

復旦大學上海醫學院

Shanghai Medical College Fudan University



1 FUDAN AT A GLANCE

2 INTRODUCTION OF SHMC

3 COOPERATION PROSPECTS



01

FUDAN
AT A GLANCE

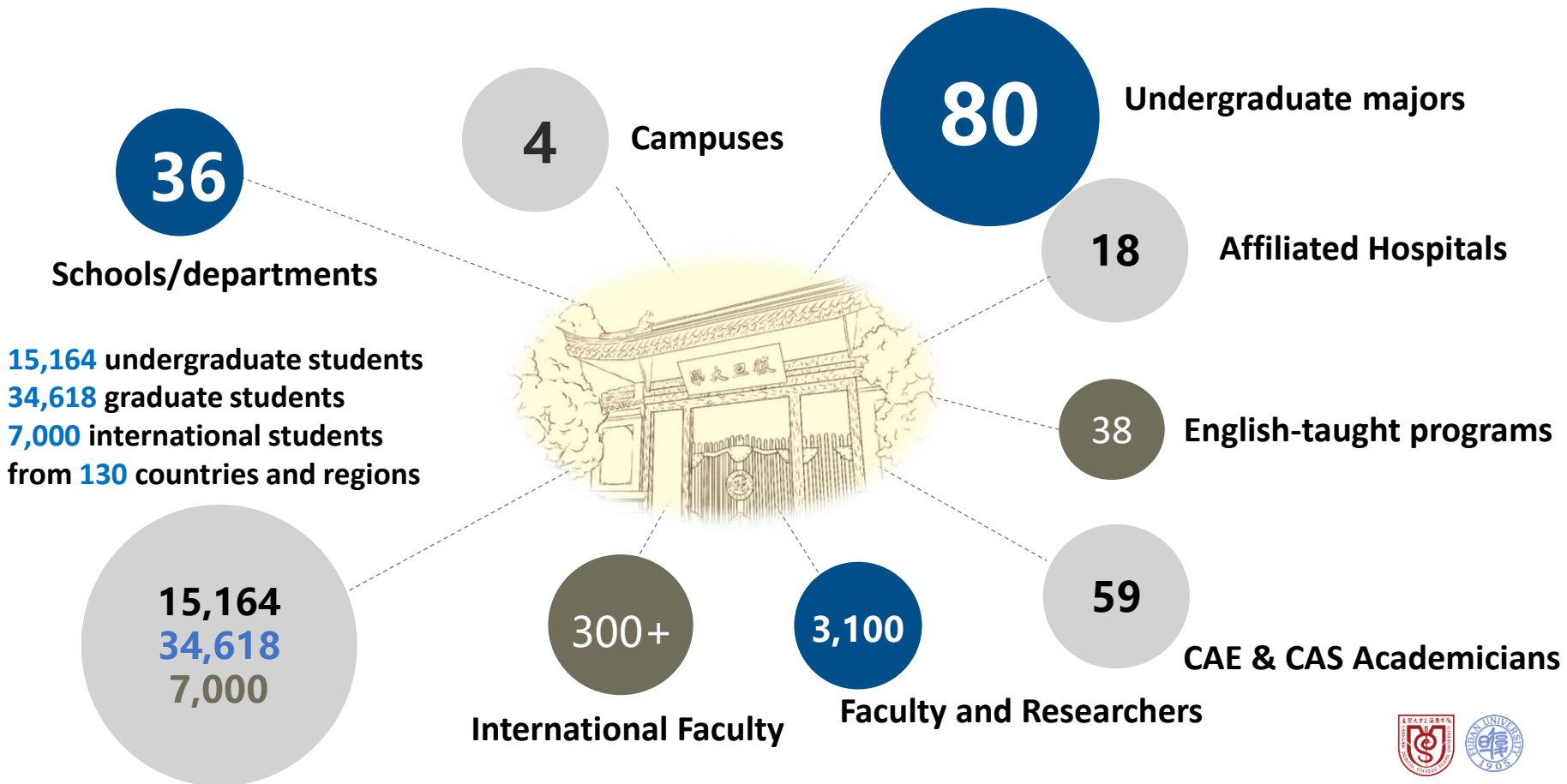
FUDAN UNIVERSITY

A world-renowned comprehensive research university

- Established in **1905**
- The **first** higher education institute in China established by Chinese scholars



FUDAN UNIVERSITY



FUDAN UNIVERSITY



2023 QS World University #34



2023 Times World University #51

QS Disciplines Ranking:

10 disciplines ranked **top 100**

3rd most in China

ESI Ranking:

11 disciplines ranked **top 1%**:

- clinical medicine
- materials science
- chemistry
- physics
- pharmacology & toxicology
- engineering
- biology & biochemistry
- microbiology
- neuroscience & behavior
- molecular biology & genetics
- environment/ecology

21 disciplines ranked **top 1%**

US News Disciplines Ranking:

12 disciplines ranked **top 50**

THE Disciplines Ranking:

3 disciplines ranked **top 50**

4 Campuses

● Jiangwan Campus

Law,
Sciences

● Handan Campus (main)

