

Irina S. Druzhinina




PROFESSIONAL ADDRESS AND CONTACT

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FungiG Fungal Genomics Group,

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CURRENT POSITIONS AND ASSIGNMENTS

Professor (Full), Fungal Genomics Laboratory (FungiG), Leader Editor, Applied and Environmental Microbiology (AEM), ASM

Head of the TU Wien Collection of Industrial Microorganisms, Vienna, Austria

Associate Editor, Mycoasia

Editorial Board Member, Fungal Biology and Biotechnology, BMC

Head of the International Committee of *Trichoderma* Taxonomy (ICTT)

Coordinator of *Trichoderma* whole genus genomics project, JGI DOE, Berkeley, USA

SUMMARY OF SCIENTIFIC ACHIEVEMENTS

- Publications in peer-reviewed journals >140
- Books edited (including on-going commitments) 5
- Book chapters (including on-going commitments) 22
- Citations (Research Gate / Google Scholar / Google scholar since 2016): >9300 / >9800 / >5500
- *h*-index (Research Gate / excl. self-citation / Google scholar): 57 / 53 / 58
- Fundraising efficiency (Science Funds, Universities, and Industry) >3.5 Mio Euro
- Invited and selected talks on international symposia >30
- Poster presentations (not counted) >250
- Organization of scientific meetings (including scheduled) 8
- Member of scientific societies 6
- Editor in peer-reviewed scientific journals 2
- Editorial board member 2
- Developed scientific web projects (total / currently active) 8 / 3



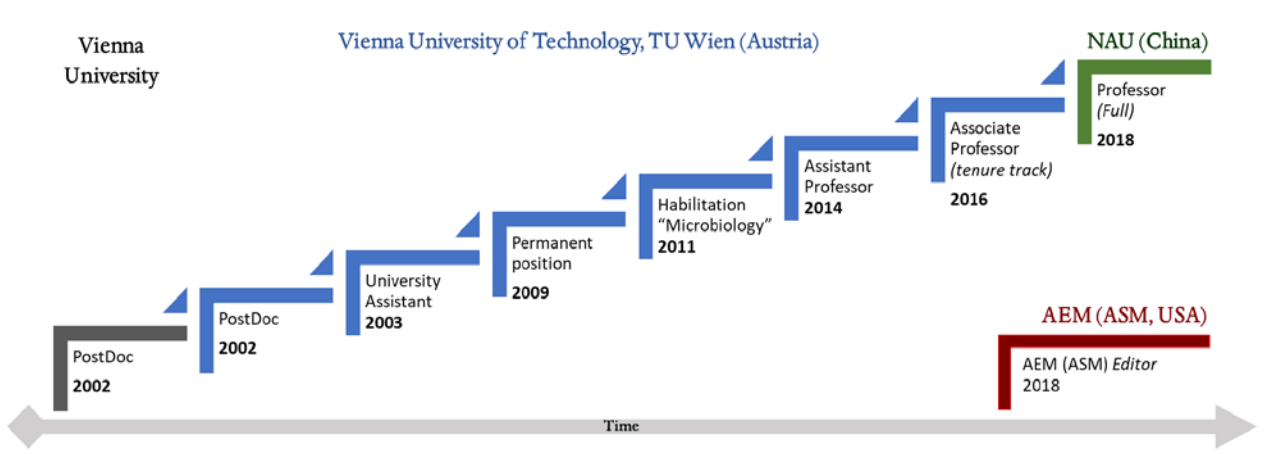
RESEARCH KEYWORDS

Fungal fitness, fungal genomics, fungal communities, genetics, molecular evolution and phylogeny, horizontal gene transfer in fungi, fungal diversity, metagenomics, surface-active proteins, hydrophobins, *Trichoderma*, mycoparasitism, microbial diversity, DNA BarCoding, phenotype profiles, microbial ecophysiology, heterologous protein production, proteomics, microbial ecology, fungal – bacterial interactions, biological control of fungal pests, plant growth promotion, tropical ecology, insect microbiomes, biological degradation of synthetic polymers

