



CRI QUARTERLY NEWSLETTER:

January – March 2023

Welcome to the first CRI newsletter for 2023

Our quarterly newsletters highlight the many cancer-related research activities in the Faculty of Health Sciences. Previous editions of the newsletter are published on the [CRI website](#).

We start this CRI Newsletter by saying a huge **Thank You** to Mr Dudley Cloete-Hopkins, recently retired Chair of the Cancer Research Trust (CRT). The Trust was set up in 1948 by a small group of visionaries to support research in the Faculty of Health Sciences at UCT on the cause, prevention and treatment of cancer. Mr Hopkins served as Chair of the Trust from mid-1980's until early 2023. Under his leadership the Trust has grown and flourished, enabling the Faculty of Health Sciences (FHS) to support important cancer research consistently and increasingly and, to develop capacity for future research in this field. In short, the FHS has benefited enormously from Mr Hopkins' excellent leadership of the CRT, his clear vision and wise guidance. We sincerely thank Mr Hopkins for his many years of unwavering commitment and wish him well in his future endeavours. Mr Hopkins your contributions will be remembered and celebrated for years to come.



World Cancer Day 2023

World Cancer Day is recognized on 4th of February annually and was initiated to stimulate collective and collaborative actions between people, communities, organizations, industries, researchers, clinicians, and governments to respond to the increasing burden of cancer. This day recognizing the real-world barriers that prevent minority, marginalized and underserved individuals and communities from accessing cancer services which continue to drive healthcare disparities. As such, the Union for International Cancer Control (UICC) fittingly chose the theme, "Close the Care Gap," to mark 2023 World Cancer Day. Our UCT **post-graduate Cancer Research Initiative (PG CRI)** Group distributed World Cancer Day posters and flyers to research teams and took various pictures to support the various activities and events for this year's World Cancer Day. Throughout the day, we tweeted the various Faculty activities (on our Twitter handle, @UctCri).



We are delighted to share some of the Faculty activities below.



African aWAREness of CANcer and Early Detection, Cape Town fieldworkers, students, and research team gathering in support of World Cancer Day 2023



The **Post Graduate Cancer Research Initiative** group with **Saif Khan, Carly Burmeister and Prof. Jen Moodley** advocating to close care gaps in cancer care on 4th February.



D6 Orthopaedic clinic at Groote Schuur Hospital advocating in honour of World Cancer Day 2023. Picture with Dr. Hilton, their nurse, fellow, and a consenting patient.

Our students and post docs form a crucial part of what



we do at CRI. Here is Zeinab (Farzaneh) Ghasemishahrestani, a **postdoctoral fellow from the Hair and Skin research lab, division of dermatology**, in support of World Cancer Day 2023.



Students and staff from **The Prince cancer laboratory** on World Cancer Day. The laboratory, based in the Department of Human Biology, unravels the molecular mechanisms that drive several cancers and tests potential novel therapeutics to treat them.



A/Prof. Shaheen Mowla's laboratory in the Haematology Molecular Research Unit in honor of World Cancer Day 2023



Virna Learners research group, Division of medical biochemistry and structural biology, World Cancer Day 2023.

See [CRI and World Cancer Day 2023](#) for all photographs.

Join the PGCRI Group

PGCRI Membership Update

The Postgraduate Group of the Cancer Research Initiative (PGCRI) is a peer mentorship programme that aims to build interdisciplinary collaborations and develop new skills. Due to the changes in circumstances over the last 2 years, the Group is finally able to host in-person events. This year the Group aims to host in-person, hybrid, and online meetings to support and facilitate interactions between post-graduate students within the cancer field on our campus. As such, the PG CRI Group is updating their student mailing list. We encourage all post-graduate students to join the team. **Visit [here](#) to sign up for the PGCRI mailing list.**

Recent Events

The annual Paediatric Brain Tumour Workshop



The annual Paediatric brain tumour workshop endorsed by the South African children's cancer study group (SACCSG) (<https://www.saccsq.co.za/>), South African society of clinical and radiation oncology (SASCO) (<https://sascro.org/>) and the Society of Neuro-Oncology in Sub-Saharan Africa (SNOSSA) (<https://snossa.org/>) was held on December 2nd and 3rd at the University of Cape Town. The event was hosted by the paediatric neuro-oncology team at Groote Schuur Hospital (GSH) and Red Cross War Memorial Children's Hospital (RCWMCH). The workshop aimed to improve the management of children with brain tumours in South Africa and Sub-Saharan Africa. The hybrid event featured talks from various international speakers and local experts across neuro-imaging, neuropathology, neurosurgery, paediatric oncology, paediatric radiation oncology, neuroscience, endocrinology, advocacy, and survivorship. It featured presentations on CSF biomarkers and ependymom, global neuro-oncology research, proton radiotherapy in LMIC, global neurosurgery for PBTs. The PBTW meeting

was held in the same week as the initiation of the Access to Care Cape Town Paediatric radiotherapy practical course and the SNOSSA "First Thursday's" neuro-oncology webinar series, aiming to give participants maximum gain.

