

2019

FACULTY OF
HEALTH SCIENCES

ANNUAL RESEARCH REPORT

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*Report prepared by Prof M. A. Papathanasopoulos and HSRO staff
on behalf of the Faculty of Health Sciences, October 2020*

A) Executive Summary

The Faculty of Health Sciences at the University of the Witwatersrand continues to be the largest in South Africa, and is comprised of seven research active schools – Anatomical Sciences, Clinical Medicine, Oral Health Sciences, Pathology, Physiology, Public Health and Therapeutic Sciences. Based on the Academic Ranking of World Universities (ARWU) ShanghaiRanking's Global Ranking of Academic Subjects 2019, the Faculty of Health Sciences was ranked 51-75 in Public Health, and 51-75 in Clinical Medicine. This can be largely attributed to the breadth and depth of the research excellence, innovation and public health impact of research conducted in these disciplines.

During 2019 the Faculty housed eight Department of Science and Technology/National Research Foundation South African Research initiative Chairs, four centres of excellence, six South African Medical Research Council (MRC) Research Units, and 24 recognized Research Entities,. Ninety one staff members were recognized as NRF rated researchers during 2019, with nine being A-rated scientists.

The faculty staff members are responsible for undergraduate and postgraduate teaching and training, conducting research, providing clinical patient care as well as informing public health policy and service delivery for South Africa. As at December 2019, the Faculty staff complement was comprised of Wits staff (258 academic, 317 administrative support), and joint staff with either the Department of Health or the National Health Laboratory Services (2595, of which 54% are registrars), and 42 postdoctoral fellows (total of 3212). Less than 30% of the abovementioned staff are research active and involved in postgraduate supervision. The Faculty continues to strive to increase the number of research active staff and supervisors.

During 2019, the Faculty of Health Sciences researchers increased their number of publication outputs and postgraduate completions. The Faculty contributed **598.24 publication units**, a 4.22% increase from 2018. A total of 687 postgraduate students completed qualifications in 2018, including **68 PhD students, 68 Masters by research, 318 Masters by coursework and research report, 60 postgraduate diploma and 173 BHSc Hons**, marking an overall increase of 14.12% from 2018.

Research excellence of numerous staff and postgraduate students was acknowledged through various international and national grants, awards and prizes. For example, three scientists in the Faculty of Health Sciences won prestigious South African Medical Research Council Scientific Merit Awards in 2019, one gold medal and two silver medals. Grant funding of approximately **ZAR 2.7 billion** for research and development aid work purposes was secured by Faculty researchers.

B) Special achievements of the Faculty of Health Sciences

There were a number of notable achievements in 2019, with selected highlights listed below:

Professor Johnny Mahlangu was appointed as chairperson of the South African Medical Research Council (SAMRC). Professor Mahlangu is Head of the School of Pathology and Head of the Haematology Diagnostic Section, Department of Molecular Medicine and Haematology.

Professor Caroline Tiemessen from the School of Pathology was awarded the 2019 SAMRC Scientific Achievement Award – Gold Medal in recognition of excellence in research.

Professor Yahya Choonara from the Wits Advanced Drug Delivery Platform and **Professor Nazir Ismail**, Department of Internal Medicine, was awarded the 2019 SAMRC Scientific Achievement Award – Silver Medal in recognition of excellence in research.

Professor Maureen Coetzee received an A-rating from the National Research Foundation (NRF). This rating denotes a scholar recognised as leader in their field by international peers.

Professors Frederick Raal, Lynn Morris and Marie-Louise Newell were identified as scientists and social scientists who produced multiple papers ranking in the top 1% by citations for their field and year of publication worldwide.

Prof. Viness Pillay won the NRF Champion of Research Capacity Development and Transformation at South African Higher Education Institutions Award. These awards honor leading Scientists for excellence and achievement in knowledge creation and dissemination.

Professor Michèle Ramsay, Director of the SBIMB, was awarded the Apex Award at 2019 SAWiSA in the category *Distinguished Women Researchers: Natural (Physical and Life) and Engineering Sciences*. Ramsay has had a distinguished career of over almost 30 years.

Professor Bavesh Kana was one of the top 5 finalists in the Lifetime Award category at the National Science and Technology Forum Awards. Prof. Kana is co-director of the DST/NRF Centre of Excellence in Biomedical Tuberculosis Research in the School of Pathology. He was also a finalist in the category **Innovation: Corporate Organisation**.

Professor Bavesh Kana and his team were the recipients of the **Vice-Chancellor's Innovation Award**. Together with his team, health sciences faculty members and Wits Enterprise, Kana was responsible for the development of the SmartSpot technology and a spin-off company that is making an impact in tens of countries around the world.

Professor Shane Norris from the Faculty of Health Sciences and Professor Abdul Kara from the Faculty of Science were the joint recipients of the **Vice-Chancellor's Research Award**.

The Transplant Unit at the Wits Donald Gordon Medical Centre and the Department of Speech Pathology and Audiology were jointly granted the **VC's Team Transformation Awards**. The Transplant Unit, led by Professor Jean Botha and his highly skilled multidisciplinary team, runs the largest liver transplant programme in sub-Saharan Africa.

Wits academics, **Dr Paula Barnard-Ashton** and **Dr Safiyah Iqbal** were part of 50 South African women named under 2019 #InspiringFiftySA, which celebrate South African women in Science, Technology, Engineering and Mathematics (STEM).

Ms Diantha Pillay (Programme Manager, Wits Reproductive Health and HIV Institute; WRHI) and **Dr Kagisho Thomas** (MD at Charlotte Maxeke Johannesburg Academic Hospital) were named along with other health care professionals in the Mail and Guardian's 200 Young South Africans in the Health category.

Emeritus Professor Beverley Kramer was re-elected as President of the International Federations of Associations of Anatomists (IFAA) for a further 5 year term. She is the first woman to be elected to this position also the first IFAA President from the African continent.

Wits-associated scientists were part of an international team that presented a potential cure for HIV-1 in two patients who stopped antiretroviral therapy after undergoing stem cell transplantation as part of their cancer treatment. (<https://www.wits.ac.za/news/latest-news/research-news/2019/2019-03/a-step-closer-to-an-hiv-cure.html>).

The Wits Reproductive Health and HIV Institute (WRHI) started evaluation of the impact of HPV vaccine schedules on the prevalence of this virus on SA adolescent girls. (<https://www.wits.ac.za/news/latest-news/research-news/2019/2019-02/first-hpv-vaccine-impact-project-in-africa-.html>).

Professor Shane Norris and Distinguished Professor Linda Richter in the DST-NRF Centre of Excellence in Human Development, co-authored a paper on gender equality and health insights from global survey data. The paper formed part of the historic Lancet series on gender equality, norms and health.

Professor Shabir Madhi, director of the RMPRU was part of the consortium of the 7-country PERCH (Pneumonia Etiology Research for Child Health) study which revealed viruses as new leading causes of global childhood pneumonia in low- and middle-income countries, highlighting the need for vaccines against these pathogens. The study was the largest and most comprehensive of its kind since the 1980s, and was published in The Lancet.

Dr. Stella Iacovides from the Brain Function Research Group won the 2019 Faculty Research Prize for a publication entitled "Three consecutive weeks of nutritional ketosis has no effect on cognitive function, sleep, and mood compared with a high-carbohydrate, low-fat diet in healthy individuals: a randomized, crossover, controlled trial" *American Journal of Clinical Nutrition*.

C) Performance against the Faculty Research and Postgraduate Plan

The Faculty continued to make progress towards meeting its Strategic goals, in line with the Research and Postgraduate Strategy 2018-2022. We continued to increase research outputs, innovation and creative productivity with respect to Wits and joint staff. Similarly, the postgraduate throughputs increased and several new strategies to promote and expand academic and scientific capacity were introduced.

Research outputs

The total units awarded by the Department of Higher Education and Training (DoHET) to the Faculty for 2019 amounted to **598.24**, from 1336 publications, and are shown in **Figure 1**. The publication emphasis continues to be on journal articles. The Faculty has enjoyed an overall increase in publication numbers as well as publication units over the last few years, with an increase of 4.22% from 2018 (**Figure 1, Tables 1 and 2**). Publication units awarded to each of the seven Schools within the Faculty for the period 2013 – 2019 is reflected in **Table 1**.

Looking at conventional research excellence indicators, evident by the quality of publications and determined by the impact factor of the journals, FHS researchers continued to publish in high impact journals such as the New England Journal of Medicine (IF 74.699) and Lancet (IF 60.392). The most prolific authors in the Faculty in 2019, as well as top citations of Faculty authors over a 10 year period (2009-2019), are included in **Appendix 1 and 2**, respectively.

Strategies to increase research excellence and research outputs included the start of a virtual Faculty “Research and Innovation Hub” and discussions with potential scientific advisory board members; funding of interdisciplinary, collaborative grants; consolidating international partnerships (for example with Vanderbilt University and ARUA – African Research University Alliance); identifying and supporting new research priority areas such as the Wits Initiative for Sports Health (WISH) and Precision Medicine, to name a few. The number of Clinician Scientists with PhDs has also increased. With regards to staff development, new workshops focusing on Scientific Writing and Grant writing were introduced by the Health Sciences Research Office (HSRO), and were particularly well attended by emergent researchers.

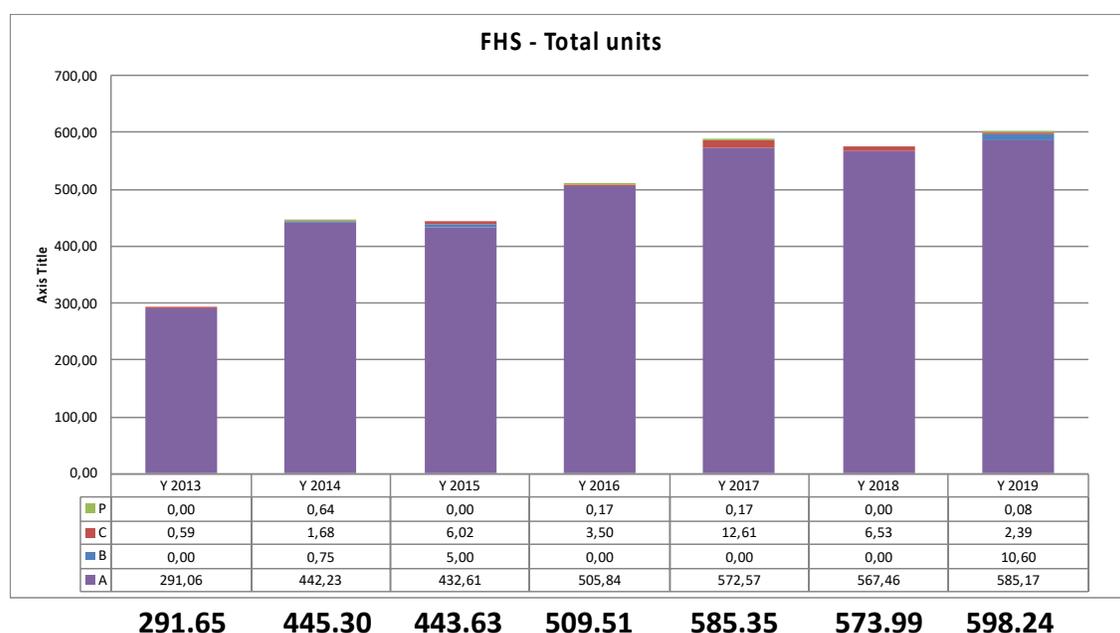


Figure 1: A comparison of the total units awarded to the Faculty of Health Sciences by DoHET for publications submitted for subsidy (2013 – 2019). A= journal articles, B=books, C= chapters and P= conference proceedings.

