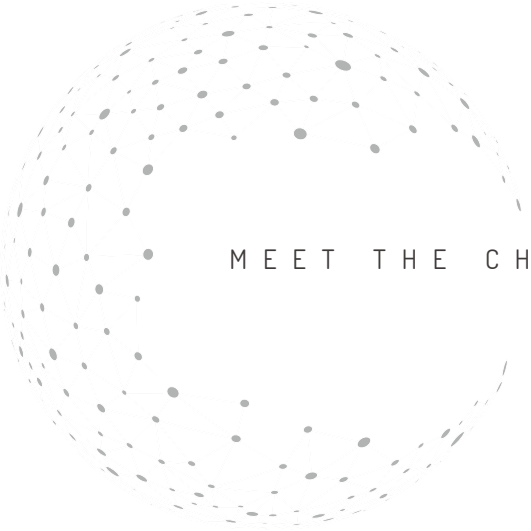
SMART

Shenzhen Medical Academy of Research and Translation



MEET THE CHALLENGE

BENEFIT THE HUMANITY

Contents

"We are committed to bridging the gap between research and application, turning knowledge into solutions that benefit our society. "

Nieng Yan

Founding President, SMART

- Director, Shenzhen Bay Laboratory
- Member, Chinese Academy of Sciences
- International Member, US National Academy of Sciences
- International Honorary Member, American Academy of Arts and Sciences

Shenzhen Medical Academy of Research and Translation (SMART), located in the Greater Bay Area in Southern China, is a leading institute dedicated to advancing medical science. Our mission is to bridge the gap between basic research, translational science, and clinical practice, creating a dynamic environment for innovation with real-world impact.

Established in 2023, SMART has united distinguished clinicians and internationally renowned scientists who have led transformative research in their respective fields. This globally collaborative environment has already led to many groundbreaking discoveries that advance our understanding of the mechanisms underlying human health and disease.

