



Emerging Ethical Challenges in Genetics and Genomics: *Implications for Research, Ethics Review, and Academic Practice*

PROGRAMME



08 May 2026



09:00 to 13:00



Online



09:00 – 09:10

Opening and Welcoming

Ms Feziwe Mseleni - Coordinator: Research Ethics & Integrity programme



09:10 – 09:15

Proceedings

Molebogeng Maisela - Senior Research and Support Officer



09:15 – 10:15

Presentation

Dr Mercury Shitindo - Founder and Executive Director: Africa Bioethics Network



10:15 – 11:15

Presentation

Dr Marianne Pretorius - Senior Lecturer: Faculty of Natural and Agricultural Sciences



11:15 – 12:30

Q & A session

Ms Molebogeng Maisela

Open Discussion

Prof Wayne Towers - Head: Health Sciences Ethics Office for Research, Training and Support



12:45 – 13:00

Closing remarks

Ms Molebogeng Maisela





higher education
& training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA



Emerging Ethical Challenges in Genetics and Genomics: *Implications for Research, Ethics Review, and Academic Practice*

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Presenters



Dr Mercury Shitindo

Founder and Executive Director:
Africa Bioethics Network



Dr Marianne Pretorius

Senior Lecturer:
Faculty of Natural and
Agricultural Sciences



Prof Wayne Towers

Head: Health Sciences Ethics Office
for Research, Training and
Support (North-West University)

Abstract

Ethical research is grounded in four core bioethical principles - Respect for Persons, Beneficence, non-maleficence, and Justice. The application of these principles in genetic and genomic research presents a range of ethical challenges. This, include obtaining appropriate informed consent, ensuring privacy and confidentiality of individuals, families and communities, addressing cultural sensitivities related to the use and reuse of human biological material e.g. DNA, promoting capacity building among students and researchers, providing feedback on genetic and genomic results, especially incidental findings, and ensuring the fair sharing of research benefits. These are not merely procedural challenges — they reflect deeper tensions between scientific innovation and ethical responsibility, individual rights and collective implications, and global research collaboration and local governance. These challenges are particularly significant in the African context, which is shaped by diverse cultural practices, high levels of inequality, as well as a large and varied burden of disease. At the same time, this context creates unique opportunities for African scientists to address unmet health needs and contribute meaningfully to global genomics science from an African vantage point. It is, however, important to balance scientific progress with respect for research participants, particularly our contextually diverse settings.

Target audience: Academics, REC members, REC administrators and supervisors.



Dr Mercury Shitindo

Founder and Executive Director:
Africa Bioethics Network

Dr Mercury Shitindo is a bioethicist and research governance specialist with over 20 years of experience working across Africa and globally. She is the Executive Director of the Africa Bioethics Network (ABN), a pan-African platform spanning over 40 countries, and Editor-in-Chief of the African Journal of Bioethics. Her work focuses on ethical governance in emerging areas of health research, including genomics, data-driven research, artificial intelligence, and reproductive technologies. She is particularly known for advancing African relational ethics frameworks, grounded in Ubuntu and decolonial approaches, as substantive contributions to global bioethics. She serves as a Consultant to the WHO Ethics Review Committee Secretariat and as an Ethics Expert for the European Commission's Horizon Europe programme. She has led and contributed to multi-country research and policy initiatives supported by organisations such as the Wellcome Trust, WHO, and the British Academy. Her work centres on translating ethical frameworks into practical guidance for researchers, institutions, and ethics committees navigating complex and evolving research environments.

Dr. Marianne Venter (ORCID: 0000-0001-9679-6346) is senior lecturer in Biochemistry and researcher at the focus area of Biomedical and Molecular Metabolism Research (BioMMet) at the North-West University, South Africa. Her research focuses on the role of mitochondrial function in health and disease. She employs a multi-omics approach to identify potential pathomechanisms of mitochondrial disease, to follow up in functional studies and identify treatment targets. Her studies involve using genetically encoded modifiers of metabolism (GEMMS) and gene editing tools, in an effort to create and investigate mitochondrial disease models that are relevant to African populations. Her current research also focuses on the impact of African genetic backgrounds on sensitivity to rare and common disease. Dr Venter actively collaborates with researchers around the world, including at The Children's Hospital of Philadelphia in the USA, Radboud University Medical Center in the Netherland, Newcastle University and the University of Birmingham in the UK. Dr Venter has published in peer reviewed journals and has supervised 20+ post-graduate students.



Dr Marianne Pretorius

Senior Lecturer:
Faculty of Natural and
Agricultural Sciences





Prof Wayne Towers

Head: Health Sciences Ethics Office
for Research, Training and
Support (NWU)

Associate **Professor Gordon Wayne Towers** is the Head of the Health Sciences Ethics Office for Research, Training and Support (HS Ethics Office) in the Faculty of Health Sciences at the North-West University (NWU) in South Africa. The HS Ethics Office is an academic support department handling the administrative and academic management of the research ethics evaluation processes pertaining to the health and health-related research being undertaken within the NWU, through its support of the two National Health Research Ethics Council (NHREC)-registered ethics committees within the faculty, namely the North-West University Health Research Ethics Committee (NWU-HREC) and the North-West University Animal Care, Health and Safety Research Ethics Committee (NWU-AnimCareREC). He holds a PhD in Biochemistry and completed a Postgraduate Diploma in Health Research Ethics at Stellenbosch University in 2015 (cum laude). He was previously a Senior Lecturer (from 2009) at the Centre of Excellence for Nutrition at the NWU, where he headed up the Nutritional Genetics laboratory, investigating the genetic susceptibility of populations in South Africa towards non-communicable disease and the modifying impact of various nutritional and environmental factors. He undertook a career change in 2015 and joined the HS Ethics Office as the Academic advisor, where he has fulfilled

numerous roles on the NWU-HREC since 2014 i.e. member, vice-chairperson, chairperson and advisory member. He is also an advisory member of NWU-AnimCareREC, the NWU-Education, Management and Economic Sciences, Law, Theology, Engineering and Natural Sciences-Social Sciences Committee (EMELTEN-SSREC) and the Faculty of Agriculture and Natural Sciences Research Ethics Committee (FNASREC) at the NWU. He is also involved in the activities of the university's Integrated Research Integrity Management System (IRIMS), under the auspices of the Research Integrity Officer, when handling alleged cases of research noncompliance and violation of good research practice in the Faculty of Health Sciences. On an international level, he has been part of the Executive Committee of the Research Ethics Committee Association of Southern Africa (REASA) from its inception in 2016 to 2023, where he has fulfilled various roles including that of Deputy Chairperson and Communication and Marketing work group leader. He was also the chair of the African Research Integrity Network (ARIN) Constitution Working Group which was responsible for the development of the constitution of this organisation as well as the chair of the Electoral Committee, responsible for electing the inaugural ARIN Executive Committee. He has now been appointed as a member of the ARIN Executive Committee, providing support to the Social Communication, Social Media, and Newsletter Sub-committee. His main focus is on building and strengthening the health research ethics and research integrity infrastructure within Africa, to improve the practice of health and health-related research, ultimately leading to a more trustworthy and transparent relationship between scientists and the general public.

