CELEBRATES SCIENCE

APRIL 2016

THE SOUTH AFRICAN MEDICAL RESEARCH COUNCIL INFORMATION SERVICES DIVISION

TOP 5 ARTICLES

Director: Prof Shabir Madhi

Article:

Madhi SA, **Cutland CL**, **Jose L**, **Koen A**, **Govender N**, Wittke F, Olugbosi M, Meulen AS, Baker S, Dull PM, Narasimhan V, Slobod K. Safety and immunogenicity of an investigational maternal trivalent group B streptococcus vaccine in healthy women and their infants: A randomised phase 1b/2 trial. Lancet Infectious Diseases. 2016 Apr 29. [Original]
DOI: 10.1016/S1473-3099(16)00152-3.
Impact Factor: 21.372

Summary:

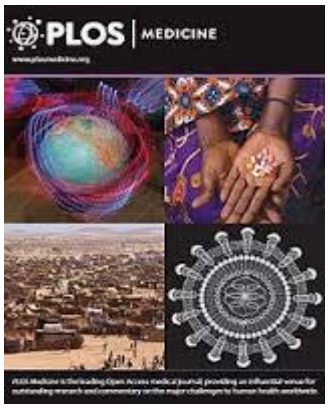
Background Maternal group B streptococcus (GBS) serotype-specific capsular antibody concentrations are correlated with susceptibility to neonatal GBS invasive disease. Maternal immunisation against GBS during pregnancy might protect infants across the period of susceptibility to invasive disease, but no licensed vaccine exists. This study assessed the safety and immunogenicity of a CRM197-conjugated trivalent GBS vaccine in non-pregnant and pregnant women, and antibody transfer to their infants.

Methods We did a phase 1b/2, randomised, observer-blind single-centre study of an investigational trivalent GBS vaccine in healthy non-pregnant women (cohort 1), and a dose-ranging study in healthy pregnant women (cohort 2). The study was done at the Chris Hani Baragwanath Academic Hospital in Soweto, South Africa. Participants were healthy non-pregnant or pregnant (28-35 weeks' gestation) women aged 18-40 years. In cohort 1, non-pregnant women were randomly assigned (2:1) to receive the investigational vaccine (two injections, 1 month apart, of a 20 μg dose [of each serotype] of aluminium hydroxide-adjuvanted investigational vaccine) or placebo. In cohort 2, pregnant women were randomly assigned (1:1:1:1) to receive one injection at 28-35 weeks' gestation of 0·5 μg, 2·5 μg, or 5·0 μg of the non-adjuvanted investigational vaccine (for each serotype), or placebo. All study participants and study staff not involved with vaccine preparation were masked to the randomisation group. The vaccine contained an equal dose (0·5 μg, 2·5 μg, 5·0 μg, or 20 μg) of each of three glycoconjugates (serotypes Ia, Ib and III). Reactogenicity was monitored to day 7 and unsolicited adverse events (adverse events) and infant safety were recorded throughout the study. The primary outcomes were tolerability and GBS-specific antibody response (measured as geometric mean concentrations [GMCs] in μg/mL) following the two injections for cohort 1, and selection of one vaccine dose based on analysis of serotype-specific antibody responses at delivery (+72 h) for use in subsequent studies. These outcomes were assessed in participants or infants of participants who correctly received the study vaccine with no major protocol deviations, and provided evaluable serum samples at day 1 and the scheduled timepoints throughout the study. This study is registered with ClinicalTrials.gov, NCT01193920.

Findings: Between Oct 5, 2010, and Sept 21, 2011, we screened 75 non-pregnant and 417 pregnant healthy South African women. Of these, 60 non-pregnant women were enrolled in cohort 1 (40 randomly assigned to the GBS 20 μg group and 40 randomly assigned to the placebo group) and 320 pregnant women were enrolled in cohort 2 (80 in each of the four groups). Among the randomised groups of pregnant women, 33-40% experienced at least one local and 54-71% one systemic solicited adverse event, less than 4% of which were severe, and the rate did not differ by study group. Also, 2% of the pregnancies resulted in stillbirth and 3·5% of the liveborn babies died by 12 months age, none of these deaths were attributed to vaccination. There was one death in a GBS-vaccine recipient, which too was unrelated to vaccination. For cohort 1, serotype-specific antibody concentrations were significantly higher, as evident by no overlap of the 95% CIs of GMCs against all three serotypes in the vaccinated group than the placebo group. For cohort 2, pregnant women in all vaccine groups had significantly higher GMCs than did those in the placebo group at delivery (eg, GMCs against serotype Ia were 11 μg/mL [95% CI 7·0-18] for the GBS vaccine 0·5 μg group, 18 μg/mL [11-29] for the GBS vaccine 2·5 μg group, 22 μg/mL [13-35] for the GBS vaccine 5·0 μg group, and 0·64 μg/mL [0·42-0·98] for the placebo group) and at all measured timepoints. GMCs did not differ significantly between the vaccine doses at any of the measured timepoints (p>0·05).