Our Missions

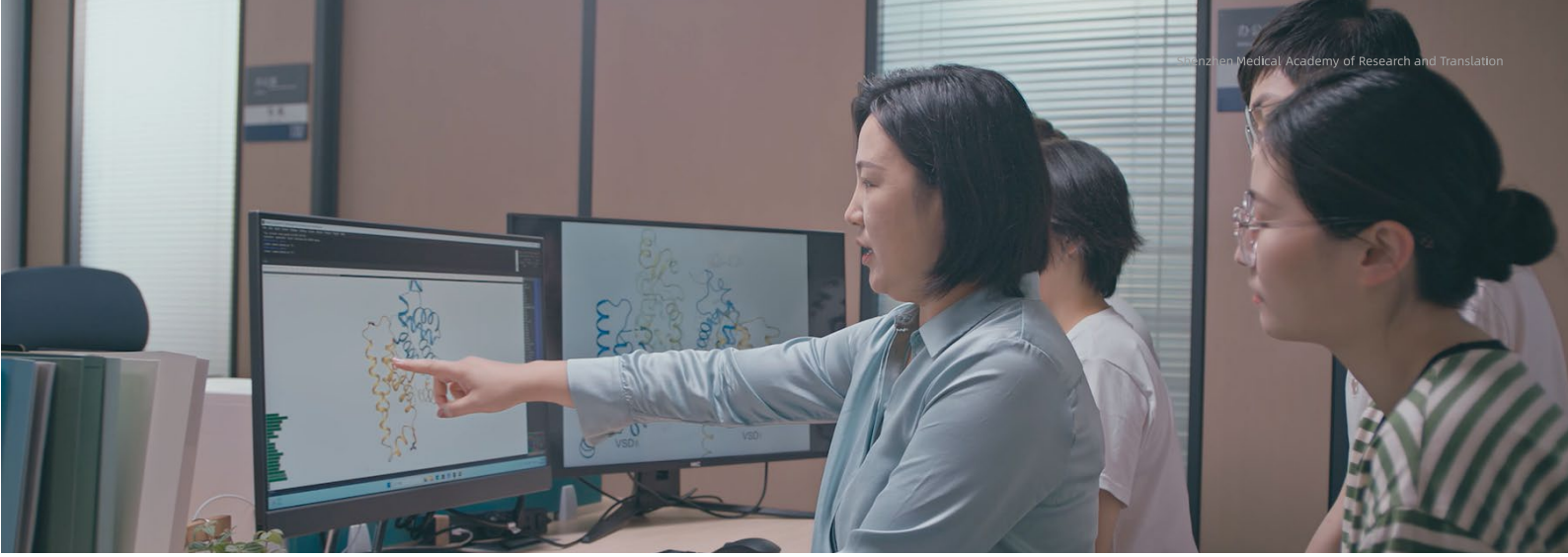
Biomedical Research

Education and Global Exchange

Translational Research and Technology Transfer

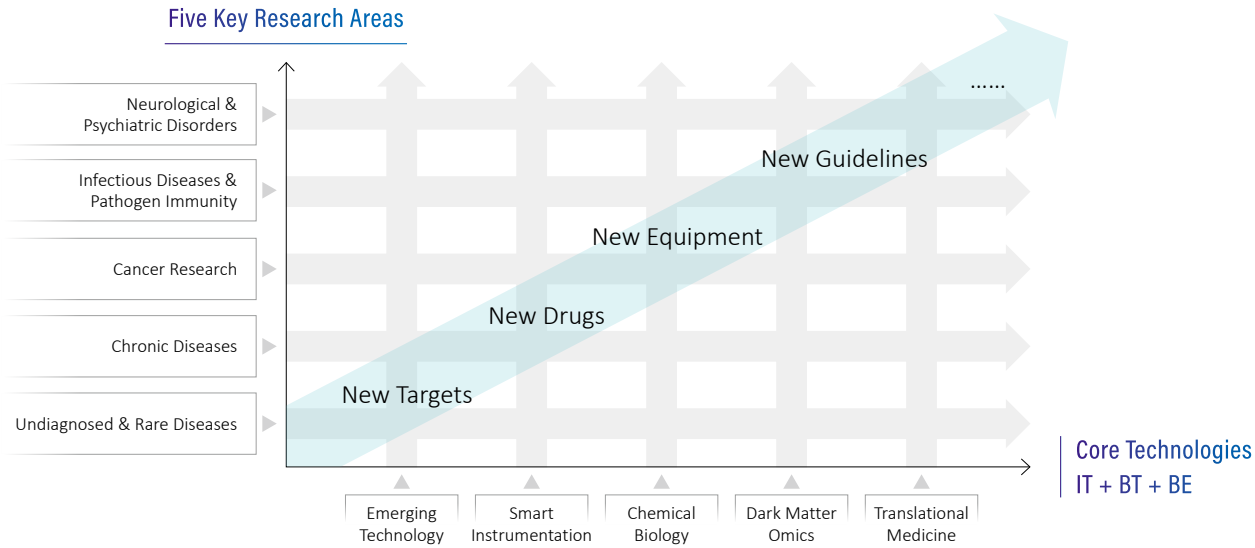
Coordinate Science and Technology Resources

Policy Consultation



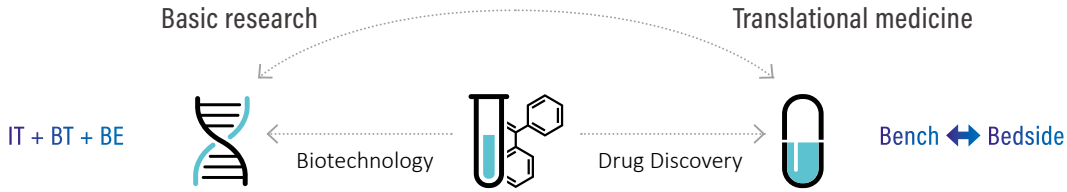
Frontier Science



SMART & Shenzhen Bay Laboratory:

An international hub for research, education, and collaboration



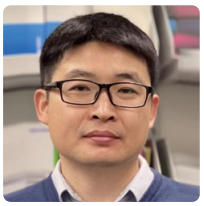
Leading Scientists at SMART

Zhou-Feng Chen, PhD

Dr. Zhou-Feng Chen was the first to identify the “itch gene” and the neural circuits in the central nervous system responsible for transmitting itch sensation. These findings demonstrated that itch is distinct from pain, resolving a long-standing controversy in the field. His research now spans pleasant touch, itch, pain, instinctive behaviors, affective contagion, empathy, and prosocial actions, probing how the nervous system encodes and transmits bodily and emotional states. Before joining SMART, Dr. Chen was a professor at the Washington University School of Medicine, St. Louis.

Yang Dan, PhD

Dr. Yang Dan has made seminal contributions to the neural mechanisms of visual perception, attention, and sleep. By combining physiological and molecular approaches, her lab has reconstructed the neural circuits that regulate sleep and is now focusing on the mechanisms and clinical intervention of sleep disorders. Yang is an elected member of the U.S. National Academy of Sciences. Before moving to SMART, Yang was Howard Hughes Medical Institute (HHMI) Investigator and Distinguished Professor at the University of California, Berkeley.



Wei Lu, PhD

Dr. Wei Lu studies the neurobiological bases of alcohol addiction, anxiety, and depression. He has proposed multiple new concepts in synapse development and regulation and discovered several novel synaptic proteins. His systematic work links synaptic dysfunction to pathogenesis, laying the groundwork for new strategies to treat neurological and psychiatric disorders and to improve anesthesia. His group is interested in developing next-generation therapeutics targeting GABAA receptors. Dr. Lu was a senior investigator at the National Institutes of Health (NIH/NINDS) before joining SMART.

Yanzhuang Wang, PhD

Dr. Yanzhuang Wang’s work spans cellular, molecular, neural, and endocrine biology, focusing on Golgi structure, regulation, and its contribution to neurodegeneration. His discoveries reshape our understanding of Golgi biogenesis and function, with implications for cancer, diabetes, SARS-CoV-2 infection, and Alzheimer’s disease, informing innovative therapeutic strategies. Before moving to SMART, Dr. Wang was a professor and associate chair at the University of Michigan.