Table 1: A breakdown of units per School, T&L and HSRO offices, awarded to the Faculty of Health Sciences by DoHET for publications submitted for subsidy (2013 – 2019). The two institutes, SBIMB and WRHI (highlighted in red text) were historically included in the School of Pathology and School of Clinical Medicine (SOCM) numbers, respectively, up until 2016. WRHI is included with SOCM for 2019.

School	2013	2014	2015	2016	2017	2018	2019
SOAS	13.57	11.9	10.06	23.01	27.77	35.98	22.95
SOCM	142.42	158.4	163.4	190.55	197.87	209.10	238.71
WRHI	-	-	-	-	27.25	25.95	-
SOHS	3.00	18.32	12.99	20.68	18.52	20.07	21.80
SPATH	69.96	63.03	74.66	82.9	87.35	83.01	81.36
SBIMB	-	-	-	-	2.27	6.41	3.72
SOP	34.74	37.15	33.2	38.28	36.56	32.13	34.90
SPH	66.82	93.45	85.4	88.25	106.26	88.82	111.30
STS	56.40	61.66	60	63.5	70.84	70.38	81.29
T&L; HSRO	1.00	1.39	3.92	2.34	3.74	2.14	2.81
Total	389.11	443.91	439.71	507.17	585.35	573.99	598.84

Table 2: The percentage change in DoHET Units obtained in the Faculty of Health Sciences compared to the previous year.

Year	2013	2014	2015	2016	2017	2018	2019
% change	33.4	14.4	-0.37	14.85	15.4	-1.94	4.22

Postgraduate student enrolments and completions

During 2019, 45.00% of the total Faculty student population was registered for postgraduate degrees (2967 of 6593) in line with the University strategy to increase the percentage of postgraduate students. The unit allocations (344.4) for postgraduate students who completed qualifications in 2019 for PhD (D), Masters by dissertation (R), coursework and research report (C), as compared to previous years are shown in **Figure 2**, and increased by 12.58% from 2018. The actual student numbers per school, including D, R, C, Postgraduate Diploma (X) and BHSc Hons (H) with comparative data for 2013 -2019, is shown in **Table 3**.

Overall, a total of 687 postgraduate students completed qualifications in 2019, including 68 PhD students, 68 Masters by research, 318 Masters by coursework and research report, 60 postgraduate diploma and 173 BHSc Hons, marking an increase of 14.11% from 2018. **Figure 3** depicts the total number of postgraduate students enrolled in the Faculty, and the number of postgraduate students graduating in a given year. Overall, trends show an increase in the number of enrolled and graduating students over the last 10 years, with a 1.96% increase in enrolled students, and a 14.11% increase in graduating students in 2019, as compared to 2018. The percentage of the students graduating is 23.15% of those registered, and is moving closer to our overall target of 30%. Of the MMeds, 199 of 1145 (17.37%) completed during 2019, which has steadily increased since 2013. This increase can be attributed to the HPCSA requirements that the clinical training and research components of the MMed degree must be completed before allowing registration as specialists.

We have increased the pool of available supervisors as well as internal examiners in the Faculty. Junior staff attended HSRO run Research methodology courses, Supervisors workshops and Examiners workshops throughout 2019.

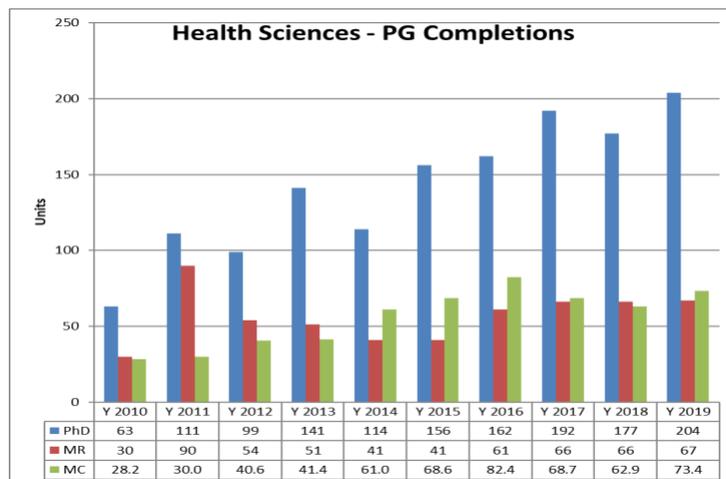


Figure 2: Total units allocated for PhD (D), Masters by dissertation (R), coursework and research report (C) completions for the period 2010-2019 in the Faculty of Health Sciences.

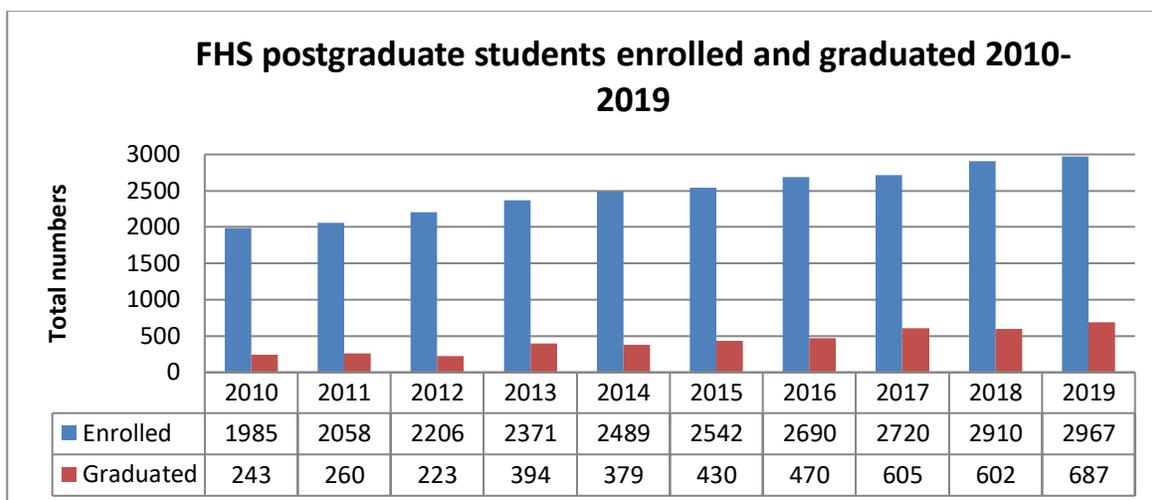


Figure 3: Number of postgraduate students enrolled vs completing in the Faculty of Health Sciences between 2010 and 2019.

Table 3: Numbers of postgraduate students graduating from each School in the Faculty of Health Sciences for the period 2013 to 2019.

Calendar Instance Year	Program Type	School of Anatomical Sciences	School of Clinical Medicine	School of Oral Health Sciences	School of Pathology	School of Physiology	School of Public Health	School of Therapeutic Sciences
2013	C		74	11	7		39	32
	D	1	10		12	8	5	8
	R	1	5		19	6	0	11
	X		1		9		31	25
	H	6			29	13		25
Total per School		8	90	11	76	27	79	106
2014	C		83	9	2		47	34
	D	1	12		10	3	4	7
	R	5	7	0	13	5	2	9
	X		6		3		0	26
	H	18	10		20	14		25
Total per School		24	128	9	48	22	53	101
2015	C		89	14	9		29	35
	D	6	16	0	14	2	7	7
	R	4	2	0	14	4	0	22
	X		22		0		27	18
	H	14	8		14	17		22
Total per School		24	137	14	51	23	63	104
2016	C		138	15	9		30	40
	D	4	14		13	3	11	9
	R	2	9		15	7	1	27
	X		27		7			7
	H	13	8		24	14		31

Total per School		19	196	15	68	24	42	114
2017	C		152	19	12		46	46
	D	3	13		12	6	8	16
	R	4	2		19	8	1	27
	X	12			2		28	14
	H	24	25		33	19		52
Total per School		43	192	19	78	33	83	155
2018	C		153	21	5		44	51
	D	3	19	0	11	8	10	8
	R	21	45		28	19		46
	X	7	9	1	23	3	0	23
	H		15		8		1	17
Total per School		31	241	22	75	30	55	145
2019	C		191	13	21		49	44
	D	4	14	1	10	7	18	14
	R	6	14	2	15	7		24
	X		15		11		18	16
	H	20	31		37	18		67
Total per School		30	265	16	94	32	85	165

Enhancing the Postgraduate Student Experience

One of the four Faculty Strategic goals is to enhance the postgraduate student experience. To this end several strategies have been implemented to increase postgraduate throughputs, increase supervisory capacity and quality and provide postgraduate students with a transformational experience.

The HSRO provides several courses throughout the year to assist the postgraduate students with research methodology, quantitative and qualitative data analysis, introductory and advanced biostatistics and research writing skills. Moreover, one-on-one biostatistics support is available daily (see below for further information).

During 2019, the Central Postgraduate Affairs Office provided funding for four Masters and PhD writing retreats. All writing retreats were held at the Phillip V. Tobias Health Sciences Building over 4 days and were facilitated by Professor Crouch and Dr Ajith. Dates were 11th to 14th March, 20th to 23rd May, 22nd to 25th July and 7th to 10th October. A total of 81 Masters and PhD students from all schools in the Faculty attended the workshop, an increase from the 52 that attended in 2018. Overall, participants achieved their writing objectives by the end of the four days. Additional support was provided post writing retreat to those participants that needed further assistance. The HSRO also manages two dedicated postgraduate hubs, with computers and relevant software. Statistics show that overall there were 13643 entries into the Postgraduate Hubs in 2019, comprised of 12 444 entries at the Medical School campus, and 1 199 entries at Chris Hani Baragwanath Academic Hospital.

An updated Postgraduate Information booklet is available annually on the Faculty of Health Sciences website. This booklet has two sections: the first provides information about postgraduate admission and registration, assessments of research protocols, thesis formats, examination and graduations processes and the second section includes information about funding, facilities available to postgraduate students and the relevant policies as well as contact details of the postgraduate office staff and Assistant Dean.

The HSRO Postgraduate Page is aimed at providing postgraduate students with useful information regarding research-related activities such as workshops, courses and funding opportunities. During

2019, the Facebook page reached a total of 384 likes. Students who subscribed to the page used it as a platform to let the public know that they attended an event, a course or a workshop organised by the HSRO. Followers also shared posts with the public informing them about what the HSRO offers. This page reaches between 74 and 205 active followers every time a post is made.

Quarterly Q&A sessions with the Assistant Dean of Research and Postgraduate Support and FHS Postgraduate Students were held during 2019, and provided a platform to address any major challenges postgraduate students were facing and answer general queries.

In July 2019, the HSRO launched a Postgraduate Support portal where students can submit their queries or concerns (<https://www.wits.ac.za/health/faculty-services/postgraduate-support/>). To date we have received 29 queries.

MRC Research Units, Research Entities, DST/NRF South African Research Chair Initiative and Centres of Excellence

The six MRC Units hosted by the Faculty of Health Sciences include the Rural Public Health and Health Transition Research Unit (Prof S. Tollman), Development Pathways Research Unit (Prof S. Norris), Respiratory and Meningeal Pathogens Research Unit (Prof S. Madhi), the Antiviral Gene Therapy Research Unit (Prof P. Arbuthnot) the Centre for Health Economics and Decision Science Research Unit (Prof K. Hoffman) and Antibody Immunity Research Unit (Prof L. Morris). Additionally there are 24 research entities (**Appendix 3**), eight DST/NRF South African Chairs (**Appendix 4**) and four Centres of Excellence (COE): DST/NRF COE for Biomedical Tuberculosis Research (Prof B. Kana), COE in Human Development (Prof L. Richter) , ANDI COE in Advanced Drug Delivery Technology (Prof V. Pillay) and ANDI COE for Viral Gene therapy (Prof P. Arbuthnot). Annual Reports for each research entity are submitted and reviewed by the FRC Research Entity review committee (available upon request).

