



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Faculty of Natural
and Agricultural Sciences

CURRICULUM VITAE
Dr Kershney Naidoo



1. BIOGRAPHICAL SKETCH

1.1 GENERAL INFORMATION			
SURNAME	Naidoo	MAIDEN NAME	Naidoo
FIRST NAMES	Kershney	RSA ID NUMBER	8105070012082
PLACE OF BIRTH	South Africa	DATE OF BIRTH	7 th May 1981
DIRECT TELEPHONE	012 – 420 6458	DIRECT TELEFAX	012 – 420 2878
E-MAIL	kershney.naidoo@fabi.up.ac.za	CELL PHONE	084 515 4905

1.2 ACADEMIC QUALIFICATIONS				
DEGREE/DIPLOMA	FIELD OF STUDY	HIGHER EDUCATION INSTITUTION	YEAR	DISTINCTIONS
Doctor of Philosophy	Genetics	University of Pretoria	2013	No
Masters in Science	Genetics	University of KwaZulu-Natal	2006	No
Bachelor of Science (Honours)	Genetics	University of Natal	2003	Yes – <i>Cum laude</i>
Bachelor of Science	Genetics	University of Natal	2003	No

1.3 AREAS OF RESEARCH

- **2013 : PhD (Genetics), University of Pretoria**
 - Research Topic: Mitochondrial genomes and concerted evolution in *Ceratocystis*.
 - Supervisors: Prof. Brenda Wingfield, Prof. Mike Wingfield and Prof. Emma Steenkamp
 - Graduation September, 2013
- **2006 : Master's in Science (Genetics), University of KwaZulu-Natal**
 - Research Topic: Characterization and regulation of Autolytic control mechanisms in *streptococcal* bacterial populations in relation to cell wall Antibiotic resistance.
 - Supervisor: Dr. Mervyn Beukes
- **2003 : Bachelor of Science (Honours) in Genetics, University of Natal**
 - Research Topic: Characterization of the major cell wall autolysins in selected *streptococcal* species on a bimolecular and bio computational level.
 - Supervisor: Dr. Mervyn Beukes
 - Degree awarded with distinction, *Cum Laude*
- **2002 : Bachelor of Science (Degree), University of Natal**
 - **Major: Genetics**

1.4 WORK EXPERIENCE TO DATE

NAME, ADDRESS OF EMPLOYER	CAPACITY AND/OR TYPE OF WORK	PERIOD
University of Pretoria, Hatfield, Pretoria, 0083	Academic Lecturer: Genetics Department	Feb 2015 - Current
University of Pretoria, Hatfield, Pretoria, 0083	Promotion: Senior Technical Assistant Genetics Department	Jan 2013 – 2015
	First Technical Assistant Genetics Department	Jan 2009 – Jan 2013
University of Pretoria, Hatfield, Pretoria, 0083	Student demonstrator and tutor Genetics Department	2007 – 2008
University of KwaZulu-Natal, Private Bag X01, Scottsville, 3209	Student demonstrator and tutor School of Molecular and Cellular Biosciences, Genetics Department	2003 – 2005
University of KwaZulu-Natal, Private Bag X01, Scottsville, 3209	Research Assistant: Horticulture Department, Supervision of Dr. A. Modi	2004 – 2005
University of KwaZulu-Natal, Private Bag X01, Scottsville, 3209	Research Assistant: School of Molecular and Cellular Biosciences, Genetics Department, Supervision of Dr. M. Beukes	2002
Edgars Pietermaritzburg, Church Street, 3201	Service centre operator	1998-2005

1.5 REFEREES

- **Prof. P. Bloomer** Head of Department, Genetics
University of Pretoria
Tel: +27 (0) 12 4203259
E-mail: paulette.bloomer@up.ac.za
- **Prof. B.D Wingfield** Deputy Dean for Postgraduate Studies & PhD Supervisor –
University of Pretoria
Tel: +27 (0) 12 420 3946
E-mail: brenda.wingfield@up.ac.za
- **Prof. M.J. Wingfield** Director of the Forestry and Agricultural Biotechnology Institute &
PhD Co-Supervisor – University of Pretoria
Tel: +27 (0) 12 420 3937
E-mail: mike.wingfield@fabi.up.ac.za
- **Prof. E.T Steenkamp** Microbiology Lecturer & PhD Co-Supervisor – University of
Pretoria
Tel: +27 (0) 12 420 3262
E-mail: emma.steenkamp@fabi.up.ac.za

