



**OSCAR** Virtual Tour

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### NEWSLETTER 025 AUGUST 2019





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## Regenerative Medical Engineering (RME) Group at OSCAR

#### **Research Group**

The Regenerative Medical Engineering (RME) group, led by PI Prof. Zhanfeng Cui and Prof. Hua Ye, located at 6th floor

- of OSCAR building, cover the following research areas:
- Tissue Engineering & Biomaterial
- Cellular & Advanced Therapy
- Cancer Screening & Personalized Therapy
- Bioprocessing & Bioformulation
- Neural Function & Regeneration
- Cryogenic Biology

The group stems from the Oxford Centre for Tissue Engineering and Bioprocessing (OCTEB), which is located within the Institute of Biomedical Engineering at Oxford, a world-class centre of excellence in research at the forefront of innovation in biomedical engineering and technology.

The OCTEB includes more than 30 research scientists, led by Professors Zhanfeng Cui and Hua Ye. The main aim of the group is to address the many challenges that are currently limiting widespread delivery of cell therapies and regenerative medicine and, by doing so, bridge the gap between the laboratory and the clinic.

Research at OSCAR focuses on translational activity to enable novel therapies and products to be applied in clinics to benefit society. The Group collaborates widely with universities, research organizations, companies and hospitals in China in R&D, training and technology transfer.

#### People



#### Zhanfeng Cui

Fellow of The Royal Academy of Engineering
Donald Pollock Professor of Chemical Engineering, University of Oxford

• Director of Strategic Projects China, Mathematical, Physical and Life Sciences Division

- Director, Oxford Centre for Tissue Engineering and Bioprocessing
- Director of JITRI IMPACT Institute at Oxford University
- Director of Oxford Suzhou Centre for Advanced Research
- Professorial Fellow, Hertford College



Hua Ye

• Associate Professor in Engineering Science, University of Oxford

- Associate Director, Oxford Centre for Tissue
- Engineering and Bioprocessing
- Fellow of Linacre College, University of Oxford



#### Dr. Wang Hui



Senior Research Scientist Dr. Wang joined OSCAR in 2017 as a Senior Research Fellow working with Professors Cui and Ye. He gained his Bachelor and M.Sc in plant physiology and biochemistry from the China Agricultural University in 1987 and 1990, and his D.Phil in Virology from St. Cross College at the University of Oxford in 1996. Current research interests include genomics and applications. Email: hui.wang@oxford-oscar.cn

#### Dr. Jia Huidong

Senior Research Scientist

MD, MSc in biomedical science, PhD in stem cell and tissue engineering. Dr. Jia is a biomedical scientist with cross-discipline experience in clinical medicine, biomedicine and clinical transition of life technology, working on cell therapy, tissues/organs engineering and regenerative medicine. Email: <u>Huidong.Jia@oxford-oscar.cn</u>

#### Dr. Liu Weizhi



Dr. Liu received his PhD degree in Materials Science at Queen Mary University of London in 2014, before joining Oxford MEStar as project manager from 2014 to 2017. He joined OSCAR in 2018. Current research interests include Biomaterials, 3D Bioprinting and Development of Automatic Cell Expansion System. Email: weizhi.liu@oxford-oscar.cn

#### Yida Zeng

Technician

He received his Bachelor Degree in Biochemistry from Imperial College London in 2009. He has worked with GMP grade cell therapy for five years. Currently interested in the cell culture and characterisation. He also acts as the lab manager. Email: <u>Yida.Zeng@oxford-oscar.cn</u>

#### Li Binbin

Technician

Binbin Li graduated from Clinical Veterinary Department of Huazhong Agricultural University as a graduate student in 2014. Before joining OSCAR, she served as a Global Safety Data Management Specialist for Pfizer (Wuhan) R&D Center, where she was responsible for adverse event reviews, submitting reports according to the appropriate Regulatory Authority requirements. Her current research project looks at the gene expression patterns of human stem cells in different culturing conditions. Email: <u>Binbin.Li@oxford-oscar.cn</u>

#### Zhu Jiachen



Jiachen Zhu received her Master's Degree from Soochow University in July 2019 before joining OSCAR. Her research focuses on the development of silk protein micropattern biomaterials. The current focus is the differences in gene expression of cultured cells on different biomaterial surfaces. Email: Jiachen.Zhu@oxford-oscar.cn





Visiting Professor: Tiantian Zhang

Professor of Reproductive Cryobiology, Bournemouth University
Deputy Dean of Research and Professional Practice, Faculty of Science and Technology, Bournemouth University

Prof. Tiantian Zhang's current research interests and activities are in the areas of the cryopreservation of reproductive cells, tissues and embryos of aquatic species and studies on the effect of cryopreservation on genome and cellular metabolism of reproductive cells including stem cells.





