

## A-rated researchers

### Professor Michael Wingfield University of Pretoria

**P**rofessor Michael Wingfield focuses his work on the health of trees and has conducted research on tree pests and pathogens, especially concerning their global movement, for more than 30 years.

Wingfield completed his BSc and honours degrees in plant pathology at the University of KwaZulu-Natal in Pietermaritzburg, his master's at Stellenbosch University, and his PhD at the University of Minnesota in the

USA. He worked as researcher at the Plant Protection Research Institute in Stellenbosch and as professor at the University of the Free State's department of microbiology and biochemistry.

He was responsible for establishing the Tree Protection Co-operative Programme in 1990, which became the catalyst for the establishment in 1998 of the Forestry and Agricultural Biotechnology Institute (FABI) at the University of Pretoria, of which he is the founding director. He is vice president responsible for divisions of the International Union for Forestry Research Organisations (IUFRO), and will become president of IUFRO, one of the world's largest and oldest scientific organisations, in October 2014.

One of the main focuses of his studies has been the movement and impact of tree pests and diseases in plantations and natural eco-systems and for which FABI has become renowned. He and his team have consequently obtained funding from a large number of organisations in South Africa and elsewhere in the world. His research programme was also selected as one of the first six DST-NRF Centres of Excellence to be established.

Wingfield has advised and co-advised more than 50 master's and 60 doctoral students, many of whom now hold very senior positions globally, and for which he received the department of trade and industry's Technology for Human Resources in Industry Programme award for

**He was responsible for establishing the Tree Protection Co-operative Programme**



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human capacity development. He has published widely with more than 700 research papers in prestigious ISI journals and has authored or edited seven books.

He also serves on numerous journal editorial boards and has been a long-standing member of the board of the CSIR.

His research has garnered considerable recognition locally and internationally, and he has received numerous awards and honours

in recognition of these contributions. He is an elected fellow of the Royal Society of South Africa, the Academy of Sciences of South Africa, the Southern African Society for Plant Pathology, and the American Phytopathological Society. He has received honorary doctorates from the University of British Columbia, Canada and North Carolina State University, and received the highest scientific award, the Kwame Nkrumah Scientific Award, from the African Union in 2013.

### Professor Brenda Wingfield University of Pretoria

Professor Brenda Wingfield has made the study of the global movement and evolution of fungal pathogens, particularly those on trees, her main research focus for the past 20 years.

After obtaining a BSc in biochemistry and genetics from the then University of Natal (now the University of KwaZulu-Natal) and an honours degree from the University of Cape Town (UCT), she moved to the University of Minnesota, where she completed her master's in biochemistry, and then to Stellenbosch University for her PhD. She spent time as a research assistant for the Institute for Electron Microscopy and then as a research officer for UCT's department of biochemistry. After leaving her position of researcher at Stellenbosch, a position she held for two years, she moved to the University of the Orange Free State (now the University of the Free State) to work as lecturer, senior lecturer and eventually associate professor, before taking up the position of professor at the University of Pretoria's (UP) department of genetics.

She was involved in leading the winning bid for the research team in tree health biotechnology to be one of the first six DST-NRF Centres of Excellence to be established, and was the programme leader for the first five years of its existence. She is one of the founding members of the Forestry and Agricultural Biotechnology Institute, and is currently acting dean of the faculty of natural and agricultural sciences at UP.

Wingfield has been responsible for a number of major advances in fungal taxonomy and phylogeny, not the least of which was the introduction of DNA-based research tools to her field of research in South Africa. This has enabled her research group to understand the biology of a wide variety of tree pathogens. Her research programme is one of the foremost in the study of distribution and population dynamics of tree pathogens using DNA markers. Her



Professor Brenda Wingfield

success as a researcher is reflected in the internationally recognised work of many of her past doctoral students. She has trained 45 honours students, has supervised 45 master's and 45 doctoral students, and has contributed considerably to bringing more female graduates into the research field.

She has published more than 300 peer-reviewed papers in a variety of international journals, including *Fungal Genetics and Biology*, *Molecular Biology and Evolution*, and *Molecular Ecology*. In addition, she has co-authored one book

and authored/co-authored many book chapters and conference proceedings.

Wingfield's work and standing as a scientist have garnered considerable recognition. She has been awarded the UP's Excellent Achiever's Award three times, and received the university's Chancellor's Award for Research in 2012. Additionally, she received the Women in Water Sanitation and Forestry Award, the DST Distinguished Women in Science Award, and the African Union Regional Award for Women in Science.





## University of Pretoria pushing the boundaries of science

The University of Pretoria (UP) is a leading research institution that is internationally renowned for its innovative solutions to local challenges. This is driven by the University's excellent academic research.

The University congratulates Prof Brenda Wingfield, Prof Michael Wingfield on their NRF A-ratings and Prof Stella Nkomo on being named NRF Champion of Research Capacity Development.

Prof Brenda Wingfield and Prof Michael Wingfield are internationally recognised for their expertise and quality of research outputs regarding the identification, molecular genetics and management of fungi and insects that kill trees. Prof Stella Nkomo is an exceptional academic and critically acclaimed international author in the fields of human resource management, race, gender and managing diversity.

[www.up.ac.za](http://www.up.ac.za)

1 Prof Stella Nkomo | 2 Prof Michael Wingfield | 3 Prof Brenda Wingfield