

Haematology News

The official Newsletter of Haematology, UCT



Welcome to the biannual newsletter for Haematology at the University of Cape Town.

This newsletter seeks to share the latest on local haematology-related news, activities, and achievements.

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Q&A with Prof Adam Bagg

By Lauren Lemkus

In the colourful landscape of pathology and laboratory medicine, Prof Adam Bagg shines like a fluorescent stain under a microscope. As a Professor at the University of Pennsylvania in Philadelphia, USA, Prof Bagg's journey began in the days when disco was king, starting with medical school and then specialised training in Haematopathology at the University of the Witwatersrand. He has not only been consistently voted as one of Philadelphia's "Top Doctors" for the past 15 years but has also been ranked among the top 1% of doctors in the US. But wait, there's more! His influence stretches far beyond state lines, with extensive lecturing both nationally and internationally, covering over 20 countries. With a wealth of over 250 publications under his lab coat (that he never actually wears), Prof Bagg isn't just breaking ground in the lab; he's practically paving the way with laughter and expertise.

In an engaging interview, Prof Bagg shared his experiences and insights, whilst on a sabbatical as a visiting professor at the University of Cape Town (UCT).

LL: What was the highlight of your time here as a visiting professor?

AB: Everything. It's just been fantastic at every level. It's been fantastic to do the work, which is not terribly cumbersome, but it allows me to do what I love and I love teaching. Historically people take sabbaticals to enrich themselves, to do research and write but this is an unusual sabbatical that allows me to sort of follow my passion of educating (or attempt to educate). I'd wanted to give and it sounds very altruistic and it is, I suppose, but it's also very selfish because I'm doing something that gives me pleasure. And if it benefits others at the same time, well, wow, that's fantastic.



“.... this is an
unusual
sabbatical that
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LL: What advice would you offer to a medical student or early-career professionals interested in pursuing a career in haematology?

AB: I think get involved as early as possible in your training and expose yourself to it and see what it's like. Although I sometimes think of that question being asked from an alternative perspective. What can you do to ensure that medical students know enough about haematology as a field to explore it and know how lovely it can be?

LL: In your opinion, what are some key skills or qualities that aspiring haematologists should cultivate to excel in the field?

AB: I don't know of any particular skills that allow you to succeed specifically in haematology. I don't know the answer to that. Just having an inquiring mind and a passion for knowledge and applying that knowledge. If you're intrigued about the mechanisms of disease and how to integrate all different facets of physiology and genetics and cell signalling and all that stuff together, I think those are sort of the fertile territory from which a haematopathologist is likely to be spawned.



LL: Can you share some highlights from your research or clinical work that you find particularly exciting or impactful in haematology?

AB: Nothing I've done is all that important. Honestly, nothing that can be attributed to me. I think I've been extraordinarily fortunate to be in an environment where I've been surrounded by other people, not only trainees, but other sort of bright people who want to do projects and sort of draw me into work with them on their projects.

LL: How do you approach balancing your roles as a researcher, clinician and educator?

AB: With difficulty. I think that's virtually impossible to be a so-called triple threat nowadays and something needs to give.

LL: What inspired you to pursue a career in academia, and what do you find most fulfilling about teaching and research?

AB: I don't know what the reason was, but I never thought I would practice anywhere else than in academia. I was never drawn to working in a community setting, not drawn to working in a commercial setting. Hats off to those people who work in these settings, but that wasn't for me. I went into academia for the stimulation and maybe for the handholding also, where you're surrounded by like-minded people and mentors early on who help guide you. And so, again, I never contemplated anything other than academia. Not so much to pursue an academic career in the sort of old-school traditional sense of writing papers and stuff like that. I think early on, maybe I didn't recognize it at the time, but my primary desire was to teach and to educate and be in an environment where that was encouraged. And I say this frequently when people ask me, which by the way you haven't asked me this question - what makes me get up in the morning and go to work? - The major driving force is, other than the alarm clock, the fact that I'm going to be surrounded by brilliant trainees. That's really my major impetus for what I do, by working with inquiring minds who have a thirst for knowledge and understanding. And that's what I've enjoyed most about my time at the University of Pennsylvania, where I've been for almost 25 years.