Jian Yang, PhD

Dr. Jian Yang resolves ion-channel structures, dissects their regulation, and links channelopathies to disorders such as autism, epilepsy, and chronic pain. His lab focuses on building disease models—ranging from mouse to non-human primate—driven by patient mutations, elucidates pathogenic mechanisms at molecular and cellular scales, and advances natural-product-based therapeutics targeting the causative channels. Dr. Yang was a professor at the Columbia University before joining SMART.

Early-Career Scientists at SMART

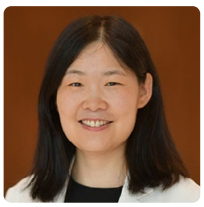
Through our tenure-track program, we support early-career scientists as they embark on their academic journeys, equipping them with the resources to pursue high-risk, high-reward research and to mentor the next generation of scientists. We are committed to empowering talented young investigators with the potential to make original and transformative discoveries.

Xiaojing Pan, PhD

Dr. Xiaojing Pan received her PhD and postdoctoral training at Tsinghua University. Dr. Pan's research focuses on membrane protein structural biology, with an emphasis on understanding the mechanisms of disease-related membrane proteins and their interaction with drugs. Using a combination of structural biology, biochemistry, and physiology, her group currently investigates membrane proteins involved in metabolic diseases and tumor immunity.

Mingxu Hu, PhD

Dr. Mingxu Hu earned his PhD from Tsinghua University and served as an early career scientist at the Beijing Advanced Innovation Center for Structural Biology. He has been dedicated to developing theories and algorithms for cryo-electron microscopy image processing. His research group focuses on integrating high-throughput microscopy and deep learning for biomolecular structure prediction and high-speed directed evolution, while also exploring the industrial applications of biomolecules.



Yuanyuan Yao, PhD

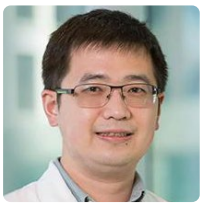
Dr. Yuanyuan Yao earned her PhD from the Institute of Neuroscience, Chinese Academy of Sciences, followed by research positions at UC Berkeley/HHMI. The Yao Lab currently focuses on brain–heart interactions during sleep, under both physiological and pathological conditions. By investigating these mechanisms, the lab aims to uncover how brain–heart dynamics are altered in sleep disorders and cardiovascular diseases, with the goal of developing novel therapeutic approaches.

Meijing Li, PhD

Dr. Meijing Li earned her PhD from Tsinghua University and completed postdoctoral training at the Max Planck Institute of Biochemistry. Her research aims to decipher macromolecular machines involved in pathogenic bacteria–host interactions at both cellular and organismal levels. Combining cryo-electron tomography (cryo-ET) and other advanced techniques, the team investigates host defense mechanisms and seeks to identify novel therapeutics against infectious diseases.

Chenyan Ma, PhD

Dr. Chenyan Ma earned her PhD from the Institute of Neuroscience, Chinese Academy of Sciences, followed by research positions at UC Berkeley/HHMI. Her research explores how the immune system contributes to sleep regulation and how sleep, in turn, influences immunity. The Ma Lab employs a wide range of experimental approaches to investigate the neuro-immune mechanisms underlying sleep. Their goal is to uncover how disruptions in these processes contribute to sleep disorders and neurodegenerative diseases for better diagnosis and therapy.



Long Gui, PhD

Dr. Long Gui earned his PhD from the University of Washington and completed his postdoctoral training at the University of Texas Southwestern Medical Center. The Gui Lab specializes in uncovering the structures and interactions of cellular macrocomplexes within their native context. Dr. Gui employs advanced *in situ* structural approaches, including cryo-ET and cryo-focused ion beam milling to investigate the architecture and function of biological macromolecular complexes.

Qiang Su, PhD

Dr. Qiang Su earned his PhD from Tsinghua University and conducted postdoctoral research at Westlake University. His research focuses on the mechanisms of membrane protein receptors involved in both adaptive and innate immunity. The Su Lab's main interests include elucidating the molecular mechanisms of key immune receptors, developing specific antibodies targeting these receptors, as well as designing and conducting preclinical studies of novel immune receptor ligands.

Jian Huang, PhD

Dr. Jian Huang earned his PhD from Tsinghua University and completed postdoctoral training at Princeton University. His research focuses on addressing key challenges in drug development through structure-based drug discovery. His group combines structural biology, medicinal chemistry, and molecular cell biology to study disease-related membrane proteins. By integrating structural and functional analyses, they aim to design precise modulators to advance drug development.

