



The 8th Kobe University Brussels European Centre Symposium

***EU-Japan Initiative for Excellence - Strategic Research Partnership
in Medicine, Biotechnology and Social Sciences***

Organised jointly with Vrije Universiteit Brussel

Tuesday 21 November 2017
Vrije Universiteit Brussels

**SPEAKERS AND MODERATORS BIOGRAPHIES
AND ABSTRACTS**

Opening		9:30-10:00
Chair	Prof. Matsuto Ogawa , Executive Vice-President, Kobe University	
Opening Addresses	Prof. Caroline Pauwels , Rector, Vrije Universiteit Brussel Prof. Hiroshi Takeda , President, Kobe University H.E. Mr. Kazuo Kodama , Ambassador of Japan to the European Union Dr. Philippe Vialatte , Deputy Head of Unit, International Cooperation Directorate, Directorate General for Research and Innovation, European Commission	
Parallel Session 1		10:00-13:30
	<i>U-Residence large meeting room</i> <i>Innovation in Higher Education and Social Sciences: Regional Culture and Global Challenges</i>	
Parallel Session 2		10:00-13:30
	<i>U-Residence small meeting room</i> <i>Microorganisms in biotechnology</i>	
Parallel Session 3		14:30-18:00
	<i>U-Residence large meeting room</i> <i>Migration and Community Building</i>	
Parallel Session 4		14:30-18:00
	<i>U-Residence small meeting room</i> <i>Healthy and Active Ageing: a Key Role for Physical Exercise</i>	
Closing Remarks		18:00-18-15

Organiser: Kobe University
Co-Organiser: Vrije Universiteit Brussel

***Innovation in Higher Education and Social Sciences: Regional Culture and Global Challenges*****Chair: Noriyuki Inoue**

Executive Vice President, Kobe University (Japan)

Professor in the Graduate School of Law, Kobe University, Japan. Awarded MSc and PhD from Osaka University, Japan in 1985 and 1996, respectively. After working for Osaka Gakuin University as assistant and associate professor, joined Kobe University as an academic member in 1995. From October 2009 to September 2011, worked as the Dean of the Graduate School of Law, and from April 2013 as the Executive Vice President of Kobe University in Charge of International Exchange and Internal Control. His research focuses on Constitutional Law and European Law.

**Chang Zhu**

Department of Educational Sciences, Vrije Universiteit Brussel (Belgium)

Prof. dr. Chang Zhu is a professor in Educational Sciences at Vrije Universiteit Brussel (VUB) since 2010. Prof. Zhu coordinates the LEAD (Erasmus+ Capacity Building in Higher Education) project (from 2015-2018) as its Project Manager; and from 2013-2016 she was project coordinator of the EU-China DOC project under the EU Erasmus Mundus Program. She is the director of the EU-China Higher Education Research Center (ECHE), the Online and Blended Learning Competence Center, and the Belgian Director of the Confucius Institute at VUB. She is the promoter and principal investigator of several key fundamental research projects in the fields of higher education, internationalisation, university governance, academic leadership, international academic mobility, student competence and literacy development, educational innovation, online and blended learning, MOOC, ICT-supported learning and social inclusion. She completed her PhD research at Ghent University. Before that she was a lecturer at the Communication University of China; and consultant for the World Bank and Asian Development Bank Mission in China, engaged in development projects in China.

Innovations in higher education: trends and challenges

Abstract: Higher Education Institutions are facing challenges such as globalisation, ranking, societal needs, new technologies and student changes. Innovations of higher education are inevitable in order to respond to the changing needs of the society, the internal and external environment, and to improve quality and practices. New learning and teaching approaches are needed in order to enhance the development of student competences. Research innovations are crucial for universities to address issues of concern for the changing society and technologies. University leadership is relevant and important in order to strengthen the role of universities to lead the innovations in research and education in the global and international contexts.



Hideki Iwabuchi

Counsellor (Science, Technology and Education),
Mission of Japan to the European Union

Before arrival to Brussels in July 2017, Mr. Iwabuchi experienced a series of positions in the Government of Japan, including: Director of the Office of International Planning, Higher Education Bureau, Japanese Ministry of Education, Culture, Sports, Science and Technology (MEXT); Secretary to the Minister of State for Science and Technology Policy, Cabinet Office of Japan; Director of the Office of Basic Research Programs, Research Promotion Bureau, MEXT; and First Secretary for Science and Technology, Embassy of Japan in Seoul (Korea). He got his master degrees in Syddansk Universitet in Odense (Denmark) [International Economics, 2004], and Tokyo Institute of Technology [Engineering, 1997].

Overview of Academic/Research Collaboration between Japan and EU/European Countries

Abstract: First, the current status of collaboration is summarized based on the data.

Student exchange: While Japanese students in Europe decreased in these 20 years, European students in Japan gradually increased. But the latter is still much less than the former. Smaller European countries may have difficulty in attracting Japanese students.

Research Collaboration: Japanese researchers write academic papers more frequently with Europeans than 10 years ago. By research field, co-authorship is frequent in environmental and medical sciences, but relatively less so in materials and engineering.

Japan-China-Korea: Compared to Chinese and Korean students, Japanese students tend to enroll in European universities, and Japanese researchers tend to collaborate with Europeans.

Second, the policy trend on collaboration is illustrated.

Historical view: Communication of intellectuals between Japan and Europe has continued for these five centuries. In the 19th century, the Japanese government invited many experts from and sent many students to Europe.

