



Faculty of Health Sciences Showcases Research & Innovation

The Faculty of Health Sciences annual research conference was a comprehensive and exciting mix of research and innovation. Faculty Research Day is a major component of the Faculty's research development strategy and aims to nurture young and emerging researchers and recognise our established researchers. Participants presented their research in the form of oral and poster presentations.

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Faculty of Health Sciences

Fakulteit Gesondheidswetenskappe
Lefapha la Disaense tša Maphelo

Health Science Matters

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This year, Faculty Research Day spanned one and half days. We had 58 oral presentations, 32 poster presentations and 132 posters on display. On postgraduate level - MSc and higher - prizes were awarded for the best contributions in clinical and pre-clinical research, while undergraduate students and honours students competed for an undergraduate prize.



Our key-note speakers highlighted opportunities for collaboration, expanding research through innovation and building a bridge between basic and clinical research. The academic programme concluded with a session on ethical issues related to children, research ethics and current issues. A distinctive feature of Faculty Research Day 2017 was a painted handprint whereby staff and students pledged their support to research in the Faculty. The 2017 Faculty Research Day was a resounding success and contributed to the stimulation of interesting debates, networking, learning and innovation for all who attended. The award function had a buzz of excitement with more than 200 staff and students celebrating research. The Olympus a capela group performed during the event. According to Prof Tiaan de Jager (Dean: Health Sciences), "I am very proud of all the exciting new things happening on the research front."

From the desk of the Dean

Dear Colleagues

Benjamin Franklin said *"Without continual growth and progress, such words as **improvement**, **achievement**, and **success** have no meaning."* These are words to heed as we enter this last stretch of the year. While we welcome the onset of longer, brighter sunshine-filled days, this part of the year is also synonymous with the start of final exams and gearing up to the end of the academic year. In the previous newsletter we reflected on our mid-term progress, which was on a steady upward trajectory. We now need to keep this momentum going to successfully conclude 2017.

As an academic institution, we are constantly challenged to create an environment that will provide a high quality academic offering resulting in top graduates who can contribute to South Africa's growth and development. We have the advantage of training students and postgraduates in health-specific critical skills areas. These skills are a vital contribution to the health service platform in an era of increasing health service delivery expectations. Over the last few years, we have managed and met the increased demand for these critical skills, confirming our reputation as a trustworthy producer of top performing graduates. We thus need to reflect on remaining committed to building on our strengths and ensuring growth that contributes to the revised strategic goals at UP (2017-2021) – **Student Access and Success; Research and Internationalisation; Transformation; Social responsiveness and Impact; Resource Optimisation and Sustainability** - in an environment that will lead to positive transformation.



Prof Tiaan de Jager, Dean; Faculty of Health Sciences

We thus need to reflect on the processes that have been started, evaluate progress and put measures in place that will ensure completion and attainment of goals. Using this benchmark, we will be able to plan for the future. We can feel proud and be encouraged by our accomplishments and performance to date. This newsletter is brimming with stories of outstanding performances by our students and; reports on courses and conferences hosted by our very competent and leading academics. Our niche research leaders have also received a number of awards and accolades lauding their expertise.

I would also like to thank all the students and academics who participated and contributed to a very successful Faculty Research Day. Upon reflection, we have decided to rename Faculty Day to Faculty Research Conference as it showcases and presents our research in a similar fashion to international conferences. We would like to commend the emerging researchers, who stepped up as session chairs, for running punctual sessions that allowed for sound scientific debate – thank you!

With the final stretch ahead of us, I would like to encourage each and every one to take time to reflect on how we can advance and improve the teaching and learning environment, enabling our students to *fly@UP* and also *flyhigher@UP*. Work out your vision. Work out your purpose. Be clear on what you wish to achieve and go for it! Acting consistently and towards the right purpose is important.

I would like to wish all students well in their exam preparations – I'm not telling you that your studies will be easy but I am telling you that it will be worth it.

Tiaan de Jager

September 2017

UP Centre for Maternal, Fetal, Newborn and Child Health Care

The South African Medical Research Council's (SAMRC) Maternal and Infant Health Care Strategies Unit was awarded to Professor Pattinson and has been housed in the Obstetrics and Gynaecology Department of the Faculty of Health Sciences, University of Pretoria (UP) since 1997. The Unit specialises in identifying the core problems, developing effective solutions and determining successful ways of implementing these interventions to reduce deaths of pregnant women and their infants at primary and secondary levels of care. This research was linked very closely with helping to achieve the Millennium Development Goals (MDGs) 4 and 5.