NRF Rated Scientists 2019

The Faculty of Health Sciences had a total of 91 NRF rated researchers in 2019, with 9 A rated, 31 B rated, 39 C rated and 12 Y rated (**Appendix 5**). Fourteen of these researchers were rated for the first time (9) or re-rated (5) during 2018/9. A list of the nine NRF A-rated scientists in the Faculty is shown in **Table 4**. The number of NRF-rated researchers in the Faculty of Health Sciences has steadily increased from 2012-2019, as depicted in **Figure 4**.

Table 4: List of NRF A-rated scientists in the Faculty of Health Sciences during 2019.

Name	School	A rating	Valid until
Gray, G	Clinical Medicine	A2	2023
Brouwer, DH	Public Health	A2	2022
Coetzee, M	Pathology	A2	2024
Feldman, C	Clinical Medicine	A2	2021
Jewkes, RK (JS)	Public Health	A2	2022
Madhi, SA	Pathology	A2	2022
Manderson LH	Public Health	A2	2021
Mathew CGP	Pathology	A2	2021
Morris, L (JS)	Pathology	A2	2021
Jewkes R (JS)	Public Health	A2	2023

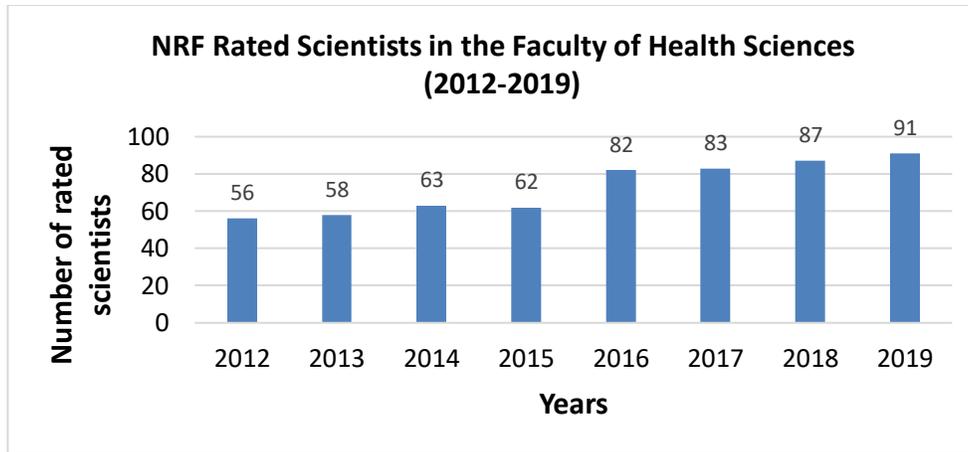


Figure 4: SA NRF Rated Scientists in the Faculty of Health Sciences (2012-2019).

Contribution of postdoctoral fellows

During 2019, the Faculty hosted a total of 42 postdoctoral fellows, where they contributed to 57 publications or 1.59% (9.53/598.24) units to the Faculty. This is translated into an expected income of R 1 147 469.00 for the University in 2021.

Health Sciences Research Office (HSRO) short courses, workshops and consultations

The demand for Short Courses and Workshops run by the HSRO continued to increase into 2019. As outlined above, these are aimed at advancing our Faculty strategic goals by strengthening research capacity of students and staff members. A total of 940 candidates attended the various courses and workshops in 2019 (**Appendix 7**). This includes 237 candidates who attended various statistics (STATISTICA and STATA) courses and workshops, and 90 candidates who attended the monthly data analysis workshops. The online Research Methodology Course that was developed and tested during 2018 was launched in 2019. Additionally, a two day grant writing workshop was introduced in 2019, and was well received.

The HSRO continues to offer ‘walk-in’ one-on-one statistical consultations to students in the Faculty 4 days per week, or at Chris Hani Baragwanath Academic Hospital (by appointment). The consultations are supported by the School of Public Health which provides some of the tutors. In 2019, more than 792 people attended the biostatistics consultations. Financial support for this initiative is provided by the HSRO. In 2019 additional consultations continued to be offered every morning mainly for established researchers and PhD students by a senior biostatistician, Dr Innocent Maposa. A survey was also carried out in 2019 to assess the levels of satisfaction of researchers with the services offered and the responses were mainly positive.

D) Self-assessment of Schools’ and research entities’ contributions

The breakdown of the units across publication types and Schools from 2013-2019 is depicted in **Figure 5**. AS in previous years, the School of Clinical Medicine recorded the highest number of units, followed by Public Health and Pathology. Please note that the outputs from the two institutes, SBIMB and WRHI, are not depicted in Figure 5.



Figure 5: Publication units for each of the seven schools in the Faculty of Health Sciences for the period 2013-2019.

Two Schools, Clinical Medicine and Therapeutic Sciences showed an increase in publication units from 2018, whereas the remainder Schools either showed a plateau or a decrease relative to the previous year. The reasons for this are multifactorial . Each School submits an annual report to the Faculty. The full reports are available upon request.

The contribution of each School to postgraduate throughput is outlined in **Table 2**. Overall, the clinical disciplines, Clinical Medicine, Therapeutic Sciences and Pathology were the major contributors to postgraduate throughputs, while the School of Public graduated the highest number of PhD students.

E) Financial reporting

Research Funding

The Faculty of Health Sciences received a total of **R 2 693 411 010** in external income specifically for research and development aid work purposes during the course of 2019. This included **R 91 368 127.00** administered through the University, and **R 2 602 042 883** administered through the Wits Health Consortium.

The FHS budget received from the URC was R 14 493 876 of which R 14 385 300 was allocated towards RINC payouts (R 10 423 700 for publications and R 3 961 600 for postgraduate throughputs; discretionary fund of R 108 576). The WHC dividend allocated to the FRC for strategic projects was the R 6.0 million that was allocated in 2018, but only made available in June 2019.

How the FRC and WHC dividend budget was utilized

The RINC component of the FRC budget was allocated to all authors and postgraduate supervisors in the Faculty as described above. Following the 2018 allocation of the funding by WHC to Wits, RFA's were sent to Faculty for the various initiatives, applications were reviewed and letters were sent to all recipients. Disbursement of the funding to the Faculty was not received during 2018, and thus approximately half of the 2019 funding was used to fund the applications approved in 2018 as well as new projects for 2019 (see **Appendix 8** for examples of some funded projects).

F) Challenges

The below challenges are highlighted annually, yet continue to be ongoing major concerns that impact on progress and optimal functioning of all emergent researchers, research active staff and related structures/systems in the Faculty of Health Sciences.

Financial sustainability

The proportion of funding that the URC directly allocates to the Faculty of Health Sciences FRC is decreasing annually, and is predominantly comprised of the abovementioned RINC allocations. The annual WHC dividend was not received during 2018, and since this funding provides critical core support to all Faculty researchers there will definitely be a knock on effect on outputs.

Shortage of staff in key support posts

a. Human Research Ethics Committee (HREC)

The same complaint has been lodged with the University Research office for the last four years, yet no improvement or changes have been made. The Ethics committee chair and office administrators that supports the HREC does not meet the needs of the University and the Faculty, with major implications for research and postgraduate outputs. There are countless complaints that they generally do not respond to emails, answer phone calls or have an acceptable turnaround time. Implications are: increases the time a postgraduate student is registered for their degree, which has direct implications

for the subsidy received by the university; Faculty researchers lose grant funding due to delays in getting ethics approval; University reputation is at risk.

b. Postgraduate Office

Continued staff shortages in the postgraduate office during 2019 have placed a huge burden on the Faculty Registrar, the Assistant Dean: Research and Postgraduate Support and the remaining administrative staff of the postgraduate office.

Infrastructure issues

a. School of Oral Health Sciences

The infrastructure issues raised by the staff and students in the School of Oral Health Sciences work have not been resolved.

b. Central Animal Services (CAS) in the FHS

The CAS is a University Core Facility, providing research support to predominantly the Faculty of Health Sciences and the Faculty of Science. These facilities have received URC funding to start major upgrades and maintenance, but ongoing support is required.

Service commitments versus research time

Faculty joint staff are employed by the Department of Health in the Schools of Clinical Medicine, Therapeutic Sciences and Oral Health Sciences, or the National Health Laboratory Services in the School of Pathology. Although they are allocated a percentage of their time to devote to academic work, including research, this is impossible to monitor and manage. Lower than expected research outputs in this group are attributed to several reasons such as the huge clinical and teaching burden placed on individuals, leaving little/no time research. Despite these challenges, there are examples of successful Clinician scientists who have been major contributors to the international standing of the Faculty.

G) Other important information

Health Sciences Research Office (HSRO)

Remit of the HSRO: The aim of the HSRO is to operationalise the strategic goals of the Faculty. The strategic research and postgraduate goals centre around increased outputs of publications, increased quality of publications (ISI journals) increased throughput and quality of postgraduate students and support (financial where possible, strategic collaborations and courses) for all researchers.

Faculty Research Committee (FRC) and Task Groups

As required, the FRC met every two months during 2019 under the Chairmanship of Professor M. Papathanasopoulos. Minutes of the meetings can be provided upon request. The Chair of the FRC Committee extends her gratitude to the Chairs of the different Task Groups and their committee members for the hard work undertaken on behalf of the Faculty during 2019.

Reports from Task Groups

In 2019, the Task Groups and their Chairpersons were as follows:

Research Entities: **Professor M Papathanasopoulos**

Individual Research Grants: **Professor J.M Pettifor**

Conference Travel: **Professor T Coetzer**

Faculty Research Prize: **Professor T Coetzer**

Faculty Research Budget: **Professor M Papathanasopoulos**

FRC Equipment: **Professor M Papathanasopoulos**

FRC Research Entity Forum: **Professor M Papathanasopoulos**

Prestigious Research lectures (PRL)

Due to funding constraints, no Prestigious Research Lectures were delivered in 2019.

Research Awards Dinner

On the 15th August 2019, the Dean, Professor Martin Veller and the Assistant Dean: Research and Postgraduate Support, Professor Maria Papathanasopoulos hosted the annual Health Sciences Research Awards Dinner. Professor Bavesh Kana, the head of the Wits University node of the DST/NRF Centre of Excellence for Biomedical TB Research was the co-host. The Dinner was held at the Houghton Golf Club, to honour outstanding achievements by the Schools, Departments, Research Entities and researchers within the Faculty in 2018. The Dean, Professor Veller congratulated the researchers for their outstanding achievements.

The Carnegie Clinician Scientist Postdoctoral Fellowship Programme

The Carnegie Corporation of New York has been generously supporting the development of Clinician Scientists in the Faculty of Health Sciences for over a decade, initially by funding PhD Fellowship posts and since 2018 by supporting part-time postdoctoral research for academic clinicians through buying out a portion of their clinical time for research and by providing support for their research costs and conference attendance. During 2019, a total of 6 postdoctoral fellowships were awarded for a period of 2 years to clinicians, who have recently completed their PhDs. Reports from the fellows have been very positive and it is hoped that it will eventually be possible to offer academic clinicians a more flexible career path in which dedicated research time can be built into their package.

Carnegie-WITS Alumni Diaspora Programme

The Wits Alumni Diaspora Programme, originally established by the Health Science Research Office in 2010, flourished as an academic research exchange programme from Alumni to both emerging and established Wits academics. By 2013 the programme had already grown into an extensive collaborative network funded by the Carnegie Corporation of New York. The Carnegie-WITS Alumni Diaspora Programme strives to enhance and build new research connections by supporting continued collaboration and partnership exchanges between Wits researchers and alumni at international health sciences research institutions.