Leaders' Vision: Japan-EU Summit recently endorsed a Joint Vision on the new strategic partnership in research and innovation. Following the vision, several new schemes for cooperation were established.

Open to the World: European Commission encouraged the collaboration with Japan in 23 calls under WP2018-20 (Horizon 2020). The research collaboration is expected to increase.

Finally, the future agenda for collaboration is discussed.



Marlène Bartès

Policy Officer, DG for Education and Culture, European Commission

Marlène Bartès joined the European Commission in 2013. She is part of the team responsible for international cooperation and programmes in the field of education and training, focusing on collaboration with countries outside the EU. Her geographical responsibilities include the Western Balkans and Asia. Before joining the Commission, Marlène worked for the Academic Cooperation Association (ACA) in Brussels, a dynamic think tank in the area of international cooperation in higher education. Her passion for international affairs started with her studies, which guided her from France to Japan and Canada.

EU-Japan Cooperation in Higher Education- Addressing Global Challenges, Together

Abstract: Japan and the EU share similar objectives in the area of education – such as international cooperation, increasing access to higher education through scholarships, or strengthening science and technology – and are therefore natural partners for cooperation in education and research.

Since 2014, the EU opened up even more opportunities to Japan thanks to the new generation of EU programmes, namely Erasmus+ and Marie Skłodowska-Curie actions, which support the internationalisation of higher education systems, increase intercultural understanding and improve employability in a globalised and knowledge-based society. However, Japanese participation in EU education programmes has to date been rather modest. In her presentation, Marlène will outline current and future cooperation between the EU and Japan in the field of higher education, with a particular focus on Japanese participation in Erasmus+ and Marie Skłodowska-Curie actions and ways to improve it.



Helmut Staubmann

Dean, Faculty of Social and Political Sciences, Universität Innsbruck (Austria)

Helmut Staubmann is Professor for Social Theory and Cultural Sociology and Dean of the Faculty of Social and Political Sciences, Universität Innsbruck. He was president of the Austrian Sociological Association. He held visiting researcher positions at UCLA, the University of Pennsylvania and Harvard University and taught at several European, Asian, and American universities. His research focuses on conceptual and methodological foundations of social sciences, the intersection between social theory and aesthetics and on issues of higher education and research.

Innovation in Higher Education and Research: Regional Culture and Global Challenges

Abstract: There are two threads that make up the fabric of the situation to which institutions of higher education and research and professional organizations are required to react: One thread is the technological advancement that resulted in new research tools and communication technologies. The other one is the rapidly increasing cooperation and exchange between scholars that finally reached the stage of a global university system.

In my presentation I will report about the developments of professional social science organizations in Austria and about a planned joint case study of Kobe University, the University of Innsbruck, and the Management Center Innsbruck on the specific transformations these three universities are undergoing and planning in the face of globalization processes.



Raf Vanderstraeten

Professor and Director, Centre for Social Theory, Ghent University (Belgium)

Awarded PhD from Leuven University, Belgium, in 1994, and Habilitation from the University of Bielefeld, Germany in 2004. He is currently also affiliated with the Helsinki Collegium for Advanced Studies (Finland) and the Department of Sociology of the University of Chicago (USA). With Kaat Louckx, he recently published *Sociology in Belgium: A Sociological History* (Palgrave Macmillan, 2018).

The schooled society: the geography of education in Belgium, 1961-2011

Abstract: The expansion of university-based education is linked with the rise of the contemporary 'knowledge society' or 'schooled society'. But as the expected amount of education has quickly spiraled upward, the 'dropout problem' for people who quit school at an early age was also created. Against this background, I will present an analysis of geographical inequalities at the top and the bottom end of the human capital distribution across Belgium in the period 1961-2011. In spite of the expansion of university education, the segregation of university trained human capital within Belgium and its regions (Flanders and Wallonia) remained high throughout this period. While the shares of adults without educational credentials clearly decreased in Belgium, this decrease goes hand in hand with growing divergences between the Flemish and the Walloon regions. Altogether, these findings clarify the ways our society is currently organizing itself on the basis of educationally gained knowledge. On the basis of these findings, this presentation will also show how the global rise of the 'knowledge society' is currently leading to new divergences between regional cultures.



Simon Kaner

Director, Centre for Japanese Studies, University of East Anglia (UK)

Dr. Simon Kaner is Director of the Centre for Japanese Studies at the University of East Anglia and Head of the Centre for Archaeology and Heritage at the Sainsbury Institute for the Study of Japanese Arts and Cultures. He is an archaeologist specialising in the prehistory of Japan and a Fellow of the Society of Antiquaries of London since 2005. His recent publications include *An Illustrated Companion to Japanese Archaeology* (edited, with Werner Steinhaus) (Oxford, Archaeopress, 2016) and he is currently editing the *Oxford Handbook of the Archaeology of Korea and Japan*. Simon is Research Fellow in the Japanese Section, Department of Asia, The British Museum, and Fellow of the McDonald Institute for Archaeological Research at the University of Cambridge. He is Co-Editor of the *Japanese Journal of Archaeology*, Series Editor for the Archaeopress series *Comparative Perspectives on Japanese Archaeology* and Series Co-Editor for the Springer series *The Science of the History of Humanity in Asia and the Pacific*.

