



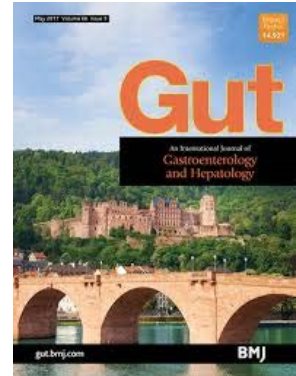
# CELEBRATES SCIENCE



# FEBRUARY 2017

## TOP 5 ARTICLES

**Director: Prof Frank Brombacher**



### Article:

**Hoving JC, Cutler AJ, Leeto M, Horsnell WG, Dewals BG, Nieuwenhuizen NE, Brombacher F.** Interleukin 13-mediated colitis in the absence of IL-4R $\alpha$  signalling. *Gut*. 2017 Feb 28. pii: gutjnl-2016-313208. [Epub ahead of print] [Other]  
DOI: 10.1136/gutjnl-2016-313208  
**Impact Factor: 14.921**

### Summary:

Sufficient evidence points to interleukin 13 (IL-13) as an important pathological factor in UC and raises hopes to a promising new treatment strategy. However, the outcomes of two recent clinical trials, both published in *Gut* 2015, suggest otherwise. A commentary published in the same issue described these results as crushing the enthusiasm for anti-IL-13 treatment in UC. In this letter, we show evidence that the disease outcome is determined by the type of signalling pathway used by IL-13 in mice. Therefore, we suggest that directly blocking IL-13 remains a potential treatment strategy for a subset of patients with UC that have elevated tissue IL-13 production.

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**Director: Prof Patrick Arbuthnot**



**Article:**

**Delhove JM**, Buckley SM, Perocheau DP, Karda R, **Arbuthnot P**, Henderson NC, **Waddington SN**, McKay TR. Longitudinal in vivo bioimaging of hepatocyte transcription factor activity following cholestatic liver injury in mice. *Scientific Reports*. 2017 Feb 3; 7: 41874. [Original]

DOI: 10.1038/srep41874

**Impact Factor: 5.228**

**Summary:**

Molecular mechanisms regulating liver repair following cholestatic injury remain largely unknown. We have combined a mouse model of acute cholestatic liver injury, partial bile duct ligation (pBDL), with a novel longitudinal bioimaging methodology to quantify transcription factor activity during hepatic injury and repair. We administered lentiviral transcription factor activated luciferase/eGFP reporter (TFAR) cassettes to neonatal mice enabling longitudinal TFAR profiling by continued bioimaging throughout the lives of the animals and following pBDL in adulthood. Neonatal intravascular injection of VSV-G pseudotyped lentivirus resulted in almost exclusive transduction of hepatocytes allowing analysis of hepatocyte-specific transcription factor activity. We recorded acute but transient responses with NF- $\kappa$ B and Smad2/3 TFAR whilst our Notch reporter was repressed over the 40 days of evaluation post-pBDL. The bipotent hepatic progenitor cell line, HepaRG, can be directed to differentiate into hepatocytes and biliary epithelia. We found that forced expression of the Notch inhibitor NUMB in HepaRG resulted in enhanced hepatocyte differentiation and proliferation whereas over-expressing the Notch agonist JAG1 resulted in biliary epithelial differentiation. In conclusion, our data demonstrates that hepatocytes rapidly upregulate NF- $\kappa$ B and Smad2/3 activity, whilst repressing Notch signalling. This transcriptional response to cholestatic liver injury likely promotes partial de-differentiation to allow pro-regenerative proliferation of hepatocytes.

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**Director: Prof Salim Abdool Karim**



**Article:**

**Thobakgale C**, Naidoo K, **McKinnon LR**, Werner L, Samsunder N, **Karim SA**, Ndung'u T, Altfeld M, **Naidoo K**. Interleukin 1-Beta (IL-1beta) production by innate cells following TLR stimulation correlates with TB recurrence in ART-treated HIV-infected patients. *Journal of Acquired Immune Deficiency Syndromes*. 2017 Feb 01; 74(2): 213-20. [Original]  
DOI: 10.1097/QAI.0000000000001181  
**Impact Factor: 3.806**

**Summary:**

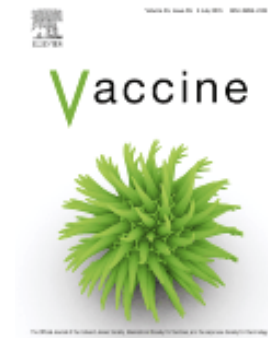
**Background:** Tuberculosis (TB) remains a major cause of global morbidity and mortality, especially in the context of HIV coinfection because immunity is not completely restored following Antiretroviral Therapy (ART). The identification of immune correlates of risk for TB disease could help in the design of host-directed therapies and clinical management. This study aimed to identify innate immune correlates of TB recurrence in HIV+ ART-treated individuals with a history of previous successful TB treatment.