In 2019, the Programme hosted a total of eleven Wits diaspora alumni and provided funding for four Faculty researchers to visit and engage with international alumni at their home institutions abroad. A detailed report can be provided upon request. Additional details of visits are show in **Appendix 9**.

Appendix 1: List of top publishing authors in the Faculty of Health Sciences, 2019.

Author	School/Entity	No. of Papers
Madhi, S.A	Pathology	43
Kahn, K	Public Health	34
Norris, S.A.	Clinical Medicine	32
Klipstein-Grobusch, K	Public Health	28
Cohen, C	Public Health	23
Clarke, D.L	Surgery	18
Tempia, S	Public Health	18
Morris, L	Pathology	17
Walaza, S	Public Health	17
Twine, R	Public Health	16
Bruce, J.L	Therapeutic Sciences	15
Kumar, P	Therapeutic Sciences	15
Pillay, V	Therapeutic Sciences	15
Ramsay, M	SBIMB	15
Tollman, S	Public Health	15
Fabian, J	Clinical Medicine	14
Fox, M.P	Clinical Medicine	14
Grobbee, D.E	Anatomical Sciences	14
Micklesfield, L.K	Clinical Medicine	14
Choonara, Y.E	Therapeutic Sciences	13
Gómez-Olivé, F.X	Public Health	13
Mathee, A	Public Health	13
Treurnicht, F.K	Pathology	13
Crowther, N.J	Pathology	12
Feldman, C	Clinical Medicine	12
Pettifor, A	Public Health	12
Tikly, M	Clinical Medicine	12
Draper, C.E	Clinical Medicine	11
Naicker, S	Clinical Medicine	11
Pillay, N	Clinical Medicine	11
Rees, H	Wits RHI	11
Smeeth, L	Anatomical Sciences	11
Tiemessen, C.T	Pathology	11
Wright, C.Y	Pathology	11
Chersich, M.F	Public Health	10
Duarte, R	Clinical Medicine	10
Goudge, J	Public Health	10
Manger, P.R	Anatomical Sciences	10
Martinson, N	Clinical Medicine	10
Mer, M	Clinical Medicine	10
Venter, W.D.F	Wits RHI	10
Wolter, N	Pathology	10
Dawood, H.	Health Sciences - Faculty Registrar's Office	9
Delany-Moretlwe, S	Clinical Medicine	9
Long, L	Clinical Medicine	9
MacPhail, C	Wits RHI	9

Moore, P.L	Pathology	9
Myezwa, H	Therapeutic Sciences	9
Norton, G.R	Physiology	9
Rosen, S	Clinical Medicine	9
Variava, E	Clinical Medicine	9
Von Gottberg, A	Pathology	9
Woodiwiss, A.J	Physiology	9
Beksinska, M	Clinical Medicine	8
Chivandi, E	Physiology	8
Dix-Peek, T	Clinical Medicine	8
Fulbrook, P	Therapeutic Sciences	8
Fuller, A	Physiology	8
Gulumian, M	NIOH	8
Louw, S	Pathology	8
Musenge, E	Public Health	8
Naicker, N	Public Health	8
Okumu, F.O	Public Health	8
Otwombe, K	Public Health	8
Shamu, S	Health Sciences - Faculty Registrar's Office	8
du Toit, L.C	Therapeutic Sciences	8
Erlwanger, K.H	Physiology	7
Evans, D	HE2RO	7
Fairlie, L	Wits RHI	7
Govender, N.P	Pathology	7
Grieve, A	Clinical Medicine	7
Izu, A	Pathology	7
Mahlangu, J.N	Pathology	7
Nunes, M.C	Pathology	7
Palanee-Phillips, T	Clinical Medicine	7
Sherman, G.G	Clinical Medicine	7
Smit, J	Clinical Medicine	7
Violari, A	Clinical Medicine	7
Wagner, R.G	Public Health	7
van Vuuren, S	Therapeutic Sciences	7

Appendix 2: Most cited publications in the Faculty of Health Sciences based on the ISI Web of Knowledge and Scopus in a 10-year period (2009 –2019).

Authors	Title	Year	Source Title	Cited by	Document Type
Lozano R., Naghavi M., Foreman K., Lim S., Shibuya K., Aboyans V., Abraham J., Adair T., Aggarwal R., Ahn S.Y., AlMazroa M.A., Alvarado M., Anderson H.R., Anderson L.M., Andrews K.G., Atkinson C., Baddour L.M., Barker-Collo S., Bartels D.H., Bell M.L., Benjamin E.J., Bennett D., Bhalla K., Bikbov B., Bin Abdulhak A., Birbeck G., Blyth F., Bolliger I., Boufous S., Bucello C., Burch M., Burney P., Carapetis J., Chen H., Chou D., Chugh S.S., Coffeng L.E., Colan S.D., Colquhoun S., Colson K.E., Condon J., Connor M.D., et al.	Global and regional mortality from 235 causes of death for 20 age groups in 1990 and 2010: A systematic analysis for the Global Burden of Disease Study 2010	2012	<i>The Lancet</i>	7832	Article
Murray C.J.L., Vos T., Lozano R., Naghavi M., Flaxman A.D., Michaud C., Ezzati M., Shibuya K., Salomon J.A., Abdalla S., Aboyans V., Abraham J., Ackerman I., Aggarwal R., Ahn S.Y., Ali M.K., AlMazroa M.A., Alvarado M., Anderson H.R., Anderson L.M., Andrews K.G., Atkinson C., Baddour L.M., Bahalim A.N., Barker-Collo S., Barrero L.H., Bartels D.H., Basáñez M.-G., Baxter A., Bell M.L., Benjamin E.J., Carapetis J., Carmona L., Cella C., Charlson F., Chen H., Cheng A.T.-A., Chou D., Chugh S.S., Coffeng L.E., Colan S.D., Colquhoun S., Colson K.E., Condon J., Connor M.D., et al.	Disability-adjusted life years (DALYs) for 291 diseases and injuries in 21 regions, 1990-2010: A systematic analysis for the Global Burden of Disease Study 2010	2012	<i>The Lancet</i>	5128	Article
Cohen M.S., Chen Y.Q., McCauley M., Gamble T., Hosseini M.C., Kumarasamy N., Hakim J.G., Kumwenda J., Grinsztejn B., Pilotto J.H.S., Godbole S.V., Mehendale S., Chariyaletsak S., Santos B.R., Mayer K.H., Hoffman I.F., Eshleman S.H., Piwovar-Manning E., Wang L., Makhema J., Mills L.A., De Bruyn G., Sanne I., et al.	Prevention of HIV-1 infection with early antiretroviral therapy	2011	<i>New England Journal of Medicine</i>	4669	Article
Vos T., Flaxman A.D., Naghavi M., Lozano R., Michaud C., Ezzati M., Shibuya K., Salomon J.A., Abdalla S., Aboyans V., Abraham J., Ackerman I., Aggarwal R., Ahn S.Y., Ali M.K., Almazroa M.A., Alvarado M., Anderson H.R., Anderson L.M., Andrews K.G., Atkinson C., Baddour L.M., Bahalim A.N., Barker-Collo S., Barrero L.H., Bartels D.H., Basáñez M.-G., Baxter A., Bell M.L., Benjamin E.J., Bennett D., Bernabé E., Bhalla K., Bhandari B., Bikbov B., Abdulhak A.B., Calabria B., Campbell B., Canter C.E., Carabin H., Carapetis J., Carmona L., Cella C., Charlson F., Chen H., Cheng A.T.-A., Chou D., Chugh S.S., Coffeng L.E., Colan S.D., Colquhoun S., Colson K.E., Condon J., Connor M.D., et al.	Years lived with disability (YLDs) for 1160 sequelae of 289 diseases and injuries 1990-2010: A systematic analysis for the Global Burden of Disease Study 2010	2012	<i>The Lancet</i>	4240	Article
Vos T., Barber R.M., Bell B., Bertozzi-Villa A., Biryukov S., Bolliger I., Charlson F., Davis A., Degenhardt L., Dicker D., Duan L., Erskine H., Feigin V.L., Ferrari A.J., Fitzmaurice C., Fleming T., Graetz N., Guinovart C., Haagsma J., Arnlov J., Agardh E.E., Al Khabouri M.J., Alam S.S., Alasfoor D., Albittar M.I., Alegretti M.A., Aleman A.V., Alemu Z.A.,Ortiz A., Pandian J.D., Panelo C.I.A., Papachristou C., Park E.-K., Parry C.D., Caicedo A.J.P., Patten S.B., Paul V.K., Pavlin B.I., Pearce N., Pedraza L.S., Pellegrini C.A., Pereira D.M., Perez-Ruiz F.P., Perico N., Pervaiz A., Pesudovs K., Peterson C.B., Petzold M., et al.	Global, regional, and national incidence, prevalence, and years lived with disability for 301 acute and chronic diseases and injuries in 188 countries, 1990-2013: A systematic analysis for the Global Burden of Disease Study 2013	2015	<i>The Lancet</i>	3068	Article
GBD 2015 Mortality and Causes of Death Collaborators, Wang H., Naghavi M., Allen C., Barber R.M., Carter A., Casey D.C., Charlson F.J., Chen A.Z., Coates M.M., Coggeshall M., Dandona L., Dicker D.J., Erskine H.E., Ferrari A.J., Fitzmaurice C., Foreman K., Forouzanfar M.H., Fraser M.S., Gankpé F.G., Awasthi A., Bacha U., Bahit M.C., Balakrishnan K., Barker-Collo S.L., Mohammed S., Barregard L., Petzold M. , Barrero L.H., Basu A., Basu S., Bayou Y.T., Bazargan-Hejazi S., Beardsley J., Bedi N., Beghi E., Deribe K., Belay H.A., Giref A.Z., Haile D., Jibat T., Manamo W.A.A., Tefera W.M., <i>et al.</i> , Carpenter D.O., Castañeda-Orjuela C.A., Castillo Rivas J., Catalá-López F., Cerda J., Chen W., Chiang P.P., Chibalabala M., Chibueze C.E., Mori R., Chimed-Ochir O., Jiang Y., Takahashi K., Chisumpa V.H., et al.	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	2016	<i>The Lancet</i>	2454	Article
GBD 2015 Disease and Injury Incidence and Prevalence Collaborators, Vos T., Allen C., Arora M.,	Global, regional, and national incidence,	2016	<i>The Lancet</i>	2451	Article