Interpretation: The vaccine was well tolerated and induced capsular-specific antibody responses, in non-pregnant and pregnant women. Maternal vaccination led to higher GBS serotype-specific antibody concentrations in infants than did placebo, with both interventions resulting in similar safety profiles.

Director: Prof Rachel Jewkes



Article:

Abrahams N, Mathews S, Martin LJ, Lombard C, Nannan N, **Jewkes R**. Gender differences in homicide of neonates, infants, and children under 5 y in South Africa: Results from the Cross-Sectional 2009 National Child Homicide Study. PLoS Medicine. 2016 Apr 26; 13(4): e1002003. [Original]
DOI: 10.1371/journal.pmed.1002003.
Impact Factor: 13.585

Summary:

Background: Homicide of children is a global problem. The under-5-y age group is the second largest homicide age group after 15-19 y olds, but has received little research attention. Understanding age and gender patterns is important for assisting with developing prevention interventions. Here we present an age and gender analysis of homicides among children under 5 y in South Africa from a national study that included a focus on neonaticide and infanticide.

Methods and Findings: A retrospective national cross-sectional study was conducted using a random sample of 38 medico-legal laboratories operating in 2009 to identify homicides of children under 5 y. Child data were abstracted from the mortuary files and autopsy reports, and both child and perpetrator data data were collected from police interviews. We erred towards applying a conservative definition of homicide and excluded sudden infant death syndrome cases. We estimated that 454 (95% CI 366, 541) children under the age of 5 y were killed in South Africa in 2009. More than half (53.2%; 95% CI 46.7%, 59.5%) were neonates (0-28 d), and 74.4% (95% CI 69.3%, 78.9%) were infants (under 1 y), giving a neonaticide rate of 19.6 per 100,000 live births and an infanticide rate of 28.4 per 100,000 live births. The majority of the neonates died in the early neonatal period (0-6 d), and abandonment accounted for 84.9% (95% CI 81.5%, 87.8%) of all the neonates killed. Distinct age and gender patterns were found, with significantly fewer boy children killed in rural settings compared to urban settings (odds ratio 0.6; 95% CI 0.4, 0.9; p = 0.015). Abuse-related killings and evidence of sexual assault were more common among older girls than in all other age and gender groups. Mothers were identified as the perpetrators in all of the neonaticides and were the most common perpetrators overall (71.0%; 95% CI 63.9%, 77.2%). Abandoned neonates were mainly term babies, with a mean gestational age of 38 wk. We did not have information on abandonment motives for all newborns and did not know if babies were abandoned with the intention that they would die or with the hope that they would be found alive. We therefore considered all abandoned babies as homicides.

Conclusions: Homicide of children is an extreme form or consequence of violence against children. This national study provides one of the first analyses of neonaticide and infanticide by age and gender and shows the failure of reproductive and mental health and social services to identify and help vulnerable mothers. Multi-sectoral prevention strategies are needed.

Director: Prof Patrick Arbuthnot

Article:

Ely A, **Moyo B**, **Arbuthnot P**. Progress with developing use of gene editing to cure chronic infection with Hepatitis B virus. Molecular Therapy. 2016 Apr; 24(4): 671-7. [Review]
DOI: 10.1038/mt.2016.43.
Impact Factor: 6.938

Summary:

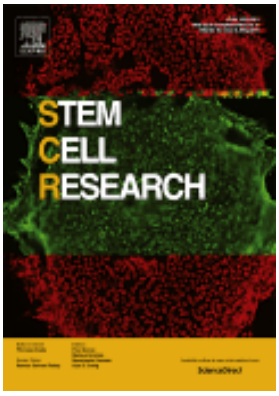
Background: User-friendly, rapid, inexpensive yet accurate TB diagnostic tools are urgently needed at points of care in resource-limited settings. We investigated host biomarkers detected in serum samples obtained from adults with signs and symptoms suggestive of TB at primary healthcare clinics in five African countries (Malawi, Namibia, South Africa, The Gambia and Uganda), for the diagnosis of TB disease.

Methods: We prospectively enrolled individuals presenting with symptoms warranting investigation for pulmonary TB, prior to assessment for TB disease. We evaluated 22 host protein biomarkers in stored serum samples using a multiplex cytokine platform. Using a pre-established diagnostic algorithm comprising of laboratory, clinical and radiological findings, participants were classified as either definite TB, probable TB, questionable TB status or non-pulmonary TB.

