



# Osteology Research Academy Hong Kong 3 – 6 June 2019

The University of Hong Kong, Prince Philip Dental Hospital, Lecture Theatre II







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## **Research Design and Methodology**

The course is a 4-day intensive course providing a comprehensive view on most of the aspects of preclinical and clinical studies required by young professionals for their daily research work. The learning objectives of the course are:

Chairmen
Prof. Mariano Sanz (Spain) and Prof. Michael Bornstein (Hong Kong)





### **Learning Objectives**

- Fundamentals of research in dental medicine
- Selection of suitable in-vitro, pre-clinical or clinical research approaches
- Selection of the appropriate analytical tools for data acquisition
- Planning of a pre-clinical or clinical study within a research group using international networks
- Analysis and critical interpretation of acquired data
- Effective communication of findings and knowledge







# **Detailed Programme**

	MONDAY 3 June 2019	TUESDAY 4June 2019	WEDNESDAY 5 June 2019	THURSDAY 6 June 2019
08.30	Registration and Coffee	WORKSHOP 1: Selection and application of analytical methods	Pre-clinical models for research on osseointegration and periimplantitis	Publication strategy - Guidelines from the author and editor
09.00	Osteology introduction and good research practice Thomas Flemmig and Mariano Sanz	Saso Ivanovskit/Rory Watt/Michael Bornstein/ George Pelekos	Lisa Heitz-Mayfield	Niklaus P. Lang and Lisa Heitz-Mayfield
09.30	Innovations with impact on the clinical practice of		Essential considerations for clinical research and	Statistical principles for research projects in oral
10.00	dentistry: historical and contemporary considerations Nairn and Margaret Wilson		management of clinical trials Niklaus P. Lang	tissue regeneration Samantha Li
10.30	Bone and periodontal tissues – histology,	Legal aspects, ethics, animal welfare in pre-		
11.00	histomorphometry and immunohistochemistry Saso Ivanovski	clinical research: from application to experiments  Jennifer Go	Patient-reported outcome measures Colman McGrath	WORKSHOP 3: Statistical principles for research projects in oral
11.30		Pre-clinical models for soft tissue regeneration		tissue regeneration Samantha Li
12.00	Biomaterials for periodontal regeneration Saso Ivanovski	Mariano Sanz		
12.30	Jaso (Vallovski		LUNCH BREAK	LUNCH BREAK
13.00				EUNON BREAK
13.30	LUNCH BREAK	LUNCH BREAK	Clinical research designs for osseointegration of implants and peri-implantitis  Lisa Heitz-Mayfield	WORKSHOP 4: Strategy to obtain research funding Benjamin Müller (Osteology)
14.00				
14.30	Microbiological analytical methods	Clinical research on soft tissue regeneration  Mariano Sanz	Clinical research designs for ridge preservation	WORKSHOP 5-1:
15.00	Rory Watt		Ki-Tae Koo	Clinical research protocol development Niklaus P. Lang/Samantha Li/Ki-Tae Koo/Atsushi Saito/Lisa Heitz-Mayfield/
15.30		Clinical models for horizontal and vertical ridge		·
16.00	Radiological analysis in clinical research	augmentation inluding sinus floor elevation Bo Chen	Clinical research evaluating growth factors in	WORKSHOP 5-2: Clinical research protocol development
16.30	Michael Bornstein		periodontal regeneration Atsushi Saito	(continuation) and presentation Niklaus P. Lang/Samantha Li/Ki-Tae Koo/Atsushi Saito/Lisa Heitz-Mayfield
17.00		WORKSHOP 2:		Salto, Lisa Heltz-MayHeld
17.30	Clinical and esthetic measurements George Pelekos	Interrupted pre-clinical case study Michael Bornstein/Mariano Sanz/Bo Chen/	TRANSFER TO RESTAURANT	Closing Thomas Flemmig and Michael Bornstein
18.00				
18.30	TRANSFER TO RESTAURANT	WRAP-UP AND Q&A	Considerations for a scientific carreer development Niklaus P. Lang	
19.00	19:00-21:30 TEAM EVENING DINNER		Miktado F. Lalig	
19.30	HK Faculty of Dentisrty / Osteology Evening		19:15–21:45 TEAM EVENING HK Faculty of Dentisrty / Osteology Evening	
20.00				





## Lecturers



Mariano Sanz MD, DDS, PhD

Professor Mariano Sanz received his MD degree from the Universidad Complutense de Madrid in 1981. He is specialist in Stomatology from the Universidad Complutense of Madrid (1983) and then completed his graduate training in Periodontology at the University of California, Los Angeles (UCLA, 1987). Additionally, he is Doctor in Medicine (PhD, 1993) from the University Complutense of Madrid and has received Honorary Doctorate Degrees from the Universities, San Sebastian (Chile, 2010), Gothenburg (Sweden, 2015), Coimbra (Portugal, 2016) and the University of Buenos Aires (Argentina). He is Professor of Periodontology and Director of the Graduate Program "Master in Periodontology" also at the University Complutense of Madrid. He is Professor Type II from the University of Oslo (Norway). Currently he is the President of the Osteology Foundation and the Workshop Committee of the European Federation of Periodontology.