LL: So what would you say then are your main focuses?

AB: I think equally diagnostics and education but I don't consider myself a researcher. You might look at my CV and say, he has X number of publications and therefore, he's a researcher – but I've been very lucky again. I've been fortunate to collaborate with other like-minded people and put projects together, or I have an idea, perhaps, and then there are eager trainees who want to bring that to fruition. So all of this is really very much dependent on the community. It's not an individual sport at all.



Prof Bagg catching up with previous WITS colleagues, Prof. Debbie Glencross (photograph on the left) and Prof. Barry Mendelow (photograph below).



Lightening round

LL: One word to describe your passion for haematology

AB: It would be passion. I mean, I would use the word, I have a [passion] for haematology. I can't think of another word. But that sounds like a corny answer.

LL: Most challenging haematological disorder to diagnose

AB: Early myelodysplastic syndrome (MDS)

LL: Top recommendation for staying updated in haematology research

AB: Read, read, read.

LL: Greatest challenge facing haematologists today

AB: Too much to know

LL: Most memorable case in your career

AB: The ones I got wrong. From which I learnt the most.

LL: If you could offer one piece of advice to your younger self, what would it be?

AB: Start looking at hair restorations earlier rather than later.

Haematology at UCT would like to extend our heartfelt appreciation to Prof Bagg for enriching us with his unparalleled expertise, approachability, humility, and humour. We hope he and his family (pictured below) enjoyed their time in Cape Town.



Recent events

Haematology would like to welcome to the team:

- Senior Haematopathologist: Dr. Sharon Officer
- Clinical Haematology Fellow: Dr. Ellouise Adams
- E5 clinical work: Dr. Marthinus Dicks (haematopathologist)
- On the Research side:
 - Dr. Andrea Coetzee (Medical Officer & MSc student)
 - Photograph below from left to right: Dr. Ryan Aylward (Postdoctoral Research Fellow), Dr. Nicol  Smith (Research Medical Officer), Dr. Fiona Watt (Research Medical Officer), and Dr. David Richardson (Ph.D student)

Welcome



Baby steps

We are delighted to share some wonderful news! Over the past few months, we've been blessed with the arrival of several bundles of joy as some of our own welcomed their first or newest additions into the world.

We extend our warmest congratulations to the proud parents and their families.

New arrivals:

1. Sophia Juliana Oxley born 20th March
2. Sophie Neshama Shein born 17th April
3. Michael Russel Norman born 25th April
4. Isabella Aila De John born 27th April
5. Maya Katherine van den Berg born 17th May
6. Nico Matthieu Bailly born 18 June 2024



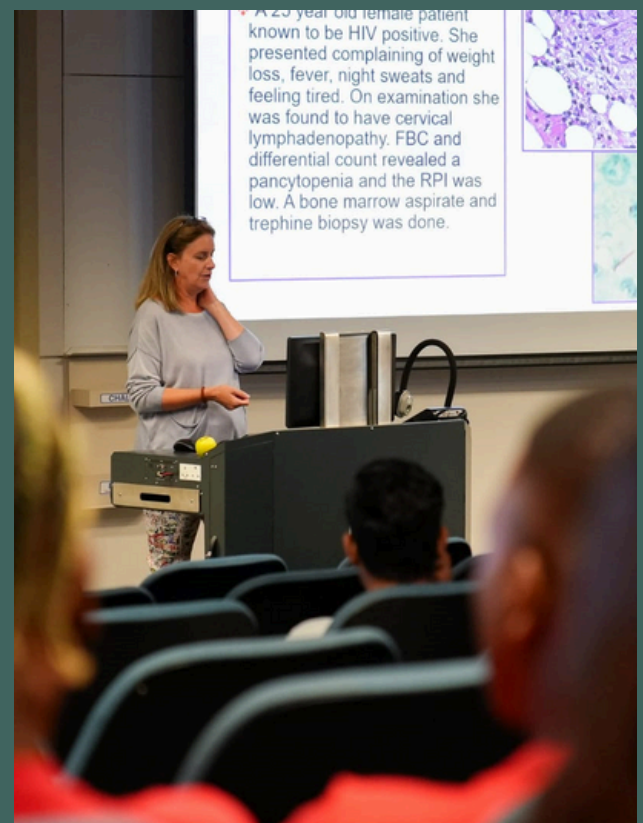
Social outreach for the Department of Pathology