Results: Of the 716 participants enrolled, 185 were definite and 29 were probable TB cases, 6 had questionable TB disease status, whereas 487 had no evidence of TB. A seven-marker biosignature of C reactive protein, transthyretin, IFN-γ, complement factor H, apolipoprotein-A1, inducible protein 10 and serum amyloid A identified on a training sample set (n=491), diagnosed TB disease in the test set (n=210) with sensitivity of 93.8% (95% CI 84.0% to 98.0%), specificity of 73.3% (95% CI 65.2% to 80.1%), and positive and negative predictive values of 60.6% (95% CI 50.3% to 70.1%) and 96.4% (95% CI 90.5% to 98.8%), respectively, regardless of HIV infection status or study site.

Conclusions: We have identified a seven-marker host serum protein biosignature for the diagnosis of TB disease irrespective of HIV infection status or ethnicity in Africa. These results hold promise for the development of a field-friendly point-of-care screening test for pulmonary TB.

Director: Prof Michael Pepper



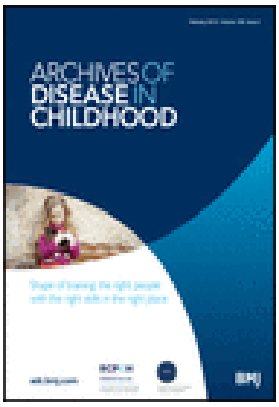
Article:

Ambele MA, **Dessels C**, **Durandt C**, **Pepper MS**. Genome-wide analysis of gene expression during adipogenesis in human adipose-derived stromal cells reveals novel patterns of gene expression during adipocyte differentiation. Stem Cell Research. 2016 Apr 19. [Original]
DOI: 10.1016/j.scr.2016.04.011.
Impact Factor: 3.892

Summary:

We have undertaken an in-depth transcriptome analysis of adipogenesis in human adipose-derived stromal cells (ASCs) induced to differentiate into adipocytes in vitro. Gene expression was assessed on days 1, 7, 14 and 21 post-induction and genes differentially expressed numbered 128, 218, 253 and 240 respectively. Up-regulated genes were associated with blood vessel development, leukocyte migration, as well as tumor growth, invasion and metastasis. They also shared common pathways with certain obesity-related pathophysiological conditions. Down-regulated genes were enriched for immune response processes. KLF15, LMO3, FOXO1 and ZBTB16 transcription factors were up-regulated throughout the differentiation process. CEBPA, PPARG, ZNF117, MLXIPL, MMP3 and RORB were up-regulated only on days 14 and 21, which coincide with the maturation of adipocytes and could possibly serve as candidates for controlling fat accumulation and the size of mature adipocytes. In summary, we have identified genes that were up-regulated only on days 1 and 7 or days 14 and 21 that could serve as potential early and late-stage differentiation markers.

Director: Prof Catherine Mathews



Article:

Loveday M, Sunkari B, Marais BJ, Master I, Brust JC. Dilemma of managing asymptomatic children referred with 'culture-confirmed' drug-resistant tuberculosis. Archives of Disease in Childhood. 2016 Apr 04. [Original]
DOI: 10.1136/archdischild-2015-310186.
Impact Factor: 3.231

Summary:

Background: The diagnosis of drug-resistant tuberculosis (DR-TB) in children is challenging and treatment is associated with many adverse effects.

Objective: We aimed to assess if careful observation, without initiation of second-line treatment, is safe in asymptomatic children referred with 'culture-confirmed' DR-TB.

Setting: KwaZulu-Natal, South Africa-an area with high burdens of HIV, TB and DR-TB.

Design, Intervention and Main Outcome Measures: We performed an outcome review of children with 'culture-confirmed' DR-TB who were not initiated on second-line TB treatment, as they were asymptomatic with normal chest radiographs on examination at our specialist referral hospital. Children were followed up every other month for the first year, with a final outcome assessment at the end of the study.

Results: In total, 43 asymptomatic children with normal chest radiographs were reviewed. The median length of follow-up until final evaluation was 549 days (IQR 259-722 days); most (34; 83%) children were HIV uninfected. Resistance patterns included 9 (21%) monoresistant and 34 (79%) multidrug-resistant (MDR) strains. Fifteen children (35%) had been treated with first-line TB treatment, prior to presentation at our referral hospital. At the final evaluation, 34 (80%) children were well, 7 (16%) were lost to follow-up, 1 (2%) received MDR-TB treatment and 1 (2%) died of unknown causes. The child who received MDR-TB treatment developed new symptoms at the 12-month review and responded well to second-line treatment.

