



Prof Mike Wingfield

Prof Wingfield is die Direkteur van die Instituut vir Bosbou- en Landboubiotegnologie (FABI), wat hy in 1998 gestig het. FABI huisves ongeveer 150 MSc-, PhD- en nadoktorale studente en het 'n aansienlike internasionale voetspoor. FABI trek studente uit baie verskillende lande en daar is sowat 30 verskillende moedertale verteenwoordig. FABI-programme lok eksterne navorsingsbefondsing van meer as R35 miljoen per jaar. Die Instituut is die tuiste van een van die agt Departement van Wetenskap en Tegnologie/NNS-ondersteunde Sentrums van Uitnemendheid (die Sentrum van Uitnemendheid in Boomgesondheidsbiotegnologie), sowel as die internasionaal erkende Koöperatiewe Program vir Boombeskerming en die Woud- Molekulêre Genetika-groep. Prof Wingfield se navorsing fokus op insekplae en siektes wat woude en bosbou wêreldwyd bedreig. Met behulp van 'n verskeidenheid benaderings (veral molekulêre genetiese tegnieke), word peste en patogene uit verskillende lande van die wêreld geïdentifiseer – dikwels vir die eerste keer. Belangrike ontdekkings van kriptiese spesiasie en hibridisering het na vore gekom vir baie boompeste en patogene. Begrip van die biologiese prosesse bevorder die vermoë om die vernietigende impak van plae en patogene op bome te werk.

Daar is projekte in baie verskillende dele van die wêreld waar molekulêre genetiese gereedskap gebruik word om gebiede van oorsprong en die geskiedenis van die verspreiding van siekte-agente te verstaan. Die oogmerk van prof Wingfield se navorsing is om oplossings te vind vir die beheer van probleme wat lei tot ernstige ekonomiese verliese en verliese aan biodiversiteit. Die belangrikste toekennings wat prof Wingfield oor die afgelope vyf jaar ontvang het, sluit in: erkenning as een van die Universiteit se 100 denkleiers in die eeufeesjaar 2008 en sy verkiesing as genoot van die American Phytopathological Society in dieselfde jaar. In 2009 ontvang hy die Biotech Fundi-toekenning van die Gautengse Departement van Landbou- en Landelike Ontwikkeling vir die ontwikkeling van mensekapitaal en die goue penning van die Wetenskapsakademie van Suid-Afrika (ASSAf). Die Technology and Human Resources for Industry Programme (THRIP) maak 'n toekenning vir menslike kapasiteitsbou in 2011 aan hom. In 2012 ontvang hy die graad DSc *honoris causa* van die Universiteit van Brits-Columbië in Kanada en hy ontvang vanjaar dieselfde graad van North Carolina-staatsuniversiteit (VSA). In 2008 en 2012 is 'n A1-gradering deur die NNS aan hom toegeken.

Prof Wingfield is the Director of the Forestry and Agricultural Biotechnology Institute (FABI), which he established in 1998. FABI accommodates approximately 150 MSc, PhD and postdoctoral students, and has achieved a substantial global footprint. Students of FABI come from many different countries with approximately 30 mother-tongue languages spoken in the Institute. FABI programmes draw external research funding in excess of R35 million per annum. The Institute is home to one of the eight Department of Science and Technology/NRF-supported Centres of Excellence (the Centre of Excellence in Tree Health Biotechnology), as well as the globally recognised Tree Protection Co-operative Programme and Forest Molecular Genetics group. Prof Wingfield's research focuses on insect pests and diseases that threaten forests and forestry globally. Using a broad range of approaches (especially molecular genetic techniques), pests and pathogens arising in many different countries of the world are identified – often for the first time. Important discoveries of cryptic speciation and hybridisation have emerged for many tree pests and pathogens. Understanding the biological processes enhance the capacity to reduce the often devastating impact that these pests and pathogens have on trees.