Shibin Hu, PhD

Dr. Shibin Hu obtained his PhD from the Shanghai Institute of Biochemistry and Cell Biology, University of Chinese Academy of Sciences, and completed his postdoctoral training at Stanford University. His lab investigates how cells prevent immune responses triggered by endogenous double-stranded RNAs (dsRNAs). They are working on identifying endogenous dsRNAs and their binding proteins, mapping regulatory networks and exploring the role of dsRNA in autoimmune diseases and cancer.

SMART Investigators

SMART-Funded External Investigators

Inspired by Howard Hughes Medical Institute (HHMI)'s philosophy of "funding people, not projects", SMART provides clinical experts and outstanding scientists with long-term support, enabling them to address challenging problems and dedicate themselves to discoveries that will shape the future. Key areas funded include disease diagnosis and treatment, translational medicine, and breakthrough technologies.

Charles Lieber, PhD

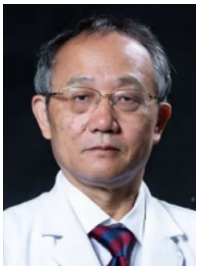
- Chair Professor, Tsinghua Shenzhen International Graduate School
- Elected Member, U.S. National Academy of Medicine (2017)
- Elected Foreign Member, Chinese Academy of Science (2015)
- Elected Member, U.S. National Academy of Inventors (2013)
- Elected Member, U.S. National Academy of Sciences (2004)
- Elected Fellow, American Academy of Arts and Sciences (2002)

Dr. Charles Lieber is a pioneer in nanoscience and nanotechnology, recognized with many of the highest honors in the field, including the Wolf Prize in Chemistry, the Welch Award, and the NIH Pioneer Award. Dr. Lieber is the founding director of i-BRAIN—the Institute for Brain Research, Advanced Interfaces, and Neurotechnologies at SMART. i-BRAIN conducts highly interdisciplinary research at the frontiers of science, engineering and medicine to develop transformative brain-computer interfaces (BCIs) that blur the distinction between electronics and the brain. Researchers at i-BRAIN seek to carry out groundbreaking research to understand the brain and brain diseases as well as to develop breakthrough technologies for the treatment of neurological and neurodegenerative diseases.

Lin Shen, MD

- Director, Department of Gastrointestinal Oncology and Department of Early Drug Development Center, Peking University Cancer Hospital
- Director, Beijing Key Laboratory of Cell and Gene Therapy for Solid Tumors
- Chair, Gastric Cancer Association, China China Anti-Cancer Association (CACA)
- Chair, Chinese Society of Clinical Oncology (CSCO)
- Vice President, China Medical Women's Association (CMWA)

Dr. Lin Shen specializes in the precision treatment of digestive system tumors. She has led over 100 international and domestic multicenter clinical trials. Her work has played a key role in shaping diagnostic and treatment guidelines for gastrointestinal cancers in China and across Asia. Her research has been published in leading journals including Nature, The Lancet, BMJ, JAMA, and Nature Medicine, and she is ranked among the world's top 2% most-cited scientists. Dr. Shen has contributed to 54 international and national clinical practice guidelines and holds 18 national patents. Her team has also established patient-derived organoid and xenograft models, along with patient sample biobanks that serve as valuable resources for biomedical research.



Jin Liu, MD

- Professor and attending anesthesiologist, Department of Anesthesiology, West China Hospital, Sichuan University
- Former President of Chinese Society of Anesthesiology (CSA)
- The First President, Chinese Association of Anesthesiologists (CAA)

Dr. Jin Liu is a leading expert in perioperative blood management, perioperative ultrasound, and the development of new anesthetics. He earned his MD and completed his anesthesia residency in China, followed by a research fellowship at University of California, San Francisco (UCSF). He served as a visiting assistant professor and attending anesthesiologist at Southwestern Medical Center in Texas from 1991-1993.

Xiangbin Pan, MD

- Vice President of Fuwai Hospital, CAMS & PUMC
- Executive Director of the China Young Scientists and Technologists Association
- Chief Technical Advisor to the United Nations
- Senior Foreign Expert of the European Society of Cardiology (ESC)
- Senior Foreign Expert of the American College of Cardiology (ACC)
- Senior Foreign Expert of the Society for Cardiovascular Angiography and Interventions (SCAI)
- Senior Foreign Expert of the Society of Thoracic Surgeons (STS)

Dr. Xiangbin Pan has pioneered ultrasound-guided percutaneous interventional technology for structural heart disease, earning the WHO Award for Innovation in Health Technology and the National Technology Invention Award. Recognized by the United Nations as a global sustainable development initiative, his team's work has received UN support and is widely promoted along the Belt and Road countries. Over the past decade, his team has expanded ultrasound-guided interventions to various cardiac procedures, developed novel delivery systems, and created integrated technologies such as transjugular techniques and mobile surgical units. These innovations have been implemented in over 30 countries and are widely recognized by the international medical community.