A new approach to delivering Japanese studies: the case of the University of East Anglia

Abstract: In this presentation I will introduce a series of initiatives through which the Sainsbury Institute for the Study of Japanese Arts and Cultures and the Centre for Japanese Studies at the University of East Anglia in the UK are developing innovative approaches to teaching, researching, and engaging local communities with, Japan. These include: Summer Schools in Japanese Studies and Japanese Arts, Cultures and Heritage; Widening Participation programmes encouraging more students to consider attending University, using Japan as an attraction; exhibitions about Japan; explicitly comparative research projects relating Japanese examples to local experiences; and the use of social media to foster new and further interest in Japan. We hope that these various initiatives will help create a resilient programme of interdisciplinary Japanese studies at the University of East Anglia that can withstand the headwinds facing the higher education sector in the UK generally.



Kiyomitsu Yui

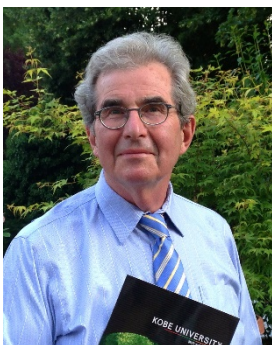
Graduate School of Humanities, Kobe University (Japan)

Kiyomitsu Yui is Professor of Sociology in the Graduate School of Humanities, and Executive Adviser to the President in Charge of International Collaboration, and Executive Director, Centre for EU Academic Collaboration, at Kobe University. He has been a visiting scholar at Harvard University, and Asian Chair at Sciences Po. His main research subject is sociological theory from G.H. Mead via T. Parsons to U. Beck. He has also been interested in the process of modernization, second modernization, and popular culture in the comparative and global context. His publications include 'From 'This is Not a Pipe' to 'This is Not Fukushima' : Global Disaster and Visual Communication', in *The Consequences of Global Disasters* (ed. by A. Elliott et.al., Routledge 2016) and 'Multiple Modernities and Japan: Nagai Kafū and H.G. Wells', in *New Steps in Japanese Studies* (Ca' Foscari Japanese Studies Series 5, 2017).

Innovation of Higher Education and internationalization of Japanese Studies: the case of Kobe University

Abstract: In the presentation I will explain and analyze the case of innovation of higher education at Kobe University, Japan, coping with the globalization of educational systems in the world. In the process of facing the global impact, the peculiarity of historical, cultural and societal settings of the educational system in each region has serious concern. The different responses towards the situation create points of difficulties for the global accordance and reconciliation to fit each other in the innovative process of higher education.

The higher educational institutes in the world have been challenged by the following different issues simultaneously: from traditional types of elite education towards more mass education, universal access by everyone yet at the same time pluralization of the system accessible by different people, and finally and most recently globalization, namely comparability and transferability of the units, symbolized by the term Bologna Process. One of the main social issues of our time in educational fields is how to sufficiently delineate all these issues and implement and express them in the institutional terms and actual educational programs. In the talk I will introduce some examples of the trials in Kobe such as joint research projects with the University of Innsbruck and especially Japanese Studies programs taught in English as cooperative academic activities with foreign universities in Europe and the world.



Discussant: Patrick Vittet-Philippe

Advisor, Kobe University Brussels European Centre (Belgium)

Patrick Vittet-Philippe is a recently retired EC official, with a special interest in international S&T cooperation, science communication and science diplomacy. Before joining the EC, he taught at Trinity College Dublin and Merton College Oxford and was *attaché de recherche* at the French CNRS. He spent 14 years in the French Diplomatic Service, as cultural attaché in Tel Aviv, London and New York. After a time in the EU TV industry, he joined the EC as expert-adviser in Information Society technologies and digital economy, representing the institution in key international fora and conferences. He moved in 2001 to DG Research as Press and Communication Officer, responsible, in particular, for commissioning TV magazines on EU research (e.g. *Futuris* on Euronews). In 2011 he became Head of the Japan and Russia Desks, where he organized the 'EU-Russia Year of Science', and was directly involved in the preparation of EU-Russia and EU-Japan Summits. He was appointed last year as adviser to Kobe University European Centre in Brussels, focusing on the development of joint research projects and academic cooperation between Europe and Japan.

**Microorganisms in Biotechnology****Topic 1: Informatics and Diversity****Chair: Prof. Ken-ichi Yoshida**

Graduate School of Science, Technology and Innovation, Kobe University (Japan)

After a Master obtained at Kyoto University in 1989, he got the position of Assistant professor at Fukuyama University in 1990 and obtained a PhD at Kyoto University in 1993. After a Post-Doc experience at INRA, France, from 1996 to 1997, he moved to Kobe University in 2004 as Associate Professor, and was promoted to Professor of Applied Microbiology in 2009. He has specialized in functional genomics of bacteria including *Bacillus subtilis* and its relatives since the very beginning of his career to date. He was once awarded the prize for "Encouragement of Young Scientists" (2002) and twice the prize for "Excellent papers" from the Japan Society for Bioscience, Biotechnology, and Agrochemistry (2008 and 2014). He served in the Research Promotion Bureau in the Ministry of Education, Culture, Sports, Science and Technology (MEXT), Japan, as a Program Officer (Scientific Research Senior Specialist) (2005-2007). Since April 2014 he serves as the Executive Director of the Kobe University Brussels European Centre .

