

## Curriculum Vitae

**Prof. Dr. sc. agr. habil. Kerstin Wydra**

MSc. agr., Dipl.-Ing. agr.



### 1 Previous and current appointments

- Since 2012 Professorship (permanent) at Erfurt University of Applied Sciences, Chair for ‘Plant Production and Climate Change’; current appointment; 2014: engagement in sustainability strategies in research and university management national and international, sustainability education, research and transfer projects
- 11/2012 President, Erfurt University of Applied Sciences  
-2/2014 University management, 350 employees, among them 138 professors, 4500 students; public representation and national and international networking, strategic plan development, policy; interdisciplinary interaction and development towards a university following principles of sustainability
- 2010 Call in the High Level Panel of Experts (HPLE) of the UN Committee of World Food Security (CFS)
- 2009-2012 Managing Director at Centre for Tropical and Subtropical Agriculture and Forestry (CeTSAF), Georg-August Universität, Göttingen  
Organization of international workshops in Germany and abroad on issues of biodiversity, nature conservation, food security, sustainable land use under climate change, forest and wild life conservation, etc; coordination of international projects and study programs with developing countries, establishing worldwide networks for research and capacity building
- 2011 Co-Founder - with University Medicine Göttingen - of the ‘Göttingen International Health Network’ (GIHN; <http://www.gihn.net/>); establishment of the ‘One Health Concept’ – human-plant-animal-environmental health
- 2010 Expert delegate of BMBF/DLR in EU-KBBE for elaboration of calls in ‘Specific International Cooperation Actions’ (SICA) in subject ‘Primary Production and Food Security’; expert of BMBF/DLR & BMZ in elaboration of project calls on cooperation with developing countries
- 2010-2014 Project leader (German partner), research project (BMZ) ‘Mitigating the impact of climate change on rice disease resistance in East Africa’ in collaboration with national and international institutions (Africa Rice Centre; Tanzania, Uganda, Rwanda)
- 2010/2011 Commissioner for Internationalization of Faculty of Agricultural Sciences, University of Göttingen
- 2007-2011 Project leader in Federal Project on ‘Pests and diseases in asparagus’

- since 2001 Assistant Professor, since 1/2005 Higher Assistant Professor, 2007 entitled Professor at Institute of Plant Diseases and Plant Protection, Leibniz Universität Hannover; working group leader and leader of various international projects. Evaluator of project proposals for international donors; supervision of 32 MSc and 18 PhD students from developing countries
- 2004-2008 Project leader (German partner) of research project ‘Selection of tomato genotypes with resistance against bacterial wilt’ with Asian Vegetable Research and Development Centre (AVRDC), Taiwan
- 2000-2006 Project leader of bilateral project ‘Integrated control methods in sustainable (biological) tomato production’ with partner at Kasetsart University and Asian Institute of Technology, Bangkok, Thailand *External evaluation: very good*
- 1999-2001 Scientist, Institute of Plant Pathology and Plant Protection, Göttingen, and Institute of Plant Diseases and Plant Protection, Hannover 1986 Research Assistant, Institute of Agricultural Chemistry, Göttingen; modelling P-fluxes in the rhizosphere
- 1998-2002 Coordinator of EU-INCO-DEV-project (IC18-CT-98-0306) ‘Development and implementation of integrated methods for the control of cassava bacterial blight’, ecozone/climate/environment interactions; with partners from France, Colombia, UK, Benin and Togo. *EU-evaluation: ,very good’*
- 1995 -1996 Elected coordinator of ‘Integrated pest management (IPM) in cassava’ program at IITA, coordination of research of 19 IITA-scientists; IITA-representative at international strategic meetings and donors’ organizations; *external project evaluation: ‘very good’*
- 1993-1999 Project leader, International Institute of Tropical Agriculture (IITA), Plant Health Management Division, Substation ‘Biological Control’, Republic of Benin (West-Africa)  
Project ‘Ecologically sustainable cassava plant protection’; Leader of project ‘Integrated control methods of crop diseases’, ecozone/environment interactions; leader of an international, interdisciplinary team of entomologists, plant breeders, agronomists, biochemists, with University of Göttingen, in collaboration with ORSTOM, France, PPS, Wageningen, Netherlands, CIAT, Colombia, and national Institutes in Benin, Ghana, Nigeria and Cameroon
- 1993 Consultant, Plant Protection Department, establishment of a plant quarantine database, Food and Agriculture Organization (FAO), Rome, Italy
- 1989-1992 Project leader ‘Biotechnology’, production of polymers from bacteria, Company Diamalt/Schering GmbH, Munich
- 1986-1989 Research Assistant, Institute of Plant Pathology and Plant Protection, Göttingen.

## 2 Education and evaluations

- 2012 Professorship (permanent) at Erfurt University of Applied Sciences; Chair of Plant Production and Climate Change
- 8/2007 Title of ‘Professor’ (apl.) at the Faculty of Natural Sciences, Gottfried Wilhelm Leibniz Universität Hannover
- 12/2004 Award for ‘Projects in agricultural sciences to be specifically awarded’ of the

,Foundation for the German Science' through the German Research Foundation (DFG) for the integration of basic and applied research in development context. 12.750 EURO

- 11/ 2004      Habilitation  
*Title of habilitation thesis:* Development of integrated control of bacterial diseases of cassava, cowpea and tomato  
*Title of colloquium:* New knowledge on host-parasite interactions through genome analysis of phytopathogenic microorganisms  
*Venia legendi* in Phytopathology
- 1991          Dr. sc. agr., Institute of Plant Pathology and Plant Protection, Faculty of Agriculture, University of Göttingen , grade 'summa cum laude' (1.0)  
*Title of dissertation:* Interactions between cell wall polymers of bean plants (*Phaseolus vulgaris*) and cells of *Pseudomonas syringae* pv. *phaseolicola* and their extracellular, polymer products (supervision: R. Heitefuß, K. Rudolph)
- 1992          MSc in Phytomedicine, Faculty of Agricultural Sciences, University of Göttingen, grade 'very good' (1.2)  
*Title of MSc-thesis:* Methods for analysis of plant polysaccharides interacting with pathogens. Grade 'very good' (1.0). Published as: Wydra, K. & Rudolph, K. 1992: Analysis of toxic extracellular polysaccharides. In: Modern Methods of Plant Analysis. New Series, Vol. 13. Analysis of Plant Toxins. H.F. Linskens and J.F. Jackson eds., Springer Verlag, Berlin, 113-183. (supervision: R. Heitefuß, K. Rudolph)  
MSc studies in postgraduate courses on 'Tropical and Subtropical Agriculture' and 'Phytomedicine'
- Diploma engineer in Agricultural Sciences  
*Title of thesis:* P-efficiency studies of tropical legumes  
(supervision: A. Jungk, N. Claassen) grade 'very good' (1.0)

### Languages

German (mothertongue), English (fluent), French (fluent), Spanish (medium level)

### 3 Leadership positions, activities in university bodies

- President of the Erfurt University of Applied Sciences (2012-2014), head of 138 professors, 350 employees (total) and 4500 students; chair person of the academic senate, member of the university board, chair person of the presidium with 3 vice-presidents, deputy chairperson of the federal committee of universities of applied sciences, Thuringia, representative of the university presidents of Thuringia in gender competence network

Develop structural plan until 2020, establishing networks between public (government, education) and private sector, NGOs and civil society, regional and international; responsible for acquisition of funds, public representation, communication with ministers and presidents of ministers

