

News Letter

International Office, Agriculture

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国際交流一期一会

伊藤操子

[京都大学名誉教授、農学専攻]

本年3月定年退職するまで、私が直接招聘や研究指導に関わった外国人はタイ、中国、台湾、アメリカ合衆国、オーストラリア、トルコなど多様な国の研究者や学生であった。また米国イリノイ州に1年間、タイ国に4ヶ月ほど滞在し、そこでも多くの出会いがあった。長らく続いている交流もある一方、See you againと別れたものの二度と会うこともないであろう人も多い。この原稿を記しながら、彼・彼女らとの交流がいかに私を豊かにしてくれたかを思い、一人一人への懐かしさと感謝の気持ちがこみ上げてくる。

国のいかに関わらず、お互いの距離を縮めるのは飲食を共にしての会話の時間が最も有効だと信じていることもあって、ご家族も含め、京大雑草研に滞在されたほとんどの方に我が家で食事をしていただいていた。一番の心配は料理が口に合うかどうかであったが、モスレムの方についてもそれは杞憂に終わったようだ。とくにここ10年来、お正月用に主人が“おせち”を沢山作るの、それを研究室の学生さんに食べに来てもらうのが習慣になっており、海外からの方も同様に招待していた。黒豆、ごまめ、お煮しめなどとくに純日本的な“おせち”料理がどの国の方にも、子供達にさえacceptableであったのは驚きであった。珍しさもあっただろうが、本当においしそうに食されているのを見るのは大変愉快であった。もっとも、私がかつて滞在した米国中北部の人たちのなかには、初めての食べ物にとっても慎重な人が多かったので、たまたま雑草学をやるような(?) flexibleな方々だったからかも知れないが。

私の50歳近くになってからの初めての米国滞在はその中北部にあるイリノイ大学であった。大学はシャンペンとアルバナという2つのcountyに跨った小さな町にあり、夏・冬休暇で学生が帰省すると人口が何分の1かになる。シャンペン空港さえ大学の施設で、到着するとまず、Welcome to the University of Illinoisという文字が飛び込んでくる。町の周りを見渡す限りトウモロコシとダイズの畑の続く平野、コーンベルトの真っ只中で、私の専門のWeed Scienceを学ぶには最適のところであった。教授陣やスタッフも充実していたが、研究室は手狭で、私は、週に2~3回、夏は半ズボン姿でふらっとみえる名誉教授のDr. Slife (アメリカ雑草学会長でもあった有名な先生)、2人の博士課程の学生と同室で机を並べていた。滞在中日本語を話す機会といえば、日本から友人や家族が尋ねてきた時だけで苦勞もあったが、中北部の大地に根ざした農業国アメリカと、そこに暮らす保守的で素朴なアメリカ人をかなり知ることができたのではないかと思う。日本でアメリカというとニューヨークや西海岸の大都市が

紹介されることが多いが、私の居たあたりはまるで別の国のようであり、実際、学生やスタッフでもそういった大都会には行ったことも関心もない人が多かった。イリノイ大学については、美しい芝生のキャンパスや大学全体が完全にバリアフリーで障害のある学生さんがのびのび行き来している姿など、impressiveだった事柄を挙げるときりがないが、とくに学生には日本と非常に違う印象をもった。まず驚いたのは、到着した直後の素性のよく知れぬ私のところに次々と学生(院生)が自己紹介に現れ、そしてそれぞれに、自分に何か出来ることはないかと申し出てくれたことである。その行動は研究室とも先生とも関係なく、全く個人の意思でかつ儀礼的ではなかったので、私には彼・彼女らが今は学生をやっている“おとな”に見えた。植物に詳しい人は近隣の森林植物園に連れて行ったり図鑑を紹介してくれたり、遠出のときの足、ちょっとしたプレゼント、下宿でのホームパーティーへの誘いなど、単身で滞在した私はそのうちすっかり学生の遊び仲間になり、はては20歳以上も離れた人たちと20年ぶりのスキー旅行にまでいったりして第2の青春を味わうこととなった。