**Michihiro Araki**

Graduate School of Medicine, Kyoto University (Japan)

Professor in the Graduate School of Medicine, Kyoto University and Visiting Professor in the Graduate School of Science, Technology and Innovation, Kobe University. Awarded MS and PhD from Kyoto University in 1998 and 2001 respectively. After working for Boston University as a research assistant, joined the University of Tokyo, Kyoto University and Kobe University as an academic member in 2003, 2008 and 2013 respectively. His research focuses on Bioinformatics, Synthetic Biology and Clinical Informatics.

Bioinformatics analyses for designing synthetic metabolic pathways

Abstract: The recent progress in synthetic biology has accelerated various modifications in cell processes, and in particular has enabled us to devise the metabolic pathways to produce various chemicals, including fuels, plastics, fibers, and pharmaceuticals. In order to produce useful chemicals with higher efficiency, a number of research projects have been conducted to design novel and/or artificial metabolic pathways, which requires urgent development in information analysis technology, namely bioinformatics.

We have developed an *in silico* technology to design metabolic pathways, and a design tool (software) has been devised. The main features of this tool are listed as follows: i) it can design possible metabolic pathways whatever the target chemical is intended to be produced, ii) the designed novel metabolic pathways can be evaluated for their efficiency in production of particular compound of interest, iii) this tool can extend the scope of metabolic networks including not only the previously known compounds and enzymes but also unknown ones, and iv) for some model organisms, the metabolism can be simulated in the genome-scale for quantitative analysis. Furthermore, the machine learning and sequence analysis technologies are now integrated to select appropriate enzyme genes from sequence databases for implementation of practical metabolic pathway designing.



Stefan Weckx

Research Group of Industrial Microbiology and Food Biotechnology (IMDO),
Faculty of Sciences and Bioengineering Sciences, Vrije Universiteit Brussel

Prof. Dr. Stefan Weckx is a tenure track assistant professor on the theme "Genomics in food fermentation processes" at the Department of Bioengineering Sciences of the Faculty of Sciences and Bioengineering Sciences of Vrije Universiteit Brussel (VUB), Brussels, Belgium. He obtained a MSc. in Biochemistry in 1996 and a PhD in Sciences in 2004, both at the University of Antwerp, Belgium.

As a PhD student, he stayed as a Marie-Curie training fellow at the European Bioinformatics Institute in Hinxton, Cambridge, UK. After obtaining his PhD, he joined the MicroArray Facility of VIB in Leuven, Belgium, as a postdoc. In 2006, he joined the Research Group of IMDO of VUB, headed by Prof. Dr. ir. Luc De Vuyst, as a postdoc to supervise the molecular (micro)biological research and to start up research on (meta)genomics and bioinformatics to investigate food fermentation processes. In 2014, he obtained a tenure track position as assistant professor.

Genomics and metagenomics to investigate fermentation food ecosystems in view of starter culture selection

Abstract: Fermented foods harbour a rich diversity of microorganisms, including for instance lactic acid bacteria, acetic acid bacteria, and yeasts. These microorganisms are involved in the production of specific metabolites that contribute to special characteristics of these foods, such as antimicrobial activity or organoleptic properties, as well as to competitiveness and ecosystem adaptation. Over the years, various spontaneous fermented foods and beverages have been studied to unravel their microbial ecosystem composition and metabolic behavior. These studies aimed at the identification of the microbial species involved in desired ecosystem functions and their possible use as functional starter cultures for controlled fermentation processes to guarantee specific characteristics of the fermented food products. Recent advances in next-generation sequencing techniques not only allow analyzing the genomes of functional starter culture strains, but also provide great opportunities to obtain a more in-depth insight into the species composition as well as the genetic potential of fermented food ecosystems.

In recent years, the research group IMDO sequenced diverse samples of various food fermentation processes (cocoa, coffee, water kefir, cheese and meat brines, etc.), whether or not obtained as a function of fermentation time, using an amplicon-based metagenetics and/or shotgun metagenomics approach, allowing taxonomic and both taxonomic and functional analysis, respectively. Also, the genomes of several of its potential functional starter cultures were sequenced. Overall, these approaches will help to understand fermented food ecosystem structures and functions, allow fermented food ecosystem reconstructions, and finally lead to a better supported selection of appropriate functional starter culture strains to perform well-controlled and/or steered food fermentation processes.



Ro Osawa

Graduate School of Agricultural Science, Kobe University (Japan)

Professor in the Graduate School of Agricultural Science, Kobe University, Japan. Graduated from the veterinary school of Hokkaido University, Japan. Awarded PhD (in veterinary medicine) from Queensland University, Australia in 1987 and another PhD (in agricultural science) from Tohoku University, Japan

in 1992. After working for Lone Pine Koala Sanctuary in Australia as a research director between 1988 and 1992, Tokushima University as a research assistant between 1993 and 1995, and Kanagawa Prefectural Health Laboratories as a senior investigator between 1996 and 2000, he joined Kobe University as an academic member. His research focuses on food and intestinal microbiology.

Development and application of a single-batch fermentation system that simulates human intestinal microbiota

Abstract: In order to study intestinal microbiota and its application for promoting human health, we have devised the "Kobe University Human Intestinal Microbiota Model" (KUHIMM), based on the single-batch fermentation system, which allows us to simulate human intestinal microbiota both metagenomically and metabolically. KUHIMM is capable of evaluating 1) practical functionality of various food components, 2) health status of human subjects, and 3) some gene expression of certain bacterial strain *in vivo*. Some technically important aspects and features of the model and its application will be described in the talk.