Conclusions: Bacteriological evaluation should not be performed in the absence of any clinical indication. If drug-resistant Mycobacterium tuberculosis is detected in an asymptomatic child with a normal chest radiograph, close observation may be an appropriate strategy, especially in settings where potential laboratory error and poor record keeping are constant challenges.

1. INTRAMURAL RESEARCH UNITS

Alcohol, Tobacco and Other Drug

1. Probst C, **Parry CDH**, Rehm J. Socio-economic differences in HIV/AIDS mortality in South Africa. Tropical Medicine & International Health. 2016 Apr 26. [Review]
DOI: 10.1111/tmi.12712
Impact Factor: 2.519

2. Sorsdahl K, Sewpaul R, Evans M, Naidoo P, **Myers B**, Stein DJ. The association between psychological distress, alcohol use and physical non-communicable diseases in a nationally representative sample of South Africans. Journal of Health Psychology. 2016 Apr 17. [Original]
DOI: 10.1177/1359105316642832
Impact Factor: 2.010

Biomedical Research and Innovation Platform

1. **Riedel S**, Abel S, Burger HM, van der Westhuizen L, Swanevelder S, Gelderblom WC. Differential modulation of the lipid metabolism as a model for cellular resistance to fumonisin B1-induced cytotoxic effects in vitro. Prostaglandins, Leukotrienes, and Essential Fatty Acids. 2016 Apr 22. [Original]
DOI: 10.1016/j.plefa.2016.04.006
Impact Factor: 3.155

Biostatistics

1. Schewitz J, Roos R, van Aswegen H, **Manda S**. The effect of two passive head-down tilt positions on diaphragm excursion in healthy adults: A preliminary study. Physiotherapy Theory and Practice. 2016 Apr; 32(3): 223-31. [Original]
DOI: 10.3109/09593985.2015.1137664
Impact Factor: 1.169

Burden of Disease

1. **Nojilana B**, **Bradshaw D**, **Pillay-van Wyk V**, **Msemburi W**, Laubscher R, **Somdyala NI**, **Joubert JD**, **Groenewald P**, Dorrington RE. Emerging trends in non-communicable disease mortality in South Africa, 1997 - 2010. South African Medical Journal. 2016 Apr 1; 106(5): 477-84. [Original]
DOI: 10.7196/SAMJ. 2016.v106i5.10674
Impact Factor: 1.500

2. **Nojilana B**, **Bradshaw D**, **Pillay-van Wyk V**, **Msemburi W**, **Somdyala N**, **Joubert JD**, **Groenewald P**, Laubscher R, Dorrington RE. Persistent burden from non-communicable diseases in South Africa needs strong action. South African Medical Journal. 2016 Apr 1; 106(5): 436-7. [Editorial]
DOI: 10.7196/SAMJ. 2016.v106i5.10776
Impact Factor: 1.500

3. Henjum S, Kjellevold M, Ulak M, Chandyo RK, Shrestha PS, Froyland L, **Strydom EE**, **Dhansay MA**, Strand TA. Iodine concentration in breastmilk and urine among lactating women of Bhaktapur, Nepal. Nutrients. 2016 Apr 28; 8(5): 255. [Original]
DOI: 10.3390/nu8050255
Impact Factor: 3.579

Centre for Tuberculosis

1. **Miller M**, Kruger M, Kruger M, Olea-Popelka F, Buss P. A scoring system to improve decision making and outcomes in the adaptation of recently captured white rhinoceroses (ceratotherium simum) to captivity. Journal of Wildlife Diseases. 2016 Apr; 52(2 Suppl): S78-85. [Original]
DOI: 10.7589/52.2S.S85
Impact Factor: 1.189

2. **du Plessis WJ**, **Kleynhans L**, **du Plessis N**, **Stanley K**, **Malherbe ST**, **Maasdorp E**, **Ronacher K**, **Chegou NN**, **Walzl G**, **Loxton AG**. The functional response of B cells to antigenic stimulation: A preliminary report of latent tuberculosis. PLoS One. 2016 Apr 6; 11(4): e0152710. [Original]
DOI: 10.1371/journal.pone.0152710
Impact Factor: 3.057

3. **Leisching G**, **Pietersen RD**, **Mpongoshe V**, van Heerden C, **van Helden P**, **Wiid I**, **Baker B**. The host response to a clinical MDR Mycobacterial strain cultured in a detergent-free environment: A global transcriptomics approach. PLoS One. 2016 Apr 7; 11(4): e0153079. [Original]
DOI: 10.1371/journal.pone.0153079
Impact Factor: 3.057