学生は一方でうわさ通り本当に良く勉強した。とくに農学の基礎となる化学、生化学、生理学、生態学、植物学などを徹底して勉強させられたようである。良い教科書があるのも羨ましかった。先生方としては雑草学専任の教授が5名、そのうち2名は合衆国農務省の研究者、2名はイリノイ州の農業普及担当で1名が大学所属であった。学生は5名の教授の誰でも指導教官に選ぶことができたし、国と州レベルの雑草問題とその対策について“なま”で学べるわけで、こうしたシステムは教育者として非常に羨ましかった。ちなみに、雑草学の講義は、州の普及担当の教授が、ユニークなお人柄そのままにズボンつり付ジーパン姿で行っておられた。イリノイ大での経験から、京大の国際交流にはインフラ整備ももちろん必要だが、教官・学生ともに在籍する日本人各自が受入れ側の一人と自覚して、滞在される外国人に対等かつ広い心で向き合うことも大切だと感じている。



留学生(トルコ、中国)とともに、楽しむ我が家の正月風景(2003年)。右端は料理人である夫。



Kyoto, my new Love

Elmar Heinzle

(Visting Professor)
(Biochemical Engineering Department,)
(Saarland University, Germany)

Through the fascinating activities of Bioinformatics at Kyoto and Keio Universities and particularly by the e-cell project at Keio University in Tsuruoka, I came into contact with Dr. Takaaki Nishioka who is Professor in the Graduate School of Agriculture as well as at Keio University. He was most well known to me as one of the fathers of the KEGG (Kyoto Encyclopedia of Genes and Genomes) which we use on an almost daily basis in our research and education and which is now an indispensable tool for us. Our first discussion at a meeting in Tsuruoka about metabolomics was stimulating both of us to start some kind of cooperation. Soon later I got an invitation to come to Kyoto University which I accepted with great pleasure. This winter-semester I took my first sabbatical in my life which I started with Prof. Friedrich Sreenc of the Biotechnology Department of the University of Minnesota in St. Paul where I stayed for two months. After a short inspection of my group around Christmas, I arrived in Kyoto in the last hours of 2003. My stay began with the invitation of Dr. Nishioka's family to the participation at the New Years ceremonies at Shinnyodo temple and Yoshida Shrine, a most exciting new experience for me.

The stay here at the Graduate School of Agriculture was most stimulating for me, an experience of academic freedom in two forms-being liberated from the manifold smaller and larger administrative obligations and more important, freedom to do things being most attractive like reading books and publications, talking to people liberated from time pressure, give lectures and work on publications. Though, I must admit, that e-mail kept me quite involved in my students activities in Saarbrücken. In some of the projects there were significant problems and I had to play fire brigade. A phone call from Dr. Jean-Marc Engasser from Nancy in France got me involved in working with him on an EU proposal which we could submit at the end of January.

I particularly enjoyed the many discussions with Dr. Nishioka both on scientific as well as cultural and political topics. We were both not only interested in metabolic research but also in hiking in the nearby mountains, in all kinds of aspects of academic life, cultural aspects, temples and many other things. The joint program, he is involved in, was also the center of my interest. We discussed problems of identification of unknown metabolites, flux analysis and related topics. Through his help I came into contact with Dr. Matsuda from the Division of Applied Life Sciences. The work of Fumio Matsuda, Keiko Morino, Masahiro Miyashita and Hisashi Miyagawa about metabolic flux analysis in plants was of great interest for me and after some discussions I got involved in their activities. I received unpublished data which I could use for modeling. Initial quick BerkeleyMadonna simulations became more and more involving and ended with extensive Monte-Carlo simulations and flux control analysis. Now we are writing a joint publication which we can hopefully finish soon. I also had interesting discussions with members of Dr. Nishioka's group, particularly with Dr. Ishihara whose work has some similarity to that of the other group, at least from my point of view.