Topic 2: Metabolism and Regulation

Chair: Stefan Weckx, Vrije Universiteit Brussel (Belgium)



Eveline Peeters

Research Group of Microbiology, Faculty of Sciences and Bioengineering Sciences, Vrije Universiteit Brussel (Belgium)

Assistant Professor in the Department of Bioengineering Sciences, Vrije Universiteit Brussel (VUB), Belgium. Awarded MSc and PhD in bioengineering sciences at VUB in 2002 and 2007, respectively. My research focuses on microbial gene regulation and synthetic biology.

Expanding synthetic biology to the extremes of life: engineering extremophilic microorganisms as novel cell factories

Abstract: Microbial production of chemicals from renewable biomass is a promising alternative for the (petro-)chemical industry and contributes to a more sustainable bio-economy. Metabolic engineering approaches, thereby adjusting fluxes in the host metabolism through genetic engineering, enables the construction of strains with higher yields. Recently, scientists are complementing this approach by introducing orthogonal genetic circuits in a bottom-up fashion enabling the engineering of complex functions, such as product synthesis with fine-tuned multi-gene pathway under biosensing control. Biosensing capabilities also enable high-throughput screening of a large number of combinatorially engineered strains for production. Thus far, most synthetic biology tools and applications have been developed for the commonly used host organisms such as *Saccharomyces cerevisiae* and *Escherichia coli*, while the orthogonality and modularity of synthetic biology engineering ("plug-and-play") opens up possibilities to expand towards novel microbial hosts for which a more limited amount of biological knowledge is available but for which the growing conditions are more compatible with the envisaged bioprocess. In this context, extremophilic microorganisms are interesting hosts as they are more likely to withstand harsh manufacturing conditions (e.g. pretreatment of the feedstock or downstream processing) enabling the development of more cost-efficient consolidated bioprocesses.

Research in my group focuses on the translation towards non-traditionally used extremophilic hosts, more specifically archaea such as thermoacidophilic *Sulfolobus acidocaldarius* growing optimally at pH 2-3 and 75°C. This translation brings about several challenges: i) a characterized synthetic biology toolbox composed of, for example, gene expression element libraries and a reporter tool, is unavailable for *archaea* and ii) all components to be transferred need to possess an inherent thermostability. Our work addresses these challenges and aims to successfully introduce a synthetic thermostable metabolic pathway under appropriate gene expression control as a first proof-of-principle demonstration of the use of *S. acidocaldarius* as a production host.



Tomohisa Hasunuma

Graduate School of Science, Technology and Innovation, Kobe University (Japan)

Professor in the Graduate School of Science, Technology and Innovation, Kobe University, Japan. Awarded Ph.D. from Osaka University in 2004. After working for Research Institute of Innovative Technology for the Earth (RITE) as a researcher for 4 years, he joined Kobe University as an academic member. His research has focused on metabolic analysis and engineering of microorganisms and microalgae based on multi-omics analysis. His current research interest is the Design-Build-Test-Learn (DBTL)-based development of recombinant microorganisms for functional-compounds production through the consolidation of biotechnology and information technology. He has published more than 110 papers and 5 book chapters in international journals and publications, and filed more than 35 patents. He was awarded the Fermentation and Metabolism Research Prize of Japan Bioindustry Association in 2013 and the Biotechnology Encouragement Prize of Biotechnology Society of Japan in 2014.

Development of dynamic metabolomics and its application to metabolic engineering

Abstract: The *in vivo* labeling technology with stable isotopic compounds enabled metabolic analysis to comprehend the turnover of metabolites (this newly developed technology is called "dynamic metabolomics"). Dynamic metabolomics makes it possible to measure not only the accumulation amount of metabolites but also the rates in the synthesis/degradation of metabolites. Conventionally, metabolic flux analysis (MFA) has been used as the established method for metabolic analysis, whose principle depends on flux prediction based on mass balance, however the prediction often does not fit the reality. On the other hand, dynamic metabolomics has a superior technical advantage over MFA, since it depends on actual measurement of the turnover of metabolites. Recently, dynamic metabolomics allowed us to identify the distribution of carbon atoms incorporated into cells as well as the bottlenecks in metabolic pathways. In addition, based on the results, metabolic pathways were successfully engineered to improve productivity of some bio-based chemical products.



Jürgen Wendland

Research Group of Microbiology, Faculty of Sciences and Bioengineering Sciences, Vrije Universiteit Brussel

2016 -: Professor of Microbiology, Vrije Universiteit Brussel, Belgium

2006 - 2016: Professor of Yeast Genetics and Yeast Biology & Fermentation Carlsberg Laboratory, Copenhagen, Denmark

2000 - 2006: Friedrich-Schiller University and Leibniz-Institute for Natural Product Research and Infection Biology - Hans-Knöll-Institute, Jena, Germany

Group leader: Junior Research Group "Fungal Pathogens"

- 1996 - 1999: Biozentrum, University Basel, Switzerland; Postdoc at the Dept. of Applied Microbiology
1993 - 1996: Philipps-University, Marburg, Germany, PhD in Fungal Genetics
1987 - 1993: Justus-Liebig University, Giessen, Germany; Diploma studies in Biology

