in the South African primary school curriculum: A qualitative study exploring the perceptions of principals and curriculum advisors. South African Journal of Clinical Nutrition. 2016 Oct 11: 1-6. [Original]
DOI: 10.1080/16070658.2016.1230971
Impact Factor: None

South African Cochrane Centre

1. Dizon JM, Grimmer K, **Machingaidze S**, McLaren P, Louw Q. Mapping South African allied health primary care clinical guideline activity: Establishing a stakeholder reference sample. Health Research Policy and Systems. 2016 Oct 10; 14(1): 77. [Original]
DOI: 10.1186/s12961-016-0145-9
Impact Factor: 2.107

2. EXTRAMURAL RESEARCH UNITS

Anxiety and Stress Disorders

1. **Roos A**, **Fouche JP**, **Stein DJ**. Brain network connectivity in women exposed to intimate partner violence: A graph theory analysis study. Brain Imaging and Behavior. 2016 Oct 18. [Original]
DOI: 10.1007/s11682-016-9644-0
Impact Factor: 3.667

2. GBD 2015 Disease and Injury Incidence and Prevalence Collaborators [includes: **Stein DJ**, Wiysonge CS]. Global, regional, and national incidence, prevalence, and years lived with disability for 310 diseases and injuries, 1990-2015: A systematic analysis for the Global Burden of Disease Study 2015. Lancet. 2016 Oct 06; 388(10053): 1545-602. [Original]
DOI: 10.1016/S0140-6736(16)31678-6
Impact Factor: 44.002

3. de Jonge P, Roest AM, Lim CC, Florescu SE, Bromet EJ, **Stein DJ**, Harris M, Nakov V, Caldas-de-Almeida JM, Levinson D, Al-Hamzawi AO, Haro JM, Viana MC, Borges G, O'Neill S, de Girolamo G, Demyttenaere K, Gureje O, Iwata N, Lee S, Hu C, Karam A, Moskalewicz J, Kovess-Masfety V, Navarro-Mateu F, Browne MO, Piazza M, Posada-Villa J, Torres Y, Ten Have ML, Kessler RC, Scott KM. Cross-national epidemiology of panic disorder and panic attacks in the world mental health surveys. Depression and Anxiety. 2016 Oct 24. [Original]
DOI: 10.1002/da.22572
Impact Factor: 5.004

4. Phillips N, Amos T, Kuo C, Hoare J, Ipser J, Thomas KG, **Stein DJ**. HIV-associated cognitive impairment in perinatally infected children: A meta-analysis. Pediatrics. 2016 Oct 11. [Review]
DOI: 10.1542/peds.2016-0893
Impact Factor: 5.196

5. McGregor NW, Hemmings SMJ, Erdman L, Calmarza-Font I, **Stein DJ**, **Lochner C**. Modification of the association between early adversity and obsessive-compulsive disorder by polymorphisms in the MAOA, MAOB and COMT genes. Psychiatry Research. 2016 Oct 24. [Original]
DOI: 10.1016/j.psychres.2016.10.044
Impact Factor: 2.466