I gave a few lectures on Metabolic Engineering aspects at the Graduate School of Agriculture but also at the Bioinformatics Center, Institute for Chemical Research in Uji which hopefully stimulated many PhD students. Through Dr. Nishioka help I came easily into contact with the bioinformatic group in the Uji campus of the Kyoto University and could see the KEGG infrastructure. The discussion

with the various research groups there was very interesting and in a little chat in the bus I could also learn that the Uji campus is actually built close to Dr. Nishioka's childhood playgrounds. I had the opportunity to visit Dr. Hirotsada Mori at Nara Institute of Science and Technology who is also a member of the Keio consortium and present our research in a lecture. Dr. Mori's research is very interesting for us, and after a second visit we could arrange some future collaboration involving his worldwide unique collection of E. coli mutant strains. I could also visit another member of the Keio consortium, Dr. Kazuyuki Shimizu at the Iizuka campus of Kyushu Institute of Technology. His research work is most similar to our work at the Saarland University concerning the methodology used. The discussions were very stimulating for both sides, I think. More recently, Dr. Masanori Arita from Tokyo University came for a discussion of research topics of mutual interest. His unique software and databank in the internet is of great interest for metabolic flux analysis. We discussed possible future modifications of his software to better serve the need of potential users. Very stimulating was the COE Symposium on "Microbial-Process Development: Pioneering Future Production Systems" held on March 10 at Kyodai Kaikan. Besides listening to interesting lectures from invited lecturers from Europe, I had the opportunity to study a whole series of posters prepared by PhD students of the Division of Applied Life Sciences. The discussions were interesting but were also partly characterized by severe language problems. I regret that I cannot speak Japanese. I think, however, that many PhD students should put more emphasis on learning to communicate in English. This would probably involve the organization of regular seminars held in English.

I could also visit some old friends of mine, Prof. Masanori Fujita from the Environmental Engineering Department of Osaka University and Prof. Kenji Furukawa from the Environmental Department of Kumamoto University, discuss their present research and to introduce them into our present research in short lectures.

Besides intensive work at the University, I also had the opportunity to hike in the mountains on weekends, a most preferred hobby. I enjoyed the peaceful, harmonic mountain area and the starts and finishes at many beautiful temples, a worldwide unique treasure. One special thing about Kyoto is that one can escape the pulsing, hectic city life in a few minutes. On several occasions in winter I walked for hours without meeting any single person. Another contrast I experienced concerns the way Japanese seem to handle waste problems. In the city, in the buses and train and particularly in the temples and shrines everything is absolutely well kept. This is also true for the hiking trails where I observed many hikers collecting even minute puniest pieces of paper. The big contrast is many pieces of land in between, the edges of woods accessible with cars. This looks like a real no man's land-old tires, machines, refrigerators, sinks, bottles, cars, bicycles - everything modern consumer society supplies to us. It seems to me that this could probably stimulate a project well suited for the Graduate School of Agriculture of Kyoto University.

I was particularly happy to share some time in Kyoto with my wife and one of my sons who came from Europe and from the United States. This was also the best opportunity to experience the wonderful Kyoto cuisine. Overall I walked all the way starting from Uji over the eastern and northern mountains, Daigo-yama, Hiei-san, Kibune-yama, Atago-san, Arashiyama down to route 9 in Katsura. I can only recommend walking around Kyoto and leaving the University for a couple of hours. When the thoughts in the head became too much of a circular character, it was very helpful to go out in the fresh air and revitalize the system. After seeing the ume blossom at Kitano-tenmangu, I am especially delighted that the cherry trees realized that I am leaving soon and are coming out now showing all their breathtaking beauty.

I am very grateful to Dr. Nishioka who invited me and who was a most cooperative host. I thank the Graduate School of Agriculture and everybody who helped making my stay interesting, enjoyable und successful. I hope that my stay was a start for a fruitful future collaboration and that we can establish a vivid exchange of students and researchers between our universities.