The APSES protein Sok2 is a positive regulator of sporulation in Ashbya gossypii

Abstract. *Ashbya gossypii* is a homothallic, flavinogenic, filamentous ascomycete, which starts overproduction of riboflavin and sporulation at the end of the growth phase. Mating is not required for sporulation and the standard homothallic laboratory strain is a MATa strain. Here we show that ectopic expression of MATa2 in *Ashbya* completely suppresses sporulation and inhibits riboflavin overproduction. A large set of sporulation specific genes was downregulated by MATa2. Additionally, we found SOK2, but not Msn2, was more than 10x downregulated in this strain. Deletion of SOK2 strongly reduces riboflavin production and prohibits sporulation in *Ashbya*. Promoter truncation analyses defined the IME1 promoter and lacZ reporter gene assays showed that IME1 transcription is not controlled by Sok2. However, global transcriptome analysis identified IME2 and NDT80 as potential targets of Sok2. This suggests that sporulation in *Ashbya* may still be under mating type locus control and is mainly controlled by nutritional signals via the cAMP-dependent PKA-pathway with SOK2 as a central positive regulator. This contrasts the situation in *Saccharomyces cerevisiae* where Sok2 is a repressor of IME1 transcription. Additionally, we provide evidence that sporulation and riboflavin overproduction in *Ashbya* are interconnected at the level of transcription via MATa2 and Sok2.

Discussant: Ken-ichi Yoshida, Kobe University (Japan)

**Migration and Community Building****Co-Chair: Kazunari Sakai**

Graduate School of Intercultural Studies, Kobe University (Japan)

Professor in the Graduate School of Intercultural Studies and Vice Director at the Center for International Education, Kobe University, Japan. Awarded MA from Tokyo University of Foreign Studies in 1994 and PhD from Kobe University in 2007. After working for the Ministry of Education, Culture, Sports, Science and Technology (MEXT) of Japan and Tokyo Institute of Technology, he joined Kobe University as an academic member. He stayed as an invited professor at Sciences Po, Université Paris Nanterre and Université Panthéon-Assas Paris II. His research focuses on the EU's external relations with neighbouring countries, migration issues across the Mediterranean Sea, and global governance related to migration.

**Co-Chair: Kaoru Aoyama**

Graduate School of Intercultural Studies, Kobe University (Japan)

Kaoru Aoyama, Ph.D. (2005, University of Essex), is a theoretically informed empirical sociologist. She currently focuses on gendered work in migration including care work and sex work and on trafficking, transformation of the intimate sphere and participatory action research. Her publications include 'The Sex Industry in Japan: the Invisible Danger of Public Morals', in *The Routledge Handbook of Sexuality Studies in East Asia* (Mackie and McLelland eds., Routledge, 2015), *Asian Women and Intimate Work* (ed. with Ochiai, Brill, 2014; chosen as an Outstanding Academic Title by the CHOICE Award 2014), and *Thai Migrant Sex Workers: From Modernisation to Globalisation* (Palgrave/Macmillan, 2009).

**Raffaella Greco Tonegutti**

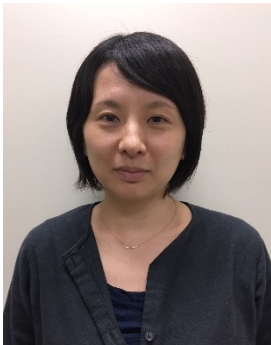
Directorate-General for Research and Innovation, European Commission

Raffaella Greco Tonegutti is a migration and asylum policy officer at DG Research and Innovation, European Commission. She holds a PhD in fundamental rights (University of Pisa, Italy), with specialization in migration studies, and a MA in International Cooperation and Human Rights. Over the last 15 years, Raffaella worked as a migration, asylum and development expert for the EU (HQ and Delegations), the International Organization for Migration (IOM), the International Centre for Migration Policy Development (ICMPD), the United Nations Organization for Drugs and Crime (UNODC), and other organizations.

EU research agenda on migration

Abstract: She will present the WP 2018-2020 of H2020. The focus will be on:

- Global and European governance of migration as well as innovative solutions for integration of migrants into European host societies.
- International cooperation, as well as a better understanding and awareness of the role of international development and regional policies.
- International protection of refugees, the management of forced displacement, and the promotion of more fact-based and accurate discourses on migration.
- Effects of migration on social systems, the access to and impact on labour markets and the cultural integration of third country nationals.
- Factual information on migration and the regulation of migration of third country nationals, also by involving migrants and their individual experiences in the shaping of narratives.



Sachi Takaya

Graduate School of Human Sciences, Osaka University (Japan)

Associate Professor in the Graduate School of Human Sciences, Osaka University
Received PhD from Kyoto University, Japan in 2010. After the JSPS postdoctoral research fellow and working at Okayama University as an associate professor, she joined Osaka University as an academic member in 2016. Her research focuses on migration, especially irregular migration and female migration in Japan.

Why hasn't Japan established migration policy?

Abstract: This presentation explores why Japan has not established migration policy for several decades by focusing on the politics of migration within parliamentary politics as well as civil society. Although the number of foreign residents in Japan has been increasing and is over 2.4 million in 2017, the Japanese government will not establish the official migration policy. Therefore, despite the fact of the unofficial "acceptance" of migration, the image that Japan is not an immigration country is still pervasive.

To explore the reason for the long-term absence of the policy, this presentation examines the attitudes of political parties and civil society toward "acceptance" of migration by referring to J. Hollifield's arguments on migration policy (Hollifield 1992, 2004). Hollifield demonstrates that the logics of liberalism, or economic, political, and juridical logics, shape migration policies in contradictory ways. The presentation analyzes how the opinions based on these logics conflict within parties and civil society. Then, it discusses that these splitting opinions prevent parties and civil society from proposing the establishment of migration policy, which keeps the unofficial routes to migration. The presentation concludes that the split opinions along with the existence of the unofficial routes hinder the establishment of the official policy.