4. Honeyborne I, McHugh TD, Kuittinen I, Cichonska A, Evangelopoulos D, **Ronacher K**, **van Helden PD**, Gillespie SH, Fernandez-Reyes D, **Walzl G**, Rousu J, Butcher PD, Waddell SJ. Profiling persistent tubercule bacilli from patient sputa during therapy predicts early drug efficacy. BMC Medicine. 2016 Apr 7; 14(1): 68. [Original]
DOI: 10.1186/s12916-016-0609-3
Impact Factor: 8.005

5. **Clarke C**, **van Helden P**, **Miller M**, **Parsons S**. Animal-adapted members of the Mycobacterium tuberculosis complex endemic to the southern African sub-region. Journal of the South African Veterinary Association. 2016 Apr 26; 87(1): 1322. [Original]
DOI: 10.4102/jsava.v87i1.1322
Impact Factor: 0.441

6. Melendez J, Sánchez CI, Philipsen RH, Maduskar P, Dawson R, **Theron G**, Dheda K, van Ginneken B. An automated tuberculosis screening strategy combining X-ray-based computer-aided detection and clinical information. Scientific Reports. 2016 Apr 29; 6: 25265. [Original]
DOI: 10.1038/srep25265
Impact Factor: 5.228

Environment and Health

1. **Street RA**, Kabera GM, Connolly C. Copper sulphate use in South African traditional medicine. Environmental Geochemistry and Health. 2016 Apr 8. [Original]
DOI: 10.1007/s10653-016-9824-2
Impact Factor: 2.079

2. Gordon LG, Elliott TM, **Wright CY**, Deghaye N, Visser W. Modelling the healthcare costs of skin cancer in South Africa. BMC Health Services Research. 2016 Apr 02; 16(1): 113. [Original]
DOI: 10.1186/s12913-016-1364-z
Impact Factor: 1.606

Gender and Health

1. **Abrahams N**, Mathews S, Martin LJ, Lombard C, Nannan N, **Jewkes R**. Gender differences in homicide of neonates, infants, and children under 5 y in South Africa: Results from the Cross-Sectional 2009 National Child Homicide Study. PLoS Medicine. 2016 Apr 26; 13(4): e1002003. [Original]
   DOI: 10.1371/journal.pmed.1002003
   Impact Factor: 13.585

2. **van der Heijden I**, **Abrahams N**, Harries J. Additional layers of violence: The intersections of gender and disability in the violence experiences of women with physical disabilities in South Africa. Journal of Interpersonal Violence. 2016 Apr 27. [Original]
   DOI: 10.1177/0886260516645818
   Impact Factor: 1.579

3. Fielding-Miller R, **Dunkle KL**, **Jama-Shai N**, Windle M, Hadley C, Cooper HL. The feminine ideal and transactional sex: Navigating respectability and risk in Swaziland. Social Science & Medicine. 2016 Jun; 158: 24-33. Epub 2016 Apr 07.
   DOI: 10.1016/j.socscimed.2016.04.005
   Impact Factor: 2.814

Health Systems

1. **Loveday M**, Sunkari B, Marais BJ, Master I, Brust JC. Dilemma of managing asymptomatic children referred with 'culture-confirmed' drug-resistant tuberculosis. Archives of Disease in Childhood. 2016 Apr 04. [Original]
   DOI: 10.1136/archdischild-2015-310186
   Impact Factor: 3.231

2. Njau B, Damian DJ, Abdullahi L, Boulle A, **Mathews C**. The effects of HIV self-testing on the uptake of HIV testing and linkage to antiretroviral treatment among adults in Africa: A systematic review protocol. Systematic Reviews. 2016 Apr 05;5(1):52. [Original]
   DOI: 10.1186/s13643-016-0230-8
   Impact Factor: None

3. **Odendaal W**, Atkins S, Lutge E, **Leon N**, **Lewin S**. Researching complex interventions in health: The State of the Art: Exeter, UK. 14-15 October 2015: S14 Qualitative evaluation alongside RCTs: what to consider to get relevant and valuable results. BMC Health Services Research. 2016 Apr 04; 16 (Suppl 1): 101. [Other]
   DOI: 10.1186/s12913-016-1274-0
   Impact Factor: 1.606

4. Giorgio M, **Townsend L**, **Zembe Y**, Guttmacher S, Kapadia F, Cheyip M, **Mathews C**. Social support, sexual violence, and transactional sex among female transnational migrants to South Africa. American Journal of Public Health. 2016 Apr 15. [Original].
   DOI: 10.2105/AJPH.2016.303107
   Impact Factor: 4.138