Shuyang Zhang, MD

- President, Peking Union Medical College Hospital
- Deputy President, Peking Union Medical College, Chinese Academy of Medical Sciences
- Chair, Rare Diseases Branch of the Chinese Medical Association
- President, Cardiovascular Physicians Branch of the Chinese Medical Doctor Association

Dr. Shuyang Zhang is a leading expert in the diagnosis and treatment of rare diseases, with a particular focus on rare cardiovascular disorders. She has led 16 national and regional research initiatives, including key R&D projects under China's 13th and 14th Five-Year Plans supported by the Ministry of Science and Technology. She has authored or co-authored over 300 SCI-indexed publications in top-tier journals such as The New England Journal of Medicine, Science, The Lancet, and Nature, with more than 7,500 citations. Dr. Zhang has also edited over 20 influential volumes, including Rare Diseases, the Guidelines for the Diagnosis and Treatment of Rare Diseases (2019 Edition), and Interpretation of the First National Rare Disease Catalog of China. She is the founding editor-in-chief of the journal Rare Disease Research.

Yongjun Wang, MD

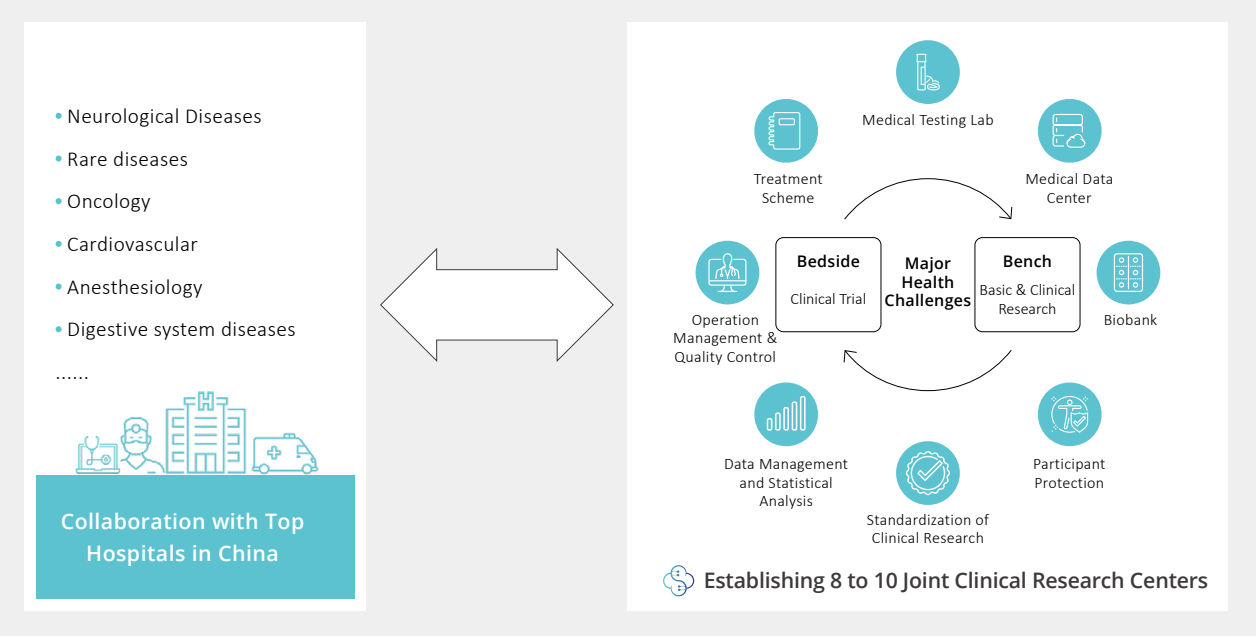
- President, Beijing Tiantan Hospital, Capital Medical University
- Director, National Medical Quality Control Center for Neurological Diseases
- Vice Director, Clinical Medical Research Center for Neurological Diseases
- Director, Beijing Advanced Innovation Center for Brain Protection
- President, Chinese Stroke Association
- Chairman, Neurology Branch of the Chinese Medical Association
- Editor-in-Chief, Stroke & Vascular Neurology (SVN) journal

Dr. Yongjun Wang is a leading expert in ischemic cerebrovascular disease, with a primary focus on uncovering mechanisms of recurrence and developing effective intervention strategies. He identified key molecular pathways involved in disease recurrence and pioneered the "CHANCE" dual antiplatelet therapy, which reduced the risk of stroke recurrence by 32%. Building on this, he developed a personalized precision medicine approach based on drug–gene interactions, further lowering recurrence risk by 20%. Dr. Wang has published over 200 papers as first or corresponding author in high-impact journals including The New England Journal of Medicine, The Lancet, JAMA, and BMJ. He has served as principal investigator for numerous clinical trials, contributing to approximately 30% of all cerebrovascular disease research published in NEJM.

Translational and Clinical Research

Clinical Research & Collaboration

Transform clinical discovery into a rapid, integrated, and patient-centric model.



Greater Bay Area International Clinical Trials Center (BAY TRIAL)

Your Gateway to Global Clinical Trials

November 21, 2024, the Greater Bay Area International Clinical Trials Center (BAY TRIAL) of SMART was officially inaugurated at the Hetao Shenzhen-Hong Kong Science and Technology Innovation Cooperation Zone.