Social sciences,
humanities, and
undergraduate
campus

●

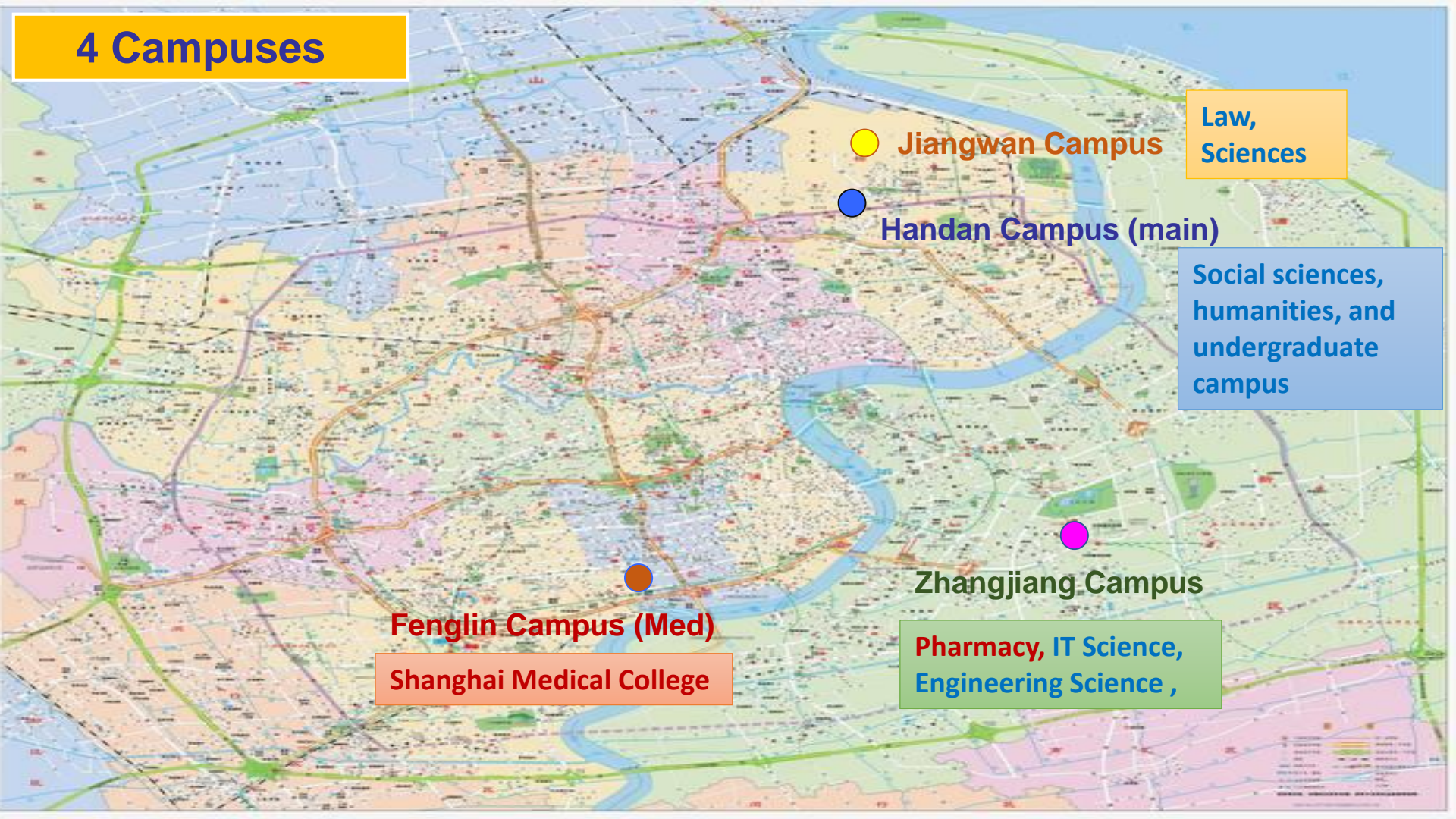
Fenglin Campus (Med)

Shanghai Medical College

●

Zhangjiang Campus

Pharmacy, IT Science,
Engineering Science ,





02

INTRODUCTION
OF SHMC

HISTORY



Dr. Fuqing YAN
(1882-1970)

Professor in Public Health and The First Asian obtained Medical Doctor Degree from Yale University U.S.A. As a renowned educator and a professor in Public Health, he was dedicated to advancing medical education in China.