**Methods:** Twelve participants with a recurrent episode of TB (cases) were matched for age, sex, time on ART, pre-ART CD4 count with 12 participants who did not develop recurrent TB in 60 months of follow-up (controls). Cryopreserved peripheral blood mononuclear cells from time-points before TB recurrence were stimulated with ligands for Toll-like receptors (TLR) including TLR-2, TLR-4, and TLR-7/8. Multicolor flow cytometry and intracellular cytokine staining were used to detect IL-1 $\beta$ , TNF- $\alpha$ , IL-12, and IP10 responses from monocytes and myeloid dendritic cells (mDCs).

**Results:** Elevated production of IL-1 $\beta$  from monocytes following TLR-2, TLR-4, and TLR-7/8 stimulation was associated with reduced odds of TB recurrence. In contrast, production of IL-1 $\beta$  from both monocytes and mDCs following Bacillus Calmette-Guérin (BCG) stimulation was associated with increased odds of TB recurrence (risk of recurrence increased by 30% in monocytes and 42% in mDCs, respectively).

**Conclusion:** Production of IL-1 $\beta$  by innate immune cells following TLR and BCG stimulations correlated with differential TB recurrence outcomes in ART-treated patients and highlights differences in host response to TB.

**Director: Prof. Shabir Madhi**



**Article:**

**Madhi SA, Dangor Z.** Prospects for preventing infant invasive GBS disease through maternal vaccination. *Vaccine*. 2017 Feb 23. [Original]  
DOI: 10.1016/j.vaccine.2017.02.025  
**Impact Factor: 3.413**

**Summary**

Group B streptococcus (GBS) is a leading cause of neonatal sepsis, with the highest incidence (1.3 per 1000 live births) reported from Africa. Although the incidence of invasive GBS disease is reportedly low in South Asia, there is disconnect between prevalence of maternal recto-vaginal colonization and the incidence of early-onset disease (EOD). This is possibly due to case-ascertainment biases that omit investigation of newborns dying on day-0 of life, which accounts for >90% of EOD. Furthermore, GBS is associated with approximately 15% of all infection related stillbirths. Vaccination of pregnant women with a serotype-specific polysaccharide epitope vaccine could possibly protect against EOD and late-onset disease (LOD) in their infants through transplacental transfer of serotype-specific capsular antibody. Furthermore, vaccination of pregnant women might also protect against impaired neurodevelopment following GBS associated neonatal sepsis, and fetal loss/stillbirths. Licensure of a GBS vaccine might be feasible based on safety evaluation and a sero-correlate of protection, with vaccine effectiveness subsequently being demonstrated in phase IV studies. A randomized-controlled trial would, however, be best suited as a vaccine-probe to fully characterize the contribution of GBS to neonatal sepsis associated morbidity and mortality and adverse fetal outcomes.

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**Director: Dr Johan Louw**



#### Article:

**Bowles SL, Ntamo Y, Malherbe CJ, Kappo AM, Louw J, Muller CJ.** Intestinal transport and absorption of bioactive phenolic compounds from a chemically characterized aqueous extract of *Athrixia phylicoides*. *Journal of Ethnopharmacology*. 2017 Feb 16. [Original]

DOI: 10.1016/j.jep.2017.02.019

**Impact Factor: 3.055**

#### Summary

**Ethnopharmacological Relevance:** *Athrixia phylicoides*, popularly known as "bush tea", is an indigenous aromatic shrub found in mountainous and grassland areas of the northern and eastern parts of southern Africa. The plant is traditionally used for the treatment of several ailments, including coughing, treating infected wounds, treating boils and sore throat, hypertension and heart disease. Potential anti-diabetic effects have also been demonstrated in vitro.

**Aim of The Study:** To investigate the intestinal transport of prominent phenolic constituents, across a fully differentiated Caco-2 monolayer, using a characterized aqueous extract of *A. phylicoides*, previously shown to have bioactivity.

**Materials and Methods:** HPLC-DAD and LC/MS analyses were used to identify the major phenolic compounds within the extract. Intestinal transport of the phenolic compounds was assessed using a differentiated Caco-2 monolayer model in order to predict bioavailability and identify metabolite formation. Rate of transport, efflux and percentage cross-over were calculated for the respective phenolic compounds.