By connecting clinical trials innovation resources from across the Greater Bay Area and fostering deeper collaboration between Shenzhen and Hong Kong, the center will establish a one-stop platform for clinical trials. This platform will provide top-tier technical support, operational management and registration services to both national and international pharmaceutical and medical device development institutions.

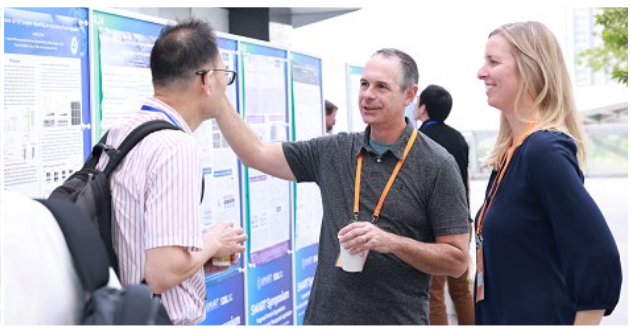
SMART Symposia

The SMART Symposia are international academic conferences organized by the Shenzhen Medical Academy of Research and Translation (SMART). Our symposia, held during Shenzhen's most favorable seasons, provide a platform to foster cross-disciplinary collaboration and communication among biomedical researchers around the world.

We have organized more than 15 symposia so far:

- Molecular Physiology
- Immunology, Deconstruction and Reconstruction of Lymphocytes for Precision Medicine
- AI-Driven Computational Biology and Medicine
- Vector-borne and Tropical Infectious Diseases
- Early Diagnosis and Intervention of Alzheimer's Disease
- Illuminating the Brain
- Targeted Protein Degradation: From Basic Science to Therapeutic Application
- Bio-Architecture & Bio-Interactions
- Microbiota in Health and Disease
- Structural Lipidomics

More is coming soon...
Choose your favorite area — and grow with us!



Website: https://symposia.smart.org.cn/sym
Contact Us: symposium@smart.org.cn; yysxiang@smart.org.cn

SMART

Shenzhen Medical Research Fund (SMRF)

To elevate Shenzhen's leadership in biomedical innovation, the Shenzhen Municipal Government established the Shenzhen Medical Research Fund (SMRF), a strategic initiative aimed at advancing cutting-edge research and transformative discoveries. SMART is responsible for managing and coordinating SMRF and other scientific resources — serving a role similar to the NIH in the United States — by strategically allocating funding and infrastructure resources to maximize scientific impact across the region.

Integration of Shenzhen's Life Sciences Resources

- Optimizing resource utilization in research
- Optimizing the ecosystem for scientific endeavors

An International, Open-Structured Collaborative Funding System for Medical Sciences

- Innovating the funding model for medical talents
- Enhancing the ecosystem for scientific endeavors

SMART Foundation

The SMART Foundation is a philanthropic organization established in 2023. It mobilizes contributions from across society to support SMART's mission of building a worry-free environment to attract top global talent and advance pioneering biomedical innovation.

SMART's life-changing discoveries are not made by scientists alone. Only with the help of our supporters can we empower our globally renowned researchers, harness cutting-edge technology, and fuel bold initiatives to tackle some of the most challenging problems of our time.

Support Our Science:

- Scientists
- Basic and Clinical Research
- Emerging Technologies
- Education
- Institutional Development

✉ Foundation@smart.org.cn

SMART PhD Program

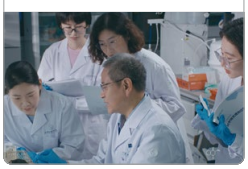
SMART provides exceptional training to talented students through joint programs with top Chinese universities, including Tsinghua University and Westlake University. Our international PhD program in Biology provides access to a diverse range of interdisciplinary fields at the forefront of science.

- > 70 Research Labs
- Fully-funded Scholarships
- Inter-disciplinary Research

Research Areas

- Neurological and Psychiatric Disorders
- Bioinformatics and Computational Biology
- Bio-Architecture and Biomimetics
- Infectious Diseases and Immunity
- Cancer and Metabolism
- Rare Diseases
- Chemical Biology

World-Class Mentors



Advanced Research Facilities

Cutting-Edge Academic Conferences

Eligibility: Bachelor's or Master's Degree(s);
Open to all nationalities (no Chinese citizenship required)
Contact: Graduate_Admission@smart.org.cn