Impressions of the Visiting Associate Professor from Poland after six month stay at Kyoto University

Ewa D. Marczak

(Visiting Associate Professor
Department of Biotechnology,
Industrial Chemistry Research Institute,
Warsaw, Poland)

For many people all over the world, including also Poland, Japan is a country of uprising sun and blooming cherry trees. It is not a secret that it was one of the reasons for which I accepted an invitation for a 6-month Visiting Associate Professor position at Graduate School of Agriculture Kyoto University. These 6 months it was an unforgettable time for me, as apart from the research and teaching program, I had also an opportunity to admire beauty of Japan during the most beautiful seasons of the year, namely autumn and spring. Weather during the last autumn caused that famous red leaves of Japanese maple trees, momiji, became more reddish than could be expected. Again this spring weather is warmer than usually and therefore cherry trees burst into bloom earlier than expected giving me possibility to admire beauty of the Japanese sakura.

Apart from unforgettable beauty of nature Japan is the first country, which introduced already in 1991 an approval system for licensing the "Foods for Specified Health Use (FOSHU)". A FOSHU is defined as "a food which, basing on the knowledge concerning the relationships between food or food components and health, is expected to exhibit certain health benefit. It has been licensed to bear a label claiming that person who uses it for specified health use may expect to obtain the health use through consumption thereof". Research on physiological functions of food and its components is performed in Japan on very advanced level. Scientists from Kyoto University create one of the leading world-recognized groups in this area.

I visited Japan for the first time in December 1997 to participate in First International Peptide Symposium and its satellite symposium International Symposium on Bioactive Peptides Derived from Food and Non-Food Proteins as the representative of Industrial Chemistry Research Institute located in Warsaw. From that time we have started collaboration with Prof. Masaaki Yoshikawa group on the subject "new drugs from proteins". One of the effects of this collaboration is isolation of new antihypertensive peptides from rapeseed protein digests. One of these peptides, RIY, has multifunctional properties. It has long lasting hypotensive effect resulted from its angiotensin-converting enzyme inhibitory and vasorelaxing activities. Research program of my 6-month stay at Kyoto University was mostly related to study of physiological function and mechanism of this peptide. In result of these studies additional functions of RIY were found, as for example hypocholesterolemic activity and inhibition of food intake. Results will be published in at least two papers. I was also engaged in teaching students.

Research facilities of my host laboratory, Division of Food Science and Biotechnology are located in Uji Campus in Obaku close to the oldest Zen-Buddhist temple, Mampuku-ji, favorite place of walks around. Location of this campus has generally many advantages however it is not free from disadvantages. This campus has an excellent location for research as it is far from tourist-exciting places. Location of Uji campus is also convenient because it is just between Kyoto and Nara, two former Japanese capitals. This makes possible to visit much more places than if you stay in Kyoto. From the other point of view location far from main university campus makes it a little bit isolated from the university atmosphere, as it is difficult for example to participate in lectures and seminars, which are given mainly in main campus. Unfortunately it takes more than one hour to get to main campus, what often means half a day used to go there and to do some business there. This was one of the reasons for which I was not able to participate in many interesting seminars or lectures.

During my stay in Japan I traveled a lot. I took part and had presentations at 4 conferences, two Japanese and two international. These were Japanese Peptide Symposium in Chiba, International Conference on Food Factors in Tokyo, International Joint Meeting on Food Factors and Free Radicals in Health & Disease in Kyoto, and Annual Conference of Agricultural Chemistry in Hiroshima. I also found some time to improve my Japanese. In this respect the real challenge for me are the kanji characters. I learned several hundreds but this is far much nothing taking into account their total number. All foreigners probably face the problem. It especially appears during Japanese conferences, seminars, and lectures, when apart from spoken part, also all visual materials like slides and transparencies are in Japanese. In such a case, trials of deciphering written matter are so absorbing that it is impossible to concentrate on listening. Finally one has to give up to avoid misunderstanding. Fortunately gradually more and more Japanese students and scientists start to prepare their materials for presentation in English. In such a case even if lecture is presented in Japanese it is possible to concentrate on listening of explanation and finally at least partially understand the subject. Please continue this way. For me this is also a kind of Japanese class with many new words and phrases.