Professor Mariano Sanz is the Director of the ETEP Research Group, comprising more than 25 researchers and scholars. He has published more than 300 scientific articles and book chapters in Periodontology, Implant Dentistry and Dental Education. He is Associate Editor of the Scientific Journals Evidence-Based Dental Practice and Journal of Clinical Periodontology and is a member of the Editorial Committee of more than 10 scientific journals. Professor Sanz participates extensively in international lectures, courses and seminars in Periodontology, Implant Dentistry and Dental Education.



**Michael Bornstein** 

Dr. med. dent. habil.

Michael Bornstein has been appointed in 2016 as Clinical Professor in Oral and Maxillofacial Radiology at the Faculty of Dentistry, The University of Hong Kong, Hong Kong SAR, China. He is also Visiting Professor at the OMFS-IMPATH Research Group, Department of Imaging and Pathology, University of Leuven, Belgium. He obtained his dental degree (1998) and thesis (Dr. med. dent., 2001) at the University of Basel. He continued with a specialisation in oral surgery and stomatology in Basel (1998-1999, Prof. Dr. Dr. J. Th. Lambrecht) and Bern (2000-2002, Prof. Dr. D. Buser). In 2004, he was visiting assistant professor at the Department of Periodontics (Prof. Dr. D. Cochran) at the University of Texas Health Science Center at San Antonio, USA, with a grant from the Swiss National Science Foundation. From 2007-2014 he was head of the Section of Dental Radiology and Stomatology, University of Bern. In 2009, he obtained the Habilitation (Privatdozent/PhD) and in 2014 he became Associate Professor in the field of "Oral Surgery and Stomatology". His fields of research include cone beam computed tomography (CBCT) in clinical dental practice, diagnostic imaging, stomatology/oral medicine, GBR procedures and dental implants. He has published over 130 original articles and is the author/coauthor of numerous case reports, review articles, and book chapters.







Thomas Flemmig Dr. med. dent. habil., MBA

Professor Thomas Flemmig is a Kingboard Professor in Advanced Dentistry, Clinical Professor in Periodontology and the head of the Institute for Advanced Dentistry - Multi-Specialty Clinic of the Faculty of Dentistry. In 2014 he was appointed Dean of Dentistry at the Faculty of Dentistry of The University of Hong Kong.

Flemmig received his Doctor of Medical Dentistry degree from Albert-Ludwigs-University in Freiburg in 1985 and did his residency at Hamburg University in oral and maxillofacial surgery (1985-87). He spent four years at the University of California Los Angeles as a visiting assistant professor doing research in periodontics and oral biology (1987-90). From 1990 to 1999, Flemmig rose from assistant professor to professor and head of the Department of Periodontology at the School of Dental Medicine at Julius-Maximilians of Würzburg, Germany. In 1999 he joined Münster University Hospital as professor and chair. In 2005 he joined the University of Washington's School of Dentistry (Seattle, USA) as chair of the Department of Periodontics.

In addition to being a member of numerous professional associations in Europe and the US, Prof. Flemmig has completed 17 industry-funded research projects, and is the holder of seven patents. His research focused on the control of oral biofilms and the economics of oral healthcare.



**Nairn Wilson** PhD, MSc, BDS

Nairn Wilson is Emeritus Professor of Dentistry, King's College London. He has enjoyed an illustrious, 45-year long career in clinical academic dentistry. His many, different previous positions include Dean of the University Dental Hospital of Manchester, King's College London Dental Institute and the Faculty of Dental Surgery. Royal College of Surgeons of Edinburgh and President of the General Dental Council and British Dental Association. He continues to lecture home and abroad and to publish widely.









**Margaret Wilson** PhD, MDSc, BDS

Margaret Wilson is a retired Consultant in Restorative Dentistry. She recently demitted office as the Director of the National Advice Centre for Postgraduate Dental Education based at the Royal College of Surgeons of England. She is Honorary Curator of the Museum of the British Dental Association and Editor of The Dental Historian.



Sašo Ivanovski BDSc, BDentSt, MDSc(Perio), PhD

Professor Sašo Ivanovski is a clinician-scientist who completed a PhD at The University of Queensland in 2000, followed by specialist clinical training (MDSc) and a postdoctoral fellowship at the Institute for Molecular Biosciences. In 2006, he was appointed the inaugural Chair and Professor of Periodontology at Griffith University and subsequently served as Deputy Head of School (Research). In 2017, Sašo Ivanovski returned to The University of Queensland School of Dentistry as Professor of Periodontology and Director of Research. Prof. Ivanovski has published over 130 articles in the peer-reviewed international literature and leads a research group with an interest in dental regeneration, additive manufacturing, tissue engineering and oral implantology.