A/Prof. Jessica Opie and A/Prof Shaheen Mowla together with a team of haematology postgraduate students (photograph on the left), taught Grade 8 learners Maths, English and Science at two schools, including Usosazo High School in Kayelitsha for one week in January. This project was spearheaded by Prof. Elizabeth Mayne, HOD, Division of Immunology.



African Research Society (ARS) - Blood Rush Event

The Blood Rush event was hosted by ARS in collaboration with the Department of Haematology and aimed to provide attendees with a comprehensive understanding of haematological research and the significance of stem cell donation in healthcare. Speakers from our Division included, Dr. Sharon Officer (photograph on the right) who presented on "Perspectives on haematological disorders and treatment modalities", Dr. Daleen Kriel who presented on "Insights into haematopathology and its diagnostic significance", and Dr. Athenkosi Kema who presented on "Haematology research and clinical practice in South Africa". Haematology would like to thank the talented ARS team for spearheading this event.



Protocol writing course

Through our NIH Fogarty grant, Blood Research and Enhanced Training against HIV-South Africa (BREATH-SA), Haematology hosted a protocol writing course from 10-15 June in Cape Town. Masters and PhD students, including 4 candidates each from UCT, UFS and SANBS, were guided to develop their research protocols with help from experts in the field.

E5 Renovations

Through grant funding from the Bristol Myers Squibb Foundation (BMSF) the first phase of renovations to the E5 Clinic has been completed.

International Society of Laboratory Haematology (ISLH) 2024

A/Prof. Jessica Opie co-chaired the educational workshop session “Focus on Coagulation” at this year's ISLH meeting.

Visiting Clinician

Dr. Jesse Qiao, Clinical Associate Professor from the University of California, Irvine, visited E5 Clinical Haematology at GSH in May. During his visit, Dr. Qiao gave engaging lectures, sharing insights from his expertise on iron deficiency anaemia and antiphospholipid syndrome.

Photograph below: Dr. Qiao (front right).



Food Drive

The Division of Haematology, through an initiative of its Transformation and Equity Committee, held a food drive for the homeless. Our heartfelt gratitude to those who donated.



Items were given to a community kitchen in Observatory - **Obs Can Feed You** - a non-profit organisation that serves meals to our vulnerable community members.



New test at GSH Haematology Laboratory

Quantitative analysis of RunX1::RunX1T1 transcript levels are now offered at the NHLS GSH Haematology Laboratory. This test, verified and implemented by A/Prof. Karen Shires and team, can be used to monitor therapy responses and detect minimal residual disease in acute myeloid leukaemia (AML) with t(8;21)(q22;q22.1);RunX1::RunX1T1. Transcripts can be detected to a level of 0.001%, allowing detection over a 4 to 4.5 log range.

AML with t(8;21)(q22;q22.1);RunX1::RUNX1T1 is one of the core-binding factor leukaemias and is usually associated with a more favorable outcome. The pathological RunX1::RunX1T1 fusion leads to the disruption of the normal function of the core-binding factor, affecting haemopoietic differentiation and maturation. Additionally, impaired apoptosis occurs. These changes lead to the accumulation of blasts and the development of AML.