The First Modern Medical College
Established by Chinese Scholars

1927

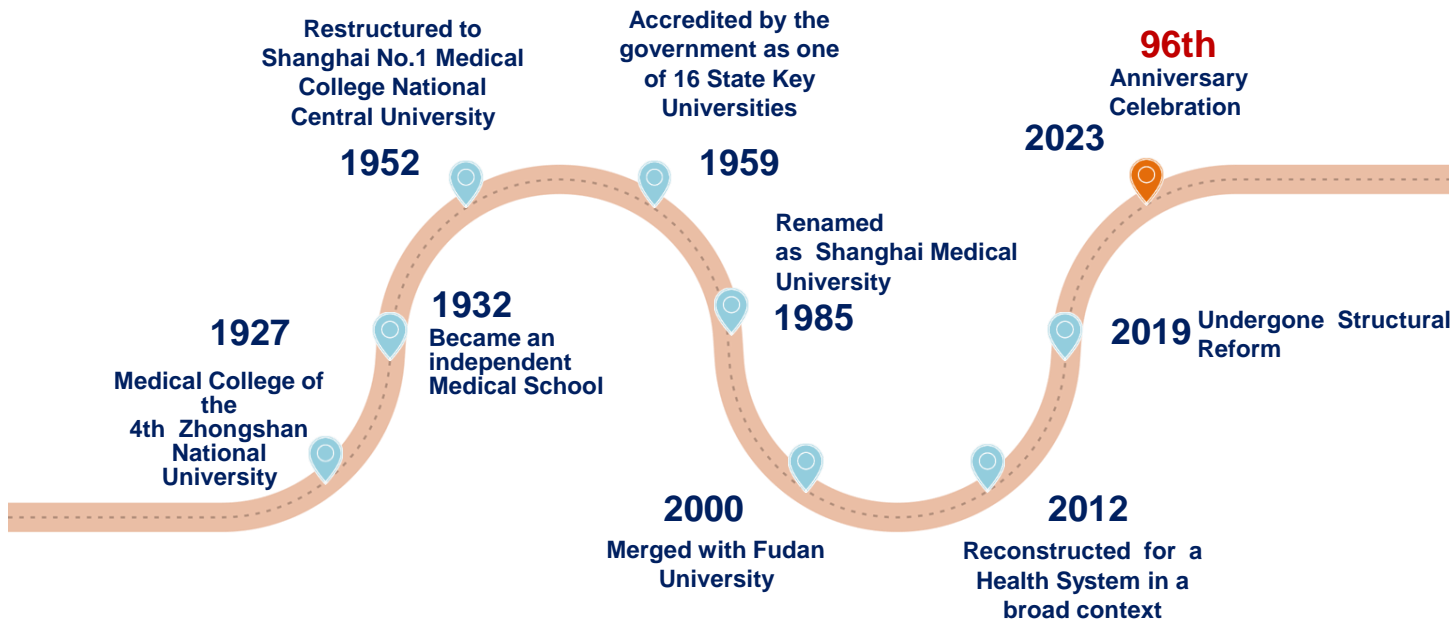


訓 院
道明謹正

School Motto in Chinese means

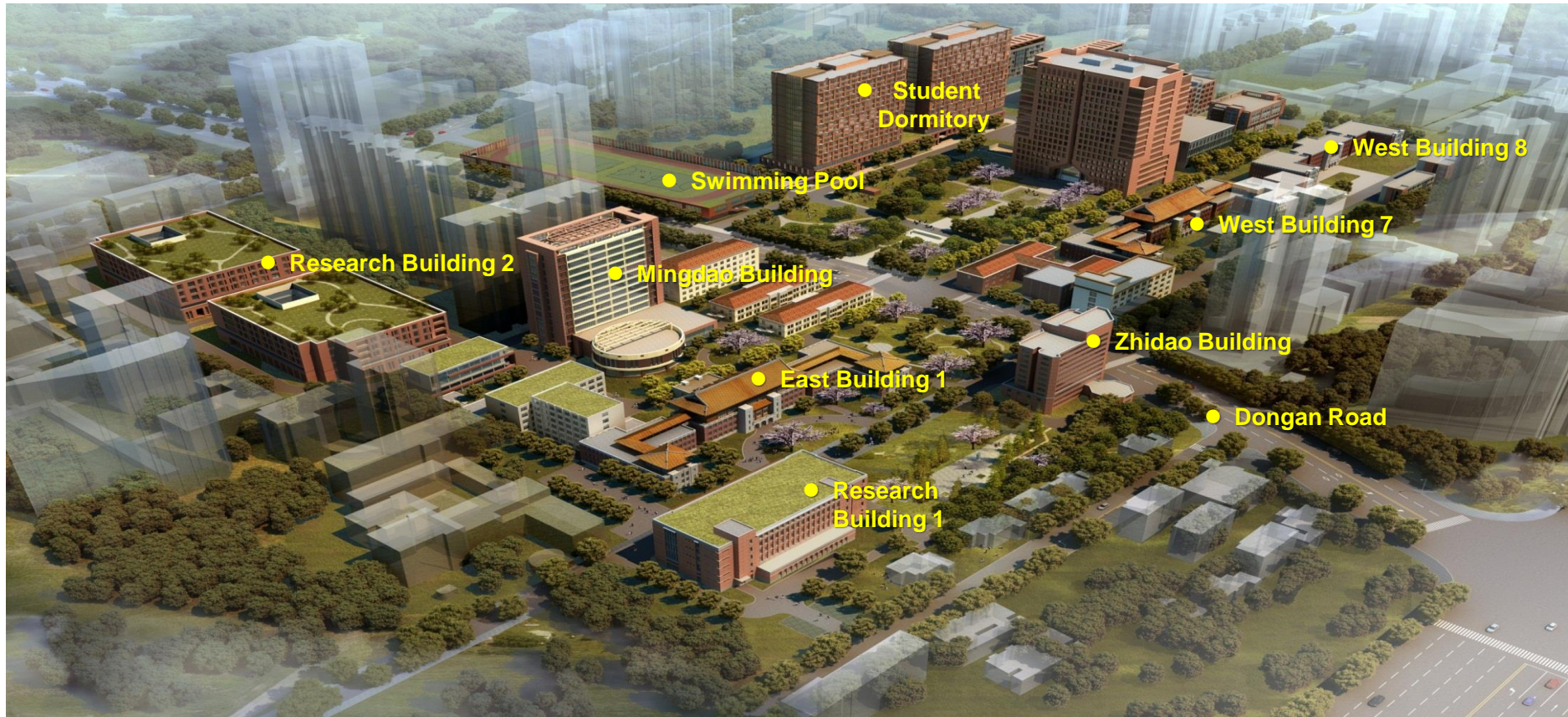
A person of virtue should uphold their moral principles,
not seek personal gain, and declare their own path
without considering personal utility.

MILESTONES



LANDSCAPE

Advanced Forefront of Medical Education, Research and Clinic Service in China



ORGANIZATION STRUCTURES

Shanghai
Government

Fudan
University



Shanghai
Medical College

Schools & Institutes

14

- School of Basic Medical Sciences
- School of Public Health
- School of Pharmacy
- School of Nursing
- Institute of Biomedical Sciences
- Institute of Neuro Science & Brain Research
- Institute of Radiation Medicine
- Institute for Translational Brain Research
- Institute of Intelligent Medicine
- Institute of Reproduction and Development
- Shanghai Institute of major infectious diseases and Biosafety
- Department of Animal Sciences



Affiliated Hospitals

18

 Zhongshan Hospital	 Jinshan Hospital	 Central Hospital of Qingpu District
 Huashan Hospital	 5th People's Hospital	 Minhang Hospital
 Shanghai Cancer Center	 Shanghai Public Health Clinical Center	 Shanghai Stomatological Hospital
 Obstetrics & Gynecology Hospital	 Huadong Hospital	 Xuhui Hospital
 Children's Hospital	 Pudong Medical Center	 Shanghai Proton and Heavy Ion Center
 Eye & ENT Hospital	 Central Hospital of Jing'an District	

FACULTIES

**4 | Member of
Chinese Academy of Engineering**

**10 | Member of
Chinese Academy of Science**

**Total of 3320 senior faculties,
2885 In Affiliated Hospital**

**633 Supervisor for Master Student
849 Supervisor for Ph.D Candidate**

ACADEMICIAN'S PROFILES



STUDENTS

As of the end of 2023, SMCFU has a total of over **12,800** enrolled students including more than **400** international students

- Undergraduates **4139**
- Master students **3603**
- Ph. D candidates **4017**

Medical Community®

Best Educator of the Year Since 2019

Developing student's capacity with goal of

**Sense of Humanity, Global Prospective,
Scientific Spirit and Professional skills**



MEDICAL EDUCATION

Degree Program

Undergraduate Program

- **Basic Medicine:**
5 yr. Program
- **Clinical Medicine:**
5 yr. Program
6 yr. English Courses Program (MBBS)
8 yr. Program
(Degree Conferred: Doctor of Medicine)
- Forensic Medicine 5 yr.
- Preventive Medicine 5 yr.
- Administration of Public health 4 yr.
- Pharmacy 4 yr.
- Nursing 4 yr.
- Pediatrics 5 yr.

Graduate Program

- Master of Science Program, 3 Yr.
- Ph.D. Program, 3-Yr.
- Integrated Ph.D. Program, 5 Yr.
(undergraduate through Ph.D., or/ graduated through Ph.D.)
- **6 medical disciplines**
Basic Medicine, Clinical Medicine
Public Health and Preventive Medicine
Combine Traditional Chinese and Western Medicine
Pharmacy and Nursing
- **3 non-medical disciplines**
Biology, Biomedical Engineering, Public Administration



MEDICAL EDUCATION

❑ POSTGRADUATE EDUCATION

Question-driven academic training

- Basic and Clinical Medical Sciences
- Biomedicine, Neural Sciences ...