HIV Prevention

1. **Abbai-Shaik NS**, Reddy T, **Govender S**, **Ramjee G**. Poor Performance of the Chlamydia Rapid Test Device for the Detection of Asymptomatic Infections in South African Men: A pilot study. Journal of Sexually Transmitted Diseases. 2016; 2016: 8695146. Epub 2016 Apr 19. [Original]
DOI: 10.1155/2016/8695146
Impact Factor: None

2. **Ramjee G**, **Moonsamy S**, **Abbai NS**, Wand H. Individual and population level impact of key hiv risk factors on hiv incidence rates in Durban, South Africa. PLoS ONE. 2016 Apr 22; 11(4): e0153969. [Original]
DOI: 10.1371/journal.pone.0153969
Impact Factor: 3.057

MRC Office of AIDS

1. Moodley N, **Gray G**, Bertram M. Projected economic evaluation of the national implementation of a hypothetical HIV vaccination program among adolescents in South Africa, 2012. BMC Public Health. 2016 Apr 14; 16(1): 330. [Original]
DOI: 10.1186/s12889-016-2959-3
Impact Factor: 2.209

Non-Communicable Disease

1. NCD Risk Factor Collaboration (NCD-RisC) [**Kengne AP**, Schutte AE]. Trends in adult body-mass index in 200 countries from 1975 to 2014: a pooled analysis of 1698 population-based measurement studies with 19·2 million participants. Lancet. 2016 Apr 2; 387(10026): 1377-96. [Review]
DOI: 10.1016/S0140-6736(16)30054-X
Impact Factor: 44.002

2. NCD Risk Factor Collaboration (NCD-RisC) [**Kengne AP**]. Worldwide trends in diabetes since 1980: a pooled analysis of 751 population-based studies with 4.4 million participants. Lancet. 2016 Apr 9; 387(10027): 1513-30. [Original]
DOI: 10.1016/S0140-6736(16)00618-8
Impact Factor: 44.002

3. **de Villiers A**, Steyn NP, Draper CE, **Hill J**, Gwebushe N, Lambert EV, Lombard C. Primary school children's nutrition knowledge, self-efficacy, and behavior, after a three-year Healthy Lifestyle Intervention (HealthKick). Ethnicity & Disease. 2016 Apr 21; 26(2): 171-80. [Original]
DOI: 10.18865/ed.26.2.171
Impact Factor: 1.014

4. Ford R, **Faber M**, Kunneke E, Smuts CM. Dietary fat intake and red blood cell fatty acid composition of children and women from three different geographical areas in South Africa. Prostaglandins, Leukotrienes, and Essential Fatty Acids. 2016 Apr 12. [Original]
DOI: 10.1016/j.plefa.2016.04.003
Impact Factor: 3.155

5. Caleyachetty R, Meunnig P, **Kengne AP**. Misclassification of cardiometabolic health when using body mass index categories. International Journal of Obesity (Lond). 2016 Apr 22. [Letter]
DOI: 10.1038/ijo.2016.65
Impact Factor: 5.337

6. Caleyachetty R, **Kengne AP**, Muennig P, Rutter H, Echouffo-Tcheugui JB. Misperception of body weight among overweight or obese adults in Mauritius. Obesity Research & Clinical Practice. 2016 Mar-Apr; 10(2): 216-9. Epub 2016 Apr 11. [Letter]
DOI: 10.1016/j.orcp.2016.02.006
Impact Factor: 2.094

7. Levitt NS, **Peer N**, Steyn K, Lombard C, Maartens G, Lambert EV, Dave JA. Increased risk of dysglycaemia in South Africans with HIV; Especially those on protease inhibitors. Diabetes Research and Clinical Practice. 2016 April 23. [Original]
DOI: 10.1016/j.diabres.2016.03.012
Impact Factor: 2.094

South African Cochrane Centre

1. Grimmer K, Machingaidze S, Dizon J, Kredo T, Louw Q, **Young T**. South African clinical practice guidelines quality measured with complex and rapid appraisal instruments. BMC Research Notes. 2016 Apr 27; 9(1): 244. [Original]
DOI: 10.1186/s13104-016-2053-z
Impact Factor: None

2. Schmidt BM, **Abrams A**, Tameris M. Engaging adolescents in tuberculosis and clinical trial research through drama. Trials. 2016 Apr 6; 17(1): 177. [Original]
DOI: 10.1186/s13063-016-1291-7
Impact Factor: 1.859

3. **Wiysonge CS**. Cochrane Column: Strategies for improving adherence to tuberculosis management. International Journal of Epidemiology. 2016 Apr; 45(2): 321-6. [Editorial]
DOI: 10.1093/ije/dyw081
Impact Factor: 7.522