Research Labs at SMART and Shenzhen Bay Laboratory

Biophysics and Structural Biology

Xiao Fan, PhD	CryoEM method development; Structural perspectives into the evolution of chemosensory receptors
Long Gui, PhD	Structural insights into human rare disease; Host-parasite interaction
Shangguo Hou, PhD	AI-assisted biological dynamics imaging; Quantitative study of biomolecular dynamics
Mingxu Hu, PhD	Cryo-EM/CryoET; High-throughput CryoEM development; AI for structural biology
Jian Huang, PhD	Mechanistic insights into disease-associated membrane proteins and targeted drug design
Kai Huang, PhD	Physical and AI modeling of genome folding and biological phase separation
Meijing Li, PhD	CryoET method development; Host-pathogen interaction
Yangyi Lu, PhD	Molecular mechanisms of photo-enzymes and photo-receptors
Xiaojing Pan, PhD	Membrane protein related diseases and drug design
Qin Peng, PhD	Decoding nuclear mechanics and epigenetics in aging and diseases by live-cell probes
Qiang Su, PhD	Immunoreceptor engineering and drug discovery
Jian Yang, PhD	Ion channel structure, function, disease mechanisms; TCM-based drug discovery
Wei Yang, PhD	Computational design of de novo proteins with advanced functions for therapeutic applications
Yandong Yin, PhD	Developing computational- and physical-based super-resolution imaging technology
Haoyue Zhang, PhD	Principles of genome folding, and transcription, aging

Biotechnology, disease diagnosis and therapy

Guiwei He, PhD	Construction and applications of human organoids
Andrew Lee, MD/PhD	First in human clinical trials for cell/gene therapy to treat rare genetic disease, ischemic injury, cancer, and anti-aging
Charles Lieber, PhD	Brain and brain diseases; Brain-computer interfaces
Changzheng Lu, PhD	Tumor immunotherapy; Vaccine; CAR-cell therapy; Antibody engineering; Chemo-/radiotherapy
Lang Rao, PhD	Engineering extracellular vesicles for immunotherapy
Kun Sun, PhD	Cancer diagnosis; Pathways in tumor metastasis and inhibition drugs
Wanbo Tai, PhD	Viral infection mechanism; Novel antigen design; mRNA vaccine
Yu-Hsuan Tsai, PhD	Tools for protein regulation and labeling in precision diagnosis and therapy
Zhiping Xu, PhD	Developing oral delivery system of enzymes; Normalization of tumor microenvironment
Chengqian Yin, PhD	Investigation of metabolic regulation and therapeutic target discovery in cancer
Lei Zhang, PhD	Identifying immunotherapy mechanisms and targets by single-cell analysis
Bo Zheng, PhD	Organoid-on-chip; Cell-free synthetic biology; Single cell analysis; Droplet microfluidics

Cell Biology

Meixin Chen, PhD	Interaction of host and microbes
Nanpeng Chen, PhD	Interplay between cell cycle and cell adhesion machineries; Mechanobiology in development and diseases
Lin Deng, PhD	Developing novel anti-cancer drugs based on new mechanism of cancer genome evolution (www.deng-lab.net)
Chao Wang, PhD	Proteostasis regulation; AI for precision drug design
Yanzhuang Wang, PhD	Golgi biogenesis, function, and defects in diseases

Chemical Biology

Yun Ge, PhD	Chemical biology for functional analysis and application of biomolecular glycosylation
Jian Huang, PhD	Mechanistic insights into disease-associated membrane proteins and targeted drug design
Gang Li, PhD	Mass spectrometry-based protein interaction profiling, amino acid labeling, and covalent inhibitor development
Mao Li, PhD	Innovative lipid nanoparticle system for RNA delivery and cancer therapy; Discovery of peptide-based functional materials
Xin Li, PhD	Interrogating histone modifications; Characterizing and targeting protein-protein interactions
Yu-Hsuan Tsai, PhD	Tools for protein regulation and labeling in precision diagnosis and therapy
Yi Yang, PhD	Develop AI-based algorithms, models, and software for molecular modelling and simulation

Computational Biology and Bioinformatics

Kai Huang, PhD	Physical and AI modeling of genome folding and biological phase separation
Lei Li, PhD	Bioinformatics/AI-driven approaches to decipher the regulatory mechanisms of emerging disease non-coding regions
Yangyi Lu, PhD	Molecular mechanisms of photo-enzymes and photo-receptors
Lili Niu, PhD	Population-based proteomics to discover diagnostic, prognostic, and therapeutic targets
Chao Wang, PhD	Proteostasis regulation; AI for precision drug design
Leyao Wang, PhD	Human microbiomes, genomics, and host-pathogen interactions
Wei Yang, PhD	Computational design of de novo proteins with advanced functions for therapeutic applications
Yi Yang, PhD	Develop AI-based algorithms, models, and software for molecular modelling and simulation
Yandong Yin, PhD	Developing computational- and physical-based super-resolution imaging technology
Yaoqi Zhou, PhD	AI-guided protein/RNA structure/function prediction, design and delivery