1.6 PEER REVIEWERS

- **Dr. M.P.A Coetzee** Senior Genetics Lecturer – University of Pretoria
Tel: +27 (0) 12 420 4826
E-mail: martin.coetzee@fabi.up.ac.za
- **Dr. P. de Waal** Senior Genetics Lecturer – University of Pretoria
Tel: +27 (0) 12 420 3949
E-mail: pdewaal@postino.up.ac.za
- **Dr. A. van der Merwe** Senior Genetics Lecturer – University of Pretoria
Tel: +27 (0) 12 420 6402
E-mail: albe.vdmerwe@fabi.up.ac.za

1.7 COURSES COMPLETED

- University of Pretoria : Advanced Molecular Phylogenetics Course , Forestry and Agricultural Biotechnology Institute (FABI), (2007)
- University of KwaZulu-Natal : PD Quest software training and analysis, 2D-SDS PAGE, BIO RAD, Johannesburg (2005)
- University of Natal : Certified course Training in Electron Microscopy (TEM and SEM), (2003)
- **Postgraduate training** includes experience practically with a self-taught discipline for the theory:
 - MCBS 707 – Advanced techniques in Molecular and Cellular Biosciences
 - MCBS 702 – Research Project in Genetics
 - MCBS 709 – Seminars and Discussions in Molecular and Cellular Biosciences
 - MCBS 711 & 722 – Advanced topics in Molecular and Cellular Biosciences

2. MANAGEMENT AND ADMINISTRATIVE DUTIES

2.1. DEPARTMENTAL DUTIES

- *Genetics Departmental Administration*
 - Honours 2016 Coordinator
 - GTK 703 Research Project
 - GTK 704 Trends in Genetics
 - Transformation Task Team – Departmental leader for the effective implementation of transformation within the Department of Genetics – University of Pretoria
 - Departmental representative for the University of Pretoria's Marketing committee
 - Planning and implementation of the UP corporate image
 - South African Society for Human Genetics Conference 2015 Planning committee
 - Conference organizational and logistical planning for the 2015 Biannual SASHG conference held in Pretoria
 - Postgraduate Social Days
 - Planning and *inter alia* assisting with financial and research administration
 - Overseeing of Departmental facilities
 - Financial administrative assistance for the catering and venue bookings
 - Honours Social Days
 - Planning and assisting of financial administration for venue bookings and catering
 - General academic administration
 - UP with Science (Science Communication)
 - Departmental liaising and communication
 - Presentation development and recruitment of students
 - CoE Public days (Interactive display setups linked to appropriate Research (FABI) based themes)
 - Overall Public Relations for the program
 - Global climate change / Future earth debates and forums
 - Seminar Series 2013
 - Scheduling and planning of the Departmental Seminar Series for postgraduates as well as invited guest speakers
 - Organization and Coordinator of the 11th Annual Genetics Postgraduate Symposium
- University CLICK UP system (Interactive student based portal)
 - MLB 111 (Molecular and Cell Biology) Lecturer
 - GTK 703 (Honours Research Module) Coordinator
 - GTK 704 (Honours Trends in Genetics module) Coordinator
 - MLB 153 (Molecular and Cell Biology) Administrative and Tutorial Module coordinator
 - GTS 366 (Plant Genetics) Administrative and Practical Module coordinator
 - BTC 361 (Plant Genetics and Crop Biotechnology) Administrative and Practical Module coordinator