2. EXTRAMURAL RESEARCH UNITS

Antiviral Gene Therapy

1. **Ely A**, **Moyo B**, **Arbuthnot P**. Progress with developing use of gene editing to cure chronic infection with Hepatitis B virus. Molecular Therapy. 2016 Apr; 24(4): 671-7. [Review]
DOI: 10.1038/mt.2016.43
Impact Factor: 6.938

Anxiety and Stress Disorders

1. **Koen N**, Fourie J, Terburg D, Stoop R, Morgan B, **Stein DJ**, van Honk J. Translational neuroscience of basolateral amygdala lesions: Studies of urbach-wiethe disease. Journal of Neuroscience Research. 2016 Jun; 94(6): 504-12. Epub 2016 Apr 19. [Review]
DOI: 10.1002/jnr.23731
Impact Factor: 2.689

2. Doruyter A, **Lochner C**, Jordaan GP, **Stein DJ**, Dupont P, Warwick JM. Resting functional connectivity in social anxiety disorder and the effect of pharmacotherapy. Psychiatry Research - Neuroimaging. 2016 May 30; 251: 34-44. Epub 2016 Apr 16. [Original]
DOI: 10.1016/j.pscychresns.2016.04.009
Impact Factor: 2.477

3. Hortensius R, Terburg D, Morgan B, **Stein DJ**, **van Honk J**, de Gelder B. The role of the basolateral amygdala in the perception of faces in natural contexts. Philosophical Transactions of the Royal Society of London. Series B, Biological Sciences. 2016 Apr 11. [Original]
DOI: 10.1098/rstb.2015.0376
Impact Factor: 5.847

4. Andersen LS, Magidson JF, O'Cleirigh C, Remmert JE, Kagee A, Leaver M, **Stein DJ**, Safren SA, Joska J. A pilot study of a nurse-delivered cognitive behavioural therapy intervention (Ziphamandla) for adherence and depression in HIV in South Africa. Journal of Health Psychology. 2016 Apr 26.
DOI: 10.1177/1359105316643375
Impact Factor: 2.010

Child and Adolescent Lung Health

1. **Vanker A**, **Barnett W**, **Brittain K**, Gie RP, Koen N, Myers B, Stein DJ, **Zar HJ**. Antenatal and early life tobacco smoke exposure in an African birth cohort study. International Journal of Tuberculosis and Lung Disease. 2016 Apr 12. [Original]
DOI: 10.5588/ijtld.15.0697
Impact Factor: 2.148

Developmental Pathways for Health

1. **Prioreschi A**, Makda MA, Tikly M, McVeigh JA. In patients with established RA, positive effects of a randomised three month WBV therapy intervention on functional ability, bone mineral density and fatigue are sustained for up to six months. PLoS One. 2016 Apr 13; 11(4): e0153470. [Original]
DOI: 10.1371/journal.pone.0153470
Impact Factor: 3.057

2. **Skau JK**, Nordin AB, Cheah JC, Ali R, Zainal R, Aris T, Ali ZM, Matzen P, Biesma R, Aagaard-Hansen J, Hanson MA, Norris SA. A complex behavioural change intervention to reduce the risk of diabetes and prediabetes in the pre-conception period in Malaysia: study protocol for a randomised controlled trial. Trials. 2016 Apr 27; 17(1): 215. [Review]
DOI: 10.1186/s13063-016-1345-x
Impact Factor: 1.859

3. **Norris SA**, **Richter LM**. The importance of developmental origins of health and disease research for Africa. Journal of Developmental Origins of Health and Disease. 2016 Apr; 7(2): 121-2. [Editorial]
DOI: 10.1017/S2040174416000040
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Drug Discovery and Development

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Impact Factor: 2.148

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Stem Cell Research and Therapy

1. **Ambele MA**, **Dessels C**, **Durandt C**, **Pepper MS**. Genome-wide analysis of gene expression during adipogenesis in human adipose-derived stromal cells reveals novel patterns of gene expression during adipocyte differentiation. Stem Cell Research. 2016 Apr 19. [Original]
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3. GRANT FUNDED RESEARCH

1. **Adeyemi CM**, Faridoon, Isaacs M, Mnkandhla D, **Hoppe HC**, Krause RWM, Kaye PT. Synthesis and antimalarial activity of N-Benzylated (N-Arylcarbamoyl) alkylphosphonic acid derivatives. Bioorganic & Medicinal Chemistry. 2016 Apr 09. [Original]
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Impact Factor: 2.923

