

# Call for Application

## International Students Program

### in Pharmaceutical Science



中国科学院  
CHINESE ACADEMY OF SCIENCES



中国科学院大学  
University of Chinese Academy of Sciences



中国科学院上海药物研究所  
Shanghai Institute of Materia Medica  
Chinese Academy of Sciences



# Call for International Students in Pharmaceutical Science

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# 1 Overview of the Program

## 1.1 Introduction to CAS, UCAS & SIMM

### About CAS

Chinese Academy of Sciences (CAS), established in Beijing on November 1, 1949, is the linchpin of China's drive to explore and harness high technology and natural sciences for the benefit of China and the world. Comprising a comprehensive research and development network, a merit-based learned society and a system of higher education, CAS brings together scientists and engineers from China and around the world to address both theoretical and applied problems using world-class scientific and management approaches.

Since the founding of CAS, it has fulfilled multiple roles — as a national team and a locomotive driving national technological innovation, a pioneer in supporting nationwide S&T development, a think tank delivering S&T advice and a community for training young S&T talent.

## 中国科学院上海药物研究所



CAS scientists conduct researches in most areas of basic science and technology as well as strategic advanced technologies and areas related to the public welfare and the development of emerging industries. CAS comprises over **100** research institutes, **12** branch academies, three universities and 11 supporting organizations in **23** provincial-level areas throughout the country. These institutions are home to more than **100** state key laboratories and engineering centers as well as nearly **200** CAS key laboratories and engineering centers. Altogether, CAS comprises **1,000** sites and stations throughout the country.

CAS has a staff of **67,900**, including about **56,000** professional researchers, of which approximately **22,800** staff are research professors or associate professors. By 2020, CAS hopes to have a few thousand leading scientists working for the organization. It has long been a CAS strategy to emphasize the combination of research and education and interdisciplinary and cross-sector cooperation in innovation.

Cultivating, recognizing and deploying talent is a key feature of CAS — accomplished through CAS's roles as an educational institution and academic society.

CAS nurtures young S&T talent through three affiliated universities, University of Science and Technology of China (USTC), University of Chinese Academy of Sciences (UCAS) and Shanghai Tech University. So far, CAS has **85,884** master and **64,977** PhD graduates around.

## About UCAS

UCAS, University of Chinese Academy of Sciences focusing on graduate education, was established under the approval of Ministry of Education of PRC, the predecessor of which was Graduate University of Chinese Academy of Sciences (GUCAS), the first graduate school in China. It witnessed a great many first achievement in New China: the first doctorate in science, the first doctorate in engineering, the first female student awarded a doctoral degree, and the first research student awarded double doctoral degrees in China all graduating from this university. In June 2012, GUCAS was renamed UCAS and began to recruit undergraduates.

Being the largest graduate educational institution, the main task of UCAS has long been graduate education. As of December 2018, UCAS had **49,249** postgraduate students enrolled, including **25,852** doctoral students; **23,397** Master's students; **1,541** undergraduates; and **1,757** international students, of whom **1,050** were doctoral students, the highest in the PRC..

UCAS is authorized to confer all Master's and doctorate degrees in the scientific disciplines as well as 90% degrees in engineering disciplines. From 1978 to 2018, UCAS had conferred degrees on **160,904** students, including **77,853** Ph.D., **82,761** Master's, and **290** Bachelor's degrees. One hundred eight UCAS graduates were elected Full and Emeritus Members of CAS and the Chinese Academy of Engineering (CAE).

UCAS boasts a team of highly qualified faculty consisting of distinguished professors from CAS institutes, strong at both education and scientific research. UCAS also provides first-class research conditions for students to conduct scientific research. As of the end of 2018, UCAS had about **3,000** professors, **11,737** supervisors, including **240** CAS Members and **6,637** doctoral supervisors from three national research centers (or labs), **77** national key labs, **189** CAS key labs, **41** national engineering research centers (labs) and various national frontier scientific research projects. This outstanding faculty are, thus, able to provide a grand and vast educational platform for students to engage in scientific research.

## About SIMM

Shanghai Institute of Materia Medica, Chinese Academy of Sciences (SIMM), nowadays a training unit of UCAS for pharmaceutical science, was evolved from Peking Institute of Materia Medica, Academia Sinica, founded in 1932 by Professor Chenggu Zhao (T. Q. Chou). It has the longest history as a comprehensive



research institution for drug discovery in China.