- Managing Director, Centre for Tropical and Subtropical Agriculture and Forestry (Tropenzentrum), University of Göttingen (2009-2012) with 56 members (mostly

professors) from 7 faculties, board and member assemblies, coordination of collaboration with deans' offices of faculties, structural and strategic development of university centre(s), development of vision and mission, agendas and standing orders, and of a new concept supported by the great majority of members; support financing through diverse donors; development of scientific networks and research projects on highest levels (universities, ministries, EU); establishment of international Double Degree Programs, supervision of international MSc and PhD Programmes 'Forest and Nature for Society' and 'Sustainable Forest and Nature Management', establishment and management of 'Higher Education Partnerships' (HEP) between Universität Göttingen and Universities in Chile, Colombia, Indonesia, South Africa, Botswana

- Commissioner for internationalization of the Faculty of Agriculture, University Göttingen, 2010/2011
- Foundation of the Göttingen International Health Network (GIHN) with University Medicine Göttingen, 2010, international launching event May 2011 (<http://www.gihn.net/>)
- Foundation of 'mass spectrometry forum' between University Hannover, Veterinary University Hannover, Medical University Hannover, Fraunhofer Society and companies (June 2007, together with one colleague) (<http://mf-hannover.de/>)
- Member in study commission (2005/2006), Member in examination board and admissions committee of BSc & MSc programs in Horticulture and Biotechnology, University of Hannover (LUH) (2007-2009)
- Member in habilitation committee, professor appointment committee (LUH)
- Development of concept for graduate school in framework of the excellence initiative of DFG (LUH) (second collaborator)
- Participation in meetings of faculty council and professor groups, and in development of Centre for Applied Plant Biotechnology (LUH)
- Member in founding committee of 'Centre of International Horticulture' (LUH)
- Member in founding committee of 'Centre of Plant Biotechnology' (LUH)
- Project leader of various large cooperative international projects (national and international donors) on sustainable development (1994-2014).

#### **4 Committee memberships and representation duties**

- Board of Directors of Solarinput e.V. & International Alliance on Solar Energy and Drinking Water <http://solarinput.de/aktivitaeten/arbeitskreise/international-alliance-for-solar-energy-and-water/>
- Advisory Board of ThEEN (Thüringer Erneuerbare Energien Netzwerk) <https://www.theen-ev.de/de/beirat.html>
- Begleitforschung Agriphotovoltaik, Fraunhofer Institut für Solare Energiesysteme
- Member: Arbeitsgemeinschaft bäuerliche Landwirtschaft (AbL)

- High Level Panel of Experts (HPLE) of the Committee of World Food Security (CFS)
- Member of the expert group of the German Academic Exchange Service (DAAD)
- Board member, Council for Agricultural Research in the Tropics and Subtropics e.V. (ATSAF) (2008-2011)
- German Forum for Development Oriented Research (DFOR) Representative of Institute of Plant Diseases and Plant Protection, University of Hannover (since 2002; DFOR is now part of ATSAF)
- Deutsche Phytomedizinische Gesellschaft
- American Phytopathological Society (abeyant)
- International Project on GMO Environmental Risk Assessment Methodologies. (GMO ERA), Geobotanical Institute, Swiss Federal College of Technology (ETHZ), Zürich
- Representative of IITA at International Fund for Agricultural Development (IFAD), Rome: Development of strategic paper 'Development of a global cassava strategy' with representatives from 15 int. organizations; leader of a subgroup (Rome, 1996)
- Representative of IITA at international meeting of CGIAR-IPM Task Force 'Soilborne pathogens' (ICARDA, Syria, 1996).

## **5 International networking, workshops, knowledge transfer**

### **German Ministry of Agriculture: Project with Uganda, Tanzania, Kenya on renewable energies in food processing, 2018-2023**

**Networking with Universities in southern and eastern Africa, Kigali, Rwanda, 2014:** Representative of the German's Rector Conferences (HRK) in Academia-Public-Private Partnership Forum "Harnessing East Africa's Innovation Potential", organized by Inter-University Council for East Africa in collaboration with the East African Business Council, Kigali, Rwanda, 23./24 October, supported by the German Rectors Conference (HRK). Keynotes (1) Reflections from Academia – in a global perspective. (2) Collaboration Academia & PPP for technological and socio-economic development.

### **University Göttingen and abroad, 2009-2012**

**In position of Managing Director of the 'Tropical Centre' of University Göttingen I organized numerous workshops and summer schools on biodiversity and nature conservation in an interdisciplinary context** at University of Göttingen and in various countries (Iran, Philippines, Mexico, Tanzania, Indonesia, China, etc.) on (agro)-biodiversity, forestry, agriculture and health, etc.

**Supervision of networks:** GAIInBiNet – the German International Biodiversity Network (<http://www.uni-goettingen.de/de/205290.html>), GAForN – The German Forestry Alumni Network (<http://www.uni-goettingen.de/de/198920.html?c=144>), and several regional alumni networks on issues of biodiversity, nature conservation – Consortium of Goettingen-Kassel-Marburg German Alumni Network, German-Egypt-Arab Region Alumni Network, Germany-Iran Alumni Network, Red Cientifica Alemania Latinoamerica

(<http://www.uni-goettingen.de/de/198920.html?c=150>), Göttingen Internatioanl Health Network

**International Workshops 2001, 2012:** Cross-cutting agriculture and health. Ghana 2012. Tanzania 2011.

**International Workshop: International Health Network, Göttingen, Mai 2011.**  
**Keynote:** Agriculture, nutrition and health. [http://www.gihn.uni-goettingen.de/datei/GIHN%20Jahresbericht%202011\\_2012.pdf](http://www.gihn.uni-goettingen.de/datei/GIHN%20Jahresbericht%202011_2012.pdf)

**International Conference: (De-) Constructing Biodiversity.** Göttingen, September 2011. (co-organizer) <http://www.uni-goettingen.de/de/210707.html>

**International Symposium con Workshop:** Ecosystem-based management and biodiversity conservation in forestry for Asia-Pacific (2011) <http://www.uni-goettingen.de/de/international-symposium-cum-workshop---ecosystem-based-management-and-biodiversity-conservation-in-forestry-for-asia-pacific-5-%E2%80%938-december-2011/222422.html>

**International German Alumni Summer School:** Consequences of multiple disturbances of tropical forests (2011) <http://www.uni-goettingen.de/de/international-german-alumni-summer-school-2011--consequences-of-multiple-disturbances-of-tropical-orests--/213662.html>

**International German Alumni Summer School:** Multidisciplinary approach for biodiversity conservation and management in the face of globalization (2011) <http://www.uni-goettingen.de/de/international-german-alumni-summer-school-2011--multidisciplinary-approach-for-biodiversity-conservation-and-management-in-the-face-of-globalization-/190822.html>

**International Workshop with Netzwerkforum Biodiversität (Diversitas),** Museum für Naturkunde, Leibniz-Institut für Evolutions- und Biodiversitätsforschung: Can agrobiodiversity enhance food security facing climate change? The insurance function of biodiversity declined through all scales (2011)

**Semester seminars, Göttingen, 2010.** Market-based instruments for ecosystem services. Universität Göttingen, <http://www.jura-goettingen.de/de/128381.html>

**International Autumn School:** Biodiverstiy conservation and management: Networking, economic approaches, policies, education and future strategies (2010) <http://www.uni-goettingen.de/de/international-autumn-school-networking-economic-approaches-policies-education-and-future-strategies/186378.html>

**International Symposium cum Workshop:** Protection and utilization of ecosystems in arid and semi-arid regions (2010) <http://www.uni-goettingen.de/de/symposium-cum-workshop--protection-and-utilization-of-ecosystems-in-arid-and-semi--arid-regions-/153657.html>