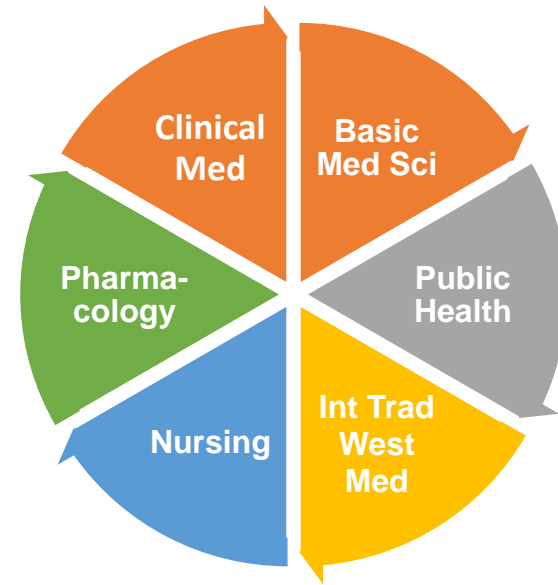
Demand-oriented professional training

- Clinical Medicine
- Public Health, Nursing ...

Encourage interdisciplinary education

- AI, Material Science, Engineering ...

All Ranked A-class in
National Disciplinary Evaluation



MEDICAL EDUCATION

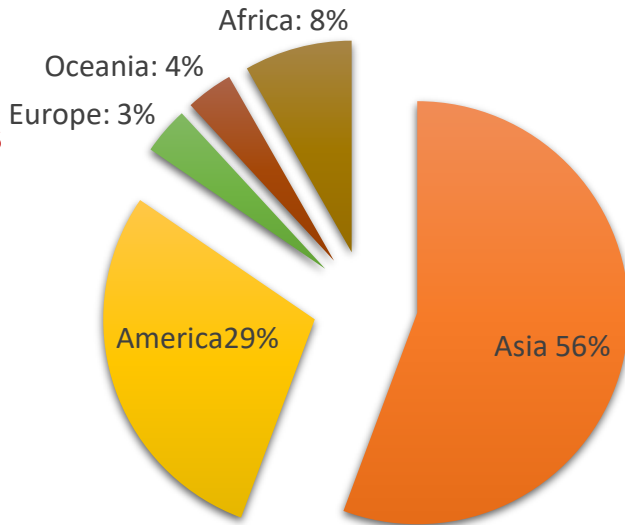
□ THE MBBS PROGRAM

Bachelor of Medicine and Bachelor of Surgery (MBBS)

- 6-year English program
- International students

Innovative training system for Clinical Medical Talents

- 7 Core Module (Liberal education)
- PBL 、 Bed-side Training 、 Integrated Program
- OSCE (Diversified Evaluation)
- Supervisor (Research caliber combined with liberal mindset)
- Research platform/clinical skills learning center (Innovation with practical skills)
- International exchange/course (Global prospect with core competitive edge)



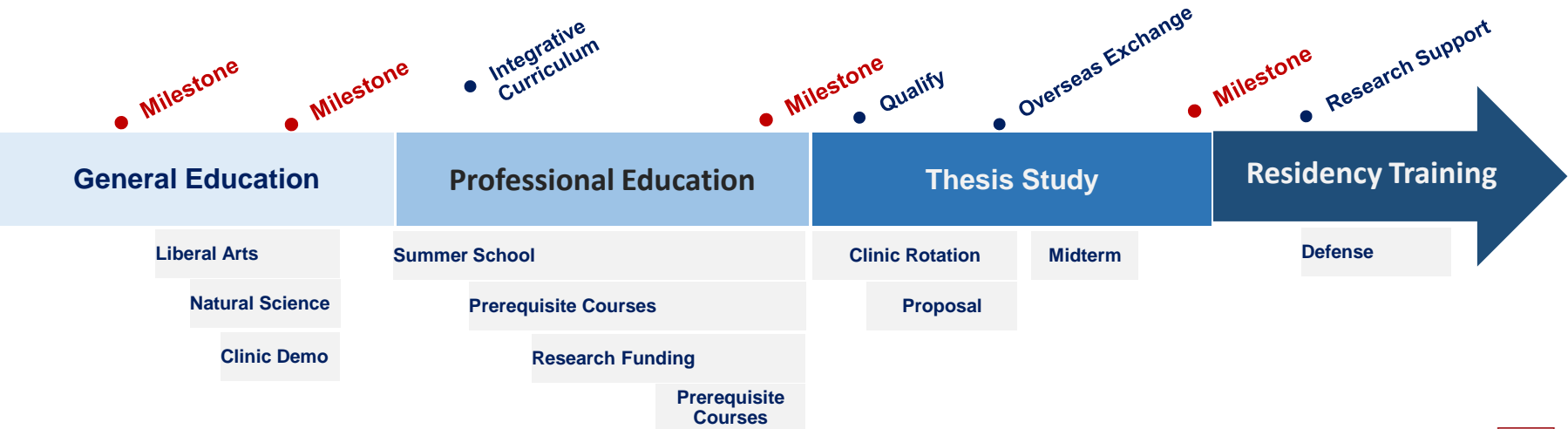
MEDICAL EDUCATION

REFORM ON THE 8-YEAR CLINIC MEDICINE PROGRAM

8-year Training Program

"Med+X" Mentorship

2nd Doctorate



MEDICAL EDUCATION

▣ RESIDENCY TRAINING

Fudan plays a major role in Standardized Residency Training Program (Launched in 2010)



**10000 Resident Enrolled From
2010-2023 Receiving
“standardized and qualified
clinical training”**

Chinese Model

- Launched “5+3” Integrated Training Program
- Select official- accredited tertiary Teaching hospitals to run residency training program
- Issue License for those qualified trainees after standardized national examination

Ultimate Goal

- Push forward nationwide Residency Training Program for every clinical medical students before 2020

LIBRARY AND TEACHING FACILITIES



MEDICAL RESEARCH



National Key Laboratory

State Key Laboratory of Medical Neurobiology

National Clinical Research center

National Center for Clinical Research in Radiation and Therapy

National Research Center for Clinical Medicine of Geriatric Diseases

Frontier Science Center

Institutes of Brain Science

Ministry level 36

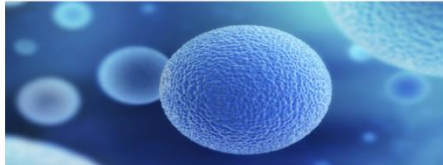
3 National Medical Center

5 Key Laboratory of Ministry of Education

1 Engineering Research Center, Ministry of Education

9 National Health Care Commission Key Laboratory

1 International Science and Technology Cooperation Base



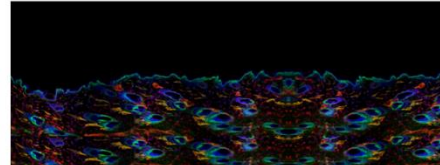
Cancer

Cancer in all its forms, encompasses research, prevention, detection, treatment, care and health system transformation to address this most significant



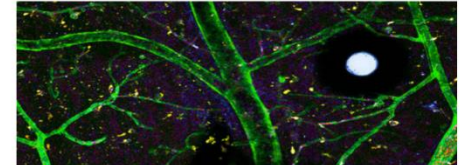
Child Health

Child Health which encompasses the whole-of-life continuum from the early life environment through adolescence and reproductive potential in order to



Immunology and Infection

Immunology and Infection including basic research, translation and public health, informed by those diseases which have a global and significant burden.