**Rory Watt** BSc, PhD

Rory Watt is an Associate Professor in the Applied Oral Sciences section of the Faculty of Dentistry at The University of Hong Kong. He obtained his Bachelor of Science (1995) and PhD (1998) in Chemistry from the University of Edinburgh, UK. He has worked at the University of Hong Kong since 2001, where he has held various academic positions; joining the Faculty of Dentistry in 2008. His research encompasses many aspects of molecular oral microbiology, with focus on oral treponeme bacteria and the periodontal microbiome. Rory has been Director of the Faculty of Dentistry's Central Research Laboratories (CRL) since 2009.







George Pelekos MuDr., MSc, MClinDent

George Pelekos is a full time Clinical Assistant Professor in Periodontology at The University of Hong Kong since 2014. Dr. Pelekos graduated with a doctoral degree and a MSc in Stomatology from the Medical Faculty, Masaryk University, Czech Republic in 2000. In 2009, he became a specialist in Periodontics (MClinDent, UCL Eastman Dental Institute, EFPaccr., UK). From 2009-2013 he was a Research Associate in Department of Periodontology (Eastman Dental Institute, UCL, London, UK) and held a Senior Specialist Periodontist position in National Health Community Services (Dental Access Centre Bedford Hospital Bedfordshire UK) as well as a Senior Clinical Teaching Fellow in Periodontology at the Eastman Dental Hospital. Currently he is a PhD candidate at Catholic University of Leuven in Belgium.



**Jennifer Go** BVSc, Dr

Jennifer Go graduated from the Sydney School of Veterinary Science in Australia in 2008. She worked in a small animal clinic in Sydney after graduation before coming back to Hong Kong. She then entered the intern program and continued to work as a general practitioner at Peace Avenue Veterinary Clinic (now CityU PAVC) for 5.5 years. In 2015, she joined the Laboratory Animal Unit, The University of Hong Kong, where she is responsible for the well-being and clinical care of animals used in research and teaching. She also teaches students/researchers on animal research ethics and animal welfare, as well as providing training on topics related to surgery.



Bo Chen DDS, MD, PhD

Dr. Bo Chen is an Associate Professor at the Department of Oral Implantology at the Peking University School of Stomatology. She is dedicated to clinical treatment, research and teaching as a full-time faculty. In 1993 she received her DDS and in 1998 her MD from Peking University School of Stomatology. In 2006, she was an ITI scholar at the Department of Oral Surgery (Prof. Daniel Buser, University of Bern, Switzerland).

She is also the Editor of the Chinese Journal of Stomatological Continuing Education and the Editor of Chinese Journal of Cosmetic Dentistry and Implants.







Lisa Heitz-Mayfield BDS, MDSc, Odont Dr

Professor Heitz-Mayfield received a Masters in Periodontology (1996) and Odont Dr (1998) from Lund University, Sweden. Awarded an ITI scholarship at the University of Berne, Switzerland where she became Head of the Oral Microbiology Research Laboratory, from 1999-2003. Received the André Schroeder Research Prize in Implant Dentistry. Current positions include Adjunct Professor at the International Research Collaborative, The University of Western Australia, University of Notre Dame, Western Australia, Associate Professor at The University of Sydney, and at The University of Hong Kong. Chair of the International Team for Implantology (ITI) Research Committee, and member of the ITI Board of Directors. She is the Editor-in-Chief of Clinical Oral Implants Research. Scientific publications in the fields of periodontal regeneration and management of peri-implant diseases. As a specialist in periodontology Prof Heitz-Mayfield maintains a private practice limited to periodontology and implant surgery with an emphasis on regeneration, prevention and comprehensive treatment planning.



Niklaus P. Lang Dr. med. dent., MSc, PhD

Niklaus P. Lang is Professor Emeritus, University of Berne, Switzerland (Chairman 1980-2008) and was Professor of Implant Dentistry at The University of Hong Kong from 2008-2012. He received his Dr. med. dent. from the University of Berne in 1970 and a Master of Science in Periodontics from the University of Michigan, Ann Arbor, USA in 1975. He was awarded the PhD title in 1978 from the University of Berne. He holds several honorary doctorates (University of Athens, Greece, 1989; University of Buenos Aires, Argentina, 1994; University of Gothenburg, Sweden, 1997; Aristotle University of Thessaloniki, Greece, 2011). Moreover, he was Honorary Professor at the University of Aarhus, Denmark (2006-2011) and still is Honorary Professor at The University of Hong Kong (2013-), University College London (2012-), and the University of Zürich (2013-). He held numerous Guest Professor positions (University of Otago, Dunedin, New Zealand, 2008; National University of Singapore, 2002, 2004, 2007, 2009, 2013; University of Michigan, USA, 2005; University of Gothenburg, Sweden, 2000; University of Queensland, Brisbane, Australia, 1999/2000; University of Aarhus, Denmark, 1994; The University of Hong Kong, 1994; University of Texas, Health Science Center at San Antonio, Texas, USA 1986; Professor Extraordinario, Universidad Autonoma de Nuevo Leon, Monterrey, Mexico, 1980). He published over 640 articles in peer-reviewed scientific journals and several textbooks (h-Index: 97). He held over 3000 lectures in 5 continents. He was Editor-in-chief of Clinical Oral Implants Research (1990-2016).