**International German Alumni Summer School:** Biodiversity Management and tourism development (2010) <http://www.uni-goettingen.de/de/international-german-alumni-summer-school-2010--biodiversity-management-and-tourism-development-/136557.html>

**International Summer School Tropentag 2009:** conservation and management of biodiversity in the tropics (2009) <http://www.uni-goettingen.de/de/international-daad-alumni-summer-school-tropentag-2009-conservation-and-management-of-biodiversity-in-the-tropics/164523.html>

**International Symposium:** Multi-purpose forestry: Managing and enhancing ecosystem services and production functions of forests, woodlands and trees outside the forests (2009) <http://www.uni-goettingen.de/de/international-symposium-on-multi-purpose-forestry-managing-and-enhancing-ecosystem-services-and-production-functions-of-forests-woodlands-and-trees-outside-the-forests/114487.html>

**Workshop: Project Results and knowledge transfer of EU-INCO Project 2001, Togo**

**Various workshops** - Transfer of methods for detection of pathogens, biological control of bacterial and fungal pathogens, integrated control of plant diseases, to African partner institutes and scientists:

**National Root Crops Research Institute, Nigeria**

**Institute de Recherche Agronomique, Cameroon**

Cassava diseases: survey techniques, epidemiology and diagnosis. Two training courses (1994)

**IITA, Ibadan, Nigeria**

Breeding for disease resistance. Participants from 19 countries. Together with 2 colleagues, 2-week courses (1994, 1995, 1996)

**IITA, Cotonou, Benin**

Cassava diseases: survey techniques, epidemiology, diagnosis, detection and isolation of pathogens. Training course (1994)

Biological control of pathogens. Training course of two weeks with 15 NARS scientists, together with a colleague (1996)

**Plant Protection and Quarantine Service, Ghana**

Quarantine regulations and production and distribution of healthy cassava planting material. Training course together with 2 colleagues (1996)

**IITA, Cotonou, Benin**

Integrated management of bacterial diseases and root and stem rots of cassava and cowpea. Workshop and training course of one week with 14 scientists from 9 African countries. BMZ Project-End-Workshop (1999)

**IITA, Cotonou, Benin**

Long-term training of 13 African post-graduates (1994-1999)

**Institut de Recherche Agronomique, Togo**

Workshop on 'Integrated control of cassava bacterial blight' with 27 participants from 5 African countries. EU Project End Workshop. Together with 3 colleagues (2001)

## **6 Invited presentations**

**Numerous public presentations on agriphotovoltaic in 2021, 2022, 2023**

**Various invitations as expert for formulating future research goals by EU, and German ministries BMBF, BMZ, BMU (2010, 2011, 2014)**

**Keynote, Podium-member, Kigali, Rwanda 2014.** Representative of the German's Rector Conferences (HRK) in Academia-Public-Private Partnership Forum "Harnessing East Africa's Innovation Potential", organized by Inter-University Council for East Africa in collaboration with the East African Business Council, Kigali, Rwanda, 23./24 October, supported by the German Rectors Conference (HRK). (1) Reflections from

Academia – in a global perspective. (2) Collaboration Academia & PPP for technological and socio-economic development.

**Keynote Workshop Agriculture and Health, Accra, Ghana, 2012:** The One-Health Concept: improving food security and livelihood.

**Keynote in III. International Conference on Plant Pathogenic Bacteria, Guadalajara, Mexico, September 2012:** Management of bacterial diseases with mineral and biotic resistance inducers.

**Workshop Agriculture and Health, Dar Es Salaam, Tanzania, 2011:** The One-Health Concept: improving food security and livelihood.

**Bioversity International, Rome, 2011:** Agrobiodiversity, food security and health – challenges and opportunities for research and implementation

**Keynote. International Conference: (De-) Constructing Biodiversity. September 2011.**  
**Title:** The insurance function of agrobiodiversity and the importance of monitoring its conservation and use to cope with change.

**Keynote. International Workshop: International Health Network, Göttingen, Mai 2011.** Agriculture, nutrition and health.

**Keynote. International Conference** organized by Bioversity International 2011, Frankfurt: On farm conservation of neglected and underutilized species: status, trends and novel approaches for coping with climate change. Title of presentation: The insurance function of agrobiodiversity and the importance of monitoring its conservation and use to cope with change.

**Keynote:** Crop diversity and food security (2011). **International Workshop:** Can agrobiodiversity enhance food security facing climate change? The insurance function of biodiversity declined through all scales. International Workshop in Göttingen, March 2011, together with Museum für Naturkunde, Leibniz-Institut für Evolutions- und Biodiversitäts-forschung

**University München-Weihenstephan HSWT (2011).** Crop diversity and food security - declined through all scales.

**Invited as expert for podium discussion on strategic planning of agricultural research in Sub-Saharan Africa (June 2010)**

Invited by BMBF, Germany and French Ministry of Education and Research, IRD, CIRAD

**‘Afrika-Tag’ of DAAD 2008**

Agricultural Research and Cooperation with Africa. **Keynote speaker.** (11/2008)

**International Workshop on ‘Bacterial blight of rice’. WARDA, IRRI, University of Hannover, NARS from 5 African countries.** (6/2008)

Various lectures on basics of plant pathogenic bacteria, host-pathogen interaction (5 hours in French language)

**2nd Internat. Symposium of Biological Control of Plant Bacterial Diseases, Florida 2008**

**Session Chair:** ‘Mechanisms of biological control’. **Keynote speaker:** A model of silicon induced basal resistance against *Ralstonia solanacearum* in various hosts. (11/2008)

**Göttinger Zentrum für Molekulare Biowissenschaften (GZMB) - Kolloquium Biochemie/Zellbiologie, SFB 523, Göttingen, 2008**

Characterization of tomato – *Ralstonia solanacearum* interaction by transcriptomic, proteomic and biochemical methods



**Agrarwissenschaftliche Fakultät Stuttgart-Hohenheim, Januar 2008**

Charakterisierung der Interaktion Tomate – *Ralstonia solanacearum* mit molekularen und histochemischen Methoden

**Zentrum für Pflanzenbiotechnologie, Universität Hannover, 2007**

Transcriptomic, proteomic and partly biochemical characterization of resistance of tomato to a bacterial pathogen

**Massenspektrometrie Forum, Naturwissenschaftliche Fakultät, Leibniz Universität Hannover, Tierhochschule und Medizinische Hochschule 2007**

Massenspektrometrische Analytik in der angewandten Pflanzenwissenschaft - Beispiele aus der aktuellen Forschung an der LUH

**Uppsala BioCenter, Swedish University of Agricultural Sciences (SLU), Uppsala, Sweden, 2007**

Agricultural plant pathology: an interdisciplinary bridge between basic and applied research

**International Conference on Plant Pathogenic Bacteria, Edinburgh, UK**

Influences of the agro-ecosystem on occurrence, disease development and control of cassava bacterial blight. (2006) **Invited plenary lecture.**

**International Bacterial Wilt Symposium, York, UK, 2006. Chairpersonship Breeding and Host Resistance Session.**

**Conference on 'Emerging Trends in Plant-Microbe Interactions'. University of Madras, Centre for Advanced Studies in Botany, Chennai, India**

Polygalacturonase-inhibiting protein (PGIP) and structure and composition of cell wall polysaccharides of tomato in relation to resistance to *Ralstonia solanacearum*. (2005)

**Institut für Phytopathologie und Pflanzenschutz, Universität Göttingen (Mai 2006) und Institut für Phytopathologie, Universität Kiel (Januar 2006)**

Anwendung molekularer Methoden zur Charakterisierung und Verbesserung der Wirtspflanzenresistenz, dargestellt am Modellsystem Tomate / *Ralstonia solanacearum* (2005)

**International Organization for Biological and Integrated Control of Noxious Animals and Plants (IOBC). International Meeting. Multitrophic Interactions in Soil for Integrated Plant Protection., Bonn, Germany: *Ralstonia solanacearum* – a mutable pathogen that complicates standard management strategies. (2003)**

**Institut für Botanik, Universität Hannover**

The concept of resistance, tolerance and latency in bacterial diseases: case studies from cassava (2002)

**Biologische Bundesanstalt Braunschweig**

Integrated control of bacterial diseases: concept, basic and applied research, and implementation (2001)

**Institut für Phytopathologie und Pflanzenschutz, Universität Göttingen (1995/1996)**

Various seminars on 'Vorkommen des Bakterienbrandes an Maniok (*Manihot esculenta*) in Benin und pathologische, genetische und physiologische Eigenschaften des Erregers.'  
,Pathologische und physiologische Eigenschaften des Erregers des Bakterienbrandes der Augenbohne aus verschiedenen geographischen Regionen.'