The inaugural Paediatric radiotherapy Access to Care Cape Town course ran for the first time in Dec 2022 in the week prior to PBTW. Many attendees were able to attend due to sponsorships raised and a new partnership with St Jude children's research hospital in Memphis Tennessee.



Arrival of a **new linear accelerator in the department of Radiation Oncology**. This machine will allow introduction of true stereotactic radiotherapy of the brain and the body

Through the Fogarty International HIV training grant and in collaboration with UCSF, the division of haematology hosted a **Designing Clinical Research course from 27 February-4 March 2023**. This course enabled students to complete their research protocols with guidance from haematology and public health experts.

The Haematology cancer research team hosted Prof. Sandeep Dave, an internationally acclaimed researcher in lymphoma, and Wellcome Distinguished Professor of Medicine at Duke University, at their Friday morning Morphology meeting in February 2023.

The **SAMRC/UCT GCRC** hosted the following important clinical research events which focused on **the elimination of cervical cancer with discussion on prevention and treatment and presenting an overall global picture of gynaecological cancers**. These were hybrid events and were very well attended by colleagues in all disciplines and from various regions in South Africa and neighbouring countries.

- **HPV Awareness Day, 9th March 2023**: focusing on HPV Awareness, prevention of HPV infection through vaccination and the treatment of women who have HPV associated illnesses

- UCT News published a focus article on **Anna-Lise Williams keynote presentation** at our HPV Awareness Day
 - <https://www.news.uct.ac.za/article/-2023-03-14-hpv-vaccinations-crucial-for-people-living-with-hiv>

Student and faculty presentations/conferences

Burmeister CA, Khan SF, Schäfer G, **Prince S** (2022). Investigating the co-operation between the human papilloma virus (HPV) oncoproteins E6/E7 with the oncogenic T-box transcription factor 3 (TBX3) to promote cervical cancer. **South African Medical Research Council (SAMRC)'s Biomedical Research and Innovation Platform (BRIP) 12th Annual Symposium**.

Mlaza MV, Bellis C, Chakraborty S, Costa-Lotufu L, **Prince S** (2022). Marine-derived chromomycin A5: a novel strategy to treat TBX2-driven rhabdomyosarcoma. **South African Medical Research Council (SAMRC)'s Biomedical Research and Innovation Platform (BRIP) 12th Annual Symposium**.

Welsh A, Matshitse R, Nyokong T, **Prince S**, Smith G (2022). Rationally designed trinuclear benzimidazole-based ruthenium(II) complexes in chemo- and photodynamic therapy. **South African Medical Research Council (SAMRC)'s Biomedical Research and Innovation Platform (BRIP) 12th Annual Symposium**.

A/Prof Jessica Opie will be attending the upcoming **British Society of Haematology Annual Scientific Meeting in Birmingham 23- 25 April** and presenting two posters:

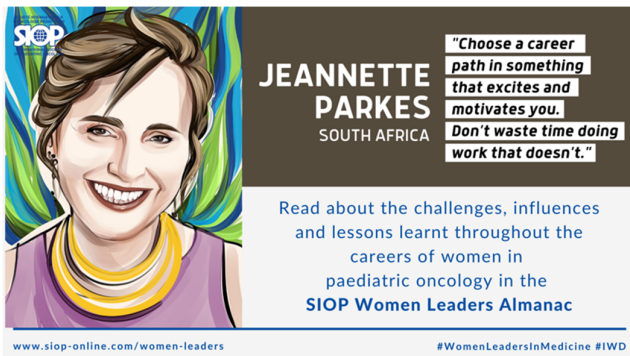
- *i) Hodgkin lymphoma: The role of EBV plasma viral load testing in an HIV endemic setting.*
 - J. Opie, E. Verburgh, J. Oosthuizen Z. Mohamed, D. Chetty, D. Hardie.
- *ii) Hodgkin Lymphoma: Circulating Natural Killer Cell Subsets in an HIV Endemic Setting.*
 - J. Opie. E. Verburgh, J. Oosthuizen, Z. Mohammed, D Chetty, G. Davison.



