DIAMOOC: Integrated AI Design and Engineering of 3D Bioprinted Multi-Organoids on Chip for Tumor Diagnosis and Therapy

DIAMOOC Workshop

May 24nd 2024

Draft Agenda
Version 1 (16/02/2024)

Locations

Conference location: Centro de Investigación Biomédica de Aragón, C. de San Juan Bosco, 13, 50009 Zaragoza

Conference Dinner location: TBD

Participants:

P N°	Acronym	Name	Role
1	BEOC	Rosa Monge	CEO, Beonchip
2	BEOC	Luis Serrano	COO, Beonchip
3	BEOC	Lara Pancorbo	Fabrication Manager
4	BEOC	Sandra González	Biology Manager

5	BEOC	Inés Pereira	Sales and R&D dpt.
5	TMELab	Manuel Doblaré	Full Professor UNIZAR (I3A)
6	TMELab	Ignacio Ochoa	Associate Professor UNIZAR (I3A)
7	TMELab	Sara Oliván	Principal Investigator UNIZAR (I3A)
8	NTU	Yuwen Cui	Full Professor Nanjing Tech University
9	NTU	Hongli Mao	Full Professor Nanjing Tech University
10	MatAi	Zhuo Wang	CEO MatAi
11	MatAi	Xiaoyuan Zhang	Advisor, MatAi
12	MatAi	Yijun Xu	HR, MatAi
13	Yunan Presion Metal	Li Chen	General Manager
14	Yunan Presion Metal	Aimin Zhang	Researcher, Materials, Genome Engineering (MGE) Lab
15	Yunan Presion Metal	Zhengyuan AN	Staff, MGE Lab
16	Kunming University of Sci & Tech	Xiaoyu Chong	Professor
17	Nanjing Hospital of Chinese Medicine	Lu WANG (join online)	Research assistant professor

Draft agenda

23nd May

| Time (pm)	Items	Supporting document
16:30-17:00	**Visit to TMELab Facilities**	**Arrival instructions**
17:00-17:30	**Visit to BEOC Facilities**	**Arrival instructions**

24nd May

Time (pm)	Items	Supporting document
8:30-9:00	**Arrival to Conference Venue**	**Arrival instructions**
9:00-9:15	**WELCOME AND INTRODUCTION ON THE DIAMOOC PROJECT Rosa Monge-BEOC and Yuwen Cui-NTU**	
	SESSION 1. MICROFLUIDICS IN BIOLOGICAL APPLICATIONS	

9:15-9:40	**Participant 1** *(20 min + 5 min)* **Lourdes Basabe**	
9:40-10:05	**Participant 2** *(20 min + 5 min)* **Luis Serrano**	
10:05-10:30	**Participant 3** *(20 min + 5 min)* **Inés Pereira: "Combining organoids and microfluidic devices: why and how"**	
10 :30-10 :50	**Participant 4** *(20 min + 5 min)* **Lu Wang:" Construction and Clinical Application of A Living Organoid Biobank of Colorectal Cancer patients"**	
10:50-11:15	**COFFEE BREAK**	
	SESSION 2. BIOIMPRESSION. PROBLEMS AND APPLICATIONS	
11:15-11:40	**Participant 5** *(20 min +5 min)* **Manuel Mazo**	
11.40-12:05	**Participant 6** *(20 min + 5 min)* **Hongli MAO : « Bioactive hydrogels for soft tissue wound management and 3D bioprinting »**	
12:05-12:30	**Participant 7** *(20 min + 5 min)* **José Luis Pedraz**	
12:30-13:30	**LIGHT LUNCH**	
	SESSION 3. MATHEMATICAL MODELS AND ARTIFICIAL INTELLIGENCE IN MICROFLUIDICS AND MATERIAL DESIGN	
13:30-13:55	**Participant 8** *(20 min + 5 min)* **Manuel Doblaré – Mathematical models in Microfluidic Technology**	
13:55-14:20	**Participant 9** *(20 min + 5 min)* **Yuwen Cui: Database and Machine Learning in Predicting Printability of Bioinks for 3D Bioprinting**	
14:20-14:45	**Participant 10** *(20 min + 5 min)* **Aimin Zhang : The Implementation of Materials Genome Engineering of Precious Metal Materials in China**	
14:45-15 :10	**Participant 11** *(20 min + 5 min)* **Sandra González**	
15:10-15:45	**COFFEE BREAK**	
	SESSION 4. BIOLOGICAL APPLICATIONS	
15:45-16:10	**Participant 12** *(20 min + 5 min)* **Iñaki Ochoa**	
16:10-16_35	**Participant 13** *(20 min + 5 min)* **Sara Oliván**	
16:35-17:00	**Participant 14** *(20 min + 5 min)*	