**International Institute of Tropical Agriculture, Ibadan, Nigeria**

Physiological, genetic and pathological characterization of strains of *Xanthomonas campestris* pv. *manihotis*, incitant of cassava bacterial blight, from West and Central Africa, and the consequences for breeders. Institutsweites Seminar (1995)

**Centro Internacional de Agricultura Tropical (CIAT), Kali, Kolumbien**

Cassava diseases in Africa: research and cooperation. (1995)

**Institut für Pflanzenkrankheiten und Pflanzenschutz, Universität Göttingen**

Bacterial blight and root rot pathogens of cassava: characterization, detection, epidemiology. (1994)

**International Centre for Agricultural Research in the Dry Areas, Aleppo, Syrien**

A model for host-parasite interactions. (1992)

**Additional: Teaching - Lectures and courses held at German Universities**

Host-Pathogen Interactions, Biological Plant Protection (Diseases), Phytomedicine Basics, Plant Protection in the Tropics and Subtropics (lectures and practical course), Bacteriology, Molecular Diagnosis (lectures and practical course), Experimental Course in Phytomedicine, Training Course on Pathogen Groups, Field Visits, various seminars and colloquia (1999-2010).

**7 Evaluator / Referee / Studies / Reports**

- Expert Report for Committee on World Food Security (CFS-HLPE) on land tenure and international investments, February 2011  
Wydra, K. 2011. Consultation on Land Tenure and International Investments in Agriculture. Proceedings No. 66. Committee on World Food Security. High Level Panel of Experts (HPLPE), pp. 74-80.  
([http://typo3.fao.org/fileadmin/user\\_upload/fsn/docs/HLPE/PROCEEDINGS\\_Land\\_tenure.pdf](http://typo3.fao.org/fileadmin/user_upload/fsn/docs/HLPE/PROCEEDINGS_Land_tenure.pdf))
- Wydra, K. 2011. Consultation on Climate Change and Food Security: setting the track for the HLPE. Proceedings No. 71. Committee on World Food Security. High Level Panel of Experts (HPLPE), pp. 100  
(<http://km.fao.org/fsn/discussions/climate-change0/en/>)
- Evaluator in German Program for Female Professorships (2013)
- Member of Editorial Board of 'Journal of Plant Diseases and Protection' (until 2009)
- Associated editor of 'Tropical Plant Pathology'
- Member of Board of Evaluators for 'Institute Partnerships' of Alexander von Humboldt Foundation (until 2012)
- Referee for the following international journals:  
Agriculture, Ecosystems and Environment, Molecular Plant Pathology, Phytopathology, Plant Disease, Plant Physiology, Plant Physiology and Biochemistry, Journal of Plant Physiology, Annals of Microbiology, International Journal of Molecular Sciences, Plant and Soil, Physiological and Molecular Plant Pathology, Molecular Biology Reports, Crop Protection, Plant Pathology, Euphytica, BioMedCentral Genomics, European Journal of Plant Pathology, Journal of Phytopathology, Tropical Plant Pathology, Journal of Plant Diseases and Plant Protection, Australasian Phytopathology, Journal of Plant Nutrition and Soil Science, Agronomy Research, Archives of Agronomy and Soil Science, Biologia Plantarum, Journal of Plant Breeding and Crop Science, International Journal of Microbiology, Biocontrol Science & Technology, Tropicultura, International Journal of Molecular Sciences, African Journal of Biotechnology, Acta Agriculturae Scandinavica, Jordan Journal of Biological Sciences, Thai Journal of Agricultural Science, Ethiopian Journal of Agricultural Sciences, Journal of Taibah University of Science

- Expert Report for GIZ (executive of German Ministry of Development and Technical Cooperation) on ‚Chances and opportunities of genetechonology in agriculture (of developing countries)’, GIZ, Eschborn, October 2004 (in German)
- Evaluator for project proposals of German Research Foundation (DFG), EU, BMBF and various research/donor orgnizations of Germany, Wissenschaftsgemeinschaft Gottfried Wilhelm Leibniz (Leibniz-Gemeinschaft) e.V., Italy (ICGEB), Colombia (in Spanish), Brazil, Hungary, etc. (about 5/year)
- Referee of BSc-, MSc- and PhD theses at various institutes at the Faculty of Natural Sciences, Leibniz Universität Hannover, University of Göttingen and worldwide (Denmark, Pakistan)

## 8 Award and nominations

### Award

12/2004            One of two awards of the year 2004 for ‘Projects in agricultural sciences to be specifically awarded’ (‘Besonders förderungswürdige Projekte’) of the ‚Foundation for the German Science’ through the German Research Foundation (DFG) for project ‘Integrated control of bacterial wilt of tomato by cultural measures, microbial antagonists and host plant resistance’; 12.750 €

### Nominations

- One of two final candidates for position of Rector of University of Linz, Austria (2015)
- Candidate suggested by University Council for President Position, Jadehochschule, Germany
- One of eight final candidates for international position ‘Executive Director Future Earth’ (2014)
- One of three candidates selected for President position at (1) University of Applied Sciences Zittau-Görlitz, (2) University of Applied Sciences Aachen, (3) University of Applied Sciences Worms, (4) one of four candidates at University Cottbus-Senftenberg
- One of three final candidates for position ‘Director’ of the international UN research center ‘Bioversity’, Montpellier, France (2012)
- Nominated as expert for the Committee on World Food Security, in the High Level Panel of Experts on Food Security and Nutrition, HLPE (December 2010)
- Invited as expert by EU, and German Ministries BMBF, BMZ, BMU for definition of project calls
- Evaluator for the Alexander von Humboldt Foundation
- Member of ‘DAAD expert’ group
- Listed in apppointment for professorship in ‘Agrarwissenschaften’ at the University Rhein-Waal, 2010
- Listed in appointment for professorship in ‚Plant pathology ’ at SLU, Uppsala, Sweden 2007
- Listed in appointment for professorship in ‚Plant pathology with emphasis on epidemiology’ at SLU, Uppsala, Sweden 2007
- Listed in appointment for professorship in ‚Molecular Phytopathology’, University of Kiel, 2005/2006
- Proposed by IITA, Plant Health Management Division, for award ‘Promising young scientist’ of the Consultative Group of International Agricultural Research (CGIAR) 1997
- Listed (2<sup>nd</sup>) at CIAT, Columbia, for ‘Senior Scientist Position’, pathologist, 1994.