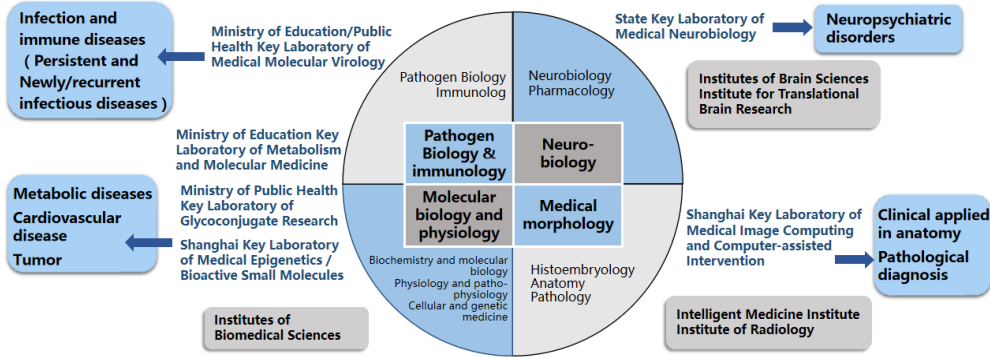


Neuroscience

Neuroscience which includes research in the fields of neuroscience, psychiatry, mental health and the study of basic psychological processes.

SCHOOL OF BASIC MEDICINE

Four Disciplines in Basic Medicine

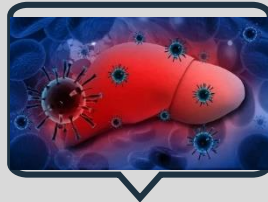


■ Established in 1955, renowned for excellent faculties and solid foundation, it is the earliest in China to carry out undergraduate and graduate education in basic medicine.

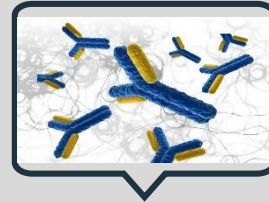
KEY LABORATORY OF MEDICAL MOLECULAR VIROLOGY RESEARCH INTERESTS



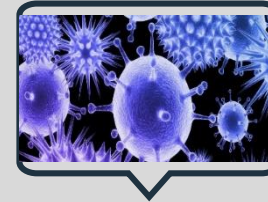
1. The establishment and maintenance mechanisms of persistent infections



2. The pathogenesis of persistent infections



3. Novel strategies for the prevention and control of persistent infections and related cancers



4. Etiology of emerging infectious diseases and strategies for prevention and control

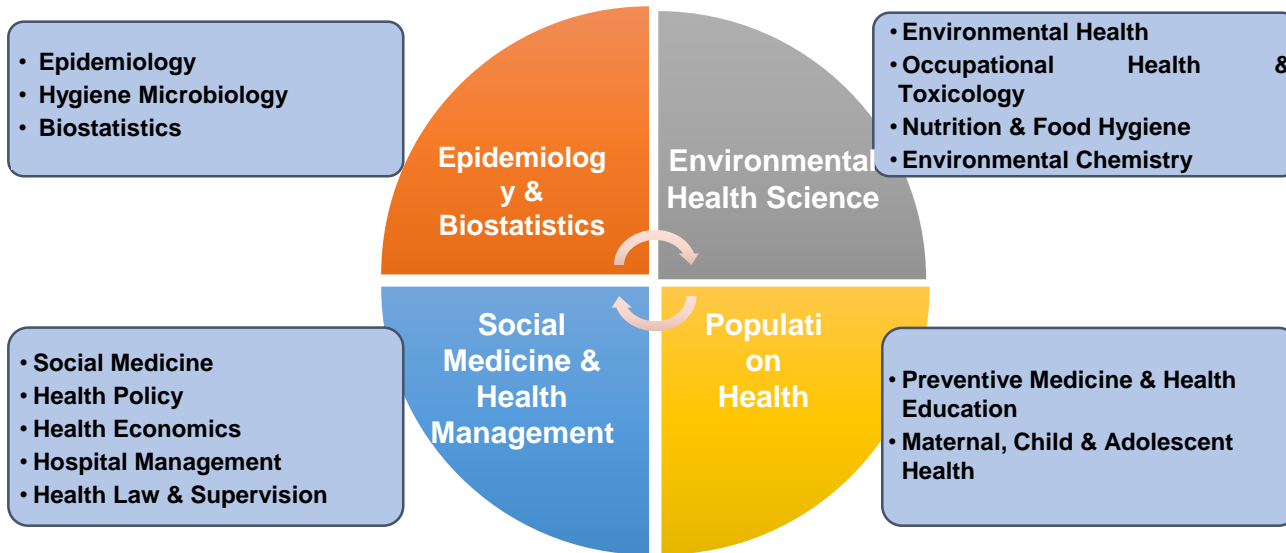
SCHOOL OF PUBLIC HEALTH

Double first-class
Leading disciplines

National High-level
Public Health School

National first-class undergraduate professional
construction platform

Departments and Divisions



SCHOOL OF PHARMACY

Departments

Medicinal Chemistry

Pharmacology

Natural Medicine

Pharmaceutics

Biological Medicines

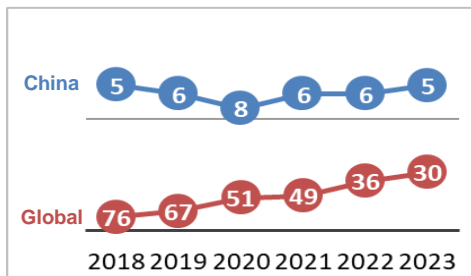
Clinical Pharmacy

Pharmaceutical
Analysis

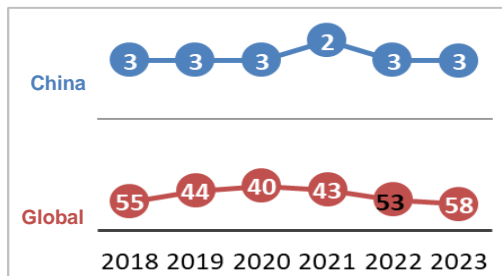
Radiopharmacy

Staffs and Students

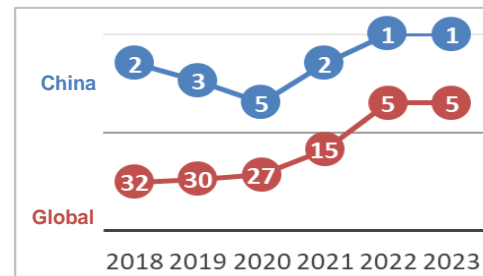
- 138 staffs (48 Professors and 47 Associate Professors)
- 379 undergraduate and 783 graduate students
- 6 Academicians of Chinese Academy of Sciences or Chinese Academy of Engineering among the alumni of SPFDU



