

# Hong Kong Musculoskeletal & Biomaterials Summit for Young Scholars



**14-15 December 2022 WED-THU**

Cheung Kung Hai Conference Centre, G/F,  
William MW Mong Block, Faculty of Medicine, HKU,  
21 Sassoon Road, Pokfulam, Hong Kong



**Co-organized by**



**HKU  
Med**

School of Clinical Medicine  
Department of Orthopaedics  
& Traumatology  
香港大學矯形及創傷外科學系



THE CHINESE  
華人生物材料協會  
ASSOCIATION FOR  
BIOMATERIALS

National Key R&D Programs  
funded by  
Ministry of Science and Technology

## PROGRAM BOOK

# FLOOR PLAN

21 Sassoon Road

William M.W. Mong Block

Main Entrance

Lecture Theare 4

Lecture Theare 3

Lecture Theare 2

Lecture Theatre 1

Registration

Seminar Room 1

Seminar Room 2

Seminar Room 3

Seminar Room 4

Laboratory Block



Washroom



Disabled Washroom



Elevator



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# WELCOME MESSAGE

## CO-CHAIRMEN



On behalf of the Chinese Association for Biomaterials (CAB), I welcome each of you to join our co-sponsored biomaterials summit! The world of biomaterials is an exciting research area. We are very excited to bring outstanding biomaterials scholars together in forums like this, and to bring inspired people together within our international Chinese biomaterials organization (i.e., CAB).

**Prof. Bingyun LI**

President, Chinese Association for Biomaterials



Welcome to join us in HK and HKUMed! I definitely feel privileged to co-host the Summit together with Chinese Association for Biomaterials and Professor Yufeng Zheng from Peking University. Though it's a bit challenging to our organising committee in terms of speaker invitation and other logistical arrangements because of COVID-19 pandemic control measures, we are still blessed to receive many positive replies and supports from those renowned scholars worldwide. Lastly, I wish to make a quote from 《論語》: 「有朋自遠方來, 不亦樂乎」 (in English: "How happy we are to meet friends from afar!") Quoted from "Analects of Confucius") to conclude my message. Looking forward to seeing you all soon!

**Prof. Kelvin YEUNG**

Professor, Department of Orthopaedics and Traumatology, The University of Hong Kong



On behalf of the editorial board of Bioactive Materials, I would like to welcome all the participants for Hong Kong Musculoskeletal & Biomaterials Summit for Young Scholars, both on site and on-line. I appreciate the local organization committee and staffs who devoted themselves so much to conference planning and arrangements. Please enjoy the scientific feast and feel free to communicate on the new advances in the field of biomaterial science and engineering. Remember to join us to congratulate Prof. Guillermo Antonio Ameer, the 2022 year winner of Bioactive Materials Lifetime Achievement Award in the morning session of Dec. 15.

**Prof. Yufeng ZHENG**

Professor, School of Materials Science and Engineering, Peking University  
Co-Editor in Chief of Bioactive Materials Journal

# ORGANIZING COMMITTEE

## CO-CHAIRMEN

Prof. Bingyun LI  
Chinese Association for Biomaterials

Prof. Kelvin YEUNG  
The University of Hong Kong

Prof. Yufeng ZHENG  
Peking University  
Co-Editor in Chief of Bioactive Materials Journal

## COMMITTEE MEMBERS

Dr. Chenjie XU  
City University of Hong Kong

Dr. Xin ZHAO  
Polytechnic University Hong Kong

## ADMINISTRATIVE SUPPORT

Mr Jazz Ma  
The University of Hong Kong

Ms Jacqueline Ng  
The University of Hong Kong

Ms Elaine Luu  
The University of Hong Kong

Ms Samantha Wong  
Queen Mary Hospital

# SPEAKERS



**Prof. Guillermo AMEER**

Professor  
Biomedical Engineering  
Department, McCormick School of  
Engineering  
Department of Surgery, Feinberg  
School of Medicine  
Northwestern University  
United States



**Dr. Jason CHEUNG**

Department Chairperson  
Clinical Associate Professor  
Department of Orthopaedics and  
Traumatology  
The University of Hong Kong  
Hong Kong



**Prof. Ali KHADEMHOSEINI**

CEO  
Terasaki Institute for Biomedical  
Innovation  
Canada



**Prof. Becki Yi KUANG**

Assistant Professor  
Department of Chemical and  
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The Hong Kong University of  
Science and Technology  
Hong Kong



**Prof. Bingyun LI**

Professor  
Department of Orthopaedics,  
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West Virginia University  
United States



**Prof. William LU**

PI of National Key R&D Program  
funded by MoST  
Professor  
Department of Orthopaedics and  
Traumatology  
The University of Hong Kong  
Hong Kong





**Prof. Guangjun NIE**

Professor  
Director of Project Management &  
International Collaboration  
National Center for Nanoscience  
and Technology  
Beijing