Joanna Marta Guzik

Institute of Middle and Far East Studies, Jagiellonian University (Poland)

Assistant Professor, Institute of Middle and Far East Studies, Jagiellonian University in Krakow, Poland. Awarded MA and PhD from Jagiellonian University in 2004 and 2010, respectively. Since 2006 she has been working in the Institute of Middle and Far East Studies, Jagiellonian University as a Lecturer and since 2011 as an Assistant Professor. In 2013 she received a special award from the Rector of Jagiellonian University for her publication in Polish "Japan's policy towards Jewish issue 1932-1945". Her

research focuses on contemporary Japanese society, Japanese social policy, Japanese minority policy, history of Japan, Korea – Japan relations, EU and V4 migration policy.

Polish government migrant policy since 2015: issues to be solved

Abstract: The presentation aims to show the migration policy of Szydło's government which stands in contradiction to the EU position on the migrant crisis. The Polish government, supported by public opinion, expresses a veto on the relocation plan for migrants from Italy and Greece, however at the same time it allows Ukrainians and other ethnicities to come to Poland. During the presentation we will show Polish government representatives and member's speeches on the issue year by year since 2015 and pro-government media rhetoric, also in the context of growing "silent" acceptance of the ruling party's anti-foreign public speaking and acts.



Shinnosuke Takahashi

Faculty of Global Human Sciences, Kobe University (Japan)

Assistant Professor, Faculty of Global Human Sciences since April 2017. Takahashi received his doctoral degree from the Australian National University in December 2016 with his dissertation on the nexus between social cohesion and identities involved in the anti-US base activist communities in Okinawa. Through ethnography, interviews, and archival works, his research highlights the so-called "non-Okinawan" and a significant number of "non-Japanese" activists to examine, and reflect critically, the discourses and practices that divide and connect the local protest community. Takahashi is an editor and author of *Transnational Japan as History: Empire, Migration and Social Movements* (Palgrave Macmillan, 2016).

Becoming Local, Connecting Places: Trans-local Lives of Anti-Base Activists in Okinawa

Abstract: While we witness an ever-increasing number of scholarships on transnational social movements, particularly in the fields of political sciences and sociology, only rarely examined is how a local civic activism grows to become a movement overarching the multi-national boundaries. The usefulness of socio-historical inquiries is that it not only unravels the local origins of the transnational movements but also affirms the importance of the heterogeneous nature of a local community upon which a form of transnationalism is created. In this light, the 70 year-long tradition of anti-US base struggle in Japan's southernmost prefecture, Okinawa, is a great laboratory to examine the historical process by which the local activism became a node of transnational anti-base networks in Asia and the Pacific. This presentation explores the details of some key activists who started a movement called "Okinawa-Korea People's Solidarity", a group founded in the late 1980s with the aim of internationalising Okinawa's protest movement. The life histories of respective activists from different places in Japan compels us to take into account "non-Okinawan" as an agent to create grass-roots regionalism in Asia and the multidimensionality of the Okinawan local protest culture and identity.

Crimmigration” or Reintegration? Convergence between Criminal and Migration Laws



Discussant: Christian Kaunert

Academic Director, Institute for European Studies, Vrije Universiteit Brussel

Prof. Dr. Christian Kaunert is Academic Director and Full Professor of European Politics at the Institute for European Studies, Vrije Universiteit Brussel. Previously, he served as a Full Professor of International Politics, Head of Discipline in Politics, University of Dundee and Director, European Institute for Security and Justice, Jean Monnet Centre for Excellence, University of Dundee. He was previously Marie Curie Senior Research Fellow at the European University Institute Florence, and Senior Lecturer in EU Politics & International Relations, University of Salford. Prof. Kaunert holds a PhD in International Politics & an MSc in European Politics from the University of Wales Aberystwyth, a BA (Hons) European Business from Dublin City University, ESB Reutlingen and a BA (Hons) Open University. His research has a clear focus on the Global Security role of the EU, especially in the area of EU Justice and Home Affairs.

***Healthy and Active Ageing: a Key Role for Physical Exercise*****(Chair) Ivan Bautmans, Vrije Universiteit Brussels (Belgium)*****Exercise to counter Inflamm-aging*****Hisatomo Kowa**

Department of Rehabilitation Science, Graduate School of Health Sciences, Kobe University (Japan)

Dr. Kowa graduated from the Faculty of Medicine, University of Tokyo in 1995 and earned an MD. He engaged in neuropathological studies on Alzheimer's disease in the Graduate School of Medicine at the University of Tokyo and earned his PhD in 2004. He worked for Massachusetts General Hospital for three years. He worked for the University of Tokyo Hospital from 2008 to 2010, then moved to Kobe University Hospital. He became an associate professor of Neurology in 2012, and was promoted to professor this year. He is currently interested in the prevention of dementia by community-based intervention.

Japanese Medical and Social System for Early Intervention of Patients with Cognitive Decline

Abstract: There has been a significant increase in the numbers of people with some form of dementia worldwide as well as in Japan. Under this situation, disease modifying therapy for dementia is vital; however, many candidates have failed to show their efficiency, suggesting to us that our realistic strategy is to prevent AD or to slow its progression from MCI to AD.

