

Curriculum Vitae of Xinmei Feng



Personal information

- Address: Kungsängsgatan 36C, 753 22, Uppsala
- Telephone: 073 5083481 (mobile)
- E-Mail: fxinmei810@hotmail.com; xinmei.feng@jti.se
- Birth: May 1968
- Nationality: Swedish
- Sex: Female

Interested fields

- Co-digestion of algae with sewage sludge to enhance biogas production
- Fungal pretreatment of lignin-cellulose materials for enhancing biogas production
- Microbial community analysis in biogas process and lake water
- Food microbiology
- Quality and safety assessment of biocontrol microbes by molecular methods
- Interaction of plant and microbes

Educations

2001-08-2006-12 PH.D degree (in Food microbiology), SLU, Uppsala

PH.D Courses: Statistics for biologists I (7.5hp), Information retrieval for post-graduate students at SLU(1.5hp), Modern mycology (4.5hp), How to present research (3hp), Quality assurance at research laboratories (1.5hp), Writing scientific English (3hp), Visualization of physiological events-using microscopy in plant biology (3hp), Lactic acid bacteria-genetics, taxonomy, ecology, physiology and applications (6hp), Chemistry and biology of microbial interactions-theories, tools and applications (4.5hp), Food microbiology (7.5hp), Introduction to food- and airborne fungi (3hp) (Netherlands), Basics in bioinformatics (7.5hp, Uppsala University), Food fermentation (1.5hp, Netherlands).

1994-09-1997-07 Master degree (in Environmental Microbiology, Biotreatment of paper-pulp with anaerobic bacteria *Clostridium*), HAU, China

1986-09-1990-07 Bachelor degree (in Microbiology, practical job on isolation, identification of methanogens), HAU, China

1983-09-1986-07 High school, natural science line, China

Working experiences

2011-09-26---now Researcher, JTI-Swedish Institute of Agricultural and Environmental Engineering

Fungal pretreatment of straw to improving biogas potential and analysis of biogas potential from different substrate combinations

Running batch test and continuous reactors

Analysis of biogas process parameters

Co-digestion of algae and sewage sludge

2011-05 to 06 Researcher, Department of Microbiology, SLU, Uppsala

Degradation of phenol by bacteria in microsoms. EU project "BACSIN".

2010-02-09 Researcher engineer, Limnology/Department of Evolution & Genetics, Uppsala University

Collaborated with five people in group, analyzed microbial community in lake water using PCR and T-RFLP, and extracted DNA from fish intestine for 454 pyrosequencing. Improved laboratory working routine and learned how to cooperate with different people and doing many things in the same time.

2008-09-2009-12 Researcher, Department of Microbiology, Swedish University of Agricultural Sciences (SLU), Uppsala

Worked in a group with four people for one year, had collaboration with Biotechnical Company. Developed strain-specific (sequence-characterized-amplified-regions as markers) molecular quantification method (Taqman qPCR) for two biocontrol fungi *Trichoderma spp.* Applied this technique both in field (Golf green) and lab systems. Planned field trial with the company, who were responsible for sampling. I was responsible for analyzing and communicating results with them. Independently performed the lab trial.

Had a lot of contacts with chemical selling and machine service companies, solved problems with real-time PCR (qPCR) machine, helped colleagues with problems related to qPCR techniques. Gave suggestions in food microbiology course.

Worked in a group with three people in an EU project called "METHACO" involving UK, Finland, Netherland, Austria, France, Germany and Norway. Stayed for one week in AIT-Austrian Institute of Technology GmbH to learn Microarray technique. Analyzed the methane oxidized-bacteria methanotrophs in forest peatland in different seasons and locations using this technique. Presented and communicated results with co-workers.

200806-09 Researcher, Limnology/Department of Ecology&Evolution, Uppsala University

Analyzed microbial community in lake water using PCR and T-RFLP method by cooperation with Eva Lindström. Enhanced my knowledge in limnology field.

2007-04-2008-05 Postdoc, Department of Water & Environmental Studies, Linköping University

Worked in a collaboration project between Anna Karlsson and Bo Svensson (Department of Water & Environmental Studies, Linköping University) and Stefan Bertilsson (Limnology/EBC, Uppsala University). Sat in Uppsala University and learned and applied molecular techniques to analyze samples from Linköping University. Deeped PCR and real-time PCR (qPCR) knowledge, learned more

molecular techniques, e.g. T-RFLP, sequencing and cloning, and acquainted with many molecular databases and analyzing tools.

2001-08-2006-12 Ph.D project, Department of Microbiology, SLU, Uppsala

Develop a new healthy food from barley (called barley tempeh) fermented mainly by fungus (*R. oligosporus*) and combined with lactic acid bacteria (can inhibit potential human pathogen growth) and yeasts (can enhance protein and vitamins) to increase the nutritional and hygienic quality. Developed a qPCR method to individually quantify the growth of both the fungus and yeasts in co-culture, which were difficult to be individually quantified by traditional methods. Had cooperation with Biocentrum, Technical University of Denmark, Lyngby, Denmark and worked there for a short period, had cooperation with image analysis company in Uppsala and had contacts with many specialists in food microbiology field in different countries.