## 9 Research cooperation, project coordination

### International

- *Project coordination (1993-1995)* Bacterial diseases and root rots of food crops in West Africa, with special emphasis on cassava and cassava bacterial blight, and establishment of a phytobacteriological training laboratory

*Project coordination (1995-1999)* Development and implementation of integrated control methods of bacterial diseases of cassava and cowpea in Africa

'Special projects' of BMZ. Plant Health Management Division, International Institute of Tropical Agriculture (IITA), Cotonou, Benin

**Collaboration with** Institut für Pflanzenpathologie und Pflanzenschutz, University of Göttingen; **Prof. V. Verdier, IRD/ORSTOM, Frankreich; Dr. J. Janse, Plant Protection Service, Wageningen, Niederlande; NARS in six African countries**

- *Project (1996-2000)* Approach to the biological control of *Macrophomina phaseolina*, causal agent of charcoal rot of cowpea, and development of serological methods for its detection (PhD thesis) IITA PhD stipend. IITA, Cotonou, Benin

**Collaboration with Prof. G. Wolf, Institut für Pflanzenpathologie und Pflanzenschutz, University of Göttingen**

- *Project (1997-1999)* Sustainable protection of cowpea. Funded by Dutch government; participation as IITA research group. IITA, Cotonou, Benin.

**Collaboration with NARS in Benin 1997-1999**

- *Project coordination (1998-2001)* Development and implementation of integrated methods for the control of cassava bacterial blight. EU Projekt, INCO-DEV IC18-CT-98-0306. Universities Göttingen/ Hannover

**Collaboration with Dr. R. Cooper, University of Bath, UK; Prof. V. Verdier, Dr. V. Jorge, Institut de Recherche pour le Developpement (IRD), France; CIAT, Colombia; ITRA, Togo; UNB, Benin**

- *Project (1999-2001)* The role of insects as potential vectors for cassava and cowpea bacterial blight in West Africa (MSc-Arbeit) BMZ/DAAD. University of Hannover

**Collaboration with IITA, Cotonou, Benin**

- *Project (2000)* Mise au point et application de méthodes de détection a *Xanthomonas campestris* pv. *vignicola*, agent causal de la bactériose du niébé (Development of genetic detection methods for *Xanthomonas campestris* pv. *vignicola*). AUPELF-URELF, France. IITA, Cotonou, Benin

**Collaboration with Prof. V. Verdier, IRD, Frankreich, Prof. C. Bragard, University of Louvain-la-Neuve, Belgium and University of Benin**

- *Project leader (2001-2010)* Integrated management of bacterial diseases of tomato, with special emphasis on bacterial wilt. DFG: Project 7 of Research Group 431/1-1. **Collaboration with AIT and KU in Bangkok, Thailand** (<http://www.susvegthai.org>); 2. Phase (2004-2007)

- *Project (2002/2003)* Genetic and pathogenic diversity of *Ralstonia solanacearum* strains pathogenic to ginger and tomato and development of molecular methods for their detection (Diplomarbeit) DAAD

**Collaboration with Dr. M. Fegan, CRC for Tropical Plant Protection, School of Molecular and Microbial Sciences, University of Queensland, Australia**

- *Project (since 2003)* Structural and chemical analysis of lipopolysaccharides of *R. solanacearum* Russian Academy of Science  
**Collaboration with Dr. E. Zdorovenko, Gastwissenschaftlerin der Universität Moskau, Dr. Y. Knirel, Universität Moskau und Dr. Bushneva, Universität Kiew**
- *Project (2003-2004)* Intercropping for control of bacterial blight in cassava in Togo. GTZ, Eschborn.  
**Collaboration with Dr. K Kpemoua, ITRA, Togo.**
- *Project (2004)* Studies on antagonistic bacteria for their effect against *R. solanacearum* and fungal pathogens. Humboldt-Stiftung, Germany.  
**Collaboration with Prof. Dr. Hegazi, guest scientist, University of Cairo, Egypt.**
- *Project (since 2004)* Studies on diseases of vegetable in Benin, West-Africa. DAAD, Bonn.  
**Collaboration with Dr. R. Sikirou, INRAB, Cotonou, Benin.**
- *Project (2004-2010)* Development of integrated control of bacterial blight of tomato in Ethiopia, with special emphasis on soil amendment and cropping systems. DAAD, Bonn.  
**Collaboration with Prof. Dr. Fininsa, Alemaya University, Ethiopia.**
- *Project (since 2006)* Identification of signaling pathways involved in induced resistance of tomato against *Ralstonia solanacearum*, by real-time PCR. DAAD, Bonn. Award of German Science Foundation.  
**Collaboration with Drs. Z. Bozso, P. Ott, Plant Protection Institute of the Hungarian Academy of Sciences, Budapest, Hungary**
- *Project (since 2008)* Identification of molecular markers for resistance against strains of *Xanthomonas axonopodis* pv. *vignicola*.  
**Collaboration with Prof. Dr. Visser, Wageningen University, Netherlands, IITA, Nigeria**
- *Project (2008-2010)* ,Characterization of the pathogen population structure of bacterial leaf blight of rice and host pathogen interaction studies'.  
**Collaboration with CGIAR Center Africa Rice, and NARS in West-Africa.**
- *Project (2006-2010)* Characterization of the mode of action of rhizosphere bacteria against bacterial wilt.  
**Collaboration with Prof. Fininsa, C. Seid Ahmed, Alemaya University, Ethiopia.**
- *Project (2009-2010)* Characterization of *Xanthomonas phaseoli* strains from Ethiopia.  
**Collaboration with Prof. Fininsa, C. Alemaya University, Ethiopia**
- *Project (2010-2013)* Excellence in education: Higher Education Partnership.  
**Collaboration with Universities in Colombia, Chile, South Africa, Indonesia**
- *Project (2009-2010)* Characterization of *Xanthomonas phaseoli* strains from Ethiopia.  
**Collaboration with Prof. Fininsa, C. Alemaya University, Ethiopia**
- *Project (2010-2014)* Mitigating the impact of climate change on rice disease resistance in East Africa.  
**Collaboration with Africa Rice Centre, IRRI (Philippines) and NARS in Uganda, Malawi, Tanzania.**
- *Project (2018-2023)* Renewable Energies in Food Processing in East Africa. (BLE)

#### **National (Germany)**

- German Ministry of Environment. Project on Professional Education in Climate adaptation. (2018-2020)
- German Ministry of Environment. Project on Climate Adaptation in Zoo-Park Erfurt. (2021-2024)
- *In the framework of a PhD thesis (2003)* Chemical analysis of cell wall polysaccharides of tomato.

**Collaboration with Prof. Dr. B. Moerschbacher, Institut für Biochemie und Biotechnologie der Pflanzen, University of Münster**

- *Project (since 2002)* Chemical analysis of lipopolysaccharides of *Ralstonia solanacearum* strains.  
**Collaboration with Dr. U. Zähringer, Forschungszentrum Borstel, Zentrum für Medizin und Biowissenschaften, Borstel**
- *Project (2001- 2003)* Analysis of leaf surface waxes of cassava genotypes with resistant or susceptible reaction to bacterial blight. Teilprojekt im Rahmen von EU, INCO-DEV  
**Collaboration with Prof. L. Schreiber, Ökophysiologie der Pflanze, Institut für Botanik, University of Bonn**
- Detection methods of *Ralstonia solanacearum* by PCR  
**Collaboration with Dr. K. Smalla, Biologische Bundesanstalt, Braunschweig.**

