

# **Curriculum vitae**

## **Tanay Bose PhD**

Postdoctoral Fellow

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Forestry and Agricultural Biotechnology Institute (FABI) | Department of Biochemistry, Genetics and Microbiology  
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### **Personal details:**

Date of birth: 21 November 1985

Nationality: Indian

Marital status: Never married

Languages: English, Hindi and Bengali

### **Education:**

1. **Doctor of Philosophy** in Microbiology, Forestry and Agricultural Biotechnology Institute, University of Pretoria; Nov 2013- Jan 2018

Thesis title: *Phytophthora* species diversity associated with native and non-native forests in South Africa

Advisor: Prof Michael J Wingfield, University of Pretoria

Co-advisors: Prof Jolanda Roux, University of Pretoria; Prof Treena I Burgess, Murdoch University

2. **Master of Science** in Botany, specialization in taxonomy and molecular systematics of Ascomycota, University of British Columbia; Sep 2010- Aug 2013

Thesis title: Taxonomy and phylogeny of mitosporic Capnodiales and description of a new sooty mold species, *Fumiglobus pieridicola*, from British Columbia, Canada

Advisor: Prof Mary L Berbee, University of British Columbia

Co-advisor: Dr Don R Reynolds, University Herbarium, University of California, Berkeley

3. **Master of Science** in Botany, specialization in Plant Pathology (Gold Medallist), Presidency College, University of Calcutta, Jul 2007- Jun 2009

Thesis title: Study of vascular wilt disease of *Chlorophytum nepalense* (Lindley) Baker

Advisor: Dr Sumita Ghosh, Presidency College, University of Calcutta

Co-advisor: Dr Samarendranath Ghosh, Presidency College, University of Calcutta

4. **Bachelor of Science (Honours)** in Botany, University of Calcutta, Aug 2004- Jul 2007 (Minor subjects: Zoology, and Chemistry)

### **Current researches:**

1. Microbial diversity associated with natural and commercial forestry environments in South Africa (emphasizing on *Phytophthora*, fungi and bacteria)

2. Mycorrhizal species associated with endangered and endemic South African orchids
3. Selection on Phytophthora resistant cultivars of commercially important tree species in South Africa.

#### **Work experiences:**

1. Teaching assistant for lab courses at the University of British Columbia
2. Instructor for lab courses at the University of Pretoria
3. Plant Diagnostic Clinic (FABI) - Nov 2013 – Dec 2016
4. Research assistant with Dr Almuth Hammerbacher (Fungal Biochemistry and Host-Pathogen Interaction) Jan – Dec 2017
5. Chairman, Protea Student Residence, Department of Residence Affairs and Accommodation (TuksRes), University of Pretoria - August 2015 - 2017
6. Chairman, TuksRes Postgraduate Research Committee, University Of Pretoria - March 2017 – 2018

#### **Teaching experiences:**

1. BIOL 209 (Non-Vascular Plants) - 2010-2013, Department of Botany, University of British Columbia
2. BIOL 210 (Vascular Plant) - 2010-2013, Department of Botany, University of British Columbia
3. MBY251 (General Bacteriology), Department of Microbiology, University of Pretoria, 2016
4. MBY755 (Advanced Techniques in Microbiology) - Department of Microbiology, University of Pretoria, 2017- ongoing
5. Scientific Mentor at DST-NRF Centre for Excellence in Tree Health Biotechnology (CTHB), 2014-2018

#### **Student supervisions:**

1. Lola Bakhareva (B.Sc, UBC) – 2012 – degree awarded
2. Elca Rathore (B.Sc, UBC) – 2012 – degree awarded
3. Mr Jacques E Theron (BSc, UP) 2014-15 (DST-NRF, CTHB, FABI)
4. Mr Robert J van Vuuren (BSc, UP) 2015 - 2017 (DST-NRF, CTHB, FABI)
5. Ms Modjadji Makwela (B Sc Hons, UP) – 2017 – degree awarded
6. Ms Modjadji Makwela (MSc, UP) – 2017 – ongoing
7. Ms Khwathelani M Takalani (MSc, UP)– 2017 – dropped out
8. Ms Patience Modiba (MSc, UP) – 2018 – degree awarded

#### **Awards:**

1. Gold Medal in Master of Science in Botany, Presidency College, University of Calcutta - 2009

2. Recipient of Biology Teaching Assistant Professional Development (BioTAP) certificate 2013, Department of Botany, University of British Columbia
3. FABI Best Mentorship Award 2016
4. FABI Best Website Award 2016
5. Sappi funded postdoctoral fellow 2018-2021 on *Eucalyptus* tree health
6. University of Pretoria, Vice-Principal Conference Funding – 2019