**Results:** Nine prominent compounds, present in the aqueous extract of *A. phylicoides*, were identified. Of these, three phenolic acids (protocatechuic acid, caffeic acid and para-coumaric acid), crossed the Caco-2 cell monolayer in significant amounts, with Papp values of 4.52, 4.35 ( $\times 10^{-6}$ cm/s) and 2.38 ( $\times 10^{-5}$ cm/s), respectively. para-Coumaric acid was shown to have the highest predicted bioavailability.

**Conclusions:** Para-Coumaric acid, identified for the first time in *A. phylicoides*, was shown to have the highest predicted bioavailability suggesting that it could play a major role in the bioactivity of *A. phylicoides*.

## 1. INTRAMURAL RESEARCH UNITS

### Alcohol, Tobacco and Other Drug

1. van Hout MC, Norman I, **Rich E**, Bergin M. Experiences of codeine use, misuse and dependence: Application of Liese and Franz's cognitive developmental model of substance abuse. *Behavioural and Cognitive Psychotherapy*. 2017 Feb 10. [Original]  
DOI: 10.1017/S1352465817000030  
**Impact Factor: 1.945**
2. Bispo S, Chikhungu L, Rollins N, **Siegfried N**, Newell ML. Postnatal HIV transmission in breastfed infants of HIV-infected women on ART: A systematic review and meta-analysis. *Journal of the International Aids Society*. 2017 Feb 22; 20(1): 1-8. [Review]  
DOI: 10.7448/IAS.20.1.21251  
**Impact Factor: 6.256**

### Biomedical Research and Innovation Platform

1. **Bowles SL**, Ntamo Y, Malherbe CJ, Kappo AM, **Louw J**, **Muller CJ**. Intestinal transport and absorption of bioactive phenolic compounds from a chemically characterized aqueous extract of *Athrixia phylicoides*. *Journal of Ethnopharmacology*. 2017 Feb 16. [Original]  
DOI: 10.1016/j.jep.2017.02.019  
**Impact Factor: 3.055**

### Biostatistics

1. Naidoo P, Dunbar R, Caldwell J, **Lombard C**, Beyers N. Has universal screening with Xpert® MTB/RIF increased the proportion of multidrug-resistant tuberculosis cases diagnosed in a routine operational setting? *PLoS ONE*. 2017 Feb 15; 12(2): e0172143. [Original]  
DOI: 10.1371/journal.pone.0172143  
**Impact Factor: 3.057**
2. Claassens MM, Dunbar R, Yang B, **Lombard CJ**. Scanty smears associated with initial loss to follow-up in South African tuberculosis patients. *International Journal of Tuberculosis and Lung Disease*. 2017 Feb 01; 21(2): 196-201. [Original]  
DOI: 10.5588/ijtld.16.0292  
**Impact Factor: 2.148**
3. Sabe VT, Basson AR, **Jordaan E**, **Mazinu M**. The association between environmental exposures during childhood and the subsequent development of Crohn's disease: A score analysis approach. *PLoS One*. 2017 Feb 7; 12(2): e0171742. [Original]  
DOI: 10.1371/journal.pone.0171742  
**Impact Factor: 3.057**

### Burden of Disease

1. **Pillay-van Wyk V**, Dorrington RE, **Bradshaw D**. Rapidly changing mortality profiles in South Africa in its nine provinces. *South African Medical Journal*. 2017 Feb 27; 107(3): 168-169. [Editorial]  
DOI: 10.7196/SAMJ.2017.v107i3.12344  
**Impact Factor: 1.500**

### Centre for Tuberculosis

1. Van der Zalm MM, van Soelen N, Mandalakas AM, Jacobsen M, Detjen AK, Marx FM, Grewal HM, Cotton MF, **Walzl G**, Hesselning AC. Re: "It May Be Too Early to Try to Prove the Effect of Deworming on Tuberculin Reactivity". *Pediatric Infectious Disease Journal*. 2017 Feb; 36(2): 241-242. [Letter]  
DOI: 10.1097/INF.0000000000001408  
**Impact Factor: 2.587**