### **Universities in Hannover**

*In the framework of PhD and MSc projects*

- Proteomics / IPCL to identify xylem proteins involved in resistance of tomato against *Ralstonia solanacearum*  
**Collaboration with PD Dr. A. Pich, Institute of Toxicology, Medical Highschool Hannover**
- High-throughput transcript analysis by microarrays to identify proteins involved in induced resistance of tomato against *Ralstonia solanacearum*  
**Collaboration with Prof. F. Stahl, Institut für Technische Chemie, Universität Hannover**
- Proteomics to identify proteins involved in resistance of tomato against *Ralstonia solanacearum*  
**Collaboration with Prof. H.-P. Braun, Institut für Zierpflanzenbau, Baumschule und Pflanzenzüchtung, Abteilung Angewandte Genetik, Universität Hannover**
- Studies on resistance mechanisms against pathogens by transcript analysis and other molecular genetic methods including transgenic plants.  
**Collaboration with Prof. H.-J. Jacobsen, Institut für Molekulargenetik, PD Dr. A. Gau, Institut für Botanik**
- Effect of silicon on the resistance of tomato to bacterial wilt caused by *Ralstonia solanacearum* (MSc-thesis) DAAD  
**Collaboration with Prof. W. Horst, Institut für Pflanzenernährung**
- Expression of polygalacturonases of *R. solanacearum* in *E. coli*; characterization of *Xanthomonas oryzae* pv. *oryzae*; ongoing  
**Collaboration with Prof. E. Maiss, Virologe, Molekulare Phytopathologie, Institut für Pflanzenkrankheiten und Pflanzenschutz.**

## **10 PhD, MSc and Diploma theses supervised**

### **PhD theses**

#### **Ongoing**

Ulmer, Nico. Sustainability in African Higher Education Institutions and the influence of language in achieving sustainable development.

Khaing, Nyunt. Strategy to manage alien invasive plant species for the central dry zone area of Myanmar. (Mitbetreuung)

**Finalized**

- Dossa, S. 2015. Climate change and host plant resistance: effects of high temperature and drought on rice *R* genes mediated resistance to bacterial blight. Leibniz Universität Hannover.
- Onaga, G. 2014. Population structure of *Magnaporthe oryzae* from different geographic regions and interaction transcriptomes with different rice genotypes at high temperatures. PhD thesis. University Göttingen (Betreuung mit Prof. A. v. Tiedemann) *summa cum laude*
- Nabhan, S. 2011. Taxonomic relationships among species of *Pectobacterium* and description of two novel taxa within the heterogeneous species *P. carotovorum*, namely *P. carotovorum* subsp. *brasiliense* subsp. nov. and *P. aroideae* sp. nov.
- Koch, T. 2011: Mykotoxinbildung in Spargel in Beziehung zum Befall mit *Fusarium* spp. und Spargelfliege. PhD thesis. University of Hannover.
- Kurabachew, H. 2011. Biochemical and molecular background of the combination of rhizosphere bacteria from Ethiopia and silicon application to induce resistance in tomato (*Solanum lycopersicum*) against bacterial caused by *Ralstonia solanacearum*. PhD thesis. University of Hannover.
- Agbicodo, E. 2009. Identification of molecular markers for resistance in cowpea (*Vigna unguiculata*) against strains of *Xanthomonas axonopodis* pv. *vignicola*. (co-supervision) PhD thesis. University of Wageningen.
- Schacht, T. 2009. Biochemical analysis of the inhibition of *Ralstonia solanacearum* polygalacturonases by polygalacturonase-inhibiting proteins (PGIP) from tomato stems and biochemical, histochemical and molecular analysis of the silicon effect in the tomato (*Solanum lycopersicum*) – *Ralstonia solanacearum* interaction. PhD thesis. University of Hannover.
- Dahal, D. 2009. Characterization of defense responses of susceptible and resistant tomato genotypes against bacterial wilt caused by *Ralstonia solanacearum*, a proteomic approach. . PhD thesis. University of Hannover.
- Ayana, G. 2009. Effect of cultural measures with special emphasis on silicon amendment and intercropping to reduce bacterial wilt in tomato under field conditions. PhD thesis. Ethiopia.
- Shenge, K. 2006. Pathological and molecular characterization of bacterial pathogens of tomato in Tanzania and the reaction of host plant genotypes. Doktorarbeit. University of Arusha, Tanzania (co-supervision)
- Beri, H. 2005. Chemical and molecular analysis of the cell wall composition of tomato (*Lycopersicon esculentum*) in relation to resistance to *Ralstonia solanacearum*, causal agent of bacterial wilt. PhD thesis. University of Hannover.
- Banito, A.. 2003. Development and ecozonal adaptation of integrated control measures of cassava bacterial blight in Togo. PhD thesis. University of Hannover.
- Zinsou, V. 2002. Integrated control of cassava bacterial blight adapted to ecozones of Benin with special emphasis on host plant resistance and resistance markers and mechanisms. PhD thesis. University of Hannover.
- Khatri-Chhetri, G. 1999. Detection and characterization of *Xanthomonas campestris* pv. *vignicola* strains, incitant of cowpea bacterial blight and bacterial pustule, and studies on genotyp/strain interactions. PhD thesis. University of Göttingen.

- Sikirou, R. 1999. Epidemiological investigations and development of integrated control methods of bacterial blight of cowpea caused by *Xanthomonas campestris* pv. *vignicola*. PhD thesis. University of Göttingen.
- Afouda, L. 1999. Approach to the biological control of *Macrophomina phaseolina*, causal agent of charcoal rot of cowpea, and development of serological methods for its detection. PhD thesis. University of Göttingen.
- Fanou, A. 1999. Epidemiological and ecological investigations on cassava bacterial blight and development of integrated methods for its control in Africa. PhD thesis. Univ. Göttingen.
- Fessehaie, A. 1997. Biochemical/physiological characterization and detection methods of *Xanthomonas campestris* pv. *manihotis* (Berthet-Bondar) Dye 1978, causal agent of cassava bacterial blight. PhD thesis. University of Göttingen.
- El-Shouny, W. 1992. Exopolysaccharides of phytopathogenic pseudomonads. Diss. Univ. Cairo, Egypt/Univ. Göttingen.

### **Master, diploma and bachelor theses (Univ. Göttingen and Hannover, Erfurt)**

- 2016-2023. Numerous theses in Renewable Energy Management, Erfurt Univ. of Applied Sciences
- Ulmer, N. 2014. Die Chancen und die Barrieren der Erneuerbaren Energien für Entwicklungsländer - illustriert am Beispiel Tansanias. MSc thesis, Erfurt Univ. Appl. Sc.
- Bimerew, M. 2010. Molecular and pathological characterization of *Xanthomonas oryzae* pv. *oryzae* and *Xanthomonas oryzicola*, causal agents of bacterial blight of rice, from West-Africa.
- Kiirika, L. 2010. Phenotypic and molecular background of resistance induction by single and combined application of chitosan and silicon in tomato against *Ralstonia solanacearum*.
- Nickel, C. 2010. Gene Expression profiling of induced resistance in tomato against *Ralstonia solanacearum* and the involvement of silicon. Master thesis, Leibniz Universität Hannover, Germany, pp 123.
- Lüddecke, F. 2008. The role of reactive oxygen species in the resistance reaction of tomato genotypes against *Ralstonia solanacearum*. MSc thesis, Leibniz Universität Hannover.
- Hartmann, T. 2008. Effect of silicon on the resistance of eggplant (*Solanum melongena* L.), geranium (*Pelargonium x hortorum*), tomato (*Solanum lycopersicum* L.) and cucumber (*Cucumis sativus* L.) against *Ralstonia solanacearum*, *Pseudomonas syringae* pv. *tomato* and *Pseudomonas syringae* pv. *lachrymans*. MSc thesis, Leibniz Universität Hannover.
- Risal, J. 2008. Effect of jasmonic acid and BTH on pr-proteins in tomato attacked by whitefly. Leibniz Universität Hannover. (co-supervision)
- Sadikaj, D. 2008. The effect of silicon on the phenylpropanoid metabolism and cell wall alterations during potato (*Solanum tuberosum* L.) – *Ralstonia solanacearum* interaction. MSc thesis, Leibniz Universität Hannover.
- Ghareeb, H. 2007. Gene expression profiling of silicon-induced resistance in tomato against *Ralstonia solanacearum*. MSc thesis, Leibniz Universität Hannover.
- Schäfer, S. 2007. Untersuchungen zum Einfluss von Silizium-Applikationen auf die