Pharmacology & Toxicology
30th in the world
5th in China



Pharmacy & Pharmacology
58th in the world
3rd in China



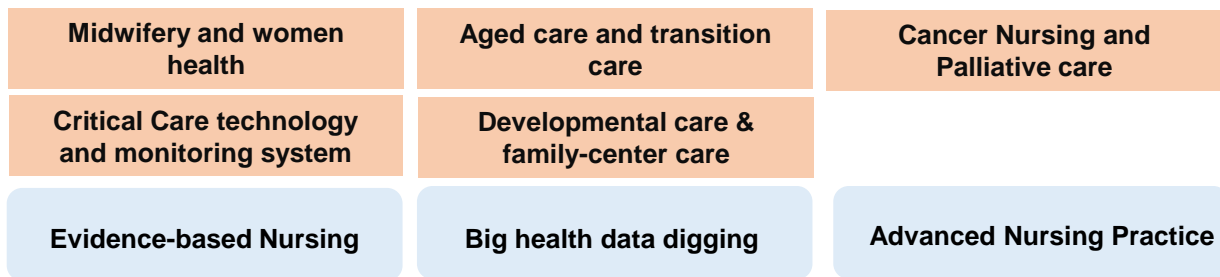
Pharmacology & Toxicology
5th in the world
1st in China



SCHOOL OF NURSING

One of the top nursing schools in mainland China

Nursing Research Innovation and Caring Centres



Research Focus

2021-2023 academic achievements

1. Publication -136
2. Research award - 44
3. Outstanding courses -5
4. Grant approved -46
5. Master & PhD -86
6. Cancer Nursing -16
7. International Forum -3
8. New platform -4



INSTITUTES FOR BIOMEDICAL SCIENCES

High-Level Publications in 5 Years

Year	CNS
2019	1 (1 Nature)
2020	2 (2 Science)
2021	3 (2 Science 、 1 Nature)
2022	4 (1 Cell 、 1 Nature 、 2 Science)
2023	4 (1 Science 、 1 Cell 、 2 Nature)

3 main research directions

- medical epigenetics
- metabolic and molecular cell biology
- proteomics and systems biology



2021 Cover Story
Yanhui Xu's Lab



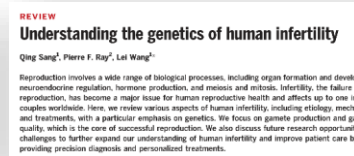
- Structures of the human Mediator and Mediator-bound preinitiation complex



2023 Cover Story
Lei Wang's Lab



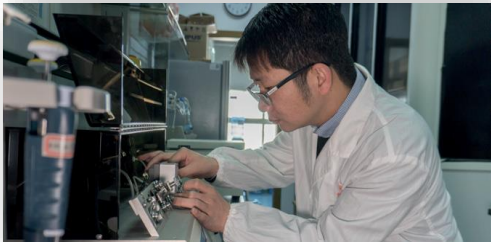
- The mechanism of acentrosomal spindle assembly in human oocytes



INSTITUTES OF BRAIN SCIENCE



Lan Ma (left), director of IOBS and SKLab; Xiongli Yang (right), founding director of IOBS/SKLab and chairman of IOBS Academic Committee



MILESTONES AT IOBS/SKLAB

- An international team of 70 talented PIs, including two members of the Chinese Academy of Sciences
- Between 2006-2023, IOBS investigators published more than one thousand research papers and reviews in peer-recognized international journals
- Enrolled more than 500 graduate and doctoral students in neurobiology, pharmacology, biophysics, and neurology
- State-of-the-art core facilities include: In vivo and high-resolution imaging facility, platforms for behavioural neuroscience, functional MRI for small animals, single cellgenomics
- Being selected for the 'Frontiers Science Center for Brain Science' programme sponsored by the Ministry of Education in 2018

INSTITUTES FOR TRANSLATIONAL BRAIN RESEARCH

Academician



Shumin Duan

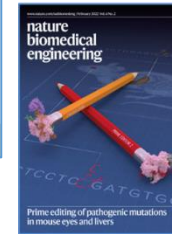
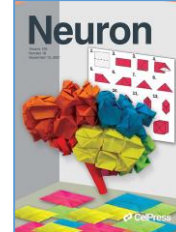
Director ITBR

Research Direction:

- Neuron-glia cell interaction
- Neural circuit basis of mood and mood-related diseases

- established in July 2019
- published **41** high leveled papers

Cell, Nature, Nature Biomedical Engineering, Neuron (2)
PNAS (2), Molecular Psychiatry, Cell Reports (3)
eLife, Nature Communications (2), Nature Metabolism.....



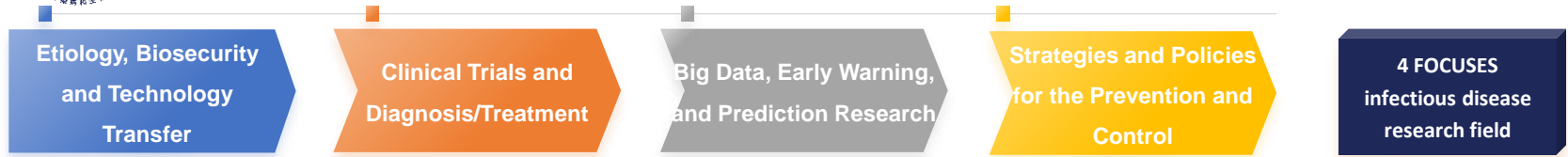
ITBR approved over **130** projects, research funding is over **170** million RMB



SHANGHAI INSTITUTE OF INFECTIOUS DISEASE AND BIOSECURITY



Established in 2020, the Shanghai Institute of Infectious Disease and Biosecurity (SIIDB) is a collaborative effort between the Shanghai Municipal People's Government and Fudan University.



5 GOALS



10 CENTERS



For more information, please visit <https://siidb.fudan.edu.cn>.