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3. **Shires K**, Teuchert A, Wienand K, Shankland I, Novitzky N. Cancer/testis antigen expression panel incorporating MAGEC1 and BAGE2 predicts multiple myeloma disease stage and severity. Journal of Hematology & Thromboembolic Diseases. 2016 Apr 07; 4:240. [Original]
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Impact Factor: None

4. Iwegbue CMA, Bassey FI, Obi G, Tesi GO, **Martincigh BS**. Concentrations and exposure risks of some metals in facial cosmetics in Nigeria. Toxicology Reports. 2016 Apr 23; 3: 464-72. [Original]
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Impact Factor: None

5. Bagla VP, Lubisi VZ, Ndiitwani T, Mokgotho MP, **Mampuru L**, Mbazima V. Antibacterial and antimetastatic potential of diospyros lycioides extract on cervical cancer cells and associated pathogens. Evidence-based Complementary and Alternative Medicine. 2016 Apr 27. [Original]
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Impact Factor: 2.656

7. Konstantinus IN, Gamieldien H, **Mkhize NN**, Kriek JM, Passmore JA. Comparing high-throughput methods to measure NK cell-mediated antibody dependent cellular cytotoxicity during HIV-infection. Journal of Immunological Methods. 2016 Apr 16. [Original]
DOI: 10.1016/j.jim.2016.04.006
Impact Factor: 1.858

8. Panayides J-L, Mathieu V, Banuls LMY, Apostolellis H, Dahan-Farkas N, Davids H, Harmse L, Rey MEC, **Green IR**, Pelly SC, Kiss R, Kornienko A, **van Otterlo WAL**. Synthesis and in vitro growth inhibitory activity of novel silyl- and trityl-modified nucleosides. Bioorganic & Medicinal Chemistry. 2016 Apr 20. [Original]
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Impact Factor: 3.057

4. CLOSED RESEARCH UNITS

Health Policy

1. Harris B, Eyles J, Goudge J. Ways of doing: Restorative practices, governmentality, and provider conduct in post-apartheid health care. Medical Anthropology. 2016 Apr 6: 1-17. [Original]
DOI: 10.1080/01459740.2016.1173691
Impact Factor: 1.283

Inter-University Cape Heart

1. **Voorneveld J**, **Oosthuysen A**, Franz T, **Zilla P**, **Bezuidenhout D**. Dual electrospinning with sacrificial fibers for engineered porosity and enhancement of tissue ingrowth. Journal of Biomedical Materials Research Part B: Applied Biomaterials. 2016 Apr 29. [Original]
DOI: 10.1002/jbm.b.33695
Impact Factor: 2.881

5. RESEARCH UNITS WITH NO QUALIFYING PUBLICATIONS

Intramural

- MRC Office of Cancer
- MRC Office of Malaria
- MRC Office of Tuberculosis
- Primate
- Violence, Injury and Peace

Extramural

- Bioinformatics Capacity Development
- Common Epithelial Cancer
- Diarrhoeal Pathogens
- Health Policy
- Health Services to Systems
- Hypertension and Cardiovascular Disease
- Immunology of Infectious Disease
- Medical Imaging
- Microbial Water Quality Monitoring
- Molecular Mycobacteriology
- Prospective Gastrointestinal Cancer
- Receptor Biology

6. GRANTS AWARDED

SAMRC LIST OF NEW CONTRACTS FOR APRIL 2016				
MRC Unit	**Funder**	**Project Title/Description**	**Contract Value**	
			Rand	**Foreign Currency**
Biomedical Research and Innovation Platform	National Research Foundation (NRF)	Effects of Rooibos on Microbiota and Prevention of Diabetes	545 000	-
Biomedical Research and Innovation Platform	National Research Foundation (NRF)	Effects of Rooibos on Microbiota and Prevention of Diabetes	70 000	
Biomedical Research and Innovation Platform	National Research Foundation (NRF)	Incentive Funding for Rated Researches	74 000	
Environment and Health	National Research Foundation (NRF)	Incentive Funding for Rated Researches	480 000	-
Environment and Health	National Research Foundation (NRF)	Incentive Funding for Rated Researches	120 000	
HIV Prevention	National Research Foundation (NRF)	Incentive Funding for Rated Researches	120 000	
Non-Communicable Disease	The Academy of Medical Science	Academy of Medical Sciences-Newton Advanced Fellowship for the Application entitled" Non-communicable disease risk in black South Africans: dissecting the role of glucorcorticoides'	1 996 200	£110 900
SHIP	DST	Capacitating the MRC TTO to improve the management and commercialisation of health related publicity funded IP	999 650	
South African Cochrane Centre	NDOH	Hosting and management of South African National Clinical Trials Register (SANCTR) in Pan African Clinical Trials Registry (PACTR) at the MRC	5 764 572	-

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