3. TEACHING ACTIVITIES

3.1 MODULES TAUGHT			
MODULE		LEVEL	SELF-DEVELOPED
2015-Present University of Pretoria	MLB 111 – Compiling and presentation of lectures (ENGLISH); ensuring all e-assignments are created (CONNECT portal); setting of and marking of semester tests, examination and supplementary examination.	1 st year	Partially
2016-Present University of Pretoria	GTK 704 – Development and coordination of Genetics in the Workplace – a two credit Honours module aimed at creating an awareness of the different job sectors available to students with a genetics background.	Honours	Yes
3.2 PRACTICALS PRESENTED			
MODULE		LEVEL	SELF-DEVELOPED
2013–Present University of Pretoria	BTC 361 – Compiling and presenting tutorials and practicals; overseeing activities of demonstrators; demonstrating the tutorial during the 150 minute practicals; ensuring all assignments are completed; assessments of tutorials; marking of tutorials, practical exams and maintaining marksheet databases.	3 rd year	Yes
2009 – 2012 University of Pretoria	GTS 366 – Compiling and presenting tutorials; overseeing activities of demonstrators; demonstrating the tutorial during the 150 minute practicals; ensuring all assignments are completed; assessments of tutorials; marking of tutorials and maintaining marksheet databases.	3 rd year	Yes
2009–Present University of Pretoria	MLB 153 – Compiling and presenting both tutorials and discussion classes; overseeing activities of demonstrators; hands on experience in the PARTICIAPATE Initiative; demonstrating the tutorial during the 90 minute practicals; ensuring all TUT tests are completed; assessments of TUT tests and assignments; marking of semester tests; tutorials and exams; maintaining marksheet databases.	1 st year	Partially
2007-2008 University of Pretoria	GTS 352 – Preparing for each dry laboratory practical; demonstration of each practical.	3 rd year	No

2003-2005 University of KwaZulu-Natal	<u>GENE 226 : Foundational prokaryotic genetics</u> – Preparing for each wet laboratory practical; pre-practical discussions; demonstration of each practical; marking of practicals.	2 nd year	No
	<u>GENE 327 : Principles of genetic engineering</u> – Preparing for each wet laboratory practical; pre-practical discussions; demonstration of each practical; marking of practicals.	3 rd year	Yes

3.3 MODULES COORDINATED

	MODULE	LEVEL
2016 –Present	<u>Honours 2016</u> <u>GTK 704</u> – Development and coordination of Genetics in the Workplace – a two credit Honours module aimed at creating an awareness of the different job sectors available to students with a genetics background. Students will be exposed to integrative networking as well as softer skills required for employment.	Honours
2013 – 2014 University of Pretoria	<u>BTC 361</u> – Overseeing all logistical and administrative responsibilities; preparing practicals and tutorial group sessions; management of all assessment and mark databases.	3 rd year
2009 – 2012 University of Pretoria	<u>GTS 366</u> – Overseeing all logistical and administrative responsibilities; preparing practicals and tutorial group sessions; management of all assessment and mark databases.	3 rd year
2009–Present University of Pretoria	<u>MLB 153</u> – Overseeing all logistical and administrative responsibilities; preparing discussion and tutorial group sessions; management of all assessment and mark databases.	1 st year
2003-2005 University of KwaZulu-Natal	<u>GENE 327 : Principles of genetic engineering</u> – Overseeing all logistical and administrative responsibilities; preparing discussion and tutorial group sessions; management of all assessment and mark databases.	3 rd year

3.4 POSTGRADUATE ACTIVITIES		
ACTIVITIES		LEVEL
2014 – Present	Honours guest lectures	Honours
2013 – 2014	MSc and PhD committees (Stage gates) <ul style="list-style-type: none"> ○ Stefanie van Wyk ○ Simone Fouche ○ Caitlyn Botha ○ Mohammad Sayari ○ Janine Burger 	MSc MSc MSc PhD MSc
2014- Present	Postgraduate student supervision <ul style="list-style-type: none"> ○ Janine Burger ○ Candice Herd ○ Williem Pretorius 	MSc Honours Honours
3.5 UNDERGRADUATE / FACULTY MENTORSHIP		
2015-2015	Angela Hoffmann	CTHB (3 rd)
2014-2014	David Andrew	Faculty (2 nd and 3 rd)
2010-2011	Maanda Rashka	Faculty (2 nd and 3 rd)
2007-2009	Daniel Diedricks	CTHB (2 nd and 3 rd)
3.6 EXTRA CURRICULUM ACTIVITIES		
2016 –Present	Day House Guardian – Vividus Ladies	All levels and all faculties