The most reliable method for preventing dementia is exercise. In Japan, a combinational intervention including aerobic exercise and cognitive training called "Cognisize" has been established and is widespread. We have two types of insurance systems for caring for older people. One is the healthcare insurance system and the other is long-term care insurance system. "Cognisize" is available in many facilities based on the latter insurance system.

In order to realize the earlier and community-based identification system of cognitive decline, Kobe University and WHO Kobe Centre have just started a three year project with support from Kobe City to conduct an analysis of health data of approximately 80,000 Kobe citizens in their 70s. This study will inform community based models and policy options for Kobe Municipality and the national government to detect and to start intervention before cognitive decline starts.

**Jürgen M. Bauer**

Heidelberg University (Germany)

In 2016 Jürgen M. Bauer took over the chair for geriatric medicine at the Ruprecht Karls University of Heidelberg, Germany. He is also the director of the Agaplesion Bethanien Hospital Heidelberg. In 2010 he was appointed director of the Centre

for Geriatric Medicine Oldenburg, Germany. Between 2004 and 2010 he worked as assistant medical director at the Department of Geriatric Medicine at the University of Erlangen-Nuremberg, Germany. In 2010 he was honored to become a member of the ESPEN faculty. He is also a member of the committee of scientific advisors of the International Osteoporosis Foundation (IOF). From 2007 until 2015 he was a member of the executive board of the European Union Geriatric Medicine Society (EUGMS) and he will be the congress president of the EUGMS Congress 2018, which will be held in Berlin. Jürgen M. Bauer serves currently as the president of the German Society for Geriatric Medicine (DGG). In 2007 he was awarded the honorary prize of the German Geriatric Society. Since 2015 Jürgen M. Bauer has been working as a co-editor of *Clinical Nutrition* and since 2016 as a section editor of *Current Opinion in Clinical Nutrition and Metabolic Care*. In recent years, Jürgen M. Bauer's research interest has focused on nutrition and its relationship with functionality in older persons.

Sarcopenia: Current definitions and challenges



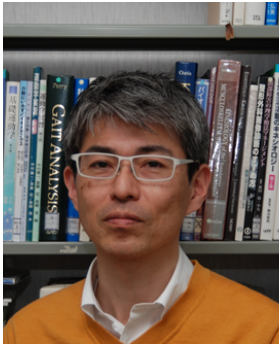
Evelien Van Roie

Department of Movement Sciences, KU Leuven (Belgium)

Evelien Van Roie graduated with an MSc in Movement Sciences from KU Leuven (Belgium) in 2008. In 2014, she obtained her PhD with joint degree (KU Leuven – Vrije Universiteit Brussel) under the supervision of Prof. Christophe Delecluse and Prof. Ivan Bautmans. Evelien is currently employed as postdoc researcher at the Department of Movement Sciences, KU Leuven. Her research focuses on age-related declines in muscle function and (resistance) exercise interventions to counteract these declines.

Resistance exercise to counter muscle weakness in the aged: does the intensity matter?

Abstract: Resistance exercise (RE) is the most effective approach to counteract sarcopenia. International guidelines have recommended RE at relatively high loads (60%-80% of the one repetition maximum (1RM)). Recently, the question has arisen whether muscle strength and mass gains would also be achievable with lighter loads. The aim of this presentation is to provide an up-to-date summary of the current literature on high- and low-load RE and its effects on muscle mass, strength and functional performance in older adults. A randomized controlled trial of 12-week lower limb training at either HIGH load (2×10–15 repetitions at 80% of 1RM), LOW load (1 ×80–100 repetitions at 20% of 1RM), or LOW+ load (1×60 repetitions at 20% of 1RM, followed by 1×10–20 repetitions at 40% of 1RM) will be discussed in detail. Conclusions support that high- and low-load RE ending with volitional fatigue may be similarly effective for hypertrophy, strength gains and functional improvements in older adults (♂26, ♀30, age = 68 ± 5 yrs). Differences that occur are very specific to the trained movement. The study points out that it is time to re-think the high-load RE philosophy in older adults.



Rei Ono

Graduate School of Health Sciences, Kobe University (Japan)

Associated Professor at the Graduate School of Health Sciences, Kobe University, Awarded MPH from the Graduate School of Medicine, Kyoto University, Japan, and PhD from the Graduate School of Medicine, Kyoto University, Japan in 2006 and 2012, respectively.

After working for Tohoku University Hospital as a Physical Therapist, joined Kobe University as an academic member.

His research focuses on clinical epidemiology, geriatric medicine, and geriatric oncology.

Effect of exercise and activity on various frail elderly from epidemiological studies

Abstract: Japan has become the most aged society in the world. There is therefore a growing interest in prevention of disease as well as curing disease. Frailty is recognized as a biologic syndrome associated with multisystem declines in physiologic reserve and increased vulnerability to stressors, which results in increased risk of adverse outcomes, including disability, hospitalization, and death. Recently, frailty is considered a complex, multidimensional, and reversible state, and its concept is proposed to include not only the physical domain, but also cognitive and social domains (cognitive frailty and social frailty). The frail elderly should be screened as soon as possible and be treated properly by medical staff and/or community. The key non-pharmacological method to prevent frailty is to perform exercise and to keep active to counteract the various types of frailty, such as physical, cognitive, and social. I am going to present the effect of exercise and activity on various frail elderly from previous reviews and our intervention study.

Discussant: Ingo Beyer

Head of Geriatric Medicine, Vrije Universiteit Brussel Universitair Ziekenhuis Brussel (Belgium)