2. Jacobson KR, **Barnard M**, Kleinman MB, **Streicher EM**, Ragan EJ, White LF, Shapira O, Dolby T, Simpson J, Scott L, Stevens W, **van Helden PD**, Van Rie A, **Warren RM**. Implications of failure to routinely diagnose resistance to second-line drugs in patients with rifampicin-resistant tuberculosis on Xpert MTB/RIF: A multisite observational study. *Clinical Infectious Diseases*. 2017 Feb 12. [Original]  
DOI: 10.1093/cid/cix128  
**Impact Factor: 8.736**
3. Rockwood NN, Pasipanodya JG, Denti P, **Sirgel F**, Lesosky M, Gumbo T, Meintjes G, McIlleron H, Wilkinson RJ. Concentration-dependent antagonism and culture conversion in pulmonary tuberculosis. *Clinical Infectious Diseases*. 2017 Feb 16.  
DOI: 10.1093/cid/cix158 [Original]  
**Impact Factor: 8.736**
4. **Uren C**, **Möller M**, **van Helden PD**, Henn BM, **Hoal EG**. Population structure and infectious disease risk in southern Africa. *Molecular Genetics and Genomics*. 2017 Feb 22. [Review]  
DOI: 10.1007/s00438-017-1296-2  
**Impact Factor: 2.622**

## Health Systems

1. Oku A, Oyo-Ita A, Glenton C, Fretheim A, Eteng G, Ames H, Muloliwa A, Kaufman J, Hill S, Cliff J, Cartier Y, Bosch-Capblanch X, Rada G, **Lewin S**. Factors affecting the implementation of childhood vaccination communication strategies in Nigeria: A qualitative study. *BMC Public Health*. 2017 Feb 15;17(1):200. [Original]  
DOI: 10.1186/s12889-017-4020-6  
**Impact Factor: 2.209**
2. Kaufman J, Ryan R, Glenton C, **Lewin S**, Bosch-Capblanch X, Cartier Y, Cliff J, Oyo-Ita A, Ames H, Muloliwa AM, Oku A, Rada G, Hill S. Childhood vaccination communication outcomes unpacked and organised in a taxonomy to facilitate core outcome establishment. *Journal of Clinical Epidemiology*. 2017 Feb 24. [Original]  
DOI: 10.1016/j.jclinepi.2017.02.007  
**Impact Factor: 4.703**
3. Mokomane Z, Mokhele T, **Mathews C**, Makoae M. Availability and accessibility of public health services for adolescents and young people in South Africa. *Children and Youth Services Review*. 2017 Mar; 74: 125-32. Epub 2017 Feb 06. [Original]  
DOI: 10.1016/j.chilyouth.2017.02.001  
**Impact Factor: 0.969**
4. Ames HMR, Glenton C, **Lewin S**. Parents' and informal caregivers' views and experiences of communication about routine childhood vaccination: A synthesis of qualitative evidence. *Cochrane Database of Systematic Reviews*. 2017 Feb 02; 2017(2): CD011787. [Original]  
DOI: 10.1002/14651858.CD011787.pub2  
**Impact Factor: 6.103**
5. **Loveday M**, Cox H. Carpe diem ('seize the day'): Building on the findings of the 2015 world health organization evaluation of the multidrug-resistant tuberculosis (MDR-TB) programme to make the most of shortened MDR-TB treatment in South Africa. *South African Medical Journal*. 2017; 107(3): 176-7. Epub 2017 Feb 27. [Editorial]  
DOI: 10.7196/SAMJ.2017.v107i3.12203  
**Impact Factor: 1.500**



## HIV Prevention

1. Cobbing S, Chetty V, **Hanass-Hancock J**, Myezwa H. “Knowing I can be helpful makes me feel good inside, it makes me feel essential”: community health care workers’ experiences of conducting a home-based rehabilitation intervention for people living with HIV in KwaZulu-Natal, South Africa. *AIDS Care - Psychological and Socio-Medical Aspects of AIDS/HIV*. 2017 Feb 09. [Original]  
DOI: 10.1080/09540121.2017.1290208  
**Impact Factor: 1.902**

## MRC Office of AIDS

1. Bekker LG, **Gray GE**. Hope for HIV control in southern Africa: The continued quest for a vaccine. *PLoS Medicine*. 2017 Feb 28; 14(2): e1002241. [Review]  
DOI: 10.1371/journal.pmed.1002241  
**Impact Factor: 13.585**
2. Fogel JM, Clarke W, Kulich M, Piwowar-Manning E, Breaud A, Olson MT, Marzinke MA, Laeyendecker O, Fiamma A, Donnell D, Mbwambo JKK, Richter L, **Gray G**, Sweat M, Coates TJ, Eshleman SH. Antiretroviral drug use in a cross-sectional population survey in Africa: NIMH project accept (HPTN 043). *Journal of Acquired Immune Deficiency Syndromes*. 2017 Feb 01; 74(2): 158-65. [Original]  
DOI: 10.1097/QAI.0000000000001229  
**Impact Factor: 3.806**