Conference presentations

Haemoglobinopathies in the public health sector of the Western and Eastern Cape of South Africa: A retrospective analysis. M. du Toit, J. Opie, M. Kriel, J. Bailly. Poster presentation. International Society of Laboratory Haematology (ISLH), Nantes, France 2024.

From the Marrow to the Blood: Optimising the Diagnosis of Iron Deficiency in the Setting of Inflammation. D. Richardson, K. Brown, J. Rusch, E. Verburgh, V. Louw, J Opie. Poster presentation. ISLH, Nantes, France 2024.

Hodgkin lymphoma: Investigating circulating natural killer cells in an HIV endemic setting. J. Opie, J. Isaacs, J. Oosthuizen, E. Verburgh, Z. Mohamed, D.Chetty, G. Davison. Poster presentation. ISLH, Nantes, France 2024.

Photograph on the right, above: A/Prof. Opie



Lymphoid neoplasms in a South African HIV endemic setting categorised according to the 5th edition of the World Health Organisation Classification of Haematolymphoid Tumours. L. Andera, D. Chetty, Z. Mohamed, D. Oelofse, J. Oosthuizen, K. Brown, G. Panchoo, K. Antel, K. Simba, G. Kritzinger, S. Cassim, A. Ramburan, J. Opie, V. Louw, E. Verburgh. Poster presentation. ISLH, Nantes, France 2024. Dr. L. Andera at ISLH 2024 (photograph on the right, below)



Surveillance of multi-drug resistant bacteria and bloodstream infections in haematopoietic stem cell transplantation patients: Insights from a sub-Saharan African tertiary centre. LPM van Leeuwen, B McMillan, G Tadzimirwa, J Oosthuizen, K Brown, L Doornekamp, ECM van Gorp, E Prentice, N Papavarnavas, A Davidson, Y Goga, J du Toit, CE du Toit, M Goeijenbier, E Verburgh. Oral Presentation. SASMO-SASCeTS 2024 Congress.

This research was presented by Dr. Brigid McMillan (photograph on the right, above).



E5 clinic nurses (photograph on the right, below) attended the SASMO-SASCETS conference in April.



Wishing the 5 members of A/Prof. Shaheen Mowla's research team who are presenting at the 28th SASBMB congress all the best! Highlights from this event to follow in the next newsletter.



The South African Society of Biochemistry and Molecular Biology
Congress 2024 *Biochemistry leading the future*
7 - 10 July 2024, Protea Hotel Ranch Resort, Polokwane



INTERNATIONAL UNION OF BIOCHEMISTRY
AND MOLECULAR BIOLOGY

Grants, partnerships, awards/honours and promotions

A/Prof. Karen Shires received the NHLS Research Trust Pathology Research Award for her research looking at cancer testis antigen use as biomarkers in multiple myeloma.

A/Prof Estelle Verburgh was awarded the Faculty Research Equipment Infrastructure Grant to purchase equipment for a project on 'Establishing a Joint Haemato-Oncological Biorepository for Oncological Research'.

Under the guidance of their brilliant laboratory managers, Mrs. Delmaine Rousseau and Mrs. Zulfa Abrahams, both the NHLS Haematology Laboratories at Groote Schuur Hospital and Red Cross Children's War Memorial Hospital maintained their South African National Accreditation System (SANAS) accreditation.

Dr. Gamuchirai Tadzimirwa was promoted to Clinical Haematology Consultant.



Graduation and exam news

The Haematology team would like to congratulate the following students who have obtained a research degree at UCT:

MMed Degrees

Dr. David Richardson obtained his MMed (Haem) degree with distinction at UCT. His project was titled “From the marrow to the blood: Optimising the diagnosis of iron deficiency in the setting of inflammation” and was supervised by A/Prof. Jessica Opie and Prof. Louw in collaboration with Dr. Jody Rusch (Chemical Pathology, UCT).

Dr. Victoria Norman obtained her MMed (Haem) degree with distinction at UCT. Her project was titled: “Effects of sample handling on the detection of key molecular markers in myeloid neoplasms” and was supervised by A/Prof. Karen Shires and Dr. Daleen Kriel.