Barber R.M., Brown A., Carter A., Casey D.C., Charlson F.J., Chen A.Z.,Balakrishnan K., Barac A., Barker-Collo S.L., Mohammed S., Barregard L., Petzold M. , Barrero L.H., Basu A., Bazargan-Hejazi S., Beghi E., Sheth K.N., Bell M.L., Huang J.J., Santos I.S., Bensenor I.M., Lotufo P.A., Berhane A., Wolfe C.D., Bernabé E., Hay R.J., Roba H.S., Beyene A.S., Bhala N., Fürst T., Piel F.B., Steiner T.J., Bhatt S., Greaves F., Majeed A., Soljak M., Biadgilign S., Bikbov B., Bjertness E., Htet A.S., Boufous S., Degenhardt L., Resnikoff S., Calabria B., Mitchell P.B., Brainin M., Brazinova A., Majdan M., Lo W.D., Shen J., Breitborde N.J.K., Buckle G.C., Butt Z.A., Lal A., Carabin H., Cárdenas R., Carpenter D.O., Castañeda-Orjuela C.A., Castillo Rivas J., Catalá-López F., Catalá-López F., Chang J., Chiang P.P., Chibueze C.E., Chisumpa V.H. , <i>et al.</i>	prevalence, and years lived with disability for 310 diseases and injuries, 1990–2015: a systematic analysis for the Global Burden of Disease Study 2015				
Feigin V.L., Forouzanfar M.H., Krishnamurthi R., Mensah G.A., Connor M. , Bennett D.A., Moran A.E., Sacco R.L., Anderson L., Truelsen T., O'Donnell M., Venketasubramanian N., Barker-Collo S., Lawes C.M.M., Wang W., Shinohara Y., Witt E., Ezzati M., Naghavi M.,	Global and regional burden of stroke during 1990-2010: Findings from the Global Burden of Disease Study 2010	2014	<i>The Lancet</i>	1909	Article
Di Cesare M., Bentham J., Stevens G.A., Zhou B., Danaei G., Lu Y., Bixby H., Cowan M.J., Riley L.M., Hajifathalian K., Fortunato L., Taddei C., Bennett J.E., Ikeda N., Khang Y.-H., Kyobutungi C., Laxmaiah A., Li Y., Lin H.-H., Miranda J.J., Mostafa A., Turley M.L., Paciorek C.J., Gunter M., Ezzati M., Abdeen Z.A., Hamid Z.A., Abu-Rmeileh N.M., Acosta-Cazares B., Adams R., Aekplakorn W., Aguilar-Salinas C.A., Ahmadvand A., Ahrens W., Ali M.M., Alkerwi A., Alvarez-Pedrerol M., Aly E., Amouyel P., Amuzu A., Van Der Schouw Y.T., Van Herck K., Van Minh H., Van Valkengoed I.G.M., Vanderschueren D., Vanuzzo D., Vatten L., Vega T., Velasquez-Melendez G., Veronesi G., Monique Verschuren W.M., Viegi G., Viet L., Viikari-Juntura E., Vineis P., Vioque J., Virtanen J.K., Visvikis-Siest S., Viswanathan B., Vollenweider P., Voutilainen S., Vrijheid M., Wade A.N. , <i>et al.</i>	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	2016	<i>The Lancet</i>	1859	Article
Vos T., Abajobir A.A., Abbafati C., Abbas K.M., Abate K.H., Abd-Allah F., Abdulle A.M., Abebo T.A., Abera S.F., Aboyans V., Abu-Raddad L.J., Ackerman I.N., Adamu A.A., Adetokunboh O., Afarideh M., Afshin A., Agarwal S.K., Aggarwal R., Agrawal A., Agrawal S., Ahmad Kiadaliri A., Ahmadieh H., Ahmed M.B., Aichour A.N., Aichour I., Aichour M.T.E., Aiyar S., Akinyemi R.O., Akseer N., Al Lami F.H., Alahdab F., Al-Aly Z., Alam K., Alam N., Alam T., Alasfoor D., Alene K.A., Ali R., Alizadeh-Navaei R., Alkerwi A.,Chibueze C.E., Chisumpa V.H. , Chithee A.A., Christopher D.J.,Nangia V., Natarajan G., Negasa D.E., Negoi I., Negoi R.I., Newton C.R., Ngunjiri J.W., Nguyen C.T., Nguyen G., Nguyen M., Nguyen Q.L., Nguyen T.H., Nichols E., Ningrum D.N.A., Nolte S., Nong V.M., Norrving B., Noubiap J.J.N., O'Donnell M.J., Ogbo F.A., Oh I.-H., Okoro A., Oladimeji O., Olagunju A.T., Olagunju T.O., Olsen H.E., Olusanya B.O., Olusanya J.O., Ong K., Opio J.N., Oren E., Ortiz A., Osgood-Zimmerman A., Osman M., Owolabi M.O., Pa M., Pacella R.E., Pana A., Panda B.K., Papachristou C., Park E.-K., Parry C.D., Parsaiean M., Patten S.B., Patton G.C., Paulson K., Pearce N., Pereira D.M., Perico N., Pesudovs K., Peterson C.B., Petzold M. , <i>et al.</i>	Global, regional, and national incidence, prevalence, and years lived with disability for 328 diseases and injuries for 195 countries, 1990-2016: A systematic analysis for the Global Burden of Disease Study 2016	2017	<i>The Lancet</i>	1800	Article
Baeten J.M., Donnell D., Ndase P., Mugo N.R., Campbell J.D., Wangisi J., Tappero J.W., Bukusi E.A., Cohen C.R., Katabira E., Ronald A., Tumwesigye E., Were E., Fife K.H., Kiari J., Farquhar C., John-Stewart G., Kania A., Odoyo J., Mucunguzi A., Nakku-Joloba E., Twesigye R., Ngunjiri K., Apaka C., Tamoo H., Gabona F., Mujugira A., Panteleeff D., Thomas K.K., Kidoguchi L., Krows M., Revall J., Morrison S., Haugen H., Emmanuel-Ogier M., Ondrejcek L., Coombs R.W., Frenkel L., Hendrix C., Bumpus N.N., Bangsberg D., Haberer J.E., Stevens W.S. , Lingappa J.R., Celum C.,	Antiretroviral prophylaxis for HIV prevention in heterosexual men and women	2012	<i>New England Journal of Medicine</i>	1766	Article
Jha V., Garcia-Garcia G., Iseki K., Li Z., Naicker S. , Plattner B., Saran R., Wang A.Y.-M., Yang C.-W.,	Chronic kidney disease: Global dimension and perspectives	2013	<i>The Lancet</i>	1710	Review
Victora C.G., Bahl R., Barros A.J.D., França G.V.A., Horton S., Krusevec J., Murch S., Sankar M.J., Walker N., Rollins N.C., Allen K., Dharmage S., Lodge C., Peres K.G., Bhandari N., Chowdhury R., Sinha B., Taneja S., Giugliani E., Horta B., Maia F., de Mola C.L., Hajeerbhoy N., Lutter C., Piwoz E., Martinez J.C., Richter L. ,	Breastfeeding in the 21st century: Epidemiology, mechanisms, and lifelong effect	2016	<i>The Lancet</i>	1693	Review
Fitzmaurice C., Dicker D., Pain A., Hamavid H., Moradi-Lakeh M., MacIntyre M.F., Allen C., Hansen G.,	The Global Burden of Cancer 2013	2015	<i>JAMA</i>	1638	Article

Woodbrook R., Wolfe C., Hamadeh R.R., Moore A., Werdecker A., Gessner B.D., Te Ao B., McMahon B., Karimkhani C., Yu C., Cooke G.S., Schwebel D.C., Carpenter D.O., Pereira D.M., Nash D., Kazi D.S., De Leo D., Plass D., Ukwaja K.N., Thurston G.D., Yun Jin K., Simard E.P., Mills E., Park E.-K., Catalá-López F., DeVeber G., Gotay C., Khan G., Hosgood H.D., III, Santos I.S., Leasher J.L., Singh J., Leigh J., Jonas J.B., Sanabria J., Beardesley J., Jacobsen K.H., Takahashi K., Franklin R.C., Ronfani L., Montico M., Naldi L., Tonelli M., Geleijnse J., Petzold M., et al.			<i>Oncology</i>		
Laxminarayan R., Duse A. , Wattal C., Zaidi A.K.M., Wertheim H.F.L., Sumpradit N., Vlieghe E., Hara G.L., Gould I.M., Goossens H., Greko C., So A.D., Bigdeli M., Tomson G., Woodhouse W., Ombaka E., Peralta A.Q., Qamar F.N., Mir F., Kariuki S., Bhutta Z.A., Coates A., Bergstrom R., Wright G.D., Brown E.D., Cars O.,	Antibiotic resistance-the need for global solutions	2013	<i>The Lancet Infectious Diseases</i>	1627	Review
Forouzanfar M.H., Afshin A., Alexander L.T., Biryukov S., Brauer M., Cercy K., Charlson F.J., Cohen A.J., Dandona L., Estep K., Ferrari A.J., Frostad J.J., Fullman N., Godwin W.W., Griswold M., Hay S.I., Kyu H.H., Larson H.J., Lim S.S.,Balakrishnan K., Barac A., Barker-Collo S.L., del Pozo-Cruz B., Mohammed S., Barregard L., Petzold M. , Barrero L.H., Basu S., Del L.C., Bazargan-Hejazi S., Beardesley J., Bedi N., Beghi E., Sheth K.N., Bell M.L., Huang J.J., Bello A.K., Santos I.S., Bensenor I.M., Lotufo P.A., Berhane A., Wolfe C.D., Bernabé E., Roba H.S., Beyene A.S., Hassen T.A., Mesfin Y.M., Bhala N., Bhansali A., Biadgilign S., Bikbov B., Bjertness E., Htet A.S., Boufous S., Degenhardt L., Resnikoff S., Calabria B., Bourne R.R.A., Brainin M., Brazinova A., Majdan M., Shen J., Breitborde N.J.K., Brenner H., Schöttker B., Broday D.M., Brugha T.S., Brunekreef B., Kromhout H., Butt Z.A., van Donkelaar A., Martin R.V., Cárdenas R., Carpenter D.O., Castañeda-Orjuela C.A., Castillo J., Castro R.E., Catalá-López F., Chang J., Chiang P.P., Chibalabala M., Chimed-Ochir O., Jiang Y., Takahashi K., Chisumpa V.H., et al.	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	2016	<i>The Lancet</i>	1581	Article
Büller H.R., Prins M.H., Lensing A.W.A., Decousus H., Jacobson B.F. , Minar E., Chlumsky J., Verhamme P., Wells P., Agnelli G., Cohen A., Berkowitz S.D., Bounameaux H., Davidson B.L., Misselwitz F., Gallus A.S., Raskob G.E., Schellong S., Segers A.,	Oral rivaroxaban for the treatment of symptomatic pulmonary embolism	2012	<i>New England Journal of Medicine</i>	1576	Article
Nair H., Nokes D.J., Gessner B.D., Dherani M., Madhi S.A. , Singleton R.J., O'Brien K.L., Roca A., Wright P.F., Bruce N., Chandran A., Theodoratou E., Sutanto A., Sedyaningsih E.R., Ngama M., Munywoki P.K., Kartasmita C., Simões E.A., Rudan I., Weber M.W., Campbell H.,	Global burden of acute lower respiratory infections due to respiratory syncytial virus in young children: a systematic review and meta-analysis	2010	<i>The Lancet</i>	1548	Article
Naghavi M., Abajobir A.A., Abbafati C., Abbas K.M., Abd-Allah F., Abera S.F., Aboyans V., Adetokunboh O., Årnlöv J., Afshin A., Agrawal A., Kiadaliri A.A., Ahmadi A., Ahmed M.B., Aichour A.N., Aichour I., Aichour M.T.E., Aiyar S., Al-Eyadhy A., Alahdab F., Al-Aly Z., Alam K., Alam N., Alam T., Alene K.A., Ali S.D., Alizadeh-Navaei R., Alkaabi J.M., Alkerwi A., Alla F., Allebeck P., Allen C., Al-Raddadi R., Chibueze C.E., Chimed-Ochir O., Chisumpa V.H. , Chitheer A.A., Christopher D.J., Ciobanu L.G., Cirillo M.,Pacella R.E., Pakhale S., Pana A., Panda B.K., Jonas S., Papachristou C., Park E.-K., Patten S.B., Patton G.C., Paudel D., Paulson K., Pereira D.M., Perez-Ruiz F., Perico N., Pervaiz A., Petzold M., et al.	Global, regional, and national age-sex specific mortality for 264 causes of death, 1980-2016: A systematic analysis for the Global Burden of Disease Study 2016	2017	<i>The Lancet</i>	1504	Article
Bentham J., Di Cesare M., Bilano V., Bixby H., Zhou B., Stevens G.A., Riley L.M., Taddei C., Hajifathalian K., Lu Y., Savin S., Cowan M.J., Paciorek C.J., Chirita-Emandi A., Hayes A.J., Katz J., Kelishadi R., Kengne A.P., Khang Y.-H., Laxmaiah A., Li Y., Ma J., Miranda J.J., Mostafa A., Neovius M., Padez C., Rampal L., Zhu A., Bennett J.E., Danaei G., Bhutta Z.A., Ezzati M., Abarca-Gómez L., Abdeen Z.A., Hamid Z.A., Abu-Rmeileh N.M., Acosta-Cazares B., Acuin C., Adams R.J., Aekplakorn W., Afsana K., Aguilar-Salinas C.A., Wade A.N., et al.	Worldwide trends in body-mass index, underweight, overweight, and obesity from 1975 to 2016: a pooled analysis of 2416 population-based measurement studies in 128.9 million children, adolescents, and adults	2017	<i>The Lancet</i>	1466	Article
Forouzanfar M.H., Alexander L., Bachman V.F., Biryukov S., Brauer M., Casey D., Coates M.M., Delwiche K., Estep K., Frostad J.J., Astha K.C., Kyu H.H., Moradi-Lakeh M., Ng M., Slepak E., Thomas B.A., Wagner J., Achoki T., Atkinson C., Barber R.M., Cooperrider K., Dandona L., Dicker D., Flaxman A.D., Fleming T.D., Foreman K.J., Gakidou E., Hay S.I., Heuton K.R., Iannarone M.L., Ku T., Larson H.J.,	Global, regional, and national comparative risk assessment of 79 behavioural, environmental and occupational, and metabolic risks or clusters of risks in 188 countries, 1990-2013: A	2015	<i>The Lancet</i>	1404	Article