1997-07-2001-07 Lecturer and Researcher, Department of Microbiology, Huazhong Agricultural University (HAU), Wuhan, China

Worked in three projects dealing with interaction of plants with bacteria such as *Rhizobium*, Mycorrhiza and plant growth promoting rhizobacteria (PGPR) funded by National Natural Science Foundation of China and Hubei Province, and the RTD4 European Union-China joint project, respectively. Transferred marker genes, e.g. *gfp*, *luxAB* or *gusA*, to *Rhizobium* to study its ecology in field trial. Under the support of the EU project, visited the Department of Biology, University of York, UK for two months to learn molecular techniques, such as RFLP, cloning and sequencing. Later under the fund of international fundation for science (IFS, Sweden), came to Sweden as guest researcher at the Plant Pathology and Biocontrol Unit, SLU for one year and worked with biocontrol of plant fungal disease (*Sclerotinia sclerotiorum*) by bacteria, and isolated the active bacterial metabolites.

1994-09-1997-06 Master project

Isolation and application of anaerobic bacteria *Clostridium* spp. in paper-pulp making.

1990-07-1994-08 Associate Agronomist, Soil and Fertilizer Company, Jianli County, Hubei Province, China

Responsible for analyzing soil and fertilizer samples (N, P and K) in company's quality verification lab and reporting the results to company and government concerned. Did business in fertilizers and fungicides and guided farmers how to use them. Learned how to solve different problems and communicate with different people.

1990-01 Practical project

Isolation and identification of methanogens from sewage biogas plant.

International working experiences

1999-08-20—1999-10-25 Detection and identification of arbuscular mycorrhiza in rice root by RFLP, cloning and sequencing et al molecular methods at the Department of Biology, University of York, UK within Peter Young's group under the supervision of Tim Daniell.

2000-08-10—2001-07-31 Biocontrol of *Sclerotinia sclerotiorum* by bacteria, and isolation of active metabolites produced by bacteria at Plant Pathology and Biocontrol Unit, SLU, Uppsala, Sweden

2003—2005 I have visited and stayed shortly at Biocentrum, Technical University of Denmark, Lyngby, to analyse the volatile production of *R. oligosporus*

Other courses

- Teaching in High education Basic (2013), SLU, Uppsala
- Life cycle assessment (2010), SLU, Uppsala
- An introduction to R for statistical analysis and data visualization (2010), Uppsala University

Pedagogic experiences

Courses taught

- 2009-11 Gave advise for **Food Production-Tempeh**, part of Food Microbiology course for senior undergraduate students, SLU, Sweden
- 2003-11 Responsible for **Food Production-Tempeh**, part of Food Microbiology course for senior undergraduate students, SLU, Sweden
- 2002-11 Responsible for the practical course on Methods for **mycological analysis of food materials, and food production-Lao Chao**, parts of Food Microbiology course for senior undergraduate students, SLU, Sweden
- 1997-1998 Independently and alone responsible for the **practical course on Basical Microbiology** for 64 Junior undergraduate students, HAU, China
- 1997-1999 Independently and alone responsible for the **practical course on Agricultural Microbiology** for 32 senior undergraduate students, HAU, China
- 1998-1999 Independently and alone responsible for the lecture course on **Soil and Environmental Microbiology** for 32 senior undergraduate students, HAU, Wuhan, China

Supervision

- 2005-07 Supervisor for a summer student on Inhibition of *Bacillus subtilis* and *Escherichia coli* by cocultivation with *Lactobacillus plantarum* and yeast in tempeh, 5 points, SLU, Uppsala, Sweden.
- 1997-2000 Mentor for 32 students for three years
- 1997-2000 Assistant supervisor for 4 Msc. students and 3 Bsc. students on environmental and ecological microbiology, HAU, Wuhan, China

Other activities

- 2012-09-01-2013-03-30 Supported by Swedish Tillväxtverket, Maria and I started a half year collaboration project with AEPI, Tianjin in biobed to reduce pesticide pollution in soil and water.
- 2011-01-21-23 Participated the 1st Sino-Sweden biogas symposium in Haikou, P.R.China. On behalf of SLU, gave a talk on: Biogas research at SLU.
- 2010-09 Supported by Swedish research links programme from VR, I and Anna Schüner invited Chinese visitors Prof. Zhang and his group to visit Sweden. We had visited Uppsala and Västrås biogas plant, had meetig in IVA (Stockholm), Department of Microbiology (SLU, Uppsala), JTI (Uppsala) and Mälardalen University (Västrås). We discussed possible collaboration fields and made prilimilary plans for projects.
- 2010-05 Under the support of research-exchange program funded by Energymyndighen, together with Anna Schnürer and Lotta Leven we visited Prof. Li Shizhong's lab in Institute of New Energy Technology, Tsinghua University, Peking. His group focus on production of ethanol