Dr. Jennifer Barnard obtained her MMed (Med) degree with distinction at UCT for the study titled ‘The diagnostic delay and demographics of the Hereditary Haemorrhagic Telangiectasia (HHT) population attending a tertiary hospital in Cape Town’ under the supervision of A/Prof. Estelle Verburgh and Prof. Vernon Louw.

Dr. Obey Mawire obtained his MMed (Med) degree at UCT for the study titled ‘Post-transplant lymphoproliferative disorders: a retrospective analysis of a single renal transplant centre’ under the supervision of A/Prof. Estelle Verburgh and Dr. Zunaid Barday.

Dr. Shakira Dawood obtained her MMed (Med) degree at UCT for the study titled ‘Evaluation of prognostic risk factors at diagnosis and treatment outcomes in adult patients with early stages Hodgkin lymphoma in Cape Town, South Africa’ under the supervision of A/Prof. Estelle Verburgh and A/Prof. Zainab Mohamed.

MSc

Marion Stone obtained her M.Sc. titled “Defining the Functional Role of MAGE-C1 in Multiple Myeloma” with A/Prof K Shires as the supervisor

PhD

Aaliyah Saferdien (photograph below, left) graduated and received her PhD degree on March, 26th – Title of her dissertation: “Anti-cancer effects of aqueous extracts of *Dodonaea viscosa* on Burkitt lymphoma”. This project was supervised by A/Prof. Shaheen Mowla (photograph below, right).





Publication list

- Simmonds W, Awuku Y, Barrett C, Brand M, Davidson K, Epstein D, et al. [Louw VJ 12th author]. Guidance for the gastrointestinal evaluation and management of iron deficiency in Sub-Saharan Africa. S Afr Med J. 2024 Feb. <https://samajournals.co.za/index.php/samj/article/view/711>
- Takalani A, Robinson M, Jonas P, Bodenstein A, Sambo V, et al. [Louw V 7th author and Opie J 8th author]. Safety of a second homologous Ad26.COVS vaccine among healthcare workers in the phase 3b implementation Sisonke study in South Africa, Vaccine, Volume 42, Issue 6, 2024, Pages 1195-1199. <https://doi.org/10.1016/j.vaccine.2024.01.066>
- Opie J, Verburgh E, Bailly J, Mayne E, Louw V, Hematological Complications of HIV Infection: An Update from an HIV-endemic setting, Open Forum Infectious Diseases, 2024. <https://doi.org/10.1093/ofid/ofae162>
- Davison G, Opie J, Davids S, Mohamed R, Novitsky N. Early Recovery of Natural Killer Cells Post T-Cell Depleted Allogeneic Stem Cell Transplantation Using Alemtuzumab 'In the Bag'. <https://dx.doi.org/10.2139/ssrn.4300095>
- Rusch J, van der Westhuizen D, Gill R, Louw V. Diagnosing iron deficiency: Controversies and novel metrics, Best Practice & Research Clinical Anaesthesiology, Volume 37, Issue 4, 2023, Pages 451-467, ISSN 1521-6896, <https://doi.org/10.1016/j.bpa.2023.11.001>.
- van den Berg K, Murphy E, Maartens G, Louw V, Grebe E. The impact of non-disclosure of HIV status and antiretroviral therapy on HIV recency testing and incidence algorithms. Vox Sang. 2024 Apr 15. <https://doi.org/10.1111/vox.13627>



PLEASE SEND ANY HAEMATOLOGY-RELATED NEWS, EVENTS, ACHIEVEMENTS,
AND PUBLICATIONS FOR THE PERIOD JULY TO DECEMBER 2024 TO
HAEMATOLOGY NEWS UCT AT haematologynews-group@uct.ac.za

FOR MORE INFORMATION ON HAEMATOLOGY AT UCT, PLEASE VISIT OUR
WEBSITE AT
<https://health.uct.ac.za/haematology>

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