Lim S.S., Lopez A.D., Lozano R., MacIntyre M.F., Margono C., Petzold M., et al.	systematic analysis for the Global Burden of Disease Study 2013				
Douillard J.-Y., Oliner K.S., Siena S., Taberero J., Burkes R., Barugel M., Humblet Y., Bodoky G., Cunningham D., Jassem J., Rivera F., Kocáková I., Ruff P. , Błasińska-Morawiec M., Šmakal M., Canon J.L., Rother M., Williams R., Rong A., Wiezorek J., Sidhu R., Patterson S.D.,	Panitumumab-FOLFOX4 treatment and RAS mutations in colorectal cancer	2013	<i>New England Journal of Medicine</i>	1352	Article
Nordestgaard B.G., Chapman M.J., Humphries S.E., Ginsberg H.N., Masana L., Descamps O.S., Wiklund O., Hegele R.A., Raal F.J. , Defesche J.C., Wiegman A., Santos R.D., Watts G.F., Parhofer K.G., Hovingh G.K., Kovanen P.T., Boileau C., Averna M., Borén J., Bruckert E., Catapano A.L., Kuivenhoven J.A., Pajukanta P., Ray K., Stalenhoef A.F.H., Stroes E., Taskinen M.-R., Tybjærg-Hansen A.,	Familial hypercholesterolaemia is underdiagnosed and undertreated in the general population: Guidance for clinicians to prevent coronary heart disease	2013	<i>European Heart Journal</i>	1292	Article
Finnerup N.B., Attal N., Haroutounian S., McNicol E., Baron R., Dworkin R.H., Gilron I., Haanpää M., Hansson P., Jensen T.S., Kammerman P.R. , Lund K., Moore A., Raja S.N., Rice A.S.C., Rowbotham M., Sena E., Siddall P., Smith B.H., Wallace M.,	Pharmacotherapy for neuropathic pain in adults: A systematic review and meta-analysis	2015	<i>The Lancet Neurology</i>	1270	Article
Robinson J.G., Farnier M., Krempf M., Bergeron J., Luc G., Averna M., Stroes E.S., Langslet G., Raal F.J. , El Shahawy M., Koren M.J., Lepor N.E., Lorenzato C., Pordy R., Chaudhari U., Kastelein J.J.P., for the ODYSSEY LONG TERM Investigators,	Efficacy and safety of alirocumab in reducing lipids and cardiovascular events	2015	<i>New England Journal of Medicine</i>	1215	Article
Kellum J.A., Lameire N., Aspelin P., Barsoum R.S., Burdmann E.A., Goldstein S.L., Herzog C.A., Joannidis M., Kribben A., Levey A.S., MacLeod A.M., Mehta R.L., Murray P.T., Naicker S. , Opal S.M., Schaefer F., Schetz M., Uchino S.,	Kidney disease: Improving global outcomes (KDIGO) acute kidney injury work group. KDIGO clinical practice guideline for acute kidney injury	2012	<i>Kidney International Supplements</i>	1068	Editorial
Sabatine M.S., Giugliano R.P., Wiviott S.D., Raal F.J. , Blom D.J., Robinson J., Ballantyne C.M., Somaratne R., Legg J., Wasserman S.M., Scott R., Koren M.J., Stein E.A., for the Open-Label Study of Long-Term Evaluation against LDL Cholesterol (OSLER) Investigators,	Efficacy and safety of evolocumab in reducing lipids and cardiovascular events	2015	<i>New England Journal of Medicine</i>	1033	Article
Murray C.J.L., Barber R.M., Foreman K.J., Ozgoren A.A., Abd-Allah F., Abera S.F., Aboyans V., Abraham J.P., Abubakar I., Abu-Raddad L.J., Abu-Rmeileh N.M., Achoki T., Ackerman I.N., Ademi Z., Adou A.K., Adsuar J.C., Afshin A., Agardh E.E., Alam S.S., Alasfoor D., Albittar M.I., Petzold M., et al.	Global, regional, and national disability-adjusted life years (DALYs) for 306 diseases and injuries and healthy life expectancy (HALE) for 188 countries, 1990-2013: Quantifying the epidemiological transition	2015	<i>The Lancet</i>	972	Article
McCorry P., Meeuwisse W., Dvořák J., Aubry M., Bales J., Broglio S., Cantu R.C., Cassidy D., Echemendia R.J., Castellani R.J., Davis G.A., Ellenbogen R., Emery C., Engebretsen L., Feddermann-Demont N., Giza C.C., Guskiewicz K.M., Herring S., Iverson G.L., Johnston K.M., Kissick J., Kutcher J., Leddy J.J., Maddocks D., Makdissi M., Manley G.T., McCrea M., Meehan W.P., Nagahiro S., Patricios J. , Putukian M., Schneider K.J., Sills A., Tator C.H., Turner M., Vos P.E.,	Consensus statement on concussion in sport—the 5th international conference on concussion in sport held in Berlin, October 2016	2017	<i>British Journal of Sports Medicine</i>	956	Article
Srivastava A., Brewer A.K., Mauser-Bunschoten E.P., Key N.S., Kitchen S., Llinas A., Ludlam C.A., Mahlangu J.N. , Mulder K., Poon M.C., Street A.,	Guidelines for the management of haemophilia	2013	<i>Haemophilia</i>	950	Article

Appendix 3: List of Research Entities in the Faculty of Health Sciences, 2019.

Research Entity	School/Department	Status	Recognition Cycle	Director/Leader
1. Antiviral Gene Therapy Research Unit	Pathology/ Molecular Medicine & Haematology	FRC/MRC/URC Unit	2015 until 2019	Prof Patrick Arbuthnot Patrick.Arbuthnot@wits.ac.za 011717 2365
2. Bone Research Laboratory Unit	Clinical Medicine	FRC/URC Unit	2018 until 2022	Prof Ugo Ripamonti Ugo.Ripamonti@wits.ac.za 011717 2300
3. Brain Function Research Group	Physiology	FRC/URC Group	2018 until 2022	Prof Andrea Fuller Andrea.Fuller@wits.ac.za 011717 2359
4. Carbohydrate & Lipid Metabolism Research Unit	Clinical Medicine/Internal Medicine	FRC/URC Unit	2015 until 2019	Prof Frederick Raal Frederick.Raal@wits.ac.za 011488 3538
5. Cardiovascular Pathophysiology and Genomics Research Unit	Physiology	FRC/URC Unit	2015 until 2019	Prof Gavin Norton Gavin.Norton@wits.ac.za 011717 2354
6. Clinical HIV Research Unit	Clinical Medicine/ Internal Medicine/WHC	FRC/URC Unit	2015 until 2019	Prof Ian Sanne Isanne@witshealth.co.za 011 274 9200
7. Developmental Pathways for Health Research Unit	Clinical Medicine/ Paediatrics	MRC/URC Unit	2016 until 2020	Prof Shane Norris San@global.co.za 011933 1122
8. Effective Care Research Unit	Clinical Medicine/ Obstetrics & Gynaecology	FRC/URC Unit	2015 until 2019	Prof Justus Hofmeyr Justhof@gmail.com 083 280 9402
9. Empilweni Services and Research Unit (ESRU)	Clinical Medicine/ Paediatrics	FRC/URC Unit	2015 until 2019	Prof Ashraf Coovadia Ashraf.Coovadia@wits.ac.za 0114709290
10. Health Policy Research Group Centre for Health Policy	Public Health	FRC/URC Group	2014 until 2018	Assoc Prof Jane Goudge jane.goudge@gmail.com 011717 3425/ 489 9931
11. Hepatitis Virus Diversity Research Unit	Clinical Medicine/ Internal Medicine	FRC/URC Unit	2015 until 2019	Prof Anna Kramvis Anna.Kramvis@wits.ac.za 011488 3100
12. HIV Pathogenesis Research Unit	Pathology// Molecular Medicine & Haematology	FRC/URC Unit	2015 until 2019	Prof Maria Papathanasopoulos Maria.Papathanasopoulos@wits.ac.za; 0117172618
13. Human Variation and Identification Research Unit	Anatomical Sciences	FRC/URC Unit	2016 until 2020	Prof Maryna Steyn Maryna.Steyn@wits.ac.za 0117172405
14. Maternal, Adolescent and Child Health (MatCH) Research Unit	Clinical Medicine/ Obstetrics & Gynaecology	FRC/URC Unit	2016 until 2020	Prof Jennifer Smit jsmit@matchresearch.co.za 031 001 1904
15. Perinatal HIV Research Unit	Clinical Medicine/ Paediatrics	FRC/URC Unit	2015 until 2019	Prof Neil Martinson (Acting Director) martinson@phru.co.za 011989 9700

16. PRICELESS (Priority Cost Effective Lesson for System)	Public Health	FRC/ URC Unit	2018 until 2022	Prof Karen Hoffman Karen.Hoffman@wits.ac.za 0117172083
17. Project for Improving Neonatal Care (PRINCE)	Clinical Medicine/ Paediatrics	FRC Programme	2016 until 2020	Prof Daynia Ballot Daynia.Ballot@wits.ac.za 0114884232
18. Pulmonary Infection Research Unit	Clinical Medicine/Internal Medicine	FRC/URC Unit	2016 until 2020	Prof Charles Feldman Charles.Feldman@wits.ac.za 011488 3840
19. Respiratory & Meningeal Pathogens Research Unit	Pathology/ NICD	MRC/URC/NH LS Unit	2015 until 2019	Prof Shabir Madhi ShabirM@nicd.ac.za 011489 8723
20. Rural Public Health and Health Transitions Research Unit (Agincourt)	Public Health	MRC/URC Unit	2018 until 2022	Prof Stephen Tollman Stephen.Tollman@wits.ac.za 011717 2085
21. Sydney Brenner Institute for Molecular Biosciences	Faculty	FRC/URC Institute	2016 until 2020	Prof Michele Ramsay Michele.Ramsay@wits.ac.za 0117176635
22. Wits Advanced Drug Delivery Platform (WADDP)	Therapeutic Sciences/ Pharmacy & Pharmacology	FRC/URC Unit	2014 until 2018	Prof Viness Pillay Viness.Pillay@wits.ac.za 0117172274
23. Wits Reproductive Health and HIV Institute (WRHI)	Faculty	FRC/URC Institute	2015 until 2019	Prof Helen Rees hrees@wrhi.ac.za 011933 1228
24. Wits Research Institute for Malaria (WRIM)	Pathology/ Therapeutic Sciences	FRC/URC Institute	2018 until 2022	Prof Robyn van Zyl Robyn.VanZyl@wits.ac.za Prof Lizette Koekemoer Lizette.Koekemoer@wits.ac.za 0117172271

Appendix 4: DST/NRF South African Research Chairs Initiative (SARChI chairs) in the Faculty of Health Sciences in 2019.