SIMM has four national centers: State Key Laboratory of Drug Research, National Center for Drug Screening, National Engineering Laboratory for TCM Standardization Technology, Chinese National Compound Library. SIMM's strategy on development lies in the basic studies on drug discovery and development, new methods and technologies of drug development, drug discovery in major diseases. SIMM has established a high-level drug development system and hold a lead in drug discovery and development in China. with the accomplishment of **301** research achievements as **49** national awards and over **97** provincial and ministerial awards. Moreover, SIMM has developed and commercialized over **100** new drugs, including a number of significant innovative drugs in the world such as Artemether and Dimercaptosuccinic acid.

The subjects of Pharmacology, Medicinal Chemistry and Drug Design in SIMM is in high rank all over the world. Over **300** papers have been published on SCI Journals annually in recent years. SIMM has fostered and attracted a large number of talent scientists in drug discovery and development. At present, SIMM has over **900** staffs including **6** academicians. SIMM has an enrollment of over **600** graduate students (above **300** PhD candidates and **20** international students included). To date, SIMM has conferred master's and doctoral degrees on over **1,600** graduate students. (Please refer to <http://english.simm.ac.cn> for more information.)



## TOP 10 Universities in China Ranked by ESI

By Thomson Reuters

Institutions	Nov 2016	Nov 2017	Nov 2018	Nov 2019
<b>University of Chinese Academy of Sciences</b>	<b>9 (326)</b>	<b>2 (114)</b>	<b>1 (90)</b>	<b>1 (81)</b>
<b>Peking University</b>	1 (128)	1 (112)	2 (91)	2 (89)
<b>Tsinghua University</b>	3 (150)	3 (128)	3 (101)	3 (91)
<b>Zhejiang University</b>	2 (145)	4 (130)	4 (111)	4 (102)
<b>Shanghai Jiao Tong University</b>	4 (164)	5 (149)	5 (120)	5 (103)
<b>Fudan University</b>	5 (188)	6 (181)	6 (161)	6 (155)

<b>Sun Yat-sen University</b>	8 (262)	9 (234)	9 (215)	7 (182)
<b>Nanjing University</b>	7 (242)	7 (228)	7 (205)	8 (187)
<b>University of Science and Technology of China</b>	6 (239)	8 (229)	8 (214)	9 (192)
<b>Huazhong University of Science and Technology</b>	13 (390)	11 (324)	10 (281)	10 (234)

The data in parentheses shows the global rank.

## Nature Index

### By Nature Index

Institutions	2015	2016	2017	2018
<b>Chinese Academy of Sciences (CAS), China</b>	<b>3633 (2)</b>	<b>3864 (2)</b>	<b>4138 (1)</b>	<b>4842 (1)</b>
<b>French National Centre for Scientific Research (CNRS), France</b>	4264 (1)	4260 (1)	4120 (2)	4085 (2)
<b>Max Planck Society, Germany</b>	2262 (3)	2431 (3)	2330 (3)	2431 (3)
<b>Harvard University, United States of America (USA)</b>	2260 (4)	2298 (4)	2279 (4)	2371 (4)
<b>Helmholtz Association of German Research Centres, Germany</b>	1970 (5)	2047 (5)	2021 (5)	2078 (5)
<b>University of Chinese Academy of Sciences (UCAS), China</b>	<b>577 (56)</b>	<b>870 (24)</b>	<b>1375 (8)</b>	<b>1816 (6)</b>
<b>Massachusetts Institute of Technology (MIT), United States of America (USA)</b>	1684 (6)	1749 (6)	1683 (6)	1698 (7)
<b>Stanford University, United States of America (USA)</b>	1513 (7)	1480 (7)	1483 (7)	1507 (8)
<b>Peking University (PKU), China</b>	1173 (12)	1255 (9)	1314 (9)	1427 (9)
<b>Tsinghua University, China</b>	910 (16)	1019 (15)	1097 (14)	1303 (10)

The data in parentheses shows the rank in the world.

## 1.2 Introduction to Pharmaceutical Science

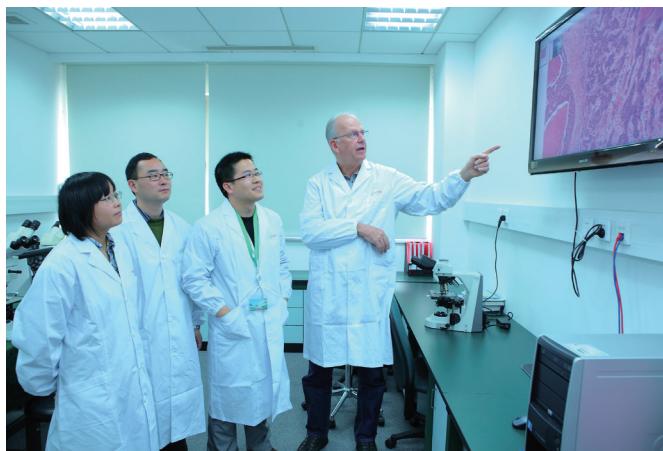
Pharmaceutical Science is a multidiscipline field that aims at drug discovery and development, with the integration of fundamental principles of chemistry, biology, and medicine. Studies in Pharmaceutical Science provide the theories and technique support for drug discovery and development, drug safety, drug efficacy and quality control. The subject focuses on identification and validation of drug targets,



