



Advanced Biomedical
Instrumentation Centre

先進生物醫學儀器中心

Advanced Biomedical Instrumentation Centre
NEWSLETTER 2024 **ISSUE 02**



Symposium on Research Commercialization of Organoid-Based Innovations and Biomedical Instrumentation

We were thrilled to announce the successful conclusion of the "From Bench to Bedside: Symposium on Research Commercialization of Organoid-Based Innovations and Biomedical Instrumentation" held on 2 December 2023 at Science Park!

This groundbreaking symposium aimed to foster collaboration among experts from diverse disciplines, facilitating discussions on the challenges, opportunities, and strategies for effectively commercializing research in Organoid-Based innovations and biomedical instrumentation.

Let's take a moment to appreciate our esteemed speakers

who are pioneers in their respective fields:

Prof. Andreas R. Bausch (TUM)
Prof. Barbara Chan (ABIC / CUHK)
Dr. Michael Chan (C2i / HKU)
Dr. Linda Huang (Invitroque (HK) Limited)
Dr. Vincent Chi Hang Lui (GLOAS / HKU)
Mr. Vincent Ma (HSITP)
Prof. Anderson Shum (ABIC / HKU)
Prof. Paul Tam, JP (GLOAS / MUST)
Prof. Kwok Yung Yuen, GBS JP (CVVT / HKU)
Dr. Jane Jie Zhou (CVVT / HKU)



Prof. Andreas R. Bausch gave a talk which delved into the intricacies of soft matter and its vast array of applications.



(From left) Prof. Barbara Chan, Prof. Kwok Yung Yuen, GBS JP, Prof. Anderson Shum and Prof. Paul Tam, JP

We would like to express our gratitude to all the participants who attended the symposium! Their active engagement and insightful contributions played a significant role in making this event a resounding success.



The InnoHK Summit 2023

The InnoHK Summit 2023 was held at the Science Park on 6 December 2023, attracting over 800 world-class academics, scientists, representatives of renowned institutes and industry leaders from Hong Kong and worldwide.

Organized by the Innovation & Technology Commission and the Hong Kong Science & Technology Parks Corporation, the summit themed "From Collaborative Research to Real World Impact" aimed to showcase the latest innovation and technology (I&T) developments and breakthroughs of InnoHK.



The Collaborative Partnership between ABIC and Mobidrop in Advancing Single-Cell Technology



(From Left) Dr. Grace Lau, Head of Institute for Translational Research, HKSTP; Prof. Anderson Shum, Centre Director of ABIC; Dr. Hao Pei, Co-Founder & CEO of Mobidrop; Dr. Wenshan Zheng, the Co-Founder & CTO of Mobidrop.

As a proud participant in the InnoHK Summit 2023

ABIC presented its latest breakthroughs and showcased our innovative projects. ABIC representatives, Prof. Anderson Shum (Centre Director) and Prof. David Weitz (Faculty Investigator) shared the vision of ABIC as well as our milestone achievements.

The centre's booth featured Dr. Aviva Chow's iCAN Awarded Cocrystal invention for pharmaceutical application, which attracted significant attention, with attendees eager to learn more about ABIC's contributions to the I&T landscape.

On 31 October, 2023, the Advanced Biomedical Instrumentation Centre (ABIC) and Mozhuo Biotech (Mobidrop) reached a significant milestone by formalizing collaboration through signing a Memorandum of Understanding (MoU), as witnessed by the Hong Kong Science and Technology Parks Corporation. The MoU represented a significant advancement in the research and development endeavors of both entities.

Both ABIC and Mobidrop were committed to leveraging their respective strengths and resources to establish a robust platform for biological innovation technology.

By harnessing the power of single-cell technology and utilizing cutting-edge instruments and equipment, the two organizations jointly explored the scientific research and clinical applications of single-cell omics. This partnership aimed to foster deep bonding through technical services, project collaborations, talent development, and more.

Together, we will drive the growth of Hong Kong's innovation and technology ecosystem in the field of single-cell technology.



Dr. Yuanyuan Li, Research Director of Mobidrop, demonstrated the experimental operation process of MobiNova[®]-100 high-throughput single-cell library construction instrument on-site.



Leading Minds from Around the World

Gather to Explore the Realm of Soft Matter

ABIC and the Department of Mechanical Engineering, HKU hosted a seminar “Exploring Soft Matter Physics and Biopolymers” launched on 13 December 2023 at HKU! This seminar brought together experts from various areas of soft matter, biophysics, and chemistry.

Lectures were given by esteemed speakers:

Structure and properties of interpenetrating biopolymer networks
Prof. David A. Weitz (Faculty Investigator, ABIC
Mallinckrodt Professor of Physics and of Applied Physics, Harvard SEAS)

Hierarchical assembly is more robust than egalitarian assembly in synthetic capsids
Prof. Seth Fraden (Professor of Physics, Brandeis University)

Metal-organic membrane microshells for emulsion stabilization and organic crystalline materials encapsulation
Prof. Jin Woong Kim (Professor of Chemical Engineering, Sungkyunkwan University)

Protein phase transitions in health and disease
Prof. Tuomas Knowles (Professor of Physical Chemistry and Biophysics, University of Cambridge)

2D and 3D printing of structurally colored graphics and architectures
Prof. Shin-Hyun Kim (Professor of Department of Chemical and Biomolecular Engineering,
Korea Advanced Institute of Science and Technology)

Awards

The invention ‘**Ultrasensitive Rapid Antigen Tests**’ developed by **Prof. Anderson Shum** and **Dr. Yang Cao** has been granted **Special Award, WIIPA Special Award and Platinum medal** at **PRIX EIFFEL International Invention & Innovation Contest 2023**.

By selectively enriching target antigens using phase separation systems, this invention can detect low concentration by concentrating target antigens to detectable levels, making lateral flow assays more accurate.



Congratulations to
Prof. Anderson Shum and Dr. Yang Cao

Centre Activities

Lunch Breakthrough Session

Transiting from school to work is an essential life journey, and it has been a priority focus for ABIC to support our young researchers in career development.

In this session (4 Aug 2023), “Elevating your healthcare career”, we invited *Miranda Wong*, CEP® - Supervisor (Partnership & Employment), Hong Kong Federation of Youth Groups (HKFYG), to share some challenges and opportunities working youth may face and services available to support them.

Edwin TY, cofounder of Fleming MedLab and recipient of HKFYG InnolImpact Award, shared how he has navigated his path from a student to a serial entrepreneur in healthcare.



Welcoming Distinguished Guests to Our Centre

Palexpo (international exhibition and congress centre in Geneva) | 6 December 2023



David Taji Farouki, President of the Jury Asia Exhibition of Inventions Hong Kong, Palexpo (From left fourth)

Prof. Anderson Shum, Centre Director of ABIC

Caroline Simonet, Director of Geneva International Exhibition of Inventions

◀ Ir. Dr. Alfred Tan, Deputy Director (TTO), HKU

Guest visiting | 30 November 2023



University of Alberta | 14 December 2023



◀ Prof. Xuehua Zhang, Chemical and Materials Engineering Dept, University of Alberta (Left second)

Prof. Amadeu Llebaria, Institute for Advanced Chemistry of Catalonia, Spain (Left second)

Prof. Erick Carreira, ETH Zürich, Switzerland (Left third)

◀ Dr. Wei Ping Wang, Assistant Professor at The University of Hong Kong (Right third)