The research mandate of the Centre is to develop health strategies at primary and secondary care levels for mothers and infants by seeking saleable and sustainable solutions. By seeking we mean performing research, by saleable we mean solutions that are acceptable to women, health care workers and health administrators, and by sustainable solutions we mean health strategies that have been developed to solve the problems identified and how they can be sustained.

Prof Bob Pattinson

The Centre follows a particular approach to the research that it conducts. It has a number of research perspectives that relate to specific research questions. These perspectives are conceptualised in the form of a research cycle that covers a range of questions starting from a problem and moving through to the implementation and testing of proposed solutions.

In the last 5 years the Centre in its endeavour to develop health care strategies to improve the care of pregnant women, their babies and children in primary and secondary levels of care has:

1. Produced 203 scientific outputs.
2. Produced 82 peer review articles of which 10 are articles in the Lancet.
3. Raised over R107 million in research funding outside of the R6 million given by the SA MRC.
4. Promoted 13 PhDs and master's students in and outside of the Unit.
5. Trained 2765 people in basic research techniques.
6. Has collaborated with researchers from at least 14 countries (8 in Africa).



New Post Graduate Surgical Dry Skills Lab

The Faculty of Health Sciences has recently completed a new Post Graduate Surgical Dry Skills Lab, which includes approximately R8 m in equipment donated by Karl Storz. The skills lab has two sections, one part that looks like an operating theatre with endoscopy towers, which enables the internal investigation of manikins that simulate patients, with screens, computers, and insufflators and the second part is a room with an ultra sound trainer with two computers.

Our post graduate students will use a hand piece (probe) linked to the ultra sound to complete computer generated instructions eg. measure the size of a baby, look at the bones etc. The information generated can be stored in the cloud and students can return to repeat the task or move on to another section. We are very excited about this new facility and the benefits for our post graduate students.



High-flying medicine students receive bursaries



Three exceptional students from the Faculty of Health Sciences were awarded full bursaries from the AfroCentric Group. Tovhowani Mulovhedzi (17), Risuna Rivombo (18) and Maggie Ramela (23), all hail from Limpopo and passed their final school year with an average of 95 percent or above. All three are studying towards an MBChB degree.

Mulovhedzi from Thohoyandou completed her matric at Thohoyandou Secondary School, while Rivombo attended Tshikheva Christian School in Vuwani, and Ramela from Polokwane was a pupil at Taxila High School.

Grace Khoza (Afro Centric), Maggie Ramela, Risuna Rivombo, Prof Mike Sathekge (UP), Prof Dianne Manning (UP) and Tovhowani Mulovhedzi

'We are grateful that AfroCentric has a vision and commitment to invest in young black female students. We need more companies to invest in the future of this country to ensure quality healthcare in the country,' said Prof Di Manning, Deputy Dean for Education at the Faculty.

The bursary covers accommodation, tuition, laptops and 3G cards, as well as a monthly stipend. The three recipients each also received a personalised laptop bag.

Said Tovhowani on behalf of the three: 'Education is key in achieving true economic emancipation. Advancement in the health sector will hopefully be achieved if the youth, particularly from the poorer communities, have the means to improve their prospects.'

Tuks Student Surgical Society (TSSS)



Tuks Student Surgical Society (TSSS) recently hosted a successful South African Student Surgical Society Symposium. The event was well attended by medical students from across the country. The Symposium included an outreach component where the delegates visited POPUP in Salvokop, Pretoria.

The symposium hosted an eclectic mix of speakers, presentations, workshops and social activities. "The TSSS Symposium organising committee would like to thank the delegates for attending, the sponsors for giving us the resources to host the symposium and the Faculty of Health Sciences for their continuous support and contributions," said Lee-Anne Classen, SASS Symposium Secretary.

TUKS win the Strap for Life Competition @ Comrades Marathon 2017

3...2...1... Position, measure, cut and STRAP. Universities from across the country gathered at the Durban Comrades Marathon Expo to compete in the annual "Strap for Life" competition. The strapping team from UP comprised five final year physiotherapy students. These students sacrificed early morning sessions, lunch times and weekends to prepare for this prestigious competition.