QUALIFICATIONS

- 1981 – 1991, Gymnasium with emphasis on Mathematics & Physics, school-leaving certificate with honor, Moscow, Russia
- **1991 – 1996, Lomonosov's Moscow State University, Faculty of Biology, Dept. of Mycology & Algology, Russia. Diploma with honor degree: Botany and Ecology, Mycology and Algology, Moscow, Russia**
- 1996 – 1997, Post-graduate course (Philosophy, Mycology, Genetics of Populations) at the Lomonosov's Moscow University, Russia
- **1998, Master degree in the University of Vienna, Vienna, Austria**
- 1998 – 2001, PhD study in the Institute of Botany, University of Vienna, Austria
- **2001, Doctor of natural science, specialization on Botany University of Vienna, Vienna, Austria**
- **2011, Habilitation on Microbiology, Vienna University of Technology (TU Wien), Vienna, Austria**

MAJOR EMPLOYMENT TIMELINE (2001 – 2021)



PROFESSIONAL LIFE

- 2002 – 2002, Post-doc Researcher in the Institute of Risk Research, University of Vienna, Vienna, Austria
- 2002 – 2003, Post-doc Researcher in the Institute of Chemical Engineering, TU Wien, Vienna, Austria
- 2002 – 2007, Scientific secretary of the International Subcommittee on *Trichoderma* and *Hypocrea* of IUMS International Commission on Taxonomy of Fungi (ICTF)
- 2003 – 2014, University assistant in the Institute of Chemical Engineering, TU Wien, Vienna, Austria
- since 2003, Leader of the Project Group Fungal Diversity and Evolution
- **since 2002, Head of the TU Collection of Industrial Microorganisms (TUCIM), TU Wien, Vienna, Austria**
- 2003, Training on Phenotype Microarrays, ECORC, Ottawa, Canada
- **2004, Training on Evolutionary Biology, Molecular Evolution Workshop, MBL, Woods Hole, USA**
- **since 2007, Chair of the International Subcommittee on *Trichoderma* and *Hypocrea*, www.ISTH.info**
- 2008, Maternity leave, 10 months
- 2009 – 2010, Principal investigator for industrial project "Pest management", BASF, Germany
- 2008 – 2009, Principal investigator for industrial project "BioDiesel production from microalgae", TUMA pumpen, Austria
- 2010 – 2015, Project manager in the Austrian Centre of Industrial Biotechnology (ACIB), strategic project "Targeting Enzymes to Polymers"
- **2011, Habilitation on Microbiology ("Privatdozentin")**
- 2011 – 2018, Leader of the Microbiology Research Group (FG), Institute of Chemical Engineering (ICEBE), TU Wien, Austria
- 2011 – 2013, Tutor for TVFA (TU Wien) Seminar SCHIMMELPILZE IN GEBÄUDEN
- 2012 – 2018, Key Researcher in the Austrian Centre of Industrial Biotechnology (ACIB)

- 2013 – 2014, Project Group Leader in the Austrian Centre of Industrial Biotechnology (ACIB)
- **2013 – 2016, Head (Bereichsleiterin) of the Research Division Biotechnology and Microbiology, ICEBE, TU Wien, Austria**
- 2014 – 2016, Assistant Professor, ICEBE, TU Wien, Austria
- **2015, “Leadership in science”, hfp consulting, UK**
- **2016 – 2018, Associate Professor (Laufbahnstelle = tenure track), ICEBE, TU Wien, Austria**
- 2017 – 2018, Guest Professor FH Campus Wien, Vienna, Austria
- 2018, Honored guest Professor, Nanjing Agricultural University, Nanjing, China
- **2018 – 2023, Editor in the Applied and Environmental Microbiology, ASM**
- **Since 2019, Full Professor, Research group leader, Nanjing Agricultural University, Nanjing, China**
- **2019, Honored “100 Talent” Professor of the Jiangsu Province, China**
- Since 2020, Curator of Outlineoffung.org web portal of fungal taxonomy, international
- **Since 2020, Coordinator and Co-PI for the JGI (DOE, USA) Community Sequencing Project Whole genus Genomics of *Trichoderma*, international**
- Since 2021, Associated editor of MycoAsia journal, China
- **2021, Hearings for the W3 Full professorship position Environmental Microbiomics, TU Berlin, Germany**