Visiting Professor: Lee Ann Laurent-Applegate • Professor of Regenerative Therapy, Lausanne University.

• Director of Cellular Therapy, Department of Musculoskeletal Medicine, Lausanne University Hospital

Prof. Applegate is a leading expert in skin regeneration and using cell therapy to treat burns and chronic wounds. She pioneered the research and clinical application of using progenitor cells to treat various conditions and to regenerate skin, bone, and cartilage tissues.







# OSCAR Lab Update

The construction of OSCAR labs began back in 2018 and promised to offer researchers state-of-the-art facilities. By August 2019, labs in OSCAR were ready to host researchers for experiments. Pictures below invite you for a "tour" of the OSCAR labs.

#### Labs on 9F (By August)

Optoelectronic Technologies Laboratory (OeTL):

- Advanced Materials Lab
- Multifunctional Device Fabrication Lab
- Printed Electronics Lab
- Advanced Photonics Lab
- Optoelectronics Characterization Lab





#### Labs on 8F (By August)

- Environmental Biotechnology and Synthetic Biology Lab
- Cell Design Lab
- Single Cell Biology Lab
- Medical Ultrasound Artificial Intelligence Laboratory
- Photo-acoustics and Acousto-optics Laboratory
- Industrial and Biomedical Acoustics Laboratory











Server room of Computational Health Informatics Lab (5F)

## " OSCAR at ChinaNANO 2019

OSCAR PI Prof. Jamie Warner, senior scientist Dr. Wenshuo Xu and technician Mr. Engi Chen attended ChinaNANO 2019, the 8th International Conference on Nanoscience and Technology, 17-19th August.

Having established a rapidly growing audience within and out of the field of nanoscience, ChinaNANO continues to develop as an all-in-one platform for scientific conversation, industrial collaboration and strategic planning. The 2019 conference brought together innovators and contributors from all parts of the global nanoscience and technology community, to share scientific breakthroughs, technological advances, progresses in industry sectors, and emerging opportunities and challenges.

At the conference, the ACS Nano announced three winners of the 2019 ACS Nano Lectureship Awards. Prof. Jamie Warner won the prize for the Europe/Africa/Middle East region, and he was invited to give a talk, entitled 'the Atomic Structure and Dynamics of Defects in 2D Materials Using Electron Microscopy.'

Prof. Jamie Warner also gave some suggestions about building up the laboratory and emphasized researchers' work plans at OSCAR.





## **G** OSCAR PI Activities

PI Prof. Wei Huang visited National Engineering Research Center for Biotechnology, Nanjing University of Technology on 29 August. The Executive Deputy Director of the centre received Prof Wei for a brief discussion about potential collaboration, both in fundamental research and industrial application.



Prof. Wei Huang met with Adrian Yeo and Tai Kee from Sembcorp in Nanjing. Sembcorp highlighted their technical needs for wastewater treatment and Prof Wei proposed a solution for it. Further discussions will be held.

## Meet New Research Scientist of OSCAR

![](_page_5_Picture_5.jpeg)

#### **Avinash Pandreka**

Research Scientist in PI Prof. Luet Wong's group

Avinash received his PhD in biological sciences from AcSIR-Institute of Genomics and Integrative Biology, India. His PhD work was focused on elucidating the biosynthesis of limonoids in neem and metabolic engineering in yeast. He joined OSCAR in August 2019 as Research Scientist in Professor Luet Wong's group. His research work is mainly focused on metabolic engineering of microbial acetyl CoA and isoprene unit biosynthesis to increase the production of terpenoids. Engineering of terpene synthases and cytochrome P450 systems to increase their efficiency and selectivity towards the terpenoid biosynthesis. His research interests include elucidating the diversity of secondary metabolites and their application.

# Oxford Interns at OSCAR

OSCAR joined the Internship Office 2019 Summer Internship Programmes which is exclusive to Oxford students. This summer, OSCAR hosted two students: one from July to August and the other from August to September.