**Prof. Haobo PAN**

Professor  
Institute of Biomedicine and  
Technology  
Shenzhen Institute of Advanced  
Technology Chinese Academy of  
Sciences  
Shenzhen



**Dr. Will QIAO**

Clinical Assistant Professor  
Applied Oral Sciences &  
Community Dental Care  
The University of Hong Kong  
Hong Kong



**Dr. Frank SCHILDBERG**

Research Director  
Clinic for Orthopedics and Trauma  
Surgery  
University Hospital Bonn  
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**Prof. Dongan WANG**

Professor  
Department of Biomedical  
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City University of Hong Kong  
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**Prof. Michelle WANG**

Assistant Professor  
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Chinese University of Hong Kong  
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**Dr. Weiping WANG**

Assistant Professor  
Department of Pharmacology and  
Pharmacy  
The University of Hong Kong  
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**Prof. Malcolm XING**

Professor  
Department of Mechanical  
Engineering and Biochemistry and  
Medical Genetics  
University of Manitoba  
Canada



**Dr. Chenjie XU**

Associate Professor  
Department of Biomedical  
Engineering  
City University of Hong Kong  
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**Dr. Lizhi XU**

Assistant Professor  
Department of Mechanical  
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**Prof. Jian YANG**

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**Prof. Xin ZHANG**

Professor  
National Key Laboratory of  
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Institute of Process Engineering,  
Chinese Academy of Sciences  
Beijing



**Dr. Xin ZHAO**

Associate Professor  
Department of Biomedical  
Engineering  
Polytechnic University Hong Kong  
Hong Kong

# PROGRAM

14 DECEMBER 2022 (WED)

Time	Topic	Speaker
08:20-08:50	Registration (Foyer of Lecture Theatre 1)	
08:50-09:00	Opening remarks	Dr. Jason CHEUNG Dr. Bingyun LI
09:00-09:45	Citrate-based photoluminescent biomaterials design and applications	Prof. Jian YANG
09:45-10:30	Bilayer hydrogel for tissue regeneration and potential clinical applications (National key R&D program - Project titled "Functional reconstruction of human tissues and organs by precision additive manufacturing technology")	Prof. William LU
10:30-11:00	Morning break (Seminar Rooms 1, 3 & 4)	
11:00-11:30	Biomaterials-enabled development of integrated antitumour immunotherapy	Prof. Guangjun NIE
11:30-12:00	Nucleic acid drugs delivery	Prof. Xin ZHANG
12:00-12:30	Dual-network of bioactive glass in tissues repair	Prof. Haobo PAN
12:30-13:30	Lunch break (Seminar Rooms 1, 3 & 4)	
13:30-14:00	Musculoskeletal immunology: New tools for diagnostics and therapy	Dr. Frank SCHILDBERG
14:00-14:30	Photoresponsive nanoparticles for the treatment of cancer and eye diseases	Dr. Weiping WANG
14:30-14:50	Rediscover macrophages in bone tissue engineering - From immunomodulation to bio-adaption	Dr. Will QIAO
14:50-15:20	Afternoon break (Seminar Rooms 1, 3 & 4)	

Time	Topic	Speaker
15:20-16:05	Biomaterials for gastrointestinal duct tissue engineering	Prof. Malcolm XING
16:05-16:35	Photocrosslinkable polymer for bone regeneration	Dr. Xin ZHAO
16:35-16:55	Hyperconnective 3D nanofiber networks as soft tissue mimetics	Dr. Lizhi XU
16:55-17:15	Basic to translational science: Tissue-derived extracellular matrix for tendon repair	Prof. Michelle WANG

*- End of Day 1 -*

## 15 DECEMBER 2022 (THU)

Time	Topic	Speaker
08:30-09:00	Registration (Foyer of Lecture Theatre 1)	-
09:00-09:15	2022 Bioactive materials lifetime achievement award ceremony by KeAi	-
09:15-10:00	Regenerative engineering: Enabling the practice of regenerative medicine	Prof. Guillermo AMEER
10:00-10:45	Innovation and experience in entrepreneurship	Prof. Ali KHADEMHOSEINI
10:45-11:00	Morning break (Seminar Rooms 3 & 4)	
11:00-11:30	Osteochondral repair using decellularized tissue engineering hyaline-like cartilage graft	Prof. Dongan WANG
11:30-12:00	Microneedle devices for intradermal delivery of vaccines	Dr. Chenjie XU
12:00-12:20	Cytidine-containing tails robustly enhance and prolong protein production of synthetic mRNA in cell and in vivo	Dr. Becki Yi KUANG
12:20-12:35	Closing ceremony: Closing remarks and e-poster award presentation	Prof. Kelvin YEUNG

- End of Day 2 -



# ACKNOWLEDGEMENTS

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- Editors-in-Chief
  - Yufeng Zheng, Peking University
  - Jian Yang, The Pennsylvania State University
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<https://www.ortho.hku.hk/mbs2022>