Drs Leonardo Alves de Souza Rios and Beatrice Ramorola presented their research at the **14th International Congress of Human Genetics, themed “COMING HOME”**, held in Cape Town on 22 – 26 Feb 2023

Research grants, partnerships, awards/honours

The Department of Radiation Oncology is part of a global team that received an NIH grant for the **ARCHERY project**, an exciting project looking at the use of artificial intelligence in radiotherapy and treatment planning. **Prof. Jeannette Parkes is the local Principal Investigator, and Drs Sameera Dalvie, Julie Wetter, Nazia Fakié and Santhuri Viranna are the local investigators.**



Prof. Jeannette Parkes was profiled in the **SIOP's Women Leaders almanac 2023**
<https://siop-online.org/wp-content/uploads/2023/03/WLPO-ALMANAC-Jeannette-v3.pdf>

Prof Prince was elected to the **UCT College of Fellows** in October 2022.



Prof Prince was:

- the recipient of the **SAMRC Gold Medal for outstanding scientific contributions to health research** in March 2023.
- awarded a National Research Foundation (NRF) Competitive Programme for Rated Researchers grant

Prof Prince, Prof. Virna Leaner and Prof Dr. Stefan Barth were a joint recipients of the **UCT Vision 2030 grand challenges program** .

Prof. Lynette Denny's profile was published in the **Lancet** in January 2023
[https://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736\(23\)00120-4.pdf](https://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736(23)00120-4.pdf)

A/Prof Verburgh's NIH-Fogarty D43 grant entitled 'Research training in HIV-related transfusion medicine and haematology in South Africa', has been renewed for another 5 years. This grant enables collaboration with CPUT on lymphoma research. lot the health facility assessment.

Graduation news

Trishana Nundalall, Establishment of recombinant antibody technologies allowing for the generation of diagnostic and therapeutic fusion proteins (PhD, Graduation March 2023)

Grace Mayuni, Generation of glioblastoma specific SNAP based antibody fusion proteins for future radiolabelling application (Masters, first class pass 90%, Graduation March 2023)



Aqeelah Sirkotte and Marion Algar both passed Part 2 examinations of the college of Radiation Oncology

Dr Girisha Panchoo, supernumerary registrar in Haematology Pathology from Mauritius, **graduated FCPATH (Haem).**

Haematology and has been awarded the FHS Postdoctoral fellowship.



Thando Kubheka received her BSc Med Hons degree on 30th March. She completed her Honours mini-project under the supervision of A/Prof Shaheen Mowla and Dr. Leo Rios, **investigating the role of miRNA in lymphoma.** She is currently enrolled in a Masters degree within the Dept. of Haematology, and has received a UCT Masters Financial award.



Dr Beatrice Ramorola received her PhD in December 2022. Her dissertation was entitled **“Molecular Characterization of Diffuse Large B-cell Lymphoma in South Africa.”** She is currently a postdoctoral fellow within the Division of



Dr Gamu Tadzimirwa graduated with her **Certificate of Clinical Haematology**

Cancer related advocacy activities

Prince Lab CANSA Shavathon 2023



The objective of the annual Prince Lab CANSA Shavathon is to raise funds for the Cancer Association of South Africa (CANSA), to spread awareness for cancer and encourage participation from students, staff, and the greater community to shave/spray their hair in solidarity with cancer sufferers and the people close to them. Two PhD students, Carly Burmeister and Karabo Serala, in the Prince lab led the project this year, 2023. We received donations and provided hair spraying and shaving in return, and participation was encouraged through newsletters, mailing lists, posters and social media. The Shavathon did not only encompass the Faculty of Health Sciences at the University of Cape Town, but it extended to families and friends of participants outside of UCT. We managed to raise R2500 for CANSA and brought together various research groups, students and staff to stand in solidarity with cancer sufferers and survivors. We hope that attendees left having built a connection with fellow volunteers and peers within the faculty and their participation sends a message far beyond campus to engage with the CANSA initiative.

In collaboration with BLOODSA, CANSA and the Bristol Myers Squibb Foundation, the Clinical Haematology team created a patient information leaflet on Myeloma. This tool serves to educate Myeloma patients and their carers by providing an overview of Myeloma, including its symptoms, diagnosis, and treatment options as well as tips for managing side effects and improving quality of life.