In this August issue, we report on Mr. Qimu Yuan's 8-week internship at OSCAR.

![](_page_5_Figure_12.jpeg)

Qimu Yuan is a third-year undergraduate student studying Physics at University of Oxford. He recently completed a two months internship at OSCAR working in the Optoelectronic Technology Laboratory (OeTL) led by Profs. Bradley & Stavrinou.

"For me, it is a truly eye-opening and memorable experience to be able to work in OSCAR for the last two months. The research team I worked in is well organized and supervised by the senior research scientist Dr. Jingsong Huang. The two other researchers, Dr. Keval Sonigara and Mr. Haiyu Liu, are always friendly and supportive, which made my transition into the new environment seamless. I feel very inspired by all team members' devotion and enthusiasm in their research as well as their profound academic expertise. As their field of research matches perfectly to my interest in condensed matter physics, and in particular, the field of semiconductor and optoelectronics, my colleagues gave me valuable academic advice and answering my numerous questions with incredible patience.

My roles and responsibilities are mainly to assist in both the laboratory management and the development of health and safety standards across all labs of the OeTL. I am really impressed by the wide variety of experimental equipment at OeTL. From the industrial level semiconductor microscope to the nano scale precision stylus profiler, most of the apparatus are far beyond what I used to see in an undergraduate laboratory. Although there is an immense amount of information to be learnt from scratch about the operation and mechanics behind each, I really enjoy the challenges and I feel extremely rewarding that the many documentations I written would contribute to the future experimental procedures of OeTL. During my time here, I also had opportunities to meet with both Professor Bradley and Professor Stavrinou, attended a series of seminars from collaborating institutions, and received experimental trainings from industrial experts, which all have broadened my knowledge both within the research of optoelectronics and the wider interdisciplinary fields.

Furthermore, whether it is from the seamless flow of teamwork within our research group or from the monthly birthday celebration event organized by the administration team, I always feel well encouraged and supported by the strong sense of community and cooperation at OSCAR. In particular, the admin staff is extremely efficient and professional in answering any queries and providing general support.

To conclude, my two months in OSCAR really made my dream of living a "researcher's life" come true while all-roundly preparing for my further studies. I cannot help gratefully thanking OSCAR for offering this wonderful and invaluable opportunity!"

![](_page_5_Picture_19.jpeg)

![](_page_5_Picture_20.jpeg)

### **G** Open to Collaborations

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On 5 August, a delegation of the Korea Advanced Institute of Science and Technology (KAIST) visited OSCAR to understand the cooperation between Oxford and SIP. On 5 August 2019, SIP and KAIST signed an agreement to jointly build a China-Korea Innovation Technology Research Institute in SIP.

On 6 August, a project roadshow was held by OUI Suzhou and others at Shanghai International Energy Innovation Centre. Dr. Muhammad Arif (Research Scientist in Prof. Thompson's group) gave a presentation about research in Environment and Biotechnology.

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![](_page_6_Picture_5.jpeg)

On 8 August, Research Scientist Dr. Muhammad Arif participated in Baotou UK-China Innovative Technologies Roadshow (2019) organized by Baotou Municipal Development and Reform Commission, Rare Earth High-tech Zone Economic Development Bureau, Baotou Science and Technology Bureau, Beijing Yantuo, OUI Suzhou.

On 14 August, Prof. Junbiao Peng visited the OSCAR Optoelectronic Technology Laboratory. Prof. Peng is Dean of School of Materials, and Deputy Director of the Institute of Optoelectronics in South China University of Technology. Dr. Jingsong Huang met with him and discussed the research collaboration and personnel exchange opportunities.

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![](_page_6_Picture_9.jpeg)

On 15 August, Suzhou Mayor, Li Yaping, accompanied a governmental delegation from Shanghai Fengxian District to OSCAR. GM Leah received them and briefed them of OSCAR progress in labs and recruitment. Secretary of CPC SIP Committee, Wu Qingwen, also joined the delegation.