MEDICAL SERVICE

Affiliated Hospitals



- Zhongshan Hospital
- Huashan Hospital
- Shanghai Cancer Center
- Children's Hospital
- The Obstetrics & Gynecology Hospital
- Eye and ENT Hospital
- Shanghai Public Health Clinical Center

- Huadong Hospital
- The Fifth People's Hospital
- Jinshan Hospital
- Pudong Hospital
- Jingan District Hospital

■ Outpatient & Emergency Service/person time: **28 962 600**

■ Discharged No.: **793 700**

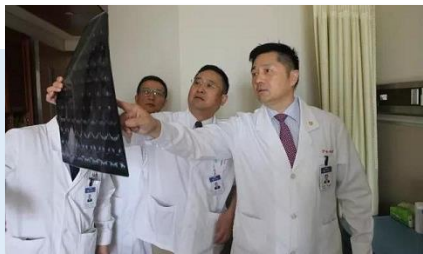
■ Operation / Person time: **620 400**

■ Registered Bed: **19 402**



MEDICAL SERVICE

□ ZHONGSHAN HOSPITAL

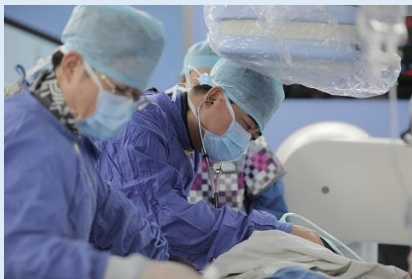


A wide range of specialties with comprehensive strengths

established in 1937

One of biggest medical care center of Shanghai

One of the first units of the National Development and Reform Commission to create a **National Medical Center**



Leading Clinical Specialties Strengths

- Cardiology
- Gastroenterology
- General Surgery/ Cardiovascular Medicine
- Hepatology
- Endocrinology...

Top 2 in national best specialty ranking 2022



MEDICAL SERVICE

▣ HUASHAN HOSPITAL

- **Chinese solely tertiary Red Cross Hospital**, established in 1907
- JCI Accreditation Hospital
- Best National Comprehensive Hospital Ranking No.8 in 2021

Leading Clinical Specialties

■ Dermatology& Infectious Diseases

top 1 in national best specialty ranking in 2021

■ Neurosurgery/Neurology/Rehabilitation Medicine

top 3 in national best specialty ranking in 2021

- Neurosurgery, The largest Clinical Center for Neurosurgery in China
- Hand Surgery, The largest Clinical Center for Peripheral Nerve Injuries
- Geriatric Aging Medical Center



National Medical Center
of Neurological Diseases



National Medical Center
of Infectious Diseases



National Medical Center
of Geriatric Diseases



MEDICAL SERVICE

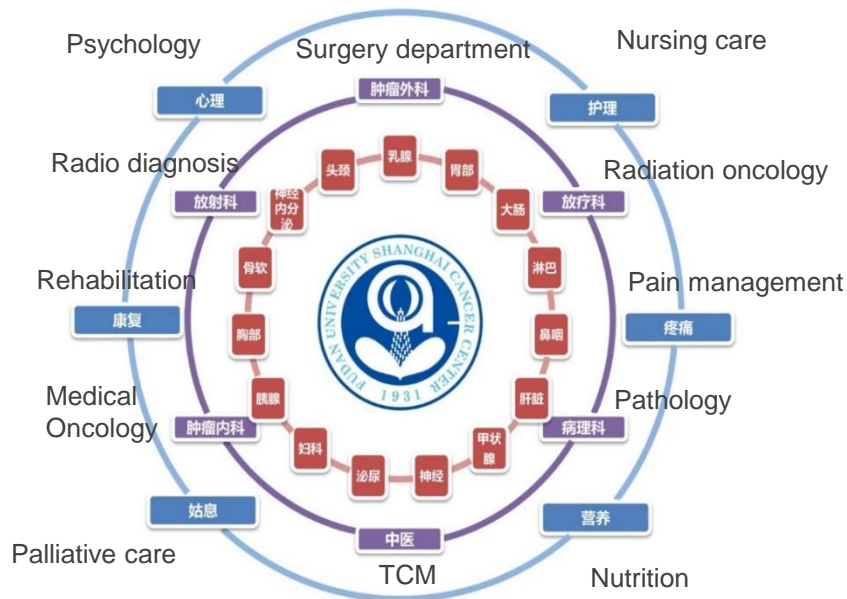
SHANGHAI CANCER CENTER

Established in 1931

Shanghai Proton and Heavy Ion Center(joined-constructed with Shanghai Government) open and running in 2015

Leading Clinical Specialties

- Pathology (top 2 in national best specialty ranking)
- Oncology (top 2 in national best specialty ranking)
- Ranking of Cancer Center in China:
 - **Champion**(2020) **Runner-up**(2021)



MEDICAL SERVICE

▣ CHILDREN'S HOSPITAL

National Children's Medical Center, The First Children's Medical Care Hospital with international service in Shanghai and One of international First aid Center in Asia.

- Neonatology has been in the leading position in China, is one of the national Key Clinical Disciplines and Resuscitation Center of Critical ill Newborns in Shanghai
- Respiratory emergency specialty is Premier Medical Program in Shanghai and Infant Surgery specialty is Shanghai's Difficult and Severe Cases Center



Top 1 in national best specialty ranking for 6 consecutive years

established in 1952

Pediatric Emergency and Critical Med
Laboratory for Neonatal Diseases
Neonatology, Gastroenterology
Traditional Chinese Medicine
Surgery
Clinical Nursing

Much strong Congenial heart disease screening study,
Autism treatment, etc...

MEDICAL SERVICE

□ EYE AND ENT HOSPITAL

Established in 1952, 894 beds, 143,000 m² area
2.4 million outpatient visits per year
>130,000 surgical procedures per year

Otorhinolaryngology ranks #1 and Ophthalmology ranks #3 in China successively for 14 years

First EENT hospital in China PR The only tertiary EENT center belong to National Health Commission



- Glaucoma center
- Dry eye center
- Congenital cataract center
- Refractive cataract center
- ICL Center
- Thyroid Eye Disease center
- Intraocular Cancer center
- Retinal disease center
- Strabismus center
- Amblyopia center
- Contact lens center
- Pediatric retinal center
- Ophthalmic Genetic Disease Center
- Ocular Trauma Center
- Pediatric Glaucoma Center
- Surgery Center for lens Dislocation
- Neuro-ophthalmic Disease Center
- Macular Disease Center
- High myopia retinopathy center
- Oculoplastic Center

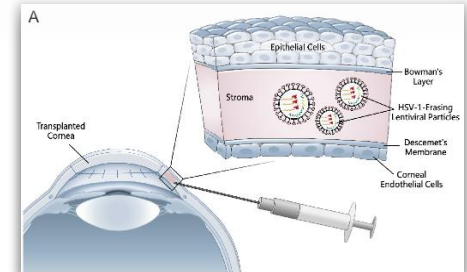
DispatchDate: 05.12.2020 - ProofNo: 781, p.1