There are projects in many different parts of the world where molecular genetic tools are applied to understand areas of origin and the history of the spread of disease agents. Ultimately, his research seeks to provide solutions to controlling these problems that are increasingly resulting in serious losses to both economies and the biodiversity of countries and continents. The most significant awards that Prof Wingfield has received over the past five years alone include recognition as one of the University of Pretoria's 100 leading minds in the 2008 centenary-year celebrations, and being elected as a fellow of the American Phytopathological Society. In 2009 he received the Biotech Fundi Award for human capacity development from the Gauteng Department of Agriculture and Rural Development, and the gold medal from the Academy of Sciences of South Africa (ASSAf). He received the THRIP Award for human capacity building in 2011, and a DSc *honoris causa* degree from the University of British Columbia, Canada, in 2012, and a similar honour from North Carolina State University, USA, in May 2013. In both 2008 and 2012 he received an A1-rating from the NRF.

Prof Wingfield ke Molaodimogolo wa Instiitshute ya Payotheknolotši ya Temo le Dithokgwa (FABI), yeo e hlomilwego ka 1998. FABI e amogela baithuti ba go balelwa go 150 ba MSc, PhD le ba dithuto tša ka morago ga lengwalo la bongaka, ebile o atlegile go ka fihlelela mehlala ya go bonagala lefaseng ka bophara. Baithuti ba FABI ba tšwa dinageng tša go fapafapana tše di ntši tša lefase, tša go ba le maleme a ka gae a 30 ao a bolelwago ka Instiitshuting. Mananeo a FABI a goketša thekgo ya mašaeleng a dinyakišišo ya ka ntle ya ka godimo ga milione tša R35 ka ngwaga. Instiitshuti ke legae la yengwe ya Disenthara tša Bothakga tše seswai tša Kgoro ya Saense le Theknolotši/tša go thekgwa ke NRF (Senthara tša Bothakga ka Payotheknolotši ya Maphelo a Dihlare), ga mmogo le Lenaneo la Tšhomišano ya Tšhireletšo ya Dihlare la go amogelwa lefaseng ka bophara le sehlopha sa Ditšenetiki tša Molekule wa Dithokgwa. Dinyakišišo tša Prof Wingfield di lebeletše dikhunkhwane le malwetši ao a senyago dithokgwa le merero ya dithokgwa lefaseng ka bophara. Ka go šomiša molokoloko wa go phatlalala wa mekgwa (eupša kudu dithekniki tša tšenetiki ya molekule), dikhunkhwane le dipatotšene go tšwa dinageng tše di ntši tša go fapafapana tša lefase di a hlaolwa – gantši lekga la mathomo. Dikutullo tša bohlokwa tša phetogo ye e khutilego le tšwadišo ya mehuta ya go se swane di bonagetše go dikhunkhwane tša dihlare le dipatotšene. Go kwešiša ditshepedišo tša payolotši go kaonafatša bokgoni bja go fokotša khuetšo yeo gantši e bakwago ke dikhunkhwane le dipatotšene tša dihlareng.

Diprotšeke di a hlokomelwa mo dikarolong tše di ntši tša lefase; dithulusi tša tšenetiki tša molekule di a šomišwa go kwešiša mafela a botšo le histori ya phatlalala ya disepediši tša malwetši. Mafelelong, dinyakišišo tša gagwe di tliša ditharollo go laola mathata ao ka bontši a feleletšago ka tobo ye kgolo bobedi go diekonomi le phapano ya bophelo ya dinaga le dikontinente. Difoka tša bohlokwa kudu tšeo Prof Wingfield a di amogetšego mo mengwageng ye mehlano ya go feta fela di akaretša go hlaolwa bjalo ka yo mongwe wa dikgopolo tša dihlaledi tše 100 tša Yunibesithi ya Pretoria meketekong ya ngwagakgolo ya ngwaga ka 2008, le go kgethwa bjalo ka leloko la Mokgatlo wa Faetopatolotši wa Amerika (American Phytopathological Society) ka ngwaga wona woo. Ka 2009 o amogetše Sefoka sa Setsebi sa Payothek sa tlhabollo ya bokgoni bja motho go tšwa go Kgoro ya Temo le Tlhabollo ya Magae ya Gauteng, le seala sa gauta go tšwa go Akatemi ya Saense ya Afrika-Borwa (ASSAf). O amogetše sefoka sa kholofelo go methopo ya botho, tšhomišano ya intasteri (THRIP) sa kago ya bokgoni bja batho ka 2011, le DSc *honoris causa* go tšwa go University of British Columbia, Canada ka 2012 – le North Carolina State University, USA, e tla latela ka Mopitlo 2013. Ka 2008 le 2012 o amogetše maemo a A1 go tšwa go NRF.