DEVELOPED WEB PROJECTS

- www.trichoderma.info – website of International Subcommittee on Taxonomy of *Hypocrea*, ICTF, IUMS
- www.trichokey.com – website supporting molecular identification of *Trichoderma*
- www.fungig.org – website of the Fungal Genetics Group (FungiG), Nanjing, China

ORGANIZATION OF SCIENTIFIC MEETINGS (INCLUDING SCHEDULED)

- **2006, Organizer of the 8th European Conference on Fungal Genetics, ECFG, Vienna, Austria**
- 2006, Chair of the Symposium on *Trichoderma* taxonomy on the International Workshop on *Trichoderma*, Vienna, Austria
- 2008, Chair of the Symposium on Taxonomy of Industrially Important Fungi and an invited speaker on the IUMS Congress of Mycology, Istanbul, Turkey
- 2010, Chair of the Symposium on Molecular Ecology of Fungi in a course of the 9th International Mycological Congress, Edinburgh, UK
- **2017, Chair and the organizer of the Symposium “Effectors and Small Secreted Cysteine-Rich Proteins”, 29th Fungal Genetics Conference, March 13 – 19, 2017 Asilomar, USA**
- 2018, Workshop organizer and invited speaker: *Trichoderma* and Soilborne Diseases on the First International Congress of Biological Control, May 14 – 16, 2018, Beijing, China
- **2022, Member of the Scientific Committee of the 16th European Conference on Fungal Genetics, ECFG, Innsbruck, Austria**
- **2023, Member of the Scientific Committee of the International Mycological Congress, ICM, Amsterdam, The Netherlands**

MEMBER OF SCIENTIFIC COMMUNITIES

- Since 2007, chair of the International Committee on Taxonomy of *Trichoderma* of the IUMS International Commission on Taxonomy of Fungi (ICTF)
- Since 2007, member of IUMS International Commission on Taxonomy of Fungi (ICTF)
- Since 2007, member of steering committee of fungal barcode initiative
- Since 2006, member of American Society of Microbiology

REVIEWER FOR SCIENTIFIC JOURNALS AND FUNDING ORGANIZATIONS

- 2013 – 2018, Editorial Board Member for Applied and Environmental Microbiology
- Since 2017, Editorial Board Member for BMC Fungal Biology and Biotechnology

- Since 2010, Springer Journal of Zhejiang University SCIENCE B
- **Reviewer for national research funds in Australia, Belgium, Germany, Netherlands, Russia, Israel, etc.**
- Reviewer for (selected journals, in alphabetic order) African Journal of Microbiological Research, Applied Microbiology and Biotechnology, Amino Acids, Annals of Microbiology, Antonie van Leeuwenhoek Journal of Microbiology, Applied and Environmental Microbiology, Applied Microbiology, Biocontrol, Biocontrol Science and Technology, Biomacromolecules, Biotechnology for Biofuel, Biotechnology Journal, BMC Biotechnology, BMC Benomics, Canadian Journal of Botany, Catalysis communications, Crop Protection, Current Genetics, Environmental Microbiology and Environmental Microbiology Reports, Experimental and Molecular Pathology, Fungal Genetics and Biology, Folia Microbiologica, Fresenius Environmental Bulletin (FEB), Frontiers of Chemical Science and Engineering, Frontiers of Environmental Science and Engineering of China, Frontiers of Microbiology, Functional and Integrative Genomics, Fungal Biology, Fungal Diversity, Indonesian microbiology, Journal of Basic Microbiology, Journal of Medical Microbiology, Journal of Agricultural Science and Technology (JAST), Journal of Applied Genetics Springer, Journal of Bioremediation & Biodegradation, Journal of Biotechnology, Journal of Zhejiang University SCIENCE B, Molecular Biology and Evolution, MGAG Molecular Genetics and Genomics, Microbial Cell Factories, Microbial Ecology, Microbial Pathogenesis, Microbiological research, Microbiology, MycoAsia, MycoKeys, Mycologia, Mycological Progress, Mycological research, Mycology an International Journal of fungal biology, Mycopathologia, Mycoscience, Natural Product Research, New Phytologist, Nova Hedwigia, Plant Physiology and Biochemistry, PLoS ONE, Physiological and Molecular Plant Pathology, Research in microbiology, Science of Food and Agriculture, Scientific reports, Soil Biology and Biochemistry, Springer Plus, Sydowia, Tropical Plant Pathology