Targeting herpes simplex virus with CRISPR-Cas9 cures herpetic stromal keratitis in mice

Di Yin^{1,2}, Sikai Ling^{1,2}, Dawei Wang^{1,2,3}, Yao Dai¹, Hao Jiang^{1,2}, Xujiao Zhou¹, Soren R. Paludan⁴, Jiaxu Hong^{1,2,4,5,6} and Yujia Cai^{1,5,6}

Herpes simplex virus type 1 (HSV-1) is a leading cause of infectious blindness. Current treatments for HSV-1 do not eliminate the virus from the site of infection or latent reservoirs in the trigeminal ganglia. Here, we target HSV-1 genomes directly using mRNA-carrying lentiviral particles that simultaneously deliver SpCas9 mRNA and viral gene-targeting guide RNAs (designated HSV-1-erasing lentiviral particles, termed HELP). We show that HELP efficiently block HSV-1 replication and the occurrence of herpetic stromal keratitis (HSK) in three different infection models. HELP were capable of eliminating the viral reservoir via retrograde transport from corneas to trigeminal ganglia. Additionally, HELP inhibited viral replication in human-derived corneas without causing off-target effects, as determined by whole-genome sequencing. These results support the potential clinical utility of HELP for treating refractory HSK.



Excellence, Unity, Realism, Innovation



MEDICAL SERVICE

OBSTETRICS AND GYNECOLOGY HOSPITAL

Shanghai Red House Ob&Gyn Hospital

Established in 1884

Top-notch OB and GYN Hospital

A national leading academic center
specialized in women's healthcare

Leading Clinical Specialties

- Obstetrics
- Gynecology

Specializing in

- Micro surgery, Reproduction Health, Obstetric Oncology
- IVF
- integrated Chinese and western Medicine in Obstetrics medical treatment



MEDICARE MODEL REFORM

Respond to National Strategy of Health China

Promote Specialty Medicare Network

Advance Academic Health System (AHS)

Promote GP training Program and Referral Consultancy

First GP training Program was launched in Zhongshan Hospital, Fudan University with WONCA.



Advantages

- Integrate teaching, research and clinical service to create synergy
- Improve medical service quality of community hospital
- To better treat chronic and common disease
- To explore novel way in Healthcare management and its research

Healthcare Medical Network

Collaborated with Minghang District, Shanghai



Fudan

Pediatric Medicare Network OB. &GY. Medicare Network



Fudan





03

COOPERATION PROSPECTS

INTERNATIONAL STRATEGY

To Promote

- undergraduates short time overseas study including
 - Clinical internship,
 - Group based Joint research,
 - Summer School....

To Explore

- Ph.D Dissertation
- global evolution
- Joint Research project funding application and conducting
- Joint Symposium and Publication

To Launch

- Training to Teacher Program
- Clinical Scholar Research Training

To Enroll

- more overseas students enrolled in MBBS Program

Global Partners at a glance

Yale University
Harvard University
Johns Hopkins University
University of Pittsburgh
University of California Berkeley
University of Texas Health Science Center at Huston
MD Anderson Cancer Center
The University of British Columbia
.....

Oxford University
Karolinska Institute
University of Essen
Medical University of Vienna
University of Lyon
European Institute of Oncology in Italy
.....

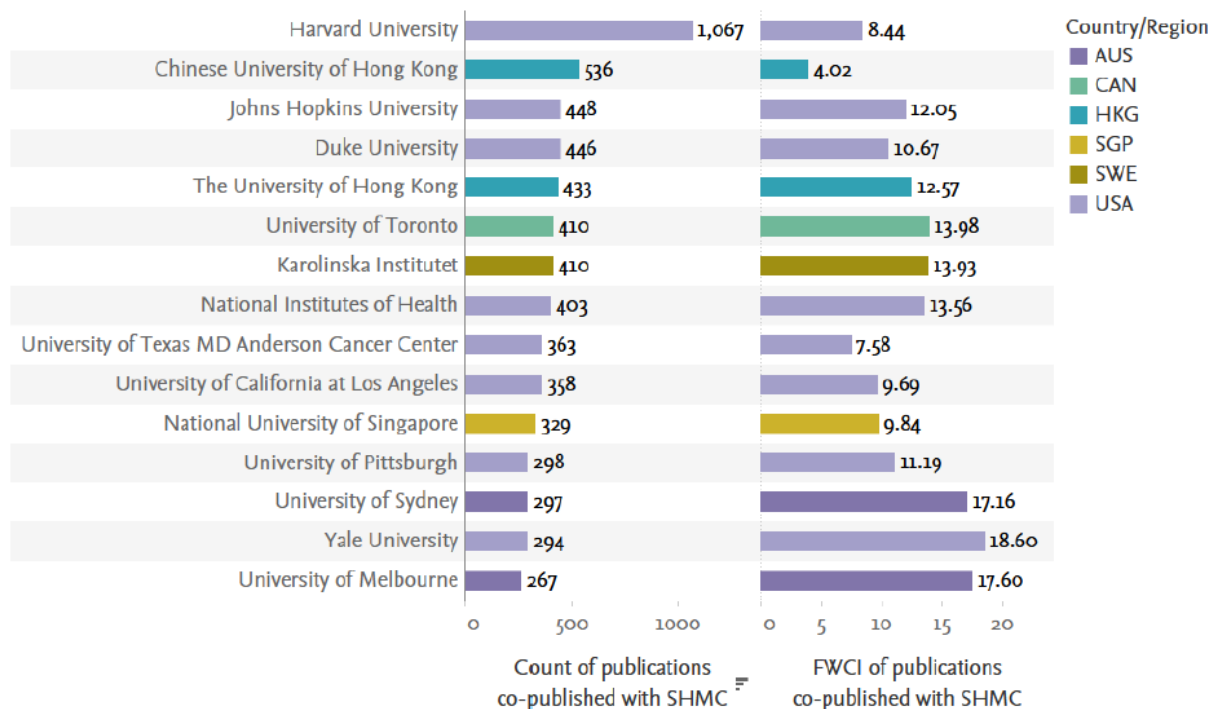
Li Ka Shing Faculty of Medicine
Faculty of Medicine, The Chinese University of Hong Kong
Kyoto University
Osaka University
College of Public Health, Chulalongkorn University
Cancer Center, University of Singapore
.....

University of Sydney
University of Melbourne
Australian National University
Adelaide Medical School,
University of Adelaide
.....



CROSS-REGION COLLABORATION

Top overseas collaborative partners of SHMC, 2013-2022



*Data from Scopus 2013-2022



THANK YOU And Welcome to SHMC!

