

## DIVISION OF EPIDEMIOLOGY AND BIOSTATISTICS

**SEMINAR:** *Shifting the focus towards education and away from statistical significance: revisiting the debate on whether it is time to get rid of statistical significance in pursuit of science*

There has been a long-standing controversy among scientists regarding the appropriate use of  $P$ -values and statistical significance in clinical research. This debate has resurfaced through recent calls to modify the threshold of  $P$ -value required to declare significance, or to retire statistical significance entirely. In this presentation, I revisit the issue by discussing: i) the connection between statistical thinking and evidence-based practice; ii) some history of statistical significance and  $P$ -values; iii) some practical challenges with statistical significance or  $P$ -value thresholds in clinical research; iv) the on-going debate on what to do with statistical significance; v) suggestions to shift the focus away from binary thinking of statistical significance and towards education for key stakeholders. I then conclude with remarks and illustrations of the potential deleterious public health consequences of poor methods including selective choice of analysis approach and misguided reliance on binary use of  $P$ -values to report and interpret scientific findings.



**Presenter: Lehana Thabane, PhD**  
Professor, McMaster University  
Vice-President Research, St Joseph's Healthcare  
Hamilton  
Professor Extraordinaire, Stellenbosch university

Dr Lehana Thabane is a Vice President of Research at St Joseph's Healthcare—Hamilton; Scientific Director of the Research Institute at St Joseph's Healthcare; Professor of Biostatistics in the Department of Health Research Methods, Evidence, and Impact at McMaster University. His international reputation has led him to be honored by many professional societies: He is an *Elected Member* of the International Statistical Institute, *Fellow* of the Royal Society of Canada, *Fellow* of the American Statistical Association, *Fellow* of the Society for Clinical Trials, *Fellow* of the Canadian Academy of Health Sciences, and *Honorary Foreign Associate Member* of the Academy of Science of South Africa. He is the *Past President* of the Society for Clinical Trials 2022-2023. He is the recipient of the 2022 of the Statistical Society of Canada Award for Impact of Applied and Collaborative Work. He was a recipient of an *honorary degree* from Stellenbosch University in South Africa in December 2023 for his contribution to clinical trial methodology.

Dr Thabane is the *Editor-in-Chief* of the journal *Pilot and Feasibility Studies*; and he is a member of the editorial board for many journals including *Trials*, and *BMJ Open*. He has co-authored over 1000 peer-reviewed manuscripts leading to significant contributions and transformation of science, healthcare, and delivery of care in many clinical areas. Having mentored over 200 graduate students and junior faculty, Dr Thabane has won several teaching and mentorship awards for his commitment to building capacity in health research and nurturing the next generation of researchers.

**Date: 24 April 2024, Time: 12:30-14:00**

**Venue: BMRI\_2085 , TEAMS link ([Join the meeting now](#) )**

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