- Entwicklung der Weissen Fliege. BSc Arbeit. Universität Hannover. (co-supervision)
- Huong N.T.L. 2006. Biochemical and phenotypic response of bacterial wilt-infected tomato to a combination of an abiotic and a biotic elicitor - silicon and a microbial antagonist. MSc thesis, Leibniz Universität Hannover.
- Semrau, J. 2005. Phenotypic and molecular characterization of the interaction of antagonistic bacteria, *Ralstonia solanacearum*, causing bacterial wilt, and tomato (*Lycopersicon esculentum* Mill.). Diploma thesis. University of Hannover.
- Simon, C. 2004. Genetic and pathogenic diversity of *Ralstonia solanacearum* strains pathogenic to ginger and tomato and development of molecular methods for their detection. Diploma thesis. University of Hannover.
- Schacht, T. 2005. Inhibition of polygalacturonases of *Ralstonia solanacearum* by polygalacturonase-inhibiting proteins (PGIPs) from tomato (*Lycopersicon esculentum* Mill) stems. Diploma thesis. University of Hannover.
- Diogo, R. 2004. Molecular characterization of the influence of silicon on resistance mechanisms of tomato (*Lycopersicon esculentum* Mill.) and on the phenotype of *Ralstonia solanacearum*. MSc thesis. University of Hannover.
- Leykun, Z. 2003 Latent infection of resistant tomato genotypes with *Ralstonia solanacearum*, monitored by microbiological quantification and molecular genetic methods. MSc thesis. University of Hannover
- Dannon, E. 2003. Effect of silicon on the resistance of tomato to bacterial wilt caused by *Ralstonia solanacearum*. Universities of Hannover /Göttingen.
- Zandjanakou, M. 2001. The role of insects as potential vectors of cassava and cowpea bacterial blight in West Africa. MSc thesis. University of Hannover.
- Zinsou, V. 2001. Studies on the expression of resistance of cassava genotypes – including individuals of the mapping population – to cassava bacterial blight. MSc thesis. University of Göttingen.
- Banito, A. 2001. Studies on two major cassava diseases in Togo: cassava bacterial blight and root and stem rots. MSc thesis. University of Göttingen.
- Sikirou, R. 1999. Inoculum sources of *Xanthomonas campestris* pv. *vignicola* strains, incitant of cowpea bacterial blight and bacterial pustule, and identification of hosts besides *Vigna unguiculata*. MSc thesis. University of Göttingen.
- Fanou, A. 1999. Epidemiological studies on the role of weeds, plant debris and vector transmission in survival and spread of *Xanthomonas campestris* pv. *manihotis*, causal agent of cassava bacterial blight. MSc thesis. University of Göttingen.
- Khatri-Chhetri, G. 1997. Pathological characterization of strains of *Xanthomonas campestris* pv. *vignicola*, incitant of cowpea bacterial blight and bacterial pustule, originating from different geographical areas. MSc thesis. University of Göttingen.
- Albers, A. 1990. Beziehungen zwischen der Ausbildung von "Wasserflecken" durch blattpathogene Pseudomonaden und der Alginatproduktion. Dipl.thesis. Univ. of Göttingen.
- MSc/BSc thesis** (Universities of Ibadan, Nigeria / Université Nationale du Bénin, Benin)
- Adissoda, Y.F. 2001. Etude du comportement de quelques clones à la bactériose vasculaire du

- manioc dans trois zones agro-écologiques du Bénin. BSc thesis. University of Benin.
- Agbicodo, E. 2000. Contribution a l'etude des mecanismes de resistance et interaction hote-pathogene chez des cultivars de manioc (*Manihot esculenta* Crantz) resistants et sensible contre la bacteriose vasculaire. Memoire de fin d'études. Université Nationale du Bénin.
- Zandjanakou, M. 1998. L'étude de la propagation de la bacteriose vasculaire du manioc par le criquet puant (*Zonocerus variegatus*). Memoire de fin d'études. Université Nationale du Bénin.
- Adamou, I. 1997. Effet de la fletrissure bacterienne causee par *Xanthomonas campestris* pv. *vignicola* sur le developpement des symptomes, la croissance et le rendement de sept varietes de niebe (*Vigna unguiculata*) au sud-Benin. Memoire de fin d'études. Université Nationale du Bénin.
- Odjo, T. 1996. Comportement de quelques variétés amelioères et locales de manioc (*Manihot esculenta* Crantz) vis a vis de trois maladies: la bacteriose vasculaire, la mosaïque africaine et l'antracnose. Memoire de fin d'études. Université Nationale du Bénin.
- Aboué, A. 1996. Inventaire des maladies parasitaires du niébé dans le Sud-Bénin. Memoire de fin d'études. Université Nationale du Bénin.
- Otuonye, A.-F. E. 1996. Comparative performance and reactions of two cassava cultivars to cassava bacterial blight caused by *Xanthomonas campestris* pv. *manihotis*. Univ. Ibadan.
- Kosoko, O. 1996. Symptom development of cassava bacterial blight, African cassava mosaic disease and anthracnose on 328 improved varieties. Univ. Ibadan.
- Bamidele, T. A. 1996. Sanitation experiment with cassava cuttings from plants infected with cassava bacterial blight. Univ. Ibadan.

## 11 Projects and fund raising

(Donor, duration, project location, short title and budget)

<b>BMFT<sup>1</sup> 1989-1993:</b> Support of Company Diamalt/Schering; PhD student, salary	BAT Iia/2, 3.5year
<b>BMZ<sup>2</sup> 1994-1995:</b> Project at IITA, Benin, management of diseases of cassava and cowpea (1 postdoc, 1 PhD student)	800.000,- DM
<b>BMZ 1996-1999:</b> Project at IITA, Benin; management of diseases of cassava and cowpea (4 PhD students)	1.2 Mio DM
<b>BMZ 1999:</b> project extension at IITA, Benin, 6 months	120.000,- DM
<b>GTZ 1999:</b> special funds for project-end-workshop	20.000,- DM
<b>IITA 1996-2000:</b> Project at IITA with University of Göttingen, 'Biological control of <i>Macrophomina phaseolina</i> '. (1 PhD student)	36.000,- \$
<b>AUPELF, Frankreich 1999:</b> Project at IITA and University Louvain-La-Neuve, C. Bragard, 3 months. Molecular detection of <i>Xanthomonas campestris</i> pv. <i>vignicola</i>	60.000,- FF
<b>Dutch Government 1997-2002:</b> Project over 5 years: Integrated control of diseases and pests of cowpea; funds for University of	Funds for NARS

