

CURRICULUM VITAE

DR. STEPHAN WINTER

Birth date 6th January 1958
Nationality German



DSMZ PLANT VIRUS DEPARTMENT

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SHORT PROFILE OF QUALIFICATIONS

Research Director with extensive experience in management, planning, and execution of scientific and technical R & D projects.

PROFESSIONAL EXPERIENCE

GERMAN COLLECTION OF MICROORGANISMS & CELL CULTURES, GERMANY Head, Plant Virus Department	1995 to date
FEDERAL DEPARTMENT OF AGRICULTURE, NIGERIA World Bank Advisor to the National Plant Quarantine Service	1994 to 1995
AGRICULTURE CANADA RESEARCH STATION VANCOUVER, CANADA Plant Virologist	1989 to 1993

RESEARCH

VIRUS DIAGNOSIS

- Development of specific virus detection kits and nucleic acid amplification protocols for difficult to diagnose plant viruses;
- Establishment of virus and viroid indexing routines for plant protection services and field diagnosticians;

- Molecular studies of virus variability and pathogen population composition, molecular taxonomy of plant viruses and virus evolution;
- Characterisation of new viruses and newly emerging virus diseases, studies of mixed virus infections and complex diseases.

MOLECULAR BIOLOGY OF TROPICAL VIRUSES & VIRUS VECTORS

- Characterisation of new viruses, virus genome variations in relation to plant disease & host plant resistance;
- Phylogenetic analysis and virus population structure analysis
- Characterisation of virus translocation pathways and receptors for virus transmission in the insect vectors

VIRUS BIOTECHNOLOGY

- Use of viral vectors for transient expression of foreign genes *in planta*
- Development of siRNA strategies for virus resistance

ACADEMIC QUALIFICATIONS

August 1988	Ph.D. in Agriculture (Dr. agr.)
	Thesis in Plant Virology
March 1982	Diploma in Agriculture (M.Sc.)
	Mc. thesis in Plant Virology

MEMBERSHIP IN PROFESSIONAL SOCIETIES

American Phytopathological Society
Association of Applied Biologists
Deutsche Phytopathologische Gesellschaft
Society for General Microbiology

Career

Stephan Winter received his Ph.D. (Dr. agr.) in Plant Virology from the Rheinische Friedrich-Wilhelms-University in Bonn, Germany in 1988.

He has been a postdoctoral research scientist from 1989-1993 at the Agriculture Canada Research Station, Vancouver, Canada in a FAO/IBGRI project to identify and characterise viruses from tropical root & tuber plants.

From 1994-1995 he was appointed for a World Bank project as Plant Virology advisor to the Nigeria Plant Quarantine Service, Federal Department of Agriculture, Ibadan, Nigeria, where he was involved in setting up and streamlining diagnostic routines and quarantine processes.

In 1995 he joined DSMZ as Head of the Plant Virus Department. He is teaching advanced plant virology at the Universities of Berlin and Braunschweig.

Focus

The research interests are covering both basic and applied problems in plant virology and plant virus diagnosis. The description of new viruses and information on the variability of virus genomes provide the basis for R & D to devise virus diagnostic reagents and protocols. Studies on the genetic structure of viral populations have implications for virus evolution, ecology and emergence and for the development of strategies to develop virus resistance in plants. A main interest is the evolution and ecology of tropical plant viruses and especially, on plant-virus-vector interactions. As part of this work, we are investigating how plant viruses are transmitted by the insects; to elucidate the mechanisms of virus recognition and translocation. We are also interested in the molecular mechanisms triggered by virus infections leading to recovery and plant resistance and although initially of a basic virological nature, most of this work ultimately will have practical applications in the development of virus resistance in significant crops.

Current Projects:

Development of infectious plant viruses as vectors for expression of foreign genes and for induction of siRNA in planta. Project partners from Denmark, Iran, Germany.

Evaluation of Cassava germplasm for resistance against begomoviruses and the ipomovirus Cassava brown streak. Project partners from Sudan, Nigeria, Democratic Republic of the Congo, Germany.

High-resolution phylogeographic studies of Rice yellow mottle virus. Project partners from France, Tanzania, Nigeria and Germany.

Characterisation of putative receptors in the virus vector insect *Bemisia tabaci* involved in virus translocation and transmission. Project partners from Israel, Germany.