|	Teodora Ranđelović	
17:00-17:45	**CONCLUSIONS AND REMARKS**	
17:45-20:30	**FREE TIME**	
20:30	**SOCIAL EVENT (MEETING DINNER)**	

Short bios of the speakers

1) Prof. Yuwen CUI
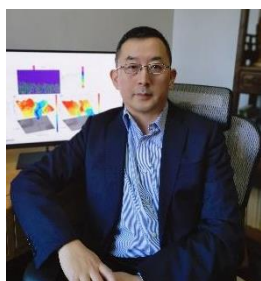
Dr. Yuwen Cui is currently a professor at Nanjing Tech University, technical leader of the material AI- design platform of the Yangtze Delta Region Institute of Advanced Materials, chief scientist of the National Key R&D Program. He has worked in Tohoku University in Japan, Katholieke University Leuven (KULeuven) in Belgium, Ohio State University and other internationally renowned material research and development institutions, and before returning to China (2011-2017), he served as the head of the computational alloy design group of the IMDEA Materials Institute in Madrid, Spain.

He has been engaged in the research of integrated computational materials engineering (ICME), established internationally recognized thermos-kinetic database of superalloy and lightweight alloy systems and proposed a high-throughput kinetic diffusion multiple approach, and supervised over the construction of data fusion and machine learning platform of Chengdu MatAI. So far, he has published 100 SCI papers and 3 monographs in Acta Mater and other journals.

2) Prof. Hongli MAO
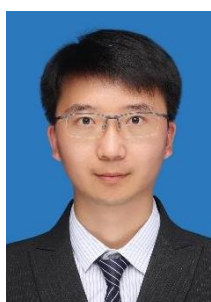
Dr Hongli Mao obtained his PhD in Materials Science and Engineering from the University of Tsukuba, Japan in July 2014. Then he began to work at RIKEN as a JSPS (Japan Society for the Promotion of Science) Postdoctoral Fellow. In March 2017, he moved to Nanjing, China, and has been a Professor at the College of Materials Science and Engineering, Nanjing Tech University since then. His main research interests include polymer biomaterials, tissue engineering, regenerative medicine, and 3D bioprinting.

3) Dr. Aimin ZHANG

Dr. Aimin Zhang is a senior researcher at Yunnan Precious Metal New Materials Holding Group Co., Ltd. in China, specializing in material genome engineering and catalytic materials with precious metals. She has led over 20 major scientific projects at national and provincial levels and won seven provincial-level scientific and technological awards. Dr. Zhang holds 24 national invention patents, six software copyrights, and has developed more than 10 industry standards, and published four monographs and over 60 research papers.

4) Dr. Lu WANG

Dr. Lu Wang is currently a research assistant professor at Nanjing Hospital of Chinese Medicine Affiliated to Nanjing University of Chinese Medicine, assistant director of the Provincial Clinical Innovation Center of TCM for Anorectal Diseases, youth member of Organoid and Organ Chip Committee of Jiangsu Research Hospital Society.

She has been engaged in the construction of patient-derived colorectal cancer organoids and clinical transformation research, and has rich experience in organoid culture. She hosted and participated in several research projects of National Natural Science Foundation, Jiangsu Key R&D Program, published SCI papers in *Adv Sci*, *J Transl Med.* and other journals. She has carried out a number of studies on the prevention and treatment of colorectal diseases by TCM based on organoids, and won the Jiangsu Province Medical New Technology Award and Nanjing Medical New Technology Award.