I understand Japanese people that they have some kind of psychological barrier to speak in English. The same can be observed in Poland, because for us English is also foreign language. People are the same everywhere. We have the same hearts and emotions the same illnesses and deaths. Differences in cultures and languages, which make difficulties in understanding still exist but are becoming not as strong as in the past. Fortunately English, which is an international language, makes contacts easier. I hope my presence in Prof. Yoshikawa's laboratory will encourage Japanese students to speak English, especially when they could observe my attempts to speak Japanese, despite mistakes and lack in vocabulary.

At last but not least I would like to express my deep appreciation for giving me opportunity to be here. I appreciate very much kind assistance of Professor Masaaki Yoshikawa himself and his co-workers and students during whole my stay in Japan. Thank you.
お世話になりましたありがとうございました。

外国人客員教授

外国人客員教授として平成17年度は下記の3名の先生方の招聘が確定しています。

氏名：**Mota Manuel M.** (ポルトガル)
招聘期間：平成17年6月15日～平成17年9月14日
所属・職：エボラ大学・生物学部・助教授
研究題目：マツ材線虫病の被害拡大様式の研究
受入教官：二井一楨教授(地域環境科学専攻・微生物環境制御学)

氏名：**Andreas Houben** (ドイツ)
招聘期間：平成17年9月20日～平成18年1月5日
所属・職：植物育種及び作物研究所・主任研究員
研究題目：オオムギ染色体の機能的動原体の構造解析
受入教官：遠藤 隆教授(応用生物科学専攻・植物遺伝学)

氏名：**Muhammad Ahmad ARSHAD** (カナダ)
招聘期間：平成18年3月20日～平成18年6月30日
所属・職：アルバータ大学・特任教授
研究題目：持続的発展のための陸域生態系管理法に関する研究
受入教官：田中 樹助教授(地域環境科学専攻・比較農業論)

特別講演会

2004年11月26日(金) 14:30～17:00 開催

Dr. Chen Pictiaw (カリフォルニア大学デービス校・名誉教授)
演題「農産物の品質判定のための非破壊技術」

Dr. Frederick George Gmitter, Jr.
(フロリダ大学・食品農業研究所・カンキツ研究教育センター・教授)
演題「カンキツ類のゲノム研究：遺伝子解析技術とカンキツ類遺伝子の進化」

外国人留学生(研究者)の博士号取得状況
(平成16年1月~12月)

当該1年間に京都大学農学研究科に博士論文を提出し、京大博(農)の学位を授与された外国人留学生(研究者)は18名です。取得者の名前と論文テーマは以下の通りです。

Tschumi Christian (森林科学)

Studies of Mirei Shigemori's Approach to the Renewal of the Japanese Garden Culture

陳 波 (森林科学)

Rheological Properties of Pulp Fiber Suspensions and Mechanism of Flocculation and Redispersion

Pramote Khuwijtjaru (食品生物科学)

Solubility of Fatty Acids and Hydrolysis of Their Esters in Subcritical Water

Kongkiat Kittiwattanawong (応用生物科学)

Biology and Conservation of Green Turtle *Chelonia mydas* in Thailand

金 大 植 (地域環境科学)

Modeling Land-Use Change and Urbanization Process

金 永 柱 (地域環境科学)

意思決定手法を用いた中山間地域の定住環境評価と活性化方策

柳 讚 錫 (地域環境科学)

Analysis of Field Information and Applying Remote Sensing Technology for Rice Management

Motaz Khilael (地域環境科学)