6. Guadalupe T, Mathias SR, van Erp TG, Whelan CD, Zwiers MP, Abe Y, Abramovic L, Agartz I, Andreassen OA, Arias-Vasquez A, Aribisala BS, Armstrong NJ, Arolt V, Artiges E, Ayesa-Arriola R, Baboyan VG, Banaschewski T, Barker G, Bastin ME, Baune BT, Blangero J, Bokde AL, Boedhoe PS, Bose A, Brem S, Brodaty H, Bromberg U, Brooks S, Buchel C, Buitelaar J, Calhoun VD, Cannon DM, Cattrell A, Cheng Y, Conrod PJ, Conzelmann A, Corvin A, Crespo-Facorro B, Crivello F, Dannlowski U, de Zubicaray GI, de Zwarte SM, Deary IJ, Desrivieres S, Doan NT, Donohoe G, Dorum ES, Ehrlich S, Espeseth T, Fernandez G, Flor H, Fouche JP, Frouin V, Fukunaga M, Gallinat J, Garavan H, Gill M, Suarez AG, Gowland P, Grabe HJ, Grotegerd D, Gruber O, Hagenaars S, Hashimoto R, Hauser TU, Heinz A, Hibar DP, Hoekstra PJ, Hoogman M, Howells FM, Hu H, Hulshoff Pol HE, Huyser C, Ittermann B, Jahanshad N, Jonsson EG, Jurk S, Kahn RS, Kelly S, Kraemer B, Kugel H, Kwon JS, Lemaitre H, Lesch KP, **Lochner C**, Luciano M, Marquand AF, Martin NG, Martinez-Zalacain I, Martinot JL, Mataix-Cols D, Mather K, McDonald C, McMahon KL, Medland SE, Menchon JM, Morris DW, Mothersill O, Maniega SM, Mwangi B, Nakamae T, Nakao T, Narayanaswaamy JC, Nees F, Nordvik JE, Onnink AM, Opel N, Ophoff R, Paillere Martinot ML, Papadopoulos Orfanos D, Pauli P, Paus T, Poustka L, Reddy JY, Renteria ME, Roiz-Santianez R, Roos A, Royle NA, Sachdev P, Sanchez-Juan P, Schmaal L, Schumann G, Shumskaya E, Smolka MN, Soares JC, Soriano-Mas C, **Stein DJ**, Strike LT, Toro R, Turner JA, Tzourio-Mazoyer N, Uhlmann A, Hernandez MV, van den Heuvel OA, van der Meer D, van Haren NE, Veltman DJ, Venkatasubramanian G, Vetter NC, Vuletic D, Walitza S, Walter H, Walton E, Wang Z, Wardlaw J, Wen W, Westlye LT, Whelan R, Wittfeld K, Wolfers T, Wright MJ, Xu J, Xu X, Yun JY, Zhao J, Franke B, Thompson PM, Glahn DC, Mazoyer B, Fisher SE, Francks C. Human subcortical brain asymmetries in 15,847 people worldwide reveal effects of age and sex. Brain Imaging and Behavior. 2016 Oct 13. [Original]
DOI: 10.1007/s11682-016-9629-z
Impact Factor: 3.667

Developmental Pathways for Health

1. Singh E, **Joffe M**, Cubasch H, Ruff P, **Norris SA**, Pisa PT. Breast cancer trends differ by ethnicity: A report from the South African National Cancer Registry (1994–2009). European Journal of Public Health. 2016 Oct 24. [Original]
DOI: 10.1093/eurpub/ckw191
Impact Factor: 2.751

Drug Discovery and Development

1. Njuguna NM, Umehara KI, Huth F, Schiller H, **Chibale K**, Camenisch G. Improvement of the chemical inhibition phenotyping assay by cross-reactivity correction. Drug Metabolism and Personalized Therapy. 2016 Oct 08. [Original]
DOI: 10.1515/dmpt-2016-0028
Impact Factor: None

Gynaecological Cancer

1. **Ujma S**, Horsnell WG, **Katz AA**, Clark HW, **Schafer G**. Non-pulmonary immune functions of surfactant proteins A and D. Journal of Innate Immunity. 2016 Oct 29. [Review]
DOI: 10.1159/000451026
Impact Factor: 4.273

Health Services to Systems

1. **Schneider H**, Okello D, Lehmann U. The global pendulum swing towards community health workers in Low- and Middle-Income Countries: A scoping review of trends, geographical distribution and programmatic orientations, 2005 to 2014. Human Resources for Health. 2016 Oct 26; 14(1): 65. [Review]
   DOI: 10.1186/s12960-016-0163-2
   Impact Factor: 2.416

Hypertension and Cardiovascular Disease

1. van Rooyen JM, Poglitsch M, Huisman HW, Mels C, Kruger R, Malan L, Botha S, Lammertyn L, Gafane L, **Schutte AE**. Quantification of systemic renin-angiotensin system peptides of hypertensive black and white African men established from the RAS-Fingerprint ®. Journal of the Renin-Angiotensin-Aldosterone System. 2016 Oct 01; 17(4):1-7. [Original]
   DOI: 10.1177/1470320316669880
   Impact Factor: 2.350