#### **Memberships:**

1. Mycological Society of America (MSA)
2. Mycological Society of India (MSI)
3. International Society for Fungal Conservation (ISFC)
4. Advisory Board, Global Journal of Research on Medicinal Plants & Indigenous Medicine (GJRMI)
5. Editorial Board, Phytodiversity, Journal of the Association for Promotion of Plant Science
6. Research Leader Future Africa Project, University of Pretoria

#### **Peer reviewing:**

Reviewer for ISI rated journal in Mycology and Plant Pathology ([Publons Link](#))

#### **Research visits:**

1. Visiting researcher, Prof Treena Burgess' Laboratory, Centre for Phytophthora Research and Management (CPSM), Department of Biological Science, Murdoch University, Perth, Western Australia – (1 July 2014 – 30 September 2014)
2. Visiting researcher, Prof. Dominik Begerow's Laboratory, AG Geobotanik, Ruhr Universität of Bochum – (15 June – 17 August 2019)

#### **Publications:**

1. **Bose T**, Wingfield MJ, Roux J, Burgess TI (2020) *Phytophthora* species associated with soils and roots of native and non-native trees in South Africa. *Microbial Ecology*: 10.1007/s00248-020-01563-0
2. **Bose T**, Roux J, Burgess TI, Shaw C, Wingfield MJ (2019) Pathogenicity of five *Phytophthora* spp. on two important non-native plantation tree species in South Africa. *Forest Pathology* 49:e12560
3. **Bose T**, Wingfield MJ, Roux J, Vivas M, Burgess TI (2018). Community composition and distribution of *Phytophthora* species across adjacent native and non-native forests of South Africa. *Fungal Ecology* 36, 17-25.

4. **Bose T**, Burgess TI, Roux J, Wingfield MJ (2017) *Phytophthora alticola*; revised description based on new collections and a neotype. *Sydowia* 69: 161-170
5. Burgess TI, White D, McDougall K, Garnas J, Dunstan W, Santiago C, Carnegie A, Warboys S, Cahill D, Vetraino AM, Stukely M, Liew ECY, Paap T, **Bose T**, Migliorini D, Williams B, Brigg F, Crane C, Rudman T, Hardy GESTJ (2016) Distribution and diversity of *Phytophthora* across Australia. *Pacific Conservation Biology* 23: 1-13
6. Rahimlou S, Babaeizad V, **Bose T**, Sayari M (2016) Determination of lignin-modifying enzymes (LMEs) in *Hyphodermella* species using biochemical and molecular techniques *Mycologia Iranica* 3: 57-63
7. Rahimlou S, **Bose T**, Babaeizad V, Sayari M, Tajick M (2015) Molecular data confirm mitosporic state of *Hyphodermella rosae* (Phanerochaetaceae) as the pathogen of rosaceous fruits in northern Iran. *Sydowia* 67: 189-196
8. **Bose T**, Reynolds DR, Berbee ML (2014) Common, unsightly, and until now undescribed: *Fumiglobus pieridicola* sp. nov. a sooty mold infesting *Pieris japonica* from western North America. *Mycologia* 48: 111-114
9. **Bose T**, Ghosh S, Ghosh SN (2010) First report of *Fusarium pallidoroseum* causing wilt disease on *Chlorophytum nepalense* (Lindley) Baker. *Journal of Mycopathological Research* 48: 111-114

#### Conferences:

1. **Bose T**, Wingfield MJ, Roux J, Vivas M, Burgess TI (2020) Live plant baiting – a tool to understand host specificity in soil-borne *Phytophthora* species. 88<sup>th</sup> Annual Meeting of the Mycological Society of America. MSA Virtual Meeting: Mycology from the Cloud (22 July 2020) – Graphical abstract presentation.
2. **Bose T**, Wingfield MJ, Roux J, Vivas M, Burgess TI (2019) *Phytophthora* species Associated with roots and soils from native and non-native forestry environments in South Africa. 9th Meeting of the IUFRO Working Party 7.02.09 Phytophthora in Forest and Natural Ecosystems. La Maddalena, Sardinia, Italy (18-25 October 2019) - Oral presentation
3. **Bose T**, Roux J, Burgess TI, Shaw C, Wingfield MJ (2019) Pathogenicity of *Phytophthora* species on two commercially important non-native tree species from South Africa. 9th Meeting of the IUFRO Working Party 7.02.09 Phytophthora in Forest and Natural Ecosystems, La Maddalena, Sardinia, Italy (18-25 October 2019) - Poster presentation
4. Aghighi S, Sistani F, Lori Z, Sarikhan S, **Bose T** (2019) Diversity of oomycetes associated with declining *Pinus* spp. and *Cupressus* spp. in Kerman Province, Iran. 9th Meeting of the IUFRO Working Party 7.02.09 Phytophthora in Forest and Natural Ecosystems, La Maddalena, Sardinia, Italy (18-25 October 2019) - Oral presentation
5. **Bose T**, Wingfield MJ, Roux J, Slippers B (2019) Replanting syndrome in forestry: What is the evidence? 30<sup>th</sup> Annual Meeting of the Tree Protection Co-operative Programme (TPCP) and DST/NRF Centre of Excellence in Tree Health Biotechnology (CTHB). University of Pretoria, South Africa (13-15 May 2019) – Oral presentation
6. Makwela MC, Hammerbacher A, **Bose T** (2019) Community composition of mycorrhizae associated with endemic and endangered South African orchids. 4<sup>th</sup> Conference of the Wild Orchid Society of Southern Africa (WOSA4). Gooderson's Drakensberg Gardens Hotel, South Africa (25 - 27 January 2019) – Oral presentation