drug design, drug screening, drug synthesis and route selection, dosage form design and formulation, pharmaceutical analysis and quality control, drug metabolism and pharmacokinetics, molecular pharmacology and toxicology, and clinical trials, etc.

### 1.3 Training Target

SIMM started international student education in 2013. In order to take the advantage of the fusion of science and education, SIMM is the training unit of UCAS for pharmaceutical science. The pharmaceutical science program aims to recruit the excellent international undergraduates to the University of Chinese Academy of Sciences (UCAS) and the associated institutes of Chinese Academy of Sciences, to cultivate high-level pharmaceutical talents and to promote the international cooperation and high level education for pharmaceutical research between China and other countries. Students in this program learn about the current status and future tendency of drug research, master the theories, methods and skills of pharmaceutical science, with the capability of drug discovery, technology and application development and management.



## 2 Application Guidance

### 2.1 Majors and Research Areas

#### (1) Medicinal Chemistry

Drug discovery focused on the major diseases; Research and development of biological medicines, carbohydrate drugs and natural products; Research on the synthesis and large-scale production of drugs.

#### (2) Pharmacology

Discovery of drugs and validation of drug targets focused on the major diseases; High-throughput drug screening; Research on the mechanism of drug action; Research and development of biological medicines; Research on pharmacogenomics and personalized medicine.

#### (3) Pharmaceutics

Advanced drug delivery techniques and systems, e.g., tumor-targeted drug delivery systems, drug delivery systems based on nanotechnology and the sustained/controlled release dosage forms.

#### (4) Pharmaceutical Analysis

Development and validation of bioanalytical methods based on liquid chromatography-mass spectrometry; Research on solid-state chemistry of drugs.

#### (5) Drug Design

New theory, method and software development of drug design; Discovering novel target and drug candidate through computational simulation and experimental studies.

### 2.2 Professional Courses Offered in English

Pharmaceutical Science Program is a diversified professional talents training program in the domain of pharmaceutical science and technology. Classes are conducted in the forms of in-depth teaching in the unitary domain and interdisciplinary teaching. Introductory courses are common elementary courses for the students of different academic backgrounds. Every student must take courses meeting the academic and career requirements under the guidance of his supervisor.

Students should take Chinese Elementary Course, China Panorama and the related academic activities.

### 2.3 Thesis and Degree Offered

Students are required to conduct an independent research project supervised by a faculty member with an interest in the particular topic of their own research. A written research proposal and a formal

presentation are required in the third term. A mid-exam proposal and a formal presentation are required in the fourth term. Students are required to submit a thesis in English with an abstract in Chinese and the final oral thesis defense is required.

Students must complete the course of study to meet the credits requirement, publish academic papers and pass thesis defense. Degree offered: degree of philosophy doctor of major, degree of natural science, Master of major.



## 2.4 Fees and Costs:

### (1) Application processing fee:

RMB 600 or USD/EUR equivalent (Non-refundable);

### (2) Tuition:

RMB 30,000/year (Master), RMB 40,000/year (PhD);

### (3) Accidental injury and hospitalization insurance premium:

RMB 800/year, RMB 400/half year;

### (4) Accommodation (shared rooms) fee:

RMB 900/month for one student;

### (5) Outpatient service fee is paid according to the insurance scheme of insurance company.

Board expenses, travel expenses and other costs of experiments, meetings and trainings beyond the program curriculum are at the student's own expense.

## 2.5 Qualification of Applicants

(1) NOT hold Chinese citizenship;

(2) Shall be in good health and abide by the Chinese laws and decrees;

(3) For PhD program applicants: Up to 35 years old;

For master program applicants: Up to 30 years old;

(4) Shall be holding a bachelor's/ master's degree in pharmaceutical science, chemistry, biology, medicine or related field with satisfactory performance;

- (5) Shall have good academic performance and research ability;
  - (6) Language skills requirements for those who take English as a second language:
    - Major undergraduate courses are taught in English (marked in transcripts)
- Or
- TOEFL-over 90/IELTS-over 6.5.