## Non-Communicable Disease

1. Mazidi M, **Kengne AP**, Banach M. Mineral and vitamin consumption and telomere length among adults in the United States. *Polskie Archiwum Medycyny Wewnętrznej*. 2017 Feb 2; 127(2): 87-90. [Original]  
DOI: 10.20452/pamw.3927  
**Impact Factor: None**
2. Mazidi M, Gao HK, Vatanparast H, **Kengne AP**. Impact of the dietary fatty acid intake on C-reactive protein levels in US adults. *Medicine (United States)*. 2017 Feb; 96(7): e5736. [Review]  
DOI: 10.1097/MD.0000000000005736  
**Impact Factor: 2.133**
3. **Peer N**, Balakrishna Y, **de Villiers A**, Crickmore C, Mungal-Singh V. Effectiveness of a screening programme in identifying individuals with increased risk of cardiovascular disease in South Africa. *Journal of Public Health (Oxford, England)* 2017 Feb 14:1-12. [Original]  
DOI: 10.1093/pubmed/fox012  
**Impact Factor: 2.019**
4. Laurie SM, **Faber M**, Maduna MM. Assessment of food gardens as nutrition tool in primary schools in South Africa. *South African Journal of Clinical Nutrition*. 2017 Feb 21. [Original]  
DOI: 10.1080/16070658.2017.1271609  
**Impact Factor: None**
5. Malambo P, **Kengne AP**, Lambert EV, **de Villiers A**, Puoane T. Association between perceived built environmental attributes and physical activity among adults in South Africa. *BMC Public Health*. 2017 Feb 20;17(1): 213. [Original]  
DOI: 10.1186/s12889-017-4128-8  
**Impact Factor: 2.209**

6. Adom T, Puoane T, **de Villiers A, Kengne AP**. Protocol for a scoping review of existing policies on the prevention and control of obesity across countries in Africa. *BMJ Open*. 2017 Feb 22; 7(2): e013541. [Review]  
DOI: 10.1136/bmjopen-2016-013541  
**Impact Factor: 2.562**

### South African Cochrane Centre

1. **Young T**, Naude C, Brodovcky T, Esterhuizen T. Building capacity in clinical epidemiology in Africa: Experiences from Masters programmes. *BMC Medical Education*. 2017 Feb 27; 17(1): 46. [Review]  
DOI: 10.1186/s12909-017-0885-4  
**Impact Factor: 1.312**

### Violence, Injury and Peace

1. van As AB, **van Niekerk A**. Prevention of childhood injuries. *South African Medical Journal*. 2017 Feb 27. [Editorial]  
DOI: 10.7196/SAMJ.2017.v107i3.12364  
**Impact Factor: 1.500**
2. **van Niekerk A, Govender R, Jacobs R**, van As AB. Schoolbus driver performance can be improved with driver training, safety incentivisation, and vehicle roadworthy modifications. *South African Medical Journal*. 2017 Feb 27. [Other]  
DOI: 10.7196/SAMJ.2017.v107i3.12363  
**Impact Factor: 1.500**

## 2. EXTRAMURAL RESEARCH UNITS

### Antiviral Gene Therapy

1. **Delhove JM**, Buckley SM, Perocheau DP, Karda R, **Arbuthnot P**, Henderson NC, **Waddington SN**, McKay TR. Longitudinal in vivo bioimaging of hepatocyte transcription factor activity following cholestatic liver injury in mice. *Scientific Reports*. 2017 Feb 3; 7: 41874. [Original]  
DOI: 10.1038/srep41874  
**Impact Factor: 5.228**

### Anxiety and Stress Disorders

1. Fourie MM, **Stein DJ**, Solms M, Gobodo-Madikizela P, Decety J. Empathy and moral emotions in post-apartheid South Africa: an fMRI investigation. *Social Cognitive and Affective Neuroscience*. 2017 Feb 17. [Original]  
DOI: 10.1093/scan/nsx019  
**Impact Factor: 5.101**

### Developmental Pathways for Health

1. **Watson ED**, Van Poppel MN, Jones RA, **Norris SA**, **Micklesfield LK**. Are South African Mothers Moving? Patterns and Correlates of Physical Activity and Sedentary Behaviour in Pregnant Black South African Women. *Journal of Physical Activity and Health*. 2017 Feb 7. [Original]  
DOI: 10.1123/jpah.2016-0388  
**Impact Factor: 1.884**
2. Liu X, Behrman JR, **Stein AD**, Adair LS, Bhargava SK, Borja JB, da Silveira MF, Horta BL, Martorell R, **Norris SA**, **Richter LM**, Sachdev HS. Prenatal care and child growth and schooling in four low- and medium-income countries. *PLoS ONE*. 2017 Feb 03; 12(2): e0171299. [Original]  
DOI: 10.1371/journal.pone.0171299  
**Impact Factor: 3.057**