2. Ware LJ, Swanepoel B, **Schutte AE**. Urinary sodium-to-potassium ratio: It may be SMART, but is it easy? Public Health Nutrition. 2016 Oct 05: 1-3. [Letter]
   DOI: 10.1017/S1368980016002731
   Impact Factor: 2.433

Maternal and Infant Health Care Strategies

1. Lavin T, Preen DB, **Pattinson R**. Timing and cause of perinatal mortality for small-for-gestational-age babies in South Africa: Critical periods and challenges with detection. Maternal Health, Neonatology and Perinatology. 2016 Oct 21; 2: 11. [Original]
   Impact Factor: None

2. Leisher SH, Teoh Z, Reinebrant H, Allanson E, Blencowe H, Erwich JJ, Frøen JF, Gardosi J, Gordijn S, Gülmezoglu AM, Heazell AE, Korteweg F, Lawn J, McClure EM, **Pattinson R**, Smith GC, Tunçalp Ö, Wojcieszek AM, Flenady V. Seeking order amidst chaos: A systematic review of classification systems for causes of stillbirth and neonatal death, 2009-2014. BMC Pregnancy and Childbirth. 2016 Oct 5; 16(1): 295. [Original]
   Impact Factor: 2.180

Microbial Water Quality Monitoring

1. **Fatokun EN**, **Nwodo UU**, **Okoh AI**. Classical optimization of cellulase and xylanase production by a marine streptomyces species. Applied Sciences (Switzerland). 2016 Oct 9; 6(10): 286. [Original]
   DOI: 10.3390/app6100286
   Impact Factor: 1.726

2. **Okoh SO**, **Iweriebor BC**, Okoh OO, **Nwodo UU**, **Okoh AI**. Antibacterial and antioxidant properties of the leaves and stem essential oils of Jatropha Gossypifolia L. BioMed Research International. 2016 Oct 24; 2016: 9392716. [Original]
   DOI: 10.1155/2016/9392716
   Impact Factor: 2.134

3. **Oladokun MO**, **Okoh IA**. Vibrio cholerae: A historical perspective and current trend. Asian Pacific Journal of Tropical Disease. 2016 Oct 20. [Original]
   DOI: 10.1016/S2222-1808(16)61154-4
   Impact Factor: None

Rural Public Health and Health Transition

1. Humphreys GW, Duta MD, Montana L, Demeyere N, McCrory C, Rohr J, **Kahn K**, **Tollman S**, **Berkman L**. Cognitive function in low-income and low-literacy settings: Validation of the tablet-based oxford cognitive screen in the health and aging in Africa: A longitudinal study of an INDEPTH community in South Africa (HAALSI). Journals of Gerontology Series B, Psychological Sciences and Social Sciences. 2016 Oct 21. [Original]
DOI: 10.1093/geronb/gbw139
Impact Factor: 2.813

2. Hussain-Alkhateeb L, Petzold M, **Collinson M**, **Tollman S**, **Kahn K**, **Byass P**. Effects of recall time on cause-of-death findings using verbal autopsy: Empirical evidence from rural South Africa. Emerging Themes in Epidemiology. 2016 Oct 18; 13: 10. [Original]
DOI: 10.1186/s12982-016-0051-1
Impact Factor: None

3. Molete MP, Chola L, **Hofman KJ**. Costs of a school-based dental mobile service in South Africa. BMC Health Services Research. 2016 Oct 19; 16(1): 590. [Original]
DOI: 10.1186/s12913-016-1827-2
Impact Factor: 1.606

Stem Cell Research and Therapy

1. Reznichenko AS, Huyser C, **Pepper MS**. Mitochondrial transfer: Implications for assisted reproductive technologies. Applied & Translational Genomics. 2016 Oct 15; 11: 40-47. [Review]
DOI: 10.1016/j.atg.2016.10.001
Impact Factor: None

2. **Dessels C**, **Potgieter M**, **Pepper MS**. Making the switch: Alternatives to fetal bovine serum for adipose-derived stromal cell expansion. Frontiers in Cell and Developmental Biology. 2016 Oct 17; 4: 115. [Review]
DOI: 10.3389/fcell.2016.00115
Impact Factor: None