from sweet soghum and biogas production from banana stem, we exchanged knowledge in pretreatment of organic matters. We also visited Prof. Zhao in Chinese Academy of Agricultural Engineering (CAAE), Peking, a group who are working on biogas production from straw, they are interested in exchanging knowledge within microbiology area with us. We attended “Clean Energy Investment Summit” in Haikou as invited biogas expert. We met different people working in biogas field in China and also met chairman Luo och Lennart Huss (former Purac representative in Beijing) from Guangxi Shenzhou Environment Industry Holding Ltd, they were planning to build biogas plant in Hainan. The final visit was paid to Institute of Agro-Environmental Protection, AEPI, Ministry of Agriculture, Tianjin. Here we had 4 days’ program, we met Prof. Zhang (my University classmate) and his group, presented what we and they were doing, visited household biogas plants and big-scale straw biogas plant, identified our common interests, we will continue to collaborate with them. We also met Chairman Chao (who is Prof. Zhang’s friend) from Tianren company, one of outstanding biogas company in China. He wishes to collaborate with Swedish biogas company by help of us.

- 2008-2009** Built contacts with Prof. Zhang who is working with biogas from Agricultural wastes in Institute of Agricultural Environmental Protection, Ministry of Agriculture. Together with other colleagues Anna and Lotta, we got two travel funds to visit China in the future. I visited Chinese household and straw-based full-scale biogas plants and discussed possible collaboration with Prof. Zhang during my visit to my family in China in 2009.
- 1998-2000** Took over the lab leader’s duty in the lab and faculty board in HAU China when he was away to USA.
- 2007-10** Holded contacts between HAU and SLU for building up collaboration in research and education. Helped a group of delegates, seven people, including the head of HAU, to visit SLU and signed an agreement for collaboration in research and education.
- 2007-01** Attending “China Day” held in SLU. Gave a talk on behalf of my home university in China on expectation for collaboration with SLU.
- 2005-10** Organized a Sino-Sweden workshop on Physiology, taxonomy and identification of food-, feed- and airborne- fungi in HAU, Wuhan, China together with supervisor and other colleagues in SLU. More than 40 participates, who are Masters, Ph.D students and senior researchers from 7 different universities and research institutes around China, attended this workshop. I initiated the idea, planned the education program and arranged the trip.
- 2004-11** Arranged 8 visitors’ trip in Sweden. They were from Department of Education in Hubei Province and different universities in Wuhan. They visited the department of Microbiology in SLU, and met the director for studies and exchanged knowledge about education system.
- 1999-07** Helped to organize European Union project meeting in Huangshan, China. About 20 people from UK, Finland and China participated. I was responsible for booking hotels and arranging transportations et al.
- 1999-05** Assisted the Workshop on Biocontrol of Fungal Diseases (Sponsored by IFS/MISTRA, Sweden), Wuhan, China. Responsible for receiving participants from different countries. Presented researches done in our lab supported by IFS.

Participating in research projects in China

- Title of project: Study on effect of external hyphae of AMF on transport of *Rhizobium* of rice bean in soil
Funded: National Natural Science Foundation of China
Data: 2001.01-2003.12
Role: as main applicant
- Title of project: Study on molecular ecology of the affinity between *Mesorhizobium huakuii* and rice
Funded: National Natural Science Foundation of China
Data: 2000.01-2002.12
Role: as participator
- Title of project: Study on the molecular ecology of plant root colonized by *M. huakuii*
Funded: National Natural Science Foundation of China
Data: 1997-1999.
Role: as participator
- Title of project: Study on the molecular ecology of plant root colonized of by *M. huakuii* during saprophytic phase.
Funded: Natural Science Foundation of Hubei Province
Data: 1997-1999.
Role: as participator
- Title of project: Studies on biodiversity of *M. huakuii* in China
Funded: The RTD4 European Union-China joint project
Data: 1996-1999.
Role: as participator

Funds obtained in Sweden

- Swedish Research Link for international planning for 2010 together with Anna (2010)
- Forskningsutbyte Sverige kina oktober 2009-Resebidrag (2009)

Participating in professional societies in China

- Pedological Society of China
- Microbiological Society of China
- Microecological Society of China
- Microecological Society of Hubei Province

Languages skill

Chinese Mother tongue
English Writing, reading and speaking fluently
Swedish Writing basically, reading and speaking functionally

Computer knowledge

- Familiar with Excel, Word, Powerpoint, information searching, references managing program Endnote and statistical analysis program PC-ORD, have basic knowledge in statistical program R and text editor TeX live 2010.
- Good at using molecular database and analyzing tools