On 28 August, collaborator, Prof. Jian Fan from Institute of Functional Nano & Soft Materials (FUNSOM) of Soochow University, visited the OSCAR Optoelectronic Technology Laboratory (OeTL). Prof. Fan is an expert in design and syntheses of organic semiconductors and their application in organic solar cells, OFETs and OLEDs. Since June 2019, OSCAR researcher Dr. Sonigara has been working in his lab in FUNSOM based on a four-month collaboration project. During his visit, Senior Research Scientist Dr. Jingsong Huang introduced the progress in lab establishment and research of the OeTL. And Dr. Sonigara discussed the mid-term work summary and the research plan for the next two months.

![](_page_6_Picture_12.jpeg)

On 26 August, a delegation of leadership of Nanjing University of Aeronautics and Astronautics (NUAA) visited OSCAR to look for possible collaboration in certain disciplines. The delegation is led by Dr. Yong'an Zheng (Party Secretary of NUAA) & Dr. Hong Nie (President of NUAA)

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### China (Jiangsu) Pilot Free Trade Zone Suzhou Area Formally **Established**

According to news published in www.gov.cn dated August 26, the State Council agreed to establish China (Jiangsu) Pilot Free Trade Zone (short for JFTZ hereinafter) and released the Master Plan for China (Jiangsu) Free Trade Zone (short for Master Plan hereinafter), commissioning the construction of the zone.

According to the Master Plan released by the State Council, JFTZ will cover an implementation area of 119.97 square kilometers consisting of Nanjing, Suzhou and Lianyungang zones. It will become a pioneering zone for developing open economy, and a model for real economy's innovative development and industrial transformation and upgrading.

Located at Suzhou Industrial Park (SIP), Suzhou Free Trade Zone (SFTZ), covering 60.15 square kilometers (including the 5.28sqkm SIP Comprehensive Bonded Zone), is a critical area consisting of the High-end Manufacturing and International Trade Zone, Dushu Lake Science and Education Innovation Zone, Jinji Lake Business District, Yangcheng Lake Peninsula Tourism Resort and other functional zones.

SFTZ aims at evolving into the world's first-class high-tech industrial park, an all-round opening-up highland, an international innovative highland, a high-end industrial highland and modernized governance zone.

> 28 August 2019 http://www.sipac.gov.cn/english/news/201908/t20190828\_1050672.htm

# Recruitment of Research Contracts Specialist (China)

#### Job Details

**Research Contracts Specialist (China)** Research Services, Robert Hooke Building, Parks Road, Oxford (primary site) and Boundary Brook House, Old Road Campus, Churchill Hospital, Oxford

Grade 8: £41,526 - £49,553 with a discretionary range to £54,131 p.a.

The University of Oxford is looking for a highly motivated individual to join its Research Services office, where you will work closely with researchers and support staff in academic departments to facilitate research collaborations with and in China. This will include contracts in both Chinese and English and under Chinese law.

The University has an increasing number of contracts with Chinese parties and has established a Chinese company and research centre (Oxford Suzhou Centre for Advanced Research - OSCAR), which will often contract with parties under Chinese law and in Chinese.

This role includes reviewing, drafting and negotiating research contracts, many of them complex in nature, on behalf of the University, as well as forming good working relationships with people across the University and with our and OSCAR's research partners.

You will be able to provide clear and pragmatic advice and make recommendations to academics and other University colleagues after identifying and assessing the relevant risks. You must also take pride in solving problems and driving multiple projects through to completion in a timely manner. You will need to be able to manage a large and varied workload, and balance the technical challenges of this work effectively in a fast-paced environment.

The role is based in Oxford city centre but you will be expected to spend time in the Research Services offices at the Old Road (Churchill Hospital) campus. Occasional travel to OSCAR in Suzhou and other locations in China may also be required.

For an informal discussion about the role, please contact: <u>daniel.blakey@admin.ox.ac.uk</u>. The closing date for applications is 12:00 noon on Wednesday 23 October 2019. Interviews are anticipated to take place week commencing Monday 11 November 2019.

**Contact Person : Recruitment Administrator** 

Contact Phone :

Closing Date : 23-Oct-2019

Contact Email : recruitment@admin.ox.ac.uk

https://my.corehr.com/pls/uoxrecruit/erq\_jobspec\_version\_4.display\_form?p\_company=10&p\_internal\_external=E&p\_display\_in\_irish=N&p\_process\_type=&p\_applicant \_no=&p\_form\_profile\_detail=&p\_display\_apply\_ind=Y&p\_refresh\_search=Y&p\_recruitment\_id=141312

Vacancy ID : 141312