GrantHolder	Department/School	Short Title
Coetzee, M	Wits Research Institute for Malaria, School of Pathology	Medical Entomology and Vector Control
Eyles, JD	School of Public Health	Health Policy and Systems
Madhi, SA	Respiratory and Meningeal Pathogens Research Unit, School of Pathology	Vaccine Preventable Diseases
Moore, PL	Department of Virology, School of Pathology	Virus-Host Dynamics for Public Health
Pillay, V	Pharmacy and Pharmacology, School of Therapeutic Sciences	Pharmaceutical Biomaterials and Polymer-Engineered Drug Delivery Technologies
Ramsay, M	Human Genetics, SBIMB, School of Pathology	Bioinformatics of African Populations
Eyles, JD	School of Public Health	Health Policy and Systems
Rispel, LC	School of Public Health	Research on the Health Workforce 4 Equity and Quality
Tiemessen, C	School of Pathology/Centre for HIV and STIs, NICD	HIV Vaccine Translational Research

Appendix 5: Faculty of Health Sciences SA NRF Rated researchers as at end of 2019.

Title	Name	Affiliation in Faculty of Health Sciences	Rating	Valid Until
Professor	Gray, G	Clinical Medicine: Perinatal HIV	A1	2023
Professor	Feldman, C	Clinical Medicine - Internal Medicine	A2	2021
Professor	Manderson LH	Public Health	A2	2021
Professor	Mathew CGP	Pathology	A2	2021
Professor	Morris, L (JS)	Pathology	A2	2021
Professor	Brouwer DH	Public Health	A2	2022
Professor	Madhi, SA	Pathology - Respiratory & Meningeal Pathogens Research Unit (RMPRU)	A2	2022
Professor	Coetzee, M (JS)	Pathology - NICD	A2	2024
Professor	Jewkes, RK (JS)	MRC - Public Health	A2	MRC
Professor	Cohen, C	Public Health (JS)	B	NHLS
Professor	Von Gottberg,A	Clinical Microbiology	B	NHLS
Professor	Rees, VH	Clinical Medicine - Reproductive Health & HIV Research Institute	B1	2019
Professor	Hofmeyr, GJ	Clinical Medicine - Obstetrics & Gynaecology	B1	2020
Professor	Manger, PR	Anatomical Sciences	B1	2020
Professor	Sliwa-Hahnle, K (JS)	Clinical Medicine	B1	2021
Professor	Ripamonti, U	Physiology - Bone Research Laboratory	B1	2022
Professor	Pillay,V	Therapeutic Sciences - Pharmacy	B1	2023
Professor	Lewis, DA (JS)	Pathology	B2	2019
Professor	Sanne, I	Clinical Medicine - Clinical HIV Research Unit	B2	2019
Professor	Tollman,S	Public Health	B2	2020
Professor	Weinberg, M	Pathology -	B2	2020
Professor	Raal, F	Clinical Medicine - Internal Medicine	B2	2021
Professor	Woodiwiss, AJ	Physiology	B2	2021
Professor	Ruff P	Clinical Medicine	B2	2022
Dr	Violari A	Clinical Medicine - PHRU	B2	2022
Professor	Koekemoer, L	Pathology - NICD	B2	2023
Professor	Norton, G	Physiology	B2	2023
Professor	Steyn, M	Anatomical Sciences	B2	2023
Professor	Arbuthnot, PB	Pathology	B2	2024
Professor	Schepartz, LA	Anatomical Sciences	B2	2024
Professor	Kahn, K	Public Health	B3	2020
Professor	Moore, PL (JS)	Pathology	B3	2020
Dr	Brooke, BD (JS)	Pathology	B3	2021
Professor	Fuller, A	Physiology	B3	2021
Professor	Kana, B	Pathology - Centre of Excellence in Clinical TB Research	B3	2021
Professor	Naicker, S (JS)	Clinical Medicine - Nephrology	B3	2021
Professor	Dessein, PH	Clinical Medicine - Internal Medicine	B3	2022
Professor	Glencross, DK	Pathology	B3	2022
Professor	Tiemessen, CT (JS)	Pathology - NICD	B3	2023
Prof	Mahlangu,JN	Pathology	B3	2024
Professor	Gulumian, M	NIOH	C	NHLS
Professor	Frean, JA (JS)	Pathology	C	

Professor	Perovic, OP (JS)	Pathology	C	
Dr	Wolter, N (JS)	Pathology	C	
Professor	Coetzer, TL (JS)	Pathology	C1	2020
Professor	van Vuuren, S	Therapeutic Sciences - Pharmacy	C1	2020
Dr	Behrens, KG	Clinical Medicine - Bioethics	C1	2021
Professor	Papathanasopoulos, M	Pathology	C1	2021
Dr	Groome, MJ	Pathology - Respiratory & Meningeal Pathogens Research Unit	C1	2023
Professor	Kammerman, P	Physiology	C2	2019
Professor	Daniels, WMU	Physiology	C2	2020
Professor	Nelson, G	Public Health	C2	2020
Professor	Stewart, A	Therapeutic Sciences - Physiotherapy	C2	2020
Professor	Ballot, DE	Clinical Medicine - Paediatrics	C2	2021
Professor	Janse van Rensburg, ABR	Clinical Medicine - Psychiatry	C2	2021
Professor	Libhaber, EN	Clinical Medicine	C2	2021
Dr	Micklesfield, L	Clinical Medicine - Paediatrics	C2	2021
Professor	Myezwa, H	Therapeutic Sciences - Physiotherapy	C2	2021
Professor	Potterton, JL	Therapeutic Sciences - Physiotherapy	C2	2021
Professor	Crowther, NJ	Pathology - Chemical Pathology	C2	2022
Professor	Scott, LE (JS)	Pathology	C2	2022
Dr	Baeyens, AJC	Clinical Medicine	C2	2023
Dr	Flanagan, C	Physiology	C2	2023
Professor	Van Aswegen, H	Physiotherapy	C2	2023
Prof	Bruce,JC	Therapeutic Sciences - Nursing	C2	2024
Professor	Choonara, YE	Therapeutic Sciences - Pharmacy	C2	2024
Dr	Evans,DH	Clinial Medicine -	C2	2024
Prof	Ntsiea,MV	Therapeutic Sciences - Physiotherapy	C2	2024
Dr	Smith, AM (JS)	Pathology	C2	NHLS
Professor	Chasela, CS	Public Health	C3	2019
Dr	Chivandi, EC	Physiology	C3	2019
Professor	Patel, M	Pathology	C3	2019
Professor	Maree, JE	Therapeutic Sciences - Nursing	C3	2020
Professor	Brooksbank, RL	Physiology	C3	2021
Professor	Erlwanger, KD	Physiology	C3	2021
Professor	Ihunwo, A	Anatomical Sciences	C3	2021
Dr	Musenge, E	Public Health	C3	2021
Dr	Michel, FM	Physiology	C3	2023
Dr	Wade,AN	Public Health	C3	2024
Dr	Du Toit LC	Therapeutic Sciences - Pharmacy	Y1	2021
Dr	Wareham,CS	Clinical Medicine - Steve Biko Bioethics	Y1	2024
Dr	Ely, A	Pathology - Mol Med and Haematology	Y2	2021
Dr	Moeno, SGKM	Oral Biological Sciences	Y2	2021
Dr	Olivier B	Therapeutic Sciences - Physiotherapy	Y2	2022
Dr	Adeagbo, OA	Clinical Medicine: Perinatal HIV	Y2	2023
Dr	Ahmad, A	Pathology	Y2	2023
N	Gravett	Anatomical Sciences	Y2	2023
Dr	Mall,S	Public Health	Y2	2024
Dr	Marimuthu,T	Therapeutic Sciences - Pharmacy	Y2	2024
Dr	Wadley,AL	Physiology	Y2	2024
Dr	Wagner,RG	Public Health	Y2	2024

Appendix 6: Postdoctoral Fellows in the Faculty of Health Sciences, 2019.

Surname	First name	Department	Sponsor
Adeyemi	Samson	Pharmacy	NRF
Ajidahun	Adedayo	Therapeutic Sciences	URC
Akilo	Olufemi	Pharmacy	NRF
Baillie	Vicky	Respiratory & Meningeal Pathogens Research Unit	RMPRU
Brandenburg	Jean-Tristan	SBIMB	SARC & HOST
Cardoso	Nicole	TB Research	NRF & URC
Christmal	Christmals	Public Health	NRF & URC
Coetzee	Jenny	Gender Health Research Unit	SAMRC
Cook	Caylee	DPHRU	THE BRITISH ACADEMY
Da Costa Dias Naicker	Bianca	Virology	NRF & URC
Dhar	Nisha	RMPRU	RMPRU
Dietrich	Janan	PERINATAL HIV RESEARCH UNIT	SAMRC
Do Nascimento Coimbra	Joao Paulo	Anatomical Science	CLF
Drysdale	Roisin	DST/NRF CoE in Human Development	DST/NRF
Dzomba	Armstrong	MRC/WITS RURAL	URC & SCHOOL
Fana	Thamuxolo	Centre for Health Policy	CHP
Frimpong	Emmanuel	Physiology	School & URC
Govender	Mershen	Therapeutic	URC & SCHOOL
Indermun	Sunaina	Therapeutic Sciences	URC + School
Kamiza	Bunya	SBIMB	SBIMB
Kandhavelu	Jeyalakshmi	Clinical Medicine	URC
Khan	Amber	Therapeutic Sciences	URC
Khan	Shama	Pathology	URC
Kisaakye	Peter	MRC/WITS RURAL	MRC
Kitchin	Dale		WHC
Kwatra	Gaurav	Respiratory & Meningeal Pathogens Research Unit	RMPRU
Liebenberg	Dale	Biomedical TB Research	DST/NRF & URC
Loubser	Alistair Shayne	Public Health	SA Research Chairs & URC
Mapanga	Witness		WHC
Masemola	Maphoko		WHC
Mirza	Sheefa	Clinical Medicine	URC
Mmerekhi	Daniel	SPH	URC & SPH
Mohamed	Farzahna		WHC
Moyo	Thandeka	Pathology	SA Research Chairs
Mpangase	Phelelani	SBIMB	URC+SBIMB
Mpondo	Feziwe	DPHRU	NRF & WELLCOME
Ngoepe	Mpho	Oral Biological Sciences	NRF FREESTANDING
Nweke	Emmanuel	Surgery	HOST& MRC
Nyuyki	Clement		WHC
Oduaran	Ovokeraye	SBIMB	URC & WHC
Olwagan	Courtney	Respiratory & Meningeal Pathogens Research	RMPRU

		Unit	
Othman	Houcemeddine		WHC
Peters	Julian		WHC
Redelinghuys	Mathys (Shane)	Wits Reproductive Health	WHC
Richardson	Simone	Pathology	SARChI/ NRF, WHC
Roche	Johanna	Physiology	URC & SCHOOL
Sengupta	Dhriti		WHC
Srivastava	Vartika	Pathology	URC
Teidt	Andrea		WHC
Tinderholm	Claire	HIV Pathogenesis Research Unit	URC, WHC
Ubanako	Philemon	Pharmacy	URC
van de Ven	Tanja	Physiology	CLF
van den Berg	Fiona	Antiviral Gene Therapy Research Unit	SAMRC
Van Der Walt	Andrew		WHC
Wose Kinge	Constance	Clinical Medicine	URC
Wrottesley	Stephanie	DPHRU	DST-NRF & URC

Appendix 7: Breakdown of courses and number of individuals attending offered by the Health Sciences Research Office during 2019.