Wheel2heel cycling group raised R1M for a new chemotherapy suite in Oncology

Recent cancer-related publications

1. Huysamen A.M., Fadeyi O.E., Mayuni G., Dogbey D.M., Mungra N., Nsole Biteghe F.A., Hardcastle N., Ramamurthy D., Akinrinmade O.A., Naran K., Cooper S., Lang D., Richter W., Hunter R.* , Barth S.* – Click chemistry-generated Auristatin F-linker-benzylguanine for a SNAP tag based recombinant antibody-drug conjugate demonstrating selective cytotoxicity towards EGFR-overexpressing triple-negative breast cancer cells. *ACS Omega* 8(4): 4026-4037 (2023)
2. Dreyer R., Pfukwa R., Barth S.* , Hunter R., Klumperman B.* - The evolution of SNAP-tag labels. *Biomacromolecules* 24(2): 517-530 (2023)
3. Automating the Treatment Planning Process for 3D-Conformal Pediatric Craniospinal Irradiation Therapy. Soleil Hernandez, Callistus Nguyen, Jeannette Parkes, Hester Burger, Dong Joo Rhee, Tucker Netherton, Raymond Mumme, Jean Gumma-De La Vega, Jack Duryea, Alexandra Leone, Arnold Paulino, Carlos Cardenas, Rebecca M. Howell, David Fuentes, Julianne Pollard-Larkin, Laurence Court. *PBC* January 2023. <https://doi.org/10.1002/pbc.30164>
4. van Niekerk A, Blanckenberg A, Kimani S, Chakraborty S, Prince S, Chellan P, Mapolie S (2022) Mechanistic insights into the anti-cancer activity of the PEGylated binuclear palladacycle, BTC2, against triple-negative breast cancer, *Journal of Bioinorganic Chemistry*,

- <https://doi.org/10.1016/j.jinorgbio.2023.112191>.
5. Louis H, Mathias GE, Agwamba EC, Malan FP, Unimuke TO, Nzondomyo WJ, Sithole SA, Biswas S, Prince S, Manicum A-LE (2022) Single crystal investigation, spectroscopic, DFT studies, and in-silico molecular docking of the anticancer activities of acetylacetonate coordinated Re(I) tricarbonyl complexes, *Inorganica Chimica Acta*, <https://doi.org/10.1016/j.ica.2022.121335>.
 6. Khan SF, Burmeister CA, Scott DJ, Sinkala M, Ramburan A, Wu H-T, Schäfer G, Katz AA, Prince S (2023) TBX3 promotes cervical cancer proliferation and migration via HPV E6 and E7 signaling, *Molecular Cancer Research*, <https://doi.org/10.1158/1541-7786.MCR-22-0598>.
 7. Naicker, K., Dalvie, S., Said-Hartley, Q. and Ntsekhe, M., 2023. Concurrent tuberculous pericarditis and lung adenocarcinoma presenting with cardiac tamponade. *SA Journal of Oncology*, 7, p.255.
 8. Denny L. Coping with cancer recurrence: my perspective as both a patient and oncologist. *Cancer.net*. 2023
 9. Brown BP, Feng C, Tanko RF, Jaumdally SZ, Bunjun R, Dabee S, Happel AU, Gasper M, Nyangahu DD, Onono M, Nair G, Palanee-Phillips T, Scoville CW, Heller K, Baeten JM, Bosinger SE, Burgener A, Passmore JS, Heffron R, Jaspan HB. Copper intrauterine device use induces depletion of *Lactobacillus crispatus* in the female genital tract microbiota in a randomized trial. *Nature Comm* 2023; 14: 499.
 10. Smith E, Sinanovic E, Masson L, Passmore JS. A cost-effectiveness analysis of a rapid point-of-care test for diagnosing sexually transmitted infections and bacterial vaginosis in women attending primary health care facilities in Cape Town, South Africa. *Frontiers in Public Health*. 2023 (In press).
 11. Simba K, Mohamed Z, Opie JJ, Andera LF, Brown K, Oosthuizen J, Antel K, Dawood T, Van der Vyfer L, Du Toit C, Louw VJ. The International Prognostic Score and HIV status predict red cell concentrate transfusion needs in Hodgkin lymphoma. *Leukemia & Lymphoma*. 2022 Dec 22:1-8.doi: 10.1080/10428194.2022.2157214
 12. Van Staden Q, Bailly J, Louw VJ. T-Cell Large Granular Lymphocytic Leukaemia in a South African Patient Living with HIV. *IJCMCR*. 2023 May 2; 26(1):1-4.
doi: 10.46998/IJCMCR.2023.26.000629.
 13. Matsela, L.M., Cleary, S. and Wilkinson, T., 2022. Cost utility and budget impact analysis of dexamethasone compared with bortezomib and lenalidomide for the treatment of second line multiple myeloma from a South African public health perspective. *Cost Effectiveness and Resource Allocation*, 20(1), pp.1-11.)

Please send any cancer-related news, events, publications and conference information for the period April – June 2023 for inclusion in our next quarterly newsletter to:

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