3. **Slemming W, Kagura J**, Saloojee H, Richter LM. Early life risk exposure and stunting in urban South African 2-year old children. *Journal of Developmental Origins of Health and Disease*. 2017 Feb 8: 1-10. [Original]  
DOI: 10.1017/S2040174417000034  
**Impact Factor: 1.733**
4. Goldstein JA, **Norris SA**, Aronoff DM. DOHaD at the intersection of maternal immune activation and maternal metabolic stress: A scoping review. *Journal of Developmental Origins of Health and Disease*. 2017 Feb 15: 1-11. [Review]  
DOI: 10.1017/S2040174417000010  
**Impact Factor: 1.733**
5. **van Heerden A, Hsiao C**, Matafwali B, Louw J, **Richter L**. Support for the feasibility of the ages and stages questionnaire as a developmental screening tool: A cross-sectional study of South African and Zambian children aged 2-60 months. *BMC Pediatrics*. 2017 Feb 16; 17(1): 55. [Original]  
DOI: 10.1186/s12887-017-0802-3  
**Impact Factor: 1.813**
6. **Rochat T**, Netsi E, Redinger S, Stein A. Parenting and HIV. *Current Opinion in Psychology*. 2017 Feb 22. [Original]  
DOI: 10.1016/j.copsyc.2017.02.019  
**Impact Factor: None**

## Gynaecological Cancer

1. Kuhn L, **Denny L**. The time is now to implement HPV testing for primary screening in low resource settings. *Preventive Medicine*. 2017 Feb 06.  
DOI: 10.1016/j.ypmed.2016.12.030  
**Impact Factor: 2.893**

## HIV/TB Pathogenesis and Treatment

1. **Thobakgale C**, Naidoo K, **McKinnon LR**, Werner L, Samsunder N, **Karim SA**, Ndung'u T, Altfeld M, **Naidoo K**. Interleukin 1-Beta (IL-1beta) production by innate cells following TLR stimulation correlates with TB recurrence in ART-Treated HIV-infected patients. *Journal of Acquired Immune Deficiency Syndromes*. 2017 Feb 01; 74(2): 213-20. [Original]  
DOI: 10.1097/QAI.0000000000001181  
**Impact Factor: 3.806**
2. **Padayatchi N, Naidu N**, Friedland G, **Naidoo K**, Conradie F, **Naidoo K, O'Donnell MR**. Turning the tide against tuberculosis. *International Journal of Infectious Diseases*. 2017 Feb 4. [Original]  
DOI: 10.1016/j.ijid.2017.01.012  
**Impact Factor: 2.229**
3. Naidoo A, Chirehwa M, McIlleron H, **Naidoo K**, Essack S, Yende-Zuma N, Kimba-Phongi E, Adamson J, Govender K, **Padayatchi N**, Denti P. Effect of rifampicin and efavirenz on moxifloxacin concentrations when co-administered in patients with drug-susceptible TB. *Journal of Antimicrobial Chemotherapy*. 2017 Feb 08. [Original].  
DOI: 10.1093/jac/dkx004  
**Impact Factor: 4.919**

## Immunology of Infectious Disease

1. **Hoving JC, Cutler AJ, Leeto M, Horsnell WG, Dewals BG, Nieuwenhuizen NE, Brombacher F**. Interleukin 13-mediated colitis in the absence of IL-4R $\alpha$  signalling. *Gut*. 2017 Feb 28. [Other]  
DOI: 10.1136/gutjnl-2016-313208

### **Impact Factor: 14.921**

2. Ng Kuet Leong N, **Brombacher F**, Dalpke AH, Weitnauer M. Crosstalk between glucocorticoids and IL-4 modulates Ym1 expression in alternatively activated myeloid cells. *Immunobiology*. 2017 Feb 9. [Original]  
DOI: 10.1016/j.imbio.2017.02.003  
**Impact Factor: 2.781**
3. Brombacher TM, Nono JK, De Gouveia KS, Makena N, Darby M, Womersley J, Tamgue O, **Brombacher F**. IL-13-mediated regulation of learning and memory. *Journal of Immunology*. 2017 Feb 15. [Original]  
DOI: 10.4049/jimmunol.1601546  
**Impact Factor: 4.985**
4. Hsu NJ, Francisco NM, Keeton R, Allie N, Quesniaux VFJ, Ryffel B, **Jacobs M**. Myeloid and T cell-derived TNF protects against central nervous system tuberculosis. *Frontiers in Immunology*. 2017 Feb 23; 8: 180. [Original]  
DOI: 10.3389/fimmu.2017.00180  
**Impact Factor: 5.695**