MONTH	DATE	COURSE OR WORKSHOP NAME	APPLIED	ATTENDED
FEBRUARY	5TH	DATA MANAGEMENT WORKSHOP	12	11
	14TH	HOW TO USE STATA	65	40
	21ST	HOW TO USE STATISTICA	30	20
	25TH TO 1ST	FAHS1595 RESEARCH METHODOLOGY	75	59-71 (5 DAYS)
MARCH	4TH TO 5TH	SCIENTIFIC WRITING SKILLS	35	40-43 (2 DAYS)
	5TH	DATA ANALYSIS WORKSHOP	10	14
	12TH	QUALITATIVE DATA ANALYSIS	4	4
	18TH TO 20TH	SUPERVISORS COURSE	49	41-45 (3 DAYS)
	25TH TO 28TH	APPLIED STATISTICAL METHODS USING STATA AND STATISTICA	18	12-19 (4 DAYS)
APRIL	1ST; 8TH; AND 15TH	ADVANCED STATISTICS WITH STATA AND STATISTICA	8	7 - 8 (3 DAYS)
	2ND	DATA MANAGEMENT WORKSHOP	9	9
	2ND TO 4TH	QUALITATIVE RESEARCH METHODOLOGY USING NVIVO	15	16 - 17 (3 DAYS)
	9TH	EXAMINERS WORKSHOP (MMED AND MDENT)	30	23-24 (2 SESSIONS)
	17TH	EXAMINERS WORKSHOP (MASTERS AND PHD)	42	37-38 (2 SESSIONS)
	23RD	HOW TO WRITE AN ABSTRACT	39	33
MAY	7TH	DATA ANALYSIS WORKSHOP	9	7
	27TH AND 3RD OF JUNE	SUPERVISORS COURSE (RADIOLOGY)	8	8
JUNE	4TH	DATA MANAGEMENT WORKSHOP	12	10
	18TH	INTRODUCTION TO QUESTIONNAIRE DESIGN	11	21
	19TH TO 20TH	SAMPLE SIZE CALCULATION	22	21-22 (2 DAYS)
	25TH	TURNITIN	23	23
JULY	2ND	DATA ANALYSIS WORKSHOP	12	10
	17th	QUALITATIVE DATA ANALYSIS	6	6
	18TH	SCIENTIFIC WRITING SKILLS	56	71
	24TH AND 31ST	SUPERVISORS COURSE (ANAESTHESIOLOGY)	7	6-7 (2 DAYS)
	25TH	HOW TO USE STATISTICA	49	37
	29TH TO 31ST	QUALITATIVE RESEARCH METHODOLOGY USING NVIVO	22	27-29 (3 DAYS)
AUGUST	1ST	HOW TO USE STATA	37	38
	6TH	DATA MANAGEMENT WORKSHOP	10	9
	19TH AND 21ST	APPLIED STATISTICAL METHODS USING STATA AND STATISTICA	16	19-21 (2 DAYS)
	19TH TO 23RD	FAHS1595 RESEARCH METHODOLOGY	44	44-48 (5 DAYS)
	26TH TO 28TH	SUPERVISORS COURSE	32	23 -25 (3 DAYS)
SEPTEMBER	3RD	DATA ANALYSIS WORKSHOP	13	10
	9TH	EXAMINERS WORKSHOP (GENERAL)	52	46
OCTOBER	3RD	DATA MANAGEMENT WORKSHOP	4	2
	7TH AND 10TH	GRANT WRITING WORKSHOP	39	24 (DAY 1); 3 (DAY 2 - PRACTICAL SESSION)
	30TH OCT AND 6TH NOV	SUPERVISORS COURSE (ANAESTHESIOLOGY)	14	10 - 13 (2 DAYS)
NOVEMBER	4TH TO 7TH	APPLIED STATISTICAL METHODS USING STATA AND STATISTICA	38	42 - 49 (4 DAYS)
	12TH	DATA ANALYSIS WORKSHOP	10	8
				940 ATTENDEES IN TOTAL

Appendix 8: List of recipients of Seed funding and Start up funding for new projects in the Faculty of Health Sciences for 2018/2019.

Name	School	Title of project	Amount
Seed Funding			
Professor Francesco Gomez-Olive	Public Health	Timing, quality, and physiology of sleep in a deprived community cohort in South Africa and their relationship with chronic disease	R59 733,00
Dr Pedzisai Mazengenya	Anatomical Sciences	Systematic characterization of the neuromodulatory systems in avian species	R59 993.52
Dr Janine Donaldson	Physiology	Changes in physical activity and cardiometabolic markers after total joint replacement surgery in osteoarthritis patients	R60 000.00
Dr Mpho Maphanyi	Pathology	Development and validation of anti-retroviral drug levels for therapeutic drug monitoring using Plasma separation cards	R60 000.00
Mrs Monique Keller	Therapeutic Sciences	Development of a rehabilitation programme for second to fifth metacarpal fractures in South Africa	R30 434.00
Dr Chloe Dafkin	Physiology	The Effects of High Intensity Interval Training on Body Composition and Cardiometabolic Health in Healthy and Overweight/Obese Women: A Randomised Controlled Trial	R55 000.00
Mr. Thankhoe Rantso	Therapeutic Sciences	Novel acetylcholinesterase inhibitors against the life cycles of Anopheles and Plasmodium falciparum	R55 000.00
Ms Lungile Khambule	Pathology	The use of novel biomarkers to improve screening for gestational diabetes in a black African population	R55 000.00
Miss Hloniphile Mthiyane	Pathology	Investigating biomarkers and viral characteristics that may affect the inflammatory process associated with respiratory syncytial virus (RSV) induced community acquired pneumonia in South African children	R55 000.00
Dr Illke Malungo	Anatomical Sciences	Does the lion sleep tonight?": The Anatomy and Physiology of sleep in large carnivores: Lions (Panthera leo)	R55 000.00
Miss Pumla Sodo	Oral Health Sciences	Attrition in the Dental Therapy Profession: an exploration of the contributing factors and solutions	R52 700.00
		TOTAL	R597 860,52
Start up funding 2018/19			
Dr Olukemi Babalola	Public Health	Design, implementation and assessment methods of community health Worker training programmes	R 27 000,00
Corlia Brandt	Therapeutic Sciences	Comparison of a tibio-femoral AP combination technique with a Maitland AP technique postanterior cruciate ligament repair	R 27 000,00
Dr Chloe Dafkin	Physiology	The effect of a high intensity intermittent training intervention on nociception and cardiometabolic health outcomes in healthy and overweight/obese women	R 20 000,00
Dr Catherine Draper	Clinical Medicine	International Surveillance study of Movement Behaviours in the Early Years (SUNRISE): Pilot study	R 30 000,00
Dr Siyabonga	Pathology	The role of chloride in the metabolic acidosis that occurs	R 19 700,00

Khoza		in critically ill patients	
Dr Lindie Lamola	Pathology	Identification of inherited cancer predisposing mutations in a cohort of childhood cancer patients	R 30 000,00
Witness Mapanga	Public Health	What strategies are effective in strengthening care for serious mental illness in primary health settling	R 15 000,00
Daniel Masekamani	Public Health	Exposure assessment of airborne manganese contaminants in African communities	R 29 600,00
Dr Thandiswa Ngcungcu	Pathology	Gene expression patterns in OCA2 patients of African descent with and without ephelides	R 30 000,00
Dr Ayanda Ngwenya	Anatomical Sciences	Neural correlates of migratory behaviour in hippocampal homologues in migratory and non-migratory fish species	R 30 000,00
		Total	R258 300,00
Start up funding 2019			
Dr Akaashni Bhika	Anatomical Sciences	The effect of prenatal alcohol exposure on craniofacial and dental development: A rat immunohistochemical and MircoCT study	R 26 500,00
Zelna Booth	Therapeutic Sciences	Traditional medicine use in two public South African hospitals: Prevalence and interactive antimicrobial and toxicity studies for combinations with conventional antimicrobials.	R 30 000,00
Mrs Marica Botha	Therapeutic Sciences	Patterns of Sensory integration dysfunction I South African children using the evaluation in ayres sensory integration	R 20 715,00
Dr Jason Edgar	Clinical Medicine	Effect of Luft device training on maximal inspiratory/expiratory pressure and symptom improvement in post TB bronchiectasis	R 30 000,00
Dr Sule Gunter	Physiology	Telemere lengths as a biomarker of cardiovascular disease in high-grade inflammation	R 30 000,00
Dr Lebogang Mokotedi	Physiology	The effects of inflammation and anti-inflammatory treatment on lipid metabolism and liver morphology in a rheumatoid arthritis rat model.	R 30 000,00
Mr Thankhoe Rants'o	Therapeutic Sciences	Novel acetylcholinesterase inhibitors against the life cycles of Anopheles and Plasmodium falciparum	R 30 000,00
		Total	R 197 215,00

Appendix 9: List of Alumni Diaspora fellows visiting Wits FHS during 2019.

Alumni Diaspora Fellow	Affiliations	Wits Host	Visit dates
Prof Shane Maloney	School of Human Sciences, University of Western Australia	Prof Andrea Fuller	February 2019
Prof Mark Goldblatt	Harvard Medical School	Prof Christopher Szabo	March 2019
Prof Kokila Lakhoo	Nuffield Department of Surgical Sciences, University of Oxford	Prof Jerome Loveland	April 2019
Dr Izel Obermeyer	Westchester Institute for Human Development, New York Medical College	Prof Daleen Caseleijn	May 2019
Prof Moyo Ajao	Department of Anatomy, Faculty of Basic Medical Sciences, College of Health Sciences, University of Ilorin	Prof Amadi Ihunwo	June 2019
Prof Rhian Touyz	Glasgow Cardiovascular Research Centre, University of Glasgow	Prof Nqoba Tsabedze	July 2019
Dr Manisha Dayal	Medical Science, Western Sydney University	Dr Carol Hartmann	January 2019
Dr Andreas Themistocleous	Nuffield Department of Clinical Neurosciences, University of Oxford	Prof Peter Kamerman	August 2019
Prof Roy Zent	Department of Medicine, Medical Center, Vanderbilt University	Prof Beverley Kramer	August 2019
Dr Jonathan Lewis	Molecular Ninja Group	Prof Maria Papathanasopoulos	September 2019
Dr Olusegun Oyedele	Department of Cellular and Physiological Sciences, Faculty of Medicine, University of British Columbia	Dr Mantoa Mokhachane	October 2019
Return Visits: Staff Member	Alumni Diaspora Fellow	Institution visited	Visit dates
Prof Ugasvaree Subramaney	Prof Michael Berk	Deakin University	August 2019
Dr Shastra Bhoora	Prof Michael Belfort	Baylor College of Medicine	November 2019
Dr Derek Harrison	Prof Kokila Lakhoo	University of Oxford	September 2019
Prof Demitri Constantinou	Prof Neil Gordon	Intervent International	November 2019

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