In the first semi-final round, the TUKS strapping team competed against Kovies (UFS), UCT and Wits. In this round, strapping team members had perform strapping techniques for four sports related scenarios. The strapping techniques were judged on their effectiveness, time usage, neatness and precision. In the second semi-final round, teams from SMU, Stellies, UKZN and DUT competed.

The atmosphere was extremely tense as students from all eight universities waited to hear which three universities would compete in the final round for the national strapping title. Maties...Wits...and TUKS! Screams erupted from all our ecstatic students.

In the final round, our team had to strap for three sport related scenarios and had to prepare for a fourth complex scenario. The team were allowed to consult lecturers and supervisors for advice on how to effectively apply strapping for the complex scenario. Our lecturers and supervisors were of great help in solving the challenging forth scenario.

After an exhausting 45 minutes of strapping, filled with the cheering and singing of fellow TUKS students who eagerly encouraged the team, the strap off was over and the judges left the stage to deliberate. The Stellies team placed third, bringing us one step closer to victory. The judge's next announcement was met with pure elation as he announced that Wits had placed second, declaring TUKS the winners. The team was awestruck and the whole class gathered in a group hug to celebrate their victory. There were smiles, laughter, screams and hugs as we all celebrated the hard work of the strapping team.

The day was wonderful and a huge success thanks to the hard work that the strapping team put in before the competition, with the help of Mr Dawood and colleagues, and thanks to their fellow class mates who tirelessly supported the team throughout the day. Everyone left the day with this motto resounding in their minds "teamwork makes dream work."

Mar-leze Vos (strapping team captain) and Kelsi Johnston (class rep).



Annual Pulse-Intercare Talent Show

On the 16th of July, the Musaion Theatre on Hatfield Campus, hosted one of the Faculty of Health Sciences' biggest annual events: The 23rd Annual Pulse-Intercare Talent Show. Audiences have come to expect superb quality, diversity, and top-class entertainment from the Talent Show and this year's show exceeded all expectations. With acts ranging from classical piano performances to poetry and drama to traditional African hymns, contemporary dance and even comedy, this event refreshed and inspired all in attendance. What a truly fantastic way to spend an evening! *Pulse*



Student name



Student name

The Hunger Games

The Hunger Games was a team building event where all first year medical students, including the BSc transfers, spent the day getting to know each other. Upon arrival they were divided into teams and each received a free T-shirt. They then competed against each other in numerous outdoor activities to finally become over-all winners of the day. Over lunch time the students received boerewors rolls and juice. The day was ended with a fun free-for-all water-balloon fight. Attached is a collage of pictures taken on the day.

Pulse 



The Soapbox @ Faculty Day



The Soapbox was a unique addition to Faculty Day 2017. The Soapbox was a platform where undergraduate students competed to present their research, protocol or concept within 3 minutes.

It is loosely based on the global initiative of a three-minute-thesis where students present their thesis within 3 minutes using only 3 slides. It was adapted by allowing any research projects or interesting topics to be presented. Our undergraduates did not use power point slides and were encouraged to use posters, flip charts,

The Faculty of Health Sciences is stimulating undergraduate research through TURF (Tuks Undergraduate Research Forum). TURF is structured but informal and a lot of fun. TURF endeavours to expose students to research and the myriad of possibilities and opportunities associated with medical research. TURF strives to make research seem less intimidating, thus forging a positive attitude towards research. The ultimate goal of TURF is to establish a research culture among undergraduate students and The Soapbox was a giant leap towards this end-goal.

Catja vd Westhuizen



Imke Engelbrecht

My most significant experience

Imke Engelbrecht (MBChB – 6th year) tells of her experience while doing her rotation in Piet Retief.

“During my rotation I spent a great deal of time in the maternity ward of the hospital and the Antenatal Care Clinic at the Mkhondo Town Clinic in Piet Retief. Here I was confronted with an immense social, economic and healthcare-related problem – namely, teenage pregnancies.

I met close to 40 teenage mothers in only 5 weeks. I can confidently testify that a dream has been placed in my heart during these weeks. I have long known that pursuing my career in medicine is part of a greater plan that my Creator has for me.

