## **Editorial**

## Global Minds: Expanding Beyond the Horizon

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I am glad to announce that *Reinvention*'s Special Issue has now been published. This special issue, 'Global Minds: Expanding Beyond the Horizon', aims to place the spotlight on the 2023 World Conference on Undergraduate Research (WorldCUR) and the British Conference of Undergraduate Research (BCUR) held at the University of Warwick in April 2023 and hosted by the Institute for Advanced Teaching and Learning (IATL).

WorldCUR-BCUR was an event where the World Congress and the British Conference were brought together as a joint conference for the first time. Undergraduate researchers from across the globe and the UK travelled to Warwick to present and share their research. Some of them gave spoken presentations, others a poster presentation. Each of these presenters went through a rigorous selection process to be granted the opportunity to attend the event. This was the third World Congress on Undergraduate Research – previous iterations having been hosted by the University of Oldenburg in 2019 and Qatar University in 2016. BCUR is an annual conference that celebrates British undergraduate research, which originated in 2011.

I had the wonderful opportunity to attend WorldCUR-BCUR personally as part of Reinvention. The team was there to run a "Writing for Publication" workshop, and some members of the team also volunteered to chair the spoken presentations. The conference was more than just a short fifteen-minute presentation. After every presentation session, people would crowd around with the presenters to ask more questions about their research, share methodological challenges, institutional support, sources of research funding. There was a researcher from Singapore who even brought her resin-persevered bugs to share with the audience. Part of this is what made WorldCUR-BCUR unique. It provided a platform for undergraduates across the globe to share their research with a like-minded community.

The theme that we chose for this special issue is Global Minds: Expanding Beyond the Horizon. Horizon has a double meaning in this case. The first is our conventional understanding of horizon. The beauty of WorldCUR-BCUR is its ability to bring research ideas across the globe. Nabirye's research on breast cancer in Arua City, Uganda and Kosgei *et al.*'s research on Cattle Mastitis in Bomet County, Kenya reminds us how important it is to consider the role of research in regions beyond our horizons. The second definition of horizon is one of creativity. This is seen through Maudsley's study of porcupine nocturnal behaviours and Nyangoma and Oryema's unique use of glass in protection against radiation. These are innovative ideas that requires the most creative minds of undergraduates to discover.

In this edition, we highlight five brilliant pieces of work that were presented in the conference.

Halima Nabirye's 'Knowledge, Attitudes and Barriers of Breast Self-Examination Among Women in Nyio Ward, Arua City' investigated the cultural factors that affect breast cancer in Uganda. In Uganda, 89 per cent of women diagnosed with breast cancer are in advanced stages (III and IV), leading to a poor prognosis. This cross-sectional study reveals that the lack of breast self-examination was not due to the traditional belief of cultural stigmatisation, but rather a complete lack of awareness. Nabirye's research highlights the importance of scientific dissemination through multiple information channels.

Hannah Maudsley's 'The Effect of the Lunar Cycle on Nocturnal Behaviour in Captive Cape Porcupine (*Hystrix africaeaustralis*)' analyses the activity levels of porcupines in the Reaseheath Mini Zoo. The results found that there was an observed increase in maintenance and resting behaviours during full moons, which are linked to predator avoidance. Maudsley's research highlights the nuanced differences between species to maximise animal welfare in animal captive centres.

Judith Nyangoma and Bosco Oryema's 'A Comparative Study of Photon Radiation Shielding Properties of Different Glass Types for Use in Health Facilities' compared various materials to protect against radiation from X-ray and gamma-ray sources. The study compared the glass types phosphate, bismuthate, tellurite, silicate, and borate. It concluded that bismuthate glass is the most effective material for photon shielding in medical applications, while borate glass is the least effective.

Lauren Dowdeswell and Lucianna Churchill's 'The Influence of Harness Design on Forelimb Biomechanics in Pet Dogs' is a personal favourite of mine. Dowdeswell's research extends beyond the existing research on assistance dogs to pet dogs. The study showed that the straight-front harness allowed the greatest range of motion in the shoulder and elbow, while the front-clip harness restricted these movements the most. This has significant consequences on how we can enhance safety and prevent musculoskeletal disorders in dogs.

Nathan Kipkirui Kosgei, Peter Njuguna Ndirangu, Senerwa Daniel Mugangai and Christine M. Mbindyo's 'Prevalence of Clinical and Subclinical Cattle Mastitis and the Associated Risk Factors in Bomet County, Kenya' surveyed 75 cows from 50 farms, finding an overall mastitis prevalence of 16 per cent. Of these, 25 per cent had clinical mastitis, and 12 per cent had subclinical mastitis. The prevalence was higher in cattle raised under intensive systems (13.3 per cent) compared to those in semi-intensive systems (2.7 per cent). This is associated with poor milking practices and control methods, due to the farmers' lack of knowledge, that contributed to the prevalence of mastitis.

The beauty of WorldCUR-BCUR is as simple as our theme suggests. Undergraduates bring in new perspectives that push us to pursue more creative research ideas. International conferences allow us to see beyond the small geographical research bubbles to which, often, we limit ourselves. But most importantly, as both Kosgei *et al.* and Nabirye point out, only when we spread awareness about our research finding and implications do we allow for the improvement of society.

To cite this paper please use the following details: Wong, Y. X. (2024), 'Global Minds: Expanding Beyond the Horizon', *Reinvention: an International Journal of Undergraduate Research*, Volume 17, Issue S1, <a href="https://reinventionjournal.org/article/view/1711">https://reinventionjournal.org/article/view/1711</a>. Date accessed [insert date]. If you cite this article or use it in any teaching or other related activities please let us know by e-mailing us at <a href="mailto:Reinventionjournal@warwick.ac.uk">Reinventionjournal@warwick.ac.uk</a>.