Immunology and Microbiology

Meixin Chen, PhD	Interaction of host and microbes
Xinhai Chen, PhD	Mechanisms behind bacterial adaptability and effective antibody function
Tingting Chu, PhD	Molecular mechanisms of innate immune pathways and their role in neurodegenerative diseases; Metabolism and tumor immunity
Shibin Hu, PhD	Study RNA-mediated innate immune responses in health and disease
Meijing Li, PhD	CryoET method development; Host-pathogen interaction
Yang Liu, PhD	Mechanisms of viral infection and transmission; Virus-host interactions; Viral vector tools
Changzheng Lu, PhD	Tumor immunotherapy; Vaccine; CAR-cell therapy; Antibody engineering; Chemo-/radiotherapy
Chenyan Ma, PhD	Deciphering the mechanisms of sleep regulation and sleep function from a neuroimmune perspective
Shixin Ma, PhD	Nutrient-driven epigenetic codes in regulating immune function in cancer and autoimmunity
Xinlei Sheng, PhD	Characterization of post-translational modifications in innate immunity
Qiang Su, PhD	Immunoreceptor engineering and drug discovery
Wanbo Tai, PhD	Viral infection mechanism; Novel antigen design; mRNA vaccine
Xiaoyu Tang, PhD	Microbial metabolite-mediated "microbe-microbe" and "microbe-host" interactions
Guoxun Wang, PhD	The pathogenesis of entric viruses and host antiviral immune response
Leyao Wang, PhD	Human microbiomes, genomics, and host-pathogen interactions
Qiankun Wang, PhD	Innate immune sensing of viral infection; Immunotherapy for HIV/AIDS
Chao Wu, PhD	Viral replication mechanism; Gene delivery and neutrotracing
Lin Wu, PhD	Metabolic regulation in tumor immunology, neuroimmunology, and autoimmunity; and the interplay between immunity and neuronal activity
Hao Xu, PhD	Dynamics of Treg and thymus under pathological and physiological conditions
Lei Zhang, PhD	Identifying immunotherapy mechanisms and targets by single-cell analysis
Yang Zhang, PhD	Transmembrane signaling in reproduction and immunity
Min Zheng, PhD	Mechanisms of tissue damages during infection and auto-immune diseases; identifying molecules to inhibit tissue damages

Metabolism

Tingting Chu, PhD	Molecular mechanisms of innate immune pathways and their role in neurodegenerative diseases; Metabolism and tumor immunity
Shixin Ma, PhD	Nutrient-driven epigenetic codes in regulating immune function in cancer and autoimmunity
Zixi Wang, PhD	Metabolic disorders; Fatty liver disease, liver fibrosis, liver regeneration

Lin Wu, PhD	Metabolic regulation in tumor immunology, neuroimmunology, and autoimmunity; and the interplay between immunity and neuronal activity
Chengqian Yin, PhD	Investigation of metabolic regulation and therapeutic target discovery in cancer

Molecular Biology

W.S. Sho Goh, PhD	Impact of RNA Modifications in Precision Medicine
Shibin Hu, PhD	Study RNA-mediated innate immune responses in health and disease
Feng Liu, PhD	Mosquito chemosensory physiology; Gene drive; Evolution of insect olfactory system
Haizhen Long, PhD	Epigenetic regulation of genome replication and its roles in disease and development
Qin Peng, PhD	Decoding nuclear mechanics and epigenetics in aging and diseases by live-cell probes
Haoyue Zhang, PhD	Principles of genome folding, and transcription, aging
Yang Zhang, PhD	Transmembrane signaling in reproduction and immunity
Yaoqi Zhou, PhD	AI-guided protein/RNA structure/function prediction, design and delivery

Neurobiology

Zhoufeng Chen, PhD	Molecular and circuit basis of animal behavior and brain disorder
Tingting Chu, PhD	Molecular mechanisms of innate immune pathways and their role in neurodegenerative diseases; Metabolism and tumor immunity
Yang Dan, PhD	Research on the neuronal mechanism of sleep and consciousness in both rodents and primates
Tengfei Guo, PhD	Mechanism, Diagnostic and therapeutic targets of Alzheimer's disease
Xian Jiang, PhD	Molecular and cellular mechanisms of memory and pathogenesis of Alzheimer's disease
Charles Lieber, PhD	Brain and brain diseases; Brain-computer interfaces
Wei Lu, PhD	Molecular and circuit mechanisms regulating animal behavior and brain disorder
Chenyan Ma, PhD	Deciphering the mechanisms of sleep regulation and sleep function from a neuroimmune perspective
Jing Wang, PhD	Exploring the sensory information processing methods and behavioral regulation logic of neural circuits
Yanzhuang Wang, PhD	Golgi biogenesis, function, and defects in diseases
Jian Yang, PhD	Ion channel structure, function, disease mechanisms; TCM-based drug discovery
Yuanyuan Yao, PhD	How is sleep and cardiovascular activity regulated physiologically and pathologically
Wen Yuan, PhD	The mechanisms of neurological disorders
Bo Zhang, PhD	Synapse under physiological and pathological conditions (www.bozhanglab.org)
Ke Zhang, PhD	Pathomechanism of amyotrophic lateral sclerosis, frontotemporal dementia, and neurodevelopmental disorders

SMART
Shenzhen Medical Academy of Research and Translation

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Contact Emails:

SMART Funding (SMRF): smartfund@smart.org.cn
PI Recruitment: talent@smart.org.cn
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