Colman McGrath BA, BDentSc, MSc, PhD

Colman McGrath is a Clinical Professor in Dental Public Health at the Faculty of Dentistry, The University of Hong Kong. His research interest is in Patient Reported Outcome Measures (PROMS) and he has published over 200 papers and has a h-index of over 50. He has conducted numerous population-wide epidemiological surveys and 20 clinical trials with a specific focus of 'PROMs' as an outcome measure.

He is passionate about 'teaching & learning' and is an advocate of Problem Based Learning (PBL). He is editor of the book 'Problem-Based Learning in Clinical Education' (Springer, 2008) and contributes regularly to the scholarship of teaching & learning. His clinical interest is in the management of people with physical, medical, intellectual, mental, emotional and social impairments. He has been working with medical compromised patients in Hong Kong for almost 20 years. Colman is past president of the BEHSR group of the IADR and has served on numerous national, regional and international committees. He serves on the editorial board of Clinical Oral Implants Research and the Journal of Disability & Oral Health.



Ki-Tae Koo DDS, MS, PhD

Prof. Koo obtained his DDS in 1999 from Yonsei University School of Dentistry, Seoul, Korea. In 2003, he graduated with a MS in Oral Biology from Temple university School of Dentistry, Philadelphia, PA, USA. Back at Yonsei University School of Dentistry, Seoul, Korea, he finished his PhD in Periodontology in 2007. From 2008 on he held positions at the Department of Periodontology, Seoul National University, Seoul, Korea. Since 2017, he is Professor (tenured) at the same department. Moreover, Prof. Koo is also an Adjunct Professor at Georgia Regents University, Georgia, USA since 2014. He is also Editor-in-chief of The Journal of Korean Academy of Oral and Maxillofacial Implants.







Atsushi Saito DDS, PhD

Professor Atsushi Saito obtained his dental degree in 1989 and his PhD in 1993 from the same institute. From 1994-1996 he was a visiting scientist at the Department of Oral Biology, School of Dental Medicine, State University of New York at Buffalo (Director: Prof. Robert J. Genco). Before he was appointed Senior Assistant Professor, he directed the Miyagi Advanced Dental Hygienist College from 2003-2007. In 2011, he became Professor and Chair of the Department of Periodontology at Tokyo Dental College. He also holds a position as Executive Director of the Japanese Society of Periodontology and the Japanese Society of Conservative Dentistry. He serves on the editorial board of BMC Oral Health.



Samantha Li BSc, MPhil

Samantha Li was educated at The University of Hong Kong and earned a Bachelor of Science with a major in statistics in 2008. In 2010, she was awarded a Master of Philosophy in Dentistry from the same university. Until 2012, she worked as a Research Assistant at the Faculty of Dentistry, The University of Hong Kong. Since 2012 she holds a Senior Technical Officer position at the Central Research Laboratories, Faculty of Dentistry, The University of Hong Kong. Her areas of research expertise lie in biostatistics, clinical trials and multilevel analysis.





# **Registration information**

Osteology Research Academy Hong Kong, Research Design and Methodology

3 - 6 June 2019, PPDH, Lecture Theatre II, Hong Kong SAR

Registration needs to be completed through the Osteology Foundation's global community platform THE BOX (<a href="https://box.osteology.org/">https://box.osteology.org/</a>).

To register for the course, a free account on THE BOX needs to be created.



**Registration link:** <a href="https://box.osteology.org/User/MyCourses">https://box.osteology.org/User/MyCourses</a>

### **Registration Fees**

Post-graduate students: CHF 1'500

All others: CHF 1'800

Payment methods: VISA, MasterCard, PayPal

#### **Credits**

CDSHK / DCHK / HKDA / CME/CPD: 30.5 (to be confirmed)

#### More information

Please visit our website at <a href="https://www.osteology.org">www.osteology.org</a> for more information.

If you need more information regarding the course, please do not hesitate to contact Prof. Michael Bornstein (bornst@hku.hk) or Dr. Benjamin Müller at the Osteology Office (benjamin.mueller@osteology.org).