<sup>1</sup> German Ministry for Research and Technology

<sup>2</sup> Ministry for Development and Technical Cooperation

Benin and NARS in Benin; participation in project	
<b>EU, INCO-DC Programm 1998-2001:</b> Project, Universities Göttingen/ Hannover, and Univ. Bath, ORSTOM, France, CIAT, Colombia, NARS in Benin and Togo; 'Integrated control of bacterial blight of cassava'. (2 PhD students for Univ. Hannover)	610.000,- ECU
<b>DAAD<sup>3</sup> 2003-2004:</b> Research stay, dipl. student in Australia, 5m	Ca. 7.000,- DM
<b>Russian Academy of Science, seit 2003:</b> Project for structural analysis of lipopolysaccharides of <i>R. solanacearum</i> ; Guest scientist stay in Hannover for 1 month	Ca. 4.000,- DM
<b>DFG<sup>4</sup> 2001-2004:</b> Project at University Hannover in collaboration with AIT, Thailand, in the framework of a DFG-Research group 'Management of bacterial diseases of tomato'. (1 PhD student)	BAT IIa/2, 3 y res. ass. + 2 y 135.750,-DM + 20.000,- Euro
<b>BMZ 2001-2003:</b> Project at University of Hannover in collaboration with KU, Thailand; 'Management of bacterial diseases of tomato'	108.849,00,- DM
<b>GTZ<sup>5</sup>-Project 2003-2004:</b> 'Control of cassava bacterial blight by mixed cropping and influence on cutting infection' in Togo; field trials and guest scientist stay	5.000,- Euro
<b>Inwent Projects (BMZ) 2003-2004:</b> guest scientist stay of two scientist	2 x 6 months + 7.000,- Euro
<b>DAAD 2004:</b> Guest scientist from Benin for 3 months	7.000,- Euro
<b>Humboldt-Stipend 2004:</b> guest scientist from Egypt	3 weeks stay
<b>DFG-award 2004</b> of the 'Foundation for German Science' for Project: 'Integrated control of bacterial wilt with cultural measures microbial antagonists and host plant resistance'	12.750,- Euro
<b>DAAD 2005:</b> guest scientists from Tanzania for 3 months	7.500,- Euro
<b>DAAD 2007:</b> guest scientist Prof. Afouda, Univ. of Parakou, Benin, 3mths	8.000,- Euro
<b>Universität Hannover 2008:</b> PhD stipend support for 'Analysis of proteome in tomato / <i>Ralstonia solanacearum</i> interaction'	5.000,- Euro
<b>DFG 2004-2009:</b> DFG project, 2nd phase: 'Integrated management of bacterial wilt of tomato by cultural measures, microbial antagonists and host plant resistance	BAT IIa/2, 3y 2 MSc stipends 60.088,- Euro
<b>BMZ 2004-2009:</b> cooperative project with AVRDC, Taiwan: Mechanisms of resistance of tomato to bacterial wilt in relation to molecular markers of mapping populations based on introgressions from wild tomato species' (1 PhD student)	109.000,- Euro
<b>DAAD 2004-2009:</b> Sandwich Project; 1 PhD student	PhD stipend, 3 y
<b>BMZ 2008-2010:</b> Project with CGIAR Center WARDA, Cotonou, Benin, and NARS in West-Africa. 'Characterization of the pathogen population structure of bacterial leaf blight of rice and host pathogen interaction studies'.	60.000,- Euro
<b>DAAD 2006-2011:</b> PhD project. Characterization of the mode of action of rhizosphere bacteria against bacterial wilt	Euro 45,000,-
<b>Ministry of Lower Saxony 2007-2011:</b> FAEN Joint Project with	BAT IIA/2,3 yrs,

<sup>3</sup> German Academic Exchange Service

<sup>4</sup> German Research Foundation

<sup>5</sup> Society for Technical Collaboration (executive of German Ministry f. Development and Technical Cooperation)

University of Göttingen, on Fusarium wilt of asparagus	133.000 Euro
<b>Humboldt Stiftung 2009-2010:</b> guest scientist support and bench fee for one year ‘Characterization of <i>Xanthomonas phaseoli</i> strains from Ethiopia’; transferred to GAUG, Prof. P. Karlovsky	39.000 Euro
<b>Islamic Development Banc (IDB) 2008-2012:</b> PhD project. Subject: Characterization of <i>Pectobacterium</i> spp. strains, their molecular interaction with tomato and resistance induction.	PhD stipend 3.5 y + 30,000 Euro
<b>DAAD 2003-2010</b> Eleven stipends for MSc students	ca. 150.000 Euro
<b>BMZ 2010-2014:</b> Projekt with CGIAR Center Africa Rice, Benin, und NARS in East-Africa. , Mitigating the impact of climate change on rice disease resistance in East Africa’, including 235.000 Euro plus 3 PhD students for UGOE	1.2 Mio Euro
<b>DAAD 2009-2010:</b> Higher Education Partnership projects and various summer schools	ca. 180.000 Euro
<b>DAAD 2010-2013:</b> Excellence in education: Higher Education Partnership with univ. in Colombia, Chile, South Africa, Indonesia	ca. 336.000 Euro
<b>2009-2012:</b> various summer schools/workshops (DAAD) at CeTSAF, Univ. Göttingen, and in various countries	ca. 450.000 Euro
<b>BMBF 2011:</b> project preparation workshop with 70 partners from German, French and African institutions	75.000 Euro
<b>DAAD 2011/2012:</b> Workshops ,Cross-cutting agriculture and health’ in Ghana und Tanzania’	100.000 Euro

**VW Foundation. 2015:** Summer School on Renewable Energies for young scientists in Africa. 50.000 Euro

Total about 5,7 Mio Euro

Submitted to BMBF 2011: Proposal on ‘Food Security’ with 18 subprojects, with 70 partners from five German, three French, twelve African institutions, and nine International Agricultural Research Centres, amount 35 Mio Euro for 5 years. Participated in proposal development of a DFG-SFB and graduate school ‘Graduiertenschule’ (Universität Hannover).

**Since 2015:** Various projects financed by German Ministries in Africa and Germany, on Renewable Energies and Climate Change.

## 12 Publications

### Book chapters / reports

**Wydra, K.,** Vera Vollmer, Sabine Schmidt, Susann Prichta, Rahel Kunze, Hubert Aulich 2022. Potential der Agri-Photovoltaik in Thüringen. Funded by Thüringen Ministry of Environment and Energy (TMUEN). <https://www.fh-erfurt.de/fileadmin/Dokumente/Personen/LGF/Wydra/APV-Studie.pdf>

Onaga, G., **K. Wydra** 2021: Recent understanding on molecular mechanisms of plant abiotic stress response and tolerance. In: Molecular Breeding in Wheat, Maize and Sorghum:

Strategies for Improving Abiotic Stress Tolerance and Yield. M. Anwar et al. (eds.). CABI Publishing. Pp. 1-23

- Wydra, K.** 2019: Transformation of economy and society towards sustainability in MENA and Sub-Sahara Africa: concepts for education, research and implementation networks. Proceedings of the Third International Conference on Solar Energy Solutions for Electricity and Water Supply in Rural Areas. 7th-10th of October 2018, The American University in Cairo, Cairo. 19 pages
- Toko, M., Neuenschwander, P., Yaninek, J.S., Ortega-Beltran, A., Fanou, A., Zinsou, V., **Wydra, K.D.**, Hanna, R., Fotso, A., Douro-Kpindou, O. 2019. Identifying and managing plant health risks for key African crops: cassava. In: Neuenschwander, P., Tamo, M. (eds) Critical issues in plant health: 50 years of research in African agriculture. Cambridge, UK: Burleigh Dodds Science. Doi: 10.19103/AS.2018.0043.07
- Tamo, M., Afouda, L., Bandyopadhyay, R., Bottenberg, H., Cortada-Gonzales, L., Murithi, H., Ortega-Beltran, A., Pittendrigh, B., Sikirou, R., Togola, A., **Wydra, K.D.** 2019. Identifying and managing plant health risks for key African crops: legumes. In: Neuenschwander, P., Tamo, M. (eds) Critical issues in plant health: 50 years of research in African agriculture. Cambridge, UK: Burleigh Dodds Science. Doi: 10.19103/AS.2018.0043.11
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