4. RESEARCH OUTPUTS

4.1 THESIS OUTPUTS

- Naidoo, K. (2013) Mitochondrial genomes and concerted evolution in *Ceratocystis*. – Ph.D Thesis, University of Pretoria
- Naidoo, K. (2006) Characterization of the Autolytic systems in selected *Streptococcal* species. – MSc Thesis, University of KwaZulu-Natal

4.2 PUBLISHED PEER-REVIEWED OR REFEREED JOURNAL ARTICLES

- Van der Nest MA, Wingfield MJ, Wilken PM, Coetzee MPA, Naidoo K, Roodt D, Sauerman E, Godlonton T, Trollip C, McTaggart AR, Steenkamp ET, Wingfield BD. (2015) Saprophytic and pathogenic fungi in the *Ceratocystidaceae* differ in their ability to metabolize plant-derived sucrose. BMC Evolutionary Biology 15:273. 10.1186/s12862-015-0550-7

- Wingfield BD, Barnes I, De Beer ZW, De Vos L, Duong TA, Kanzi AM, Naidoo K, Nguyen HDT, Santana QC, Sayari M, Seifert KA, Steenkamp ET, Trollip C, Van der Merwe N, Van der Nest MA, Wilken PM, Wingfield MJ. (2015) Draft genome sequences of *Ceratocystis eucalypticola*, *Chrysosporthe cubensis*, *C. deuterocubensis*, *Davidsoniella virescens*, *Fusarium temperatum*, *Graphilbum fragrans*, *Penicillium nordicum*, and *Thielaviopsis musarum*. IMA Fungus 6(2):493-506. 10.5598/imafungus.2015.06.02.13
- Van der Nest MA, Beirn LA, Crouch JA, Demers JE, De Beer ZW, De Vos L, Gordon TR, Moncalvo JM, Naidoo K, Sanchez-Ramirez S, Roodt D, Santana QC, Slinks SL, Stata M, Taerum SJ, Wilken PM, Wilson AM, Wingfield MJ, Wingfield BD. (2014) Draft genomes of *Amanita jacksonii*, *Ceratocystis albifundus*, *Fusarium circinatum*, *Huntiella omanensis*, *Leptographium procerum*, *Rutstroemia sydowiana*, and *Sclerotinia echinophila*. IMA Fungus 5(2):473-486. 10.5598/imafungus.2014.05.02.11
- van der Nest MA, Bihon W, de Vos L, Naidoo K, Roodt D, Rubagotti E, Slippers B, Steenkamp ET, Wilken PM, Wilson A, Wingfield MJ and Wingfield BD (2014) Draft genome sequences of *Diplodia sapinea*, *Ceratocystis manginecans* and *Ceratocystis moniliformis*. IMA Fungus · 5(1): 135–140 doi:10.5598/imafungus.2014.05.01.13
- Naidoo K, Steenkamp ET, Coetzee MPA, Wingfield MJ and Wingfield BD (2013) Concerted Evolution in the Ribosomal RNA Cistron. PLoS ONE 8(3): e59355. Impact factor: 3.73
- Wingfield BD, ET Steenkamp, Q Santana, MPA Coetzee, S Bam, I Barnes, CW Beukes, A W.Y. Chan, L de Vos, G Fourie, M Friend, TR Gordon, DA Herron, C Holt, I Korf, M Kvas, SH Martin, O Mlonyeni, K Naidoo, MM Phasha, A Postma, O Reva, M Simpson, S Slinki, B Slippers, R Sutherland, NA van der Merwe, MA van der Nest, SN Venter, PM Wilken, M Yandell, R Zipfel and MJ Wingfield. (2012) First fungal genome sequence from Africa: Consequences scientific and regional. *South African Journal of Science* 108: 1-9. Impact factor: 0.84

4.2 MANUSCRIPTS IN PREPARATION FOR SUBMISSION / UNDER REVIEW TO PEER-REVIEWED OR REFEREED JOURNALS

- K. Naidoo, E.T. Steenkamp, M.P.A Coetzee, M.J. Wingfield, B.D. Wingfield. (2015) An inter- and intra-species comparative analysis: Assembly, annotation and variation in *Ceratocystis* mitochondrial genomes.