Development of Metering Mechanism for Variable Rate Fertilizer Applicator-Low Power Consumption and Torque-

魏 云 林 (応用生命科学)

Studies of Enzymes from Cold-adapted Microorganisms and Construction of Their Overproduction Systems

Shemsu Kemal Andeta (地域環境科学)

Experimental Investigation of Volume Change and Shear Behavior of Unsaturated Granular Soils

金 河 元 (食品生物科学)

Suppression of Inflammatory Leukocytes-induced Mutagenesis by Dietary Antioxidants

姜 有 那 (農学)

Studies on the Structure and Function of Soybean β -Amylase by Mutations at Active Site and Surface Residues

張 春 花 (森林科学)

Three-Dimensional Cell Arrangement and Heartwood Substances Movement in Hardwoods

Mary Rose Gecolea Tandang (応用生命科学)

Studies on Structure and Physicochemical Function Relationships of Rapesced and Soybean Storage Proteins by Protein Engineering

Subandi (生物資源経済学)

Analysis of Food Security Policy in Indonesia With a Focus on the Implications of the Rice Import Tariff Policy

Woro Triarsi Sulistyaningdyah (応用生命科学)

Screening and applied studies of novel microbial oxidoreductases

Ageng Setiawan Herianto (生物資源経済学)

A Quantitative Study on the Adoption of Soil Mining Leaf Banana Cropping Systems in a Mountainous Village of West Java, Indonesia Using Plot-wise and Household Data

安 榮 玉 (応用生命科学)

A New Class of Glycosidases Specific to Disaccharide Glycosides

農学部国際交流ニュース

留学生室名称変更

農学部・留学生室の名称は平成17年4月より農学部・国際交流室(International Office)に変更になりました。

農学研究科博士後期課程編入学考査

平成17年度農学研究科博士後期課程編入学考査(私費外国人留学生特別選抜を含む)は、1月27・28日に行われ、22名が合格しました。このうち私費外国人留学生は、応用生命科学専攻1名(中国)、応用生物科学専攻2名(韓国)、地域環境科学専攻1名(韓国)、食品生物科学専攻2名(中国・韓国)の合計6名でした。

農学研究科修士課程私費外国人留学生特別選抜入学試験

平成17年度農学研究科修士課程私費外国人留学生特別選抜入学試験は、1月27・28日に行われ、6名が合格しました。専攻別内訳は、農学専攻1名(ブータン)、応用生命科学専攻2名(カナダ・中国)、生物資源経済学専攻2名(中国)、食品生物科学専攻1名(中国)でした。

農学部私費外国人特別選考試験

平成17年度私費外国人留学生特別選考試験は3月1日に行われ、19名の受験者があり、地域環境工学科(1名)と食料・環境経済学科(1名)と食品生物学科(1名)に入学されることになりました。

新入留学生のためのオリエンテーションと歓迎パーティー

平成17年度、農学研究科は13カ国31名の新入留学生を迎えました。4月8日、オリエンテーションに引き続いて、教職員および在学留学生約120名の参加を得て、恒例の歓迎パーティーが農学部大会議室で盛大に行われました。開催に当たり、農学部国際交流推進後援会より援助ならびに御高配を賜りましたことを、ここに感謝いたします。

世界の料理講習会開催

第1回 インドネシア料理 Ms. Elly Kesumawati, 第2回 タイ料理 Ms. Thiwthong Rungruedee, 第3回 中国料理 Ms. 陳 浩, 第4回 ネパール料理 Ms. Shanta Karki, 第5回 ベトナム料理 Ms. Nguyen Thi Hong Van, Ms. Nguyen Thu Ha, 第6回 ガーナ料理 Mr. Adayi George Miandi に講師をお願いしました。今回は5月27日(金)ブラジル料理開催を予定しています。



平成17年度
新入留学生と国際
交流室スタッフ



中国料理講習会



ガーナ料理講習会

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