7. Modiba MP, **Bose T**, Coutinho TA (2019) Identification of Oomycetes associated with plum orchards in the Western Cape province of South Africa. 51st Congress of the Southern African Society for Plant Pathology. Club Mykonos, Langebaan, South Africa (20 - 24 January 2019) – Poster presentation
8. **Bose T**, Roux J, Burgess TI, Shaw C, Wingfield MJ (2019) Re-evaluating the susceptibility of *Eucalyptus grandis* and *Acacia mearnsii* to five common *Phytophthora* species in South Africa. 51st Congress of the Southern African Society for Plant Pathology. Club Mykonos, Langebaan, South Africa (20 - 24 January 2019) – Oral presentation
9. Makwela MC, Hammerbacher A, **Bose T** (2018) Identification of mycorrhizae species associated with the endemic South African orchid *Habenaria barbertonii*. 3<sup>rd</sup> Conference of the Wild Orchid Society of Southern Africa (WOSA3). Dullstroom, South Africa (19 - 21 January 2018) – Oral presentation
10. **Bose T**, Roux J, Wingfield MJ, Burgess TI (2018) *Phytophthora* spp. in natural forests and commercial plantations in South Africa. 29th Annual Meeting of the Tree Protection Co-operative Programme (TPCP) and DST/NRF Centre of Excellence in Tree Health Biotechnology (CTHB). University of Pretoria, South Africa (14-16 May 2018) – Oral presentation
11. **Bose T**, Roux J, Wingfield MJ, Burgess TI (2017) The hidden *Phytophthora* species: Threats to the future of plantation forestry in South Africa. 28th Annual Meeting of the Tree Protection Co-operative Programme (TPCP) and DST/NRF Centre of Excellence in Tree Health Biotechnology (CTHB). University of Pretoria, South Africa (15-17 May 2017) – Oral presentation
12. **Bose T**, Roux J, Wingfield MJ, Burgess TI (2017) Do *Phytophthora* species move from natural forest to plantations of non-native trees in South Africa? 8th Meeting of the IUFRO Working Party 7.02.09 Phytophthora in Forest and Natural Ecosystems. Sa Pa, Vietnam (18-25 March 2017) – Oral presentation
13. **Bose T**, Burgess TI, Roux J, Wingfield MJ (2017). *Phytophthora umhlaba* sp. nov.: a new species from native forests and plantations of non-native trees in South Africa. 50th Conference of South African Society for Plant Pathology (SASPP). Champagne Sports Resort, Drakensberg, South Africa (15-19 January 2017) – Poster presentation
14. **Bose T**, Wingfield MJ, Roux J, Olivier-Espejel S, Burgess TI (2017) Are natural forests the source of *Phytophthora* species in plantations of non-native trees in South Africa? 50th Conference of South African Society for Plant Pathology (SASPP). Champagne Sports Resort, Drakensberg, South Africa (15-19 January 2017) – Oral presentation
15. **Bose T**, Reynolds DR, Berbee ML (2013) Phylogeny of mitosporic Capnodiales and description of a new sooty mold species *Fumiglobus pierisicolus* from British Columbia, Canada. Joint Meeting of the American Phytopathological Society and the Mycological Society of America (APS and MSA). Austin, the United States of America (10 -14 August 2013) - Oral Presentation

## References:

1. Prof Michael J Wingfield

Forestry and Agricultural Biotechnology Institute (FABI) | University of Pretoria

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2. Prof Treena I Burgess

Director Centre of Phytophthora Science and Management (CPSM) | Murdoch University

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3. Prof Mary L Berbee

Department of Botany | University of British Columbia

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