5. OTHER SCHOLARLY RESEARCH-BASED CONTRIBUTIONS

5.1 PARTICIPATION IN CONFERENCES, WORKSHOPS AND SPECIAL ACHEIVEMENTS

5.1.1 NATIONAL

- **2016** – Transforming the Curriculum: South African Imperatives and 21st century possibilities. 28 January 2016, CSIR Convention Centre, Pretoria
- **2013** – 18th Biannual Congress – South African Society for Microbiology, Warmbaths, Bela Bela 24 – 27 November 2013, Annotation and comparative analysis of three *Ceratocystis* mitochondrial genomes; K. Naidoo, M.P.A. Coetzee, E. Steenkamp, M.J Wingfield & B.D Wingfield
- **2012** – 38th Annual South African Association for Botanist conference, University of Pretoria 16th-18th January 2012, Gene conversion of the Ribosomal RNA cistron; K. Naidoo, M.P.A. Coetzee, E. Steenkamp, B. Slippers, M.J Wingfield & B.D Wingfield
- **2011** – 9th Annual South African Society for Systematic Biology conference, Rhodes University, Gramhamstown, 19th-21st January 2011, Mitochondrial Genomics: Developing tools to characterize sibling species in fungi; K. Naidoo, B.D. Wingfield & M.J. Wingfield
- **2011** – 37th Annual South African Association for Botanists conference, Rhodes University, Grahamstown, 17th-19th January 2011.
- **2010** – 21st Biannual South African Genetics Society conference, University of the Free State, Bloemfontein, April 2010, Characterizing the Mitochondrial Genome of the tree pathogen *Ceratocystis albifundus*; K. Naidoo, B.D. Wingfield & M.J. Wingfield
- **2009** – 46th South African Society for Plant Pathology conference & 6th African Mycological Association, Gordons Bay, Cape Town, January 25- 29th 2009, Progress towards sequencing the mitochondrial genome of the tree pathogen *Ceratocystis albifundus*; K. Naidoo, B.D. Wingfield & M.J. Wingfield
- **2008** – 20th Biannual South African Genetics Society conference, University of Pretoria, 27-29th March, 2008, Progress towards sequencing the mitochondrial genome of the tree pathogen *Ceratocystis albifundus*; K. Naidoo, B.D. Wingfield & M.J. Wingfield
- **2006** – 19th Biannual South African Genetics Society conference, University of the Free State, Bloemfontein, May 2006, Characterization of the Autolytic Systems in selected *Streptococcal* species; K. Naidoo & M. Beukes
- **2003** – 16th Annual Symposium of the South African Society for Microbiology, University of Durban-Westville, Characterization of the Autolytic Systems in *Streptococcus milleri*; K. Naidoo & M. Beukes

5.1.2 WORKSHOPS

- **2016** – University of Pretoria : High Impact Modules Workshop
- **2015** – University of Pretoria : Academic and Research Induction Week
- **2014** – University of Pretoria : Hands on Science Communication for Early career Academics
- **2010** – University of Pretoria : Forensic Science workshop, Inqaba Biotechnology
- **2008** – University of Pretoria : Inspiring Discovery workshop for Molecular and Cellular Sciences, Inqaba Biotechnology
- **2008** – University of Pretoria : Merck Laboratory Safety and Chemical grades workshop
- **2007** – University of Pretoria : Advanced Phylogenetics workshop

- **2005** – University of KwaZulu-Natal : PD Quest software training and analysis, 2D-SDS PAGE, BIO RAD, Johannesburg
- **2004** – University of Western Cape : Training for the Biacore-X Instrument