PROJECT LEADER AND PROJECT MANAGER (2013 – 2021)

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|---|--|
| • FUNGIG STARTUP FUND
Funded by Nanjing Agricultural University, China | 2019 – 2023
5 000 000 RMB |
| • 100 TALENTS PROGRAM
Funded by the Jiangsu Province, China | 2019 – 2021
500 000 RMB |
| • HYDROPHOBINS; THE VITAL INVENTION OF FUNGI
Funded by the Austrian Science Fund FWF | 2018, GRANTED
418 20.50 Euro |
| • MICROBIAL ECOLOGY, CHEMISTRY, AND DIVERSITY OF EXPLODING ANTS
Funded by the Vienna Science and Technology Fund WWTF | 2014 – 20180
785 200 Euro |
| • <i>TRICHODERMA</i> PROTEINS WITH ANKYRIN DOMAINS
Funded by the Austrian Science Fund FWF | 2013 – 2018
443 215.50 Euro |
| • <i>TRICHODERMA</i> – <i>BURKHOLDERIA</i> INTERACTIONS
Funded by the Austrian Science Fund FWF | 2013 – 2018
328 860 Euro |
| • MOLECULAR ECOLOGY OF <i>TRICHODERMA</i>
Funded by the Austrian Science Fund FWF | 2005 – 2013
260 860 Euro |
| • GENOMICS OF <i>TRICHODERMA HARZIANUM</i> T37
Nanjing Agricultural University, China | 2012 – 2017
100 000 Euro |
| • OVERPRODUCTION OF A PROKARYOTIC PROTEASE IN <i>TRICHODERMA</i>
Carbios, France | 2015 – 2016
48 000 Euro |
| • ANALYSIS OF PEPTAIBOLS OF <i>TRICHODERMA REESEI</i> CULTURE BROTHS
AB Enzymes, Germany | 2013 – 2015
13 000 Euro |
| • HETEROLOGOUS GENE EXPRESSION OF MYCOTOXIN HYDROLYSING ENZYMES
Biomin, Austria | 2013 – 2014
70 000 Euro |

PROJECT MANAGER

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|--|--|
| • TARGETING ENZYMES TO POLYMERS
Funded by the Austrian Center Industrial Biotechnology
Project manager
Key Researcher
Research group leader | 2010 – 2015
600 000 Euro
since 2010
since 2011
since 2013 |
| • „ <i>CLONOSTACHYS</i> “
Funded by the Austrian Science Fund FWF | 2013 – 2016
232 921.50 Euro |

Project manager	2013 – 2016
Research group leader	2014 – 2016

EARLIER RESEARCH GRANTS, AWARDS, SCHOLARSHIPS AND INDUSTRY COLLABORATIONS

- **1998 – 2001, Bertha von Suttner Doctorate Scholarship from the Austrian Office of Academic Exchanges (ÖAD)**
- 2000 – 2002, Grant from Austria-Hungary bilateral scientific and technical collaboration program (Wissenschaftlich - Technische Zusammenarbeit des ÖAD)
- 2002 – 2004, Responsible researcher in the project, "Biodiversity and population structure of biocontrol species of *Trichoderma*" funded by the Austrian ministry of Science and Culture, GZ 45.515/1-VI/B/7a/2001
- 2003 – 2007, Responsible researcher in the project "Speciation in *Trichoderma*" (FWF Austrian Science Foundation, P 16601-B12)
- 2004 – 2006, Grant from Austria-Italy bilateral scientific and technical collaboration program (Wissenschaftlich - Technische Zusammenarbeit des ÖAD)
- 2004 – 2005, Grant from Hochschuljubilaumsstiftung der Stadt Wien
- 2006 – 2010, Responsible researcher in the project "Phylogeny of *Trichoderma* Section Longibrachiatum" (FWF Austrian Science Foundation, P19340)
- 2009 – 2010, Industrial cooperation with BASF, Germany
- 2008 – 2009, Industrial cooperation with TUMA Pumpen, Austria