I am confident that He allowed me to return to my hometown to do my family medicine and community obstetrics rotation, to open my heart to the need of thousands of young girls. I have engaged with a local NGO, Thol’uwazi Thol’impilo, to become involved in their project as soon as I have completed my studies.

This would be in pursuit of the dream that has been laid on my heart in these weeks. A dream of a mobile clinic servicing schools in and around Piet Retief with antenatal care, contraceptive methods and primary healthcare. But most importantly I want to engage with these girls in a way that will bring some hope to their circumstances, some dreams to their future and most importantly PURPOSE to their existence!”

A first for Africa

The Department of Pharmacology hosted the **Basic and Advanced Toxicology Short Course** during the July recess. This is the first course of its kind to be hosted in the country and on the continent. The credit bearing Basic and Advanced Toxicology short course is a preparatory exercise towards the new Master of Philosophy (MPhil) Health Risk Assessment and Toxicology degree.

This course is long awaited and much needed in South Africa. Toxicology seeks to identify, estimate and control the benefits and adverse effects of chemicals to preserve human and environmental health. This field therefore occupies a key role in the decision-making process where science has to interact with, and occasionally confront technical, political and societal visions.

The presenters and delegates agree that the **Basic and Advanced Toxicology Short Course** was a huge success. We envisage the full course to start next year and to produce 20 Masters students within the next two years. Prof Vanessa Steenkamp



Delegates from the Department of Health; Department of Agriculture, Forestry and Fisheries; National Institute for Occupational Health, and the Lecturers.



The presenters of the course included; Proffs ,Mary Gulumian (Head of Division of Toxicology: NIOH) , Herman Autrup (Institute of Public Health, University of Aarhus, Denmark (Emeritus) and Vanessa Steenkamp (Head of Department: Pharmacology).

Faculty Of Health Sciences Education & Research Symposium



The annual Education & Research Symposium of the Faculty of Health Sciences was held in June this year. The symposium was divided into two workshops. The first workshop focussed on "Gathering evidence to defend our assessments of competence" and the second on "Research in health professions education: validity research".

The presenter of the workshops was Dr Jack Boulet. He is the Vice President for Research and Data Resources at FAIMER, and the Assistant Vice President for Research and Evaluation at ECFMG (Educational Commission for Foreign Medical Graduates).

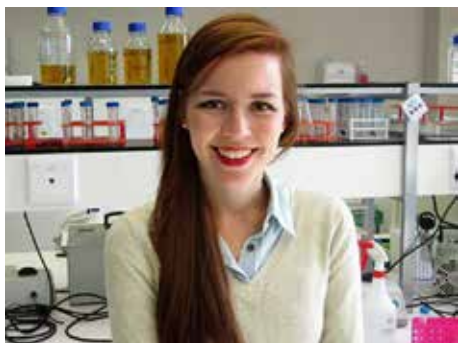
Dr. Boulet implements the Foundation's research agenda and guides its efforts to develop meaningful resources for medical education worldwide.

All in all, the symposium was successful, engaging our faculty members in a better understanding of assessment issues.



All the Science Ladies

All the Science Ladies is an initiative celebrating and connecting women in science in an informal setting, allowing them to communicate science and the challenges that they face on a professional and/or personal level. This is a platform to share, learn, be motivated and enjoy science together. All the Science Ladies is a place to find information, be guided through career choices/options and be built up by like-minded women in science.



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All the Science Ladies is a meeting point for women in science with the perspective to form a foundation where they can mentor each other and learn how to communicate their science effectively, in a relaxed environment. It is an initiative by women for women to focus on challenges that women in science might face and how to address these challenges in a constructive manner; eg balancing a career and a family. Furthermore, it lays the foundation to grow and develop into a group also focusing on younger women (school pupils) and how to address the challenges they face in order to ensure that the next generation is informed and able to enter and join other women in the exciting field of science!