5.1.3 SPECIAL ACHIEVEMENTS

- **2016** – Research and Development Grant (University of Pretoria) **(R50 000)**
- **2016** – Genomics Research Institute Seed Funding (University of Pretoria) **(R60 000)**
- **2013** – Incentive Research Award: Upcoming researcher in the Department of Genetics – University of Pretoria **(R9350)**
- **2013** – Incentive Studentship Award for Publication **(R5600)**
- **2011** – NRF Sabbatical Award - Improving Academic Qualifications (IAQ) towards research costs **(R200 000)**
- **2011** - NRF Sabbatical Award - Improving Academic Qualifications (IAQ) towards Staff and departmental replacement costs **(R200 000)**
- **2009** – Certificate of Recognition for Scientific Community Engagement, Forestry and Agricultural Biotechnology Institute
- **2009** – Elected Student Representative for the Forestry and Agricultural Biotechnology Institute Mancom
- **January 2009** – Awarded as a Young Plant Pathologist at the South African Society for Plant Pathologists, Gordons Bay, South Africa **(R5000)**
- **2006-2008** – University of Pretoria Postgraduate Mentor Bursary **(R65 000)**
- **2006-2008** – NRF Prestigious Scholarship for Doctoral studies **(R55 000)**
- **2005** – NRF Thuthuka Scholarship for collaborative research in Germany, University of Bonn and France, Institute Pasteur, Strasbourg **(R25 000)**
- **2004-2005** – Scholarship, NRF Thuthuka Research Grant Holder Bursary **(R20 000)**
- **2004** – NRF Thuthuka Scholarship for training in Surface Plasmon Resonance at the Institute Pasteur, Strasburg France **(R25 000)**
- **2004** – NRF Thuthuka Scholarship for training and use of Biacore-X Instrument at the University of Western Cape **(R18 000)**
- **2003** – Scholarship, NRF Thuthuka Research Grant Holder **(R8 000)**
- **2003** – Beckman Book Prize at the 16th Annual Symposium of the South African Society for Microbiology (KZN Branch) for the best student paper presentation **(R500)**
- **2002-2000** – Fulton Trust Bursary **(R9 000)**

5.2 MEMBERSHIP IN PROFESSIONAL BODIES

- Active member of the **South African Association of Botanists**
- Active member of the **South African Society for Plant Pathology**
- Active member of the **South African Genetics Society**
- Active member of the **Southern African Society for Systematic Biology**
- Active member of the **South African Society of Microbiology**

5.3 COMMUNITY SERVICE

- **2013-2016** – UP with Science Program, University of Pretoria, Department of Genetics.
- **2014-2015** – National and Special Judge – Eskom Science Expo for young Scientists Finals, Benoni, South Africa.
- **2010-2015** – Regional Judge – Eskom Expo for Young Scientists National Finals, Pretoria.
- **2010-2013** – UP with Science Program, University of Pretoria, Representative for the Forestry and Agricultural Biotechnology Institute in conjunction with the Department of Genetics.
- **2010-2015** – University of Pretoria, Faculty of Natural and Agricultural Sciences Mentorship Program, selected to mentor undergraduate BSc students.
- **2009, 2010, 2011, 2012** – Representative of the Centre of Excellence Research Open Day, Stellenbosch; Cape Town and Pretoria.
- **2009, 2010, 2011, 2012** – University of Pretoria Open Day – Representative of the Genetics Department.
- **2009** – UP with Science Program, University of Pretoria, Representative for the Centre of Tree Health Biotechnology (CTHB) Division in conjunction with the Department of Genetics.
- **2009** – Co-ordinator of the Forestry and Agricultural Biotechnology Institute (FABI) open day to St. Albans Boys High School.
- **2007, 2008, 2009, 2010** – Co-ordinator of the Centre of Tree Health Biotechnology (CTHB) Division Mentorship Program
- **2007, 2008, 2009, 2010** National Judge – Eskom Expo for Young Scientists National Finals, Pretoria.
- **2007** – Team leader and University Representative for the Sasol SciFest initiative, Grahamstown, South Africa.
- **2005** – Represented University of KwaZulu-Natal (Genetics Department) at the Sasol Science Festival (SciFest), Grahamstown, South Africa. Was placed 2nd overall for the Best Genetics Display.
- **2005** – Represented University of KwaZulu-Natal (Genetics Department) at the Royal Agricultural Show, Pietermaritzburg, South Africa. Was placed 1st for the most interactive Public Display on Genetically modified organisms.