3. GRANT FUNDED RESEARCH

1. Zuhlke L, Karthikeyan G, Engel ME, Rangarajan S, Mackie P, Cupido-Katya Mauff B, Islam S, Daniels R, Francis V, Ogendo S, Gitura B, Mondo C, Okello E, Lwabi P, Al-Kebsi MM, Hugo-Hamman C, Sheta SS, Haileamlak A, Daniel W, Goshu DY, Abdissa SG, Desta AG, Shasho BA, Begna DM, ElSayed A, Ibrahim AS, Musuku J, Bode-Thomas F, Yilgwan CC, Amusa GA, Ige O, Okeahialam B, Sutton C, Misra R, Abul Fadl A, Kennedy N, Damasceno A, Sani MU, Ogah OS, Elhassan TO, Mocumbi AO, Adeoye AM, Mntla P, Ojji D, Mucumbitsi J, Teo K, Yusuf S, **Mayosi BM**. Clinical outcomes in 3343 children and adults with rheumatic heart disease from 14 Low- and Middle-Income Countries: Two-year follow-up of the Global Rheumatic Heart Disease Registry (the REMEDY Study). Circulation. 2016 Oct 04. [Original]
   DOI: 10.1161/CIRCULATIONAHA.116.024769
   Impact Factor: 17.202

4. RESEARCH CENTRES

Advancing Care and Treatment (ACT) For TB/HIV

1. Maraba N, Karat AS, McCarthy K, **Churchyard GJ**, Charalambous S, Kahn K, Grant AD, Chihota V. Verbal autopsy-assigned causes of death among adults being investigated for TB in South Africa. Transactions of the Royal Society of Tropical Medicine and Hygiene. 2016 Oct 28; 110 (9): 510-6. [Original]
   DOI: 10.1093/trstmh/trw058
   Impact Factor: 1.631

5. CLOSED RESEARCH UNITS

Inter-University Cape Heart Group

1. **Woudberg NJ**, Goedecke JH, **Lecour S**. Protection from cardiovascular disease due to increased high-density lipoprotein cholesterol in African black populations: Myth or Reality? Ethnicity & Disease. 2016 Oct 20; 26(4): 553-560. [Review]
   DOI: 10.18865/ed.26.4.553
   Impact Factor: 1.014

6. RESEARCH UNITS WITH NO QUALIFYING PUBLICATIONS

Intramural

- Biomedical Research and Innovation Platform
- Burden of Disease
- Gender and Health
- Office of Cancer
- Office of Malaria
- Office of Tuberculosis
- Violence, Injury and Peace

Extramural

- Antiviral Gene Therapy
- Bioinformatics Capacity Development
- Child and Adolescent Lung Health
- Common Epithelial Cancer
- Diarrhoeal Pathogens
- Herbal Drugs
- HIV/TB Pathogenesis and Treatment
- Human Genetics
- Immunology of Infectious Disease
- Medical Imaging
- Molecular Mycobacteriology
- Prospective Gastrointestinal Cancer
- Receptor Biology
- Respiratory and Meningeal Pathogens

7. GRANTS AWARDED

SAMRC LIST OF CONTRACTS FOR OCTOBER 2016					
MRC Unit	**Funder**	**Main Funder**	**Project Title/Description**	**Contract Value**	
				Rand	**Foreign Currency**
Cochrane Centre	The Cochrane Collaboration	The Cochrane Collaboration	Can overarching aim: The can aims to increase to use of Cochrane evidence healthcare decision on the African continent.	371 103.13	£22 169.44
Office of the President	Sanlam Foundation	Sanlam Foundation	Contribution in respect of Human Resource Development and the public understanding of disease outbreaks.	500 00.00	-

Published by Information Services Division
South African Medical Research Council
PO Box 19070, Tygerberg 7505,
Cape Town, South Africa,
Francie van Zijl Drive, Parow Valley, Cape Town
www.mrc.ac.za

Please send questions, comments and grant news to enews@mrc.ac.za