This initiative has only recently been established but aims to grow and lay down a firm foundation in the near future in order to ensure that this is a successful endeavour resulting in a sustainable impact. Please feel free to participate and communicate on our **Facebook page** <https://www.facebook.com/allthescienceladies/>

Official opening of the newly upgraded Basic Medical Sciences and Dentistry



Prof Tiaan de Jager, Dean of the Faculty of Health Sciences, Ms Kabelo Nzima, Manager: Prinshof Library and Mr Robert Moropa, Library Director

The newly refurbished and upgraded library in the Basic Medical Sciences (BMS) Building on the University of Pretoria (UP)'s Prinshof Campus was officially opened by the Faculty of Health Sciences Library Manager, Kabelo Nzima, in a brief ceremony.

In 2016, the BMS and Dentistry Library received funding from the National Skills Fund (NSF) to upgrade the BMS library and convert the old cafeteria next to the existing library into a new library to house more users. The expansion of the library was necessitated by the growing intake of MBChB students. The expansion of the library was planned to incorporate the print collection, meet the increasing technological needs of students and facilitate the future role of the library.

In his official address, Prof Tiaan de Jager, Dean of the Faculty, mentioned that libraries are important cornerstones of a healthy community and that the upgraded library not only addresses the needs of students, but also provides an intellectual space where staff and students can think, plan, work and excel. This library is a world-class facility and part of the master plan to upgrade facilities on the Prinshof Campus.

Mr Robert Moropa, Library Director, reminded the guests that the opening of this library takes place at a time when libraries need to break with their traditional role. He applauded the designers of the library, who used natural light, soundproofed the discussion rooms and accommodated the need for collaborative spaces with the inclusion of the unique feature of the balcony, where students will have WiFi access and be able to sit and work and even enjoy lunch.

The Department of Family Medicine exhibited at this year's South African Association of Health Educationalists (SAAHE) Congress that took place at the North-West University Potchefstroom Campus.

They showcased the mobile data collecting solution, Aitah. Many people were impressed by the work done by the Faculty of Health Sciences to add value to community based programmes.



Prestigious Harry Oppenheimer Fellowship awarded to Prof Robert Millar

The prestigious Harry Oppenheimer Fellowship was presented to Professor Robert Millar for his work in neuroendocrinology. The Oppenheimer Fellowship is awarded to researchers and academics who show a strong track record of ground-breaking research and intellectual achievement. It is regarded as the top award for research on the African continent.

'The University of Pretoria prides itself on being a research leader in Africa,' said Prof Cheryl de la Rey, Vice-Chancellor and Principal of the University of Pretoria. 'Prof Millar's exemplary achievement solidifies this reputation and speaks to UP's commitment to ground-breaking research.'

Prof Millar currently serves as the Director of the Centre for Reproductive Neuroendocrinology. He was elected President of the International Neuroendocrinology Federation (INF) in 2016.



Prof Robert Millar



Prof Millar and his students

Prof Millar has been published in over 400 publications, holds 18 patents and his research has been cited by other academics more than 20 000 times. He currently serves as the editor-in-chief of the prestigious international journal, *Neuroendocrinology*.

His most recent research focuses on the breakthrough discovery that function can be restored by inactivating mutations in human G-protein-coupled receptors (GPCRs), which are responsible for most cell communication. This discovery unlocks the possibility for precision, personalised pharmaceuticals with the potential to treat a variety of diseases including blindness, obesity, diabetes, and thyroid, muscle, kidney, reproductive and mental health conditions.

'It is rewarding to have the research on which you have worked so hard recognised by such a prestigious organisation,' said Prof Millar. 'I owe much of the success of my research to many colleagues and students that have contributed over the years. The award will greatly enhance our research in this area.'

A select committee evaluates the applicants for the award in December of each year. The Secretary General of the Academy of Science of South Africa chairs the selection proceedings.

The remittance ceremony took place at the Oppenheims' residence in Brenthurst, in Johannesburg. The award (a gold medal and a monetary prize) was bestowed by Bridget Oppenheimer.

Prof Mike Sathekge admitted as fellow of the Academy of Medicine, Singapore



Prof Mike Sathekge

Prof Mike Sathekge, Head of the Department of Nuclear Medicine, has been admitted as a fellow of the Academy of Medicine, Singapore.

The Academy, established in 1957, is a professional institution of medical and dental specialists devoted to advancing the art and science of medicine in Singapore through postgraduate specialist training; the maintenance of high standards of competency and ethical integrity through continuous professional development; and the dissemination of health-related information and knowledge to the public. As a fellow of the Academy, Prof Sathekge will be able to forge close professional relationships with other fellows of the Academy and will contribute to, and influence, the standard of specialist practice, training and education and professional development not only in Singapore, but potentially also in South Africa through the establishment and facilitation of future collaboration agreements between institutions in the two countries.