### **Maternal and Infant Health Care Strategies**

1. **Soma-Pillay P**, Suleman FE, **Makin JD**, **Pattinson RC**. Cerebral white matter lesions after pre-eclampsia. *Pregnancy Hypertension*. 2017 Feb 16. [Original]  
DOI: 10.1016/j.preghy.2017.02.001  
**Impact Factor: 1.308**

### **Respiratory and Meningeal Pathogens**

1. **Madhi SA**, **Dangor Z**. Prospects for preventing infant invasive GBS disease through maternal vaccination. *Vaccine*. 2017 Feb 23. [Original]  
DOI: 10.1016/j.vaccine.2017.02.025  
**Impact Factor: 3.413**
2. Millman AJ, Greenbaum A, Walaza S, Cohen AL, **Groome MJ**, Reed C, McMorrow M, Tempia S, Venter M, Treurnicht FK, **Madhi SA**, Cohen C, Variava E. Development of a respiratory severity score for hospitalized adults in a high HIV-prevalence setting-South Africa, 2010-2011. *BMC Pulmonary Medicine*. 2017 Feb 02; 17(1): 28. [Original]  
DOI: 10.1186/s12890-017-0368-8  
**Impact Factor: 2.329**

### **Rural Public Health and Health Transition**

1. Gaziano TA, Abrahams-Gessel S, **Gomez-Olive FX**, **Wade A**, Crowther NJ, Alam S, Manne-Goehler J, **Kabudula CW**, **Wagner R**, Rohr J, Montana L, **Kahn K**, Bärnighausen TW, Berkman LF, **Tollman S**. Cardiometabolic risk in a population of older adults with multiple co-morbidities in rural south africa: the HAALSI (Health and Aging in Africa: Longitudinal studies of INDEPTH communities) study. *BMC Public Health*. 2017 Feb 17; 17(1): 206. [Original]  
DOI: 10.1186/s12889-017-4117-y  
**Impact Factor: 2.209**

### **Stem Cell Research and Therapy**

1. Mahomed S, Nöthling-Slabbert M, **Pepper MS**. Ownership and human tissue - the legal conundrum: A response to Jordaan's critique. *South African Medical Journal*. 2017 Feb 27; 107(3): 196-198. [Original]  
DOI: 10.7196/SAMJ.2017.v107i3.12062  
**Impact Factor: 1.500**