ADMINISTRATIVE EXPERIENCE IN TU WIEN 2003 – 2018 (IN GERMAN)

- Leiterin der Projektgruppe Mikrobiologie im Forschungsbereich „Biotechnologie und Mikrobiologie“ (damaliger Leiter: Univ. Prof. C. P. Kubicek) 2003 - 2011
- Leiterin der Forschungsgruppe „Mikrobiologie“ (E166.53) 2011 - 2018
- Leiterin des Forschungsbereichs „Biotechnologie und Mikrobiologie“ (E166.5) von Oktober 2013 bis Februar 2016
- Leiterin der Sammlung industrieller Mikroorganismen der TU Wien (TU Collection of Industrial Microorganisms, TUCIM; <http://www.vt.tuwien.ac.at/tucim/>)
- **2014**, Mitarbeit bei der "Forschungs- und Transfersupport Förderberatung und Wirtschaftskooperationen" der TU Wien zur Entwicklung von *F&E Profilen*.
- **Oktober 2014**, Teilnahme am *E166 Integration Workshop*, Seminarhotel Groß Enzersdorf – Hotel am Sachsengang, Groß-Enzersdorf, Österreich
- 2012 – 2018, *Technik im Kindergarten Workshop*
- **2015**, Hauptmitglied als Mittelbauvertreter in der **Berufungskommission** „Biochemische Technologie“, TU WIEN
- **2015**, Ersatzmitglieder (Mittelbau) in der **Habilitationskommission** Dr.techn. Oliver SPADIUT. Fachgebiet: "Biotechnologie (Biotechnology)"
- **2015**, Hauptmitglied (Mittelbau) in der **Habilitationskommission** Dr. Astrid Mach-Aigner. Fachgebiet: „Synthetische Biologie (Synthetic Biology)"
- **April 2016**, organisierte und koordinierte die TU Wien Station „Angewandte Mikrobiologie für Industrie und Pflanzenschutz“ der „**Langen Nacht Der Forschung**."
- **2018**, Hauptmitglied als Mittelbauvertreter in der **Berufungskommission** „Multimodal Bioanalytics“, TU WIEN

SELECTED PUBLIC RELATION ACTIVITIES

- TU Wien Presseausendung 04.11.2013: Großer Erfolg für Bio-Projekte der TU Wien
- Frauespuren TU Wien, Frauespuren heute, Professorinnen, Irina Druzhinina
- Project "Technical and natural science in playschool", "Science in Kindergarten 2"
- TU Wien Presseausendung 70/2011

- ScienceDaily (Oct. 31, 2011) Mould Fungi Can Cure Plants
- TU Wien Presseausendung 44/2007;
- **Der Standard** Geistesblitz: Die Schwammerlsucherin, Redaktion, 19. Februar 2008, 20:36
- **Die Presse** Altes Wissen von den Ameisen lernen, April 23, 2016

LANGUAGES

English (fluent), **German** (sufficient understanding and speaking), **Russian** (native)

PERSONAL INFO

Name as in the passport:	Dr. rer. nat. Irina Druzhinina
Date and place of birth:	16 May 1974, Moscow, Russia (USSR)
Current Residence:	Nanjing, China since 2018
Citizenship:	Austria

HOBBIES

Across Eurasia cultural comparisons, photography, essays (in Russian www.druzhinina.com), sociopsychology, fine art, science theory, anthropology and human evolution, follower of the International Atheistic Alliance (AAI), gardening and pets.