Currently Prof Sathekge also serves as president of the Colleges of Medicine of South Africa and chairman of the Medical Research Council of South Africa. On the international front, he is the president of the International Society of Radiolabelled Blood Elements (ISORBE) and has served as secretary-general of the World Federation of Nuclear Medicine and Biology. His numerous publications have had a significant impact in the field of nuclear medicine, both locally and abroad.

Prof Martin Schwellnus, Director of the Sport, Exercise Medicine and Lifestyle Institute (SEMLI) is the recipient of the 2017 American College of Sport Medicine (ACSM) International Clinical Scholar Award. This annual award recognises the top athlete care and/or clinical medicine abstract, or clinical case paper submitted at the ACSM's annual meeting. This meeting is considered to be the most comprehensive sports medicine and exercise science conference in the world. This year's event attracted approximately 7 000 delegates and took place in Denver, Colorado, with a banquet and award ceremony on the evening of Friday, 2 June. Prof Schwellnus received the award in recognition of his submission, titled 'Pre-race medical screening and educational intervention reduces medical complications: A SAFER study in 153 208 runners'.

Prof Schwellnus receives 2017 ACSM International Clinical Scholar Award



Prof Martin Schwellnus

Prof Tahir Pillay



Prof Tahir Pillay, Head of the Department of Chemical Pathology, was the keynote speaker at the opening ceremony of the recently held, International Cell Signalling Conference. His presentation was entitled "Understanding Cell Communication in Health and Disease".

Prof Pillay was also an invited speaker at the American Association of Clinical Chemistry (AACC) annual meeting in San Diego, California. The AACC meeting attracts approximately 20 000 attendees. Prof Pillay is the only member of the AACC Publications Core Committee from outside North America, as well as a member of the International Committee of the Royal College of Pathologists and is the Royal College country advisor for South Africa.

Department of Orthodontics donation success



The Department of Orthodontics recently received a donation of R78 757 worth of the latest materials and instruments to be used by postgraduate doctors for treating orthodontic patients. Budget constraints and material cost has dramatically effected the levels of service rendered to orthodontic patients and the training of postgraduate doctors in the use of the latest materials. However, the Department of Orthodontics has achieved great success by approaching the private sector to support training and services over the last few years.



Dr Nelson Fernandes

Publication Success for Registrar

Dr Nelson Fernandes, Prosthodontics Registrar shares his motivation to publish. "I was motivated to publish after attending Prof DeJager's TNM 800 course in the beginning of 2016- it opened my mind to the enriching experience of seeing your name in print. As a registrar, I have tried my best to publish at least two articles a year, in and amongst all my other responsibilities.

Though my registrarship is coming to an end, and I will be a specialist soon, I will like to continue to be affiliated to the Faculty on a part-time basis so that I can continue doing research and publishing articles. I would like to give back to the institution, as I am proud to be affiliated to UP and am eternally grateful for the opportunity that has been given to me.

My list of publications include:

- **The longevity of restorations- a literature review** SADJ 2015; 70(9):410-413
- **Reconstruction of an extensive midfacial defect using additive manufacturing techniques** J Prosthodont 2016; 25:589-594
- **Customized reconstruction of an extensive mandibular defect: A clinical report** J Prosthet Dent 2016; 116(6):928-931
- **Nasal reconstruction of a patient with complete congenital arhinia: A clinical report** J Prosthet Dent 2016; 116(6):924-927
- **Immediate implant placement and provisionalization following tumor-resective surgery in the midfacial region: A case series** J Prosthodont DOI:10.1111/jopr.12686
- **Comparison of alveolar osteitis with post implant removal osteitis- can you get a dry socket after implant removal?** SADJ (submitted & accepted)
- **To pen or to probe. Part 16: Prescribing versus treating, how to decide.** SADJ (submitted & accepted)
- **Chronic apical periodontitis- a criterion for endodontic failure?** SADJ (submitted & accepted"



We would love to hear more from departments and staff.
Please e-mail your ideas and contributions for the next edition to Ronel Leyds
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