### 3. GRANT FUNDED RESEARCH

1. **Pieters M**, Barnard SA, Loots DT, Rijken DC. The effects of residual platelets in plasma on plasminogen activator inhibitor-1 and plasminogen activator inhibitor-1-related assays. *PLoS ONE*. 2017 Feb 03; 12(2): e0171271. [Original]  
DOI: 10.1371/journal.pone.0171271  
**Impact Factor: 3.057**
2. **Aderibigbe BA**. Design of drug delivery systems containing artemisinin and its derivatives. *Molecules*. 2017 Feb 20; 22(2): 323. [Review]  
DOI: 10.3390/molecules22020323  
**Impact Factor: 2.465**
3. Liebenberg LJP, **Masson L**, Arnold KB, Mckinnon LR, Werner L, Proctor E, **Archary D**, Mansoor LE, Lauffenburger DA, Abdool Karim Q, Abdool Karim SS, Passmore J-AS. Genital—systemic chemokine gradients and the risk of HIV acquisition in women. *Journal of Acquired Immune Deficiency Syndromes*. Feb 14. [Original]  
DOI: 10.1097/QAI.0000000000001218  
**Impact Factor: 3.806**
4. Baartman TL, Swanepoel T, Barrientos RM, Laburn HP, Mitchell D, **Harden LM**. Divergent effects of brain interleukin-1 $\beta$  in mediating fever, lethargy, anorexia and conditioned fear memory. *Behavioural Brain Research*. 2017 Feb 14. [Original]  
DOI: 10.1016/j.bbr.2017.02.020  
**Impact Factor: 3.002**
5. **Malan L**, Schutte CE, Alkerwi A, Stranges S, Malan NT. Hypothalamic-pituitary-adrenal-axis dysregulation and double product increases potentiate ischemic heart disease risk in a Black male cohort: The SABPA study. *Hypertension Research*. 2017 Feb 09. [Original]  
DOI: 10.1038/hr.2017.5  
**Impact Factor: 3.208**
6. Katsidzira RM, van der Walt MM, Bergh JJ, **Terre'Blanche G**. The adenosine A 1 and A 2A receptor affinity of a series of 3,4-dihydropyrimidone derivatives. *Suid-Afrikaanse Tydskrif vir Natuurwetenskap en Tegnologie*. 2017 Feb 28; 36(1): 1-7. [Original]  
DOI: 10.4102/satnt.v36i1.1381  
**Impact Factor: None**
7. Tade G, Norton GR, Booyesen HL, Sibiyi MJ, Ballim I, Sareli P, Libhaber E, Majane OH, **Woodiwiss AJ**. Time to the peak of the aortic forward wave determines the impact of aortic backward wave and pulse pressure on left ventricular mass. *Journal of Hypertension*. 2017 Feb; 35(2): 300-9. [Original]  
DOI: 1097/HJH.0000000000001173  
**Impact Factor: 5.062**
8. van der Merwe N, Peeters AV, Pienaar FM, Bezuidenhout J, van Rensburg SJ, **Kotze MJ**. Exome sequencing in a family with luminal-type breast cancer underpinned by variation in the methylation pathway. *International Journal of Molecular Sciences*. 2017 Feb 22; 18(2): 467. [Original]  
DOI: 10.3390/ijms18020467  
**Impact Factor: 3.257**
9. **Shaw W**, Rae WID, Alber ML. Image-guided adaptive brachytherapy dose escalation for cervix cancer via fractionation compensation. *Brachytherapy*. 2017 Feb 06. [Original].  
DOI: 10.1016/j.brachy.2017.01.002  
**Impact Factor: 2.088**

10. **Ndlovu KCZ, Sibanda W, Assounga A.** Peritonitis outcomes in patients with HIV and end-stage renal failure on peritoneal dialysis: A prospective cohort study. *BMC Nephrology*. 2017 Feb 03; 18(1): 48. [Original]  
DOI: 10.1186/s12882-017-0466-0  
**Impact Factor: 2.289**
11. Elisha IL, Jambalang AR, Botha FS, Buys EM, McGaw LJ, **Eloff JN.** Potency and selectivity indices of acetone leaf extracts of nine selected South African trees against six opportunistic Enterobacteriaceae isolates from commercial chicken eggs. *BMC Complementary and Alternative Medicine*. 2017 Feb 02; 17(1): 90. [Original]  
DOI: 10.1186/s12906-017-1597-3  
**Impact Factor: 1.987**

#### 4. CLOSED RESEARCH UNITS

##### Inter-University Cape Heart

1. **Maarman GJ,** Schulz R, **Sliwa K,** Schermuly RT, **Lecour S.** Novel putative pharmacological therapies to protect the right ventricle in pulmonary hypertension: A review of current literature. *British Journal of Pharmacology*. 2017 Feb 24. [Review]  
DOI: 10.1111/bph.13721  
**Impact Factor: 5.259**

#### 5. RESEARCH UNITS WITH NO QUALIFYING PUBLICATIONS

##### Intramural

- Environment and Health
- Gender and Health
- MRC Office of Cancer
- MRC Office of Malaria
- MRC Office of Tuberculosis

##### Extramural

- Bioinformatics Capacity Development
- Child and Adolescent Lung Health
- Common Epithelial Cancer
- Diarrhoeal Pathogens
- Drug Discovery and Development
- Health Services to Systems
- Herbal Drugs
- Human Genetics
- Hypertension and Cardiovascular Disease
- Medical Imaging
- Microbial Water Quality Monitoring
- Molecular Mycobacteriology
- Prospective Gastrointestinal Cancer
- Receptor Biology

## 6. GRANTS AWARDED

SAMRC LIST OF NEW CONTRACTS FOR FEBRUARY 2017					
SAMRC Unit	Funder	Main Funder	Project Title/Description	Contract Value	
				Rand	Foreign Currency
HIV Prevention	Fred Hutchinson Cancer Research Centre	Bill & Melinda Gates Foundation	HIV Vaccine Trial Site Development IN Southern Africa - NCE	-	-
	Fred Hutchinson	National Institutes of Allergy & Infectious Diseases	HIV Vaccine Trial Net P5 Program Protocol Funding	1 263 096	\$97 056
	Magee-Womens Research Institute & Foundation	National Institutes of Allergy & Infectious Diseases	Leadership and Operations Centre	94 613	\$7 270

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