## 2.6 Documents for Application

### **(1) SUBMIT YOUR ADMISSION APPLICATION VIA THE ONLINE SYSTEM**

Applications shall be submitted via the Online Application System for International Students of UCAS (<http://adis.ucas.ac.cn/>). For the required materials, please refer to the international student enrollment brochure (<http://english.ucas.ac.cn/index.php/admission/international-students>).

### **(2) CERTIFICATE OF FINANCIAL SUPPORT OR COMPLETE THE SCHOLARSHIP APPLICATION FORM**

### **(3) PHOTOCOPY OF REGULAR PASSPORT PERSONAL INFORMATION PAGE**

Regular passport should have at least 2 years' validity. Any individual who was a Chinese national and then acquired a foreign nationality shall provide a Certificate of Cancellation of Chinese Household registration.

### **(4) ORIGINAL SCANNED PHOTOCOPY OF BACHELOR AND MASTER DEGREE CERTIFICATE**

Applicants having just completed or about to complete their Bachelor's or Master's degree should provide an official pre-graduation certificate showing their student status and stating their expected graduation date. They are required to submit Bachelor's or Master's degree certificates to the International Students Office of UCAS via their host institute before they are enrolled at UCAS.

### **(5) ORIGINAL SCANNED TRANSCRIPTS OR OF BACHELOR AND MASTER TRANSCRIPTS**

### **(6) TWO ACADEMIC RECOMMENDATION LETTERS**

The referees shall be familiar with you and your work, and should **NOT** be the expected supervisor. The letters should be signed, dated on official headed paper with contact phone number and email address of the referees.

### **(7) CV & RESEARCH PROPOSAL**

### **(8) PHOTOCOPIES OF ALL THE TITLE PAGES AND ABSTRACTS OF MAXIMUM 5 REPRESENTATIVE PUBLISHED PAPERS (IF ANY)**

Please **DO NOT** submit any unpublished papers.

## 2.7 Application Time and Process

**(1) Application Time:** Please refer to the official notice.

<http://english.ucas.ac.cn/index.php/admission/international-students/scholarship-financial-aid>

**(2) Application Process:** Applicants who are eligible and meet all the eligibility criteria above may send the application documents to SIMM (one **CANNOT** apply more than one institute). The faculty reviews the applicant's application documents, determines if the applicant's background is acceptable and select applicants for interview. Then makes final decision according to the availability of supervisors.

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**Website:** <http://english.simm.cas.cn/>

## 2.8 Visa Application and Admission Registration

UCAS will send Admission Notices and Visa Application forms to the admitted students.

The admitted student should take his personal passport that is used for admission application, Admission Notice, Visa Application Form (JW202/JW201), and original Form of Physical Examination Record for Foreigners as well as other original documents of physical examination to the Embassy or Consulate of the People's Republic of China, and apply for a student visa (X1/X2 visa). Please DO NOT enter China visa-free or with other types of visas other than X visa. Please keep the original Admission Notice and Visa Application Form (JW202/ JW201) which are needed for registration and residence permit application.

The admitted student should register at the place indicated in the Admission Notice, and should register on the assigned date. Otherwise, students should apply to UCAS for early or late registration.



## 3 Scholarships to Apply

The applicants may apply for Chinese Government Scholarship, ANSO scholarship, or UCAS Scholarship for International Students.

### ● Chinese Government Scholarship

The Chinese Government Scholarship sponsor international students to study at Chinese universities. The scholarship offers fee waivers of admission application and tuition, health insurance, on-campus accommodation, etc. Please refer to the website of the China Scholarship Council (<http://www.csc.edu.cn/Laihua/>) for detailed introduction, qualifications of applicants and application procedure.

UCAS is one of the Chinese Government Scholarship universities. Eligible applicants may apply to the China Scholarship Council with recommendation from related national official departments and Embassies or Consulates of the People's Republic of China. The scholarship application usually starts in November and ends in the following April, but please be noted of deadline variations for different countries. The International Students Office of UCAS will offer pre-admission notice if needed.

Applicants may submit application via UCAS (see <http://english.ucas.ac.cn/> for detailed information and application procedure). But this is only for a small number of excellent international students who are not currently studying in China.

### ● ANSO scholarship

ANSO (Alliance of International Science Organizations) is a non-profit and non-governmental international scientific organization founded in 2018 by 37 international science and education institutions from around the world. ANSO came into being under the principles of “Extensive

Consultation, Joint Contribution and Shared Benefits" championed by the Belt and Road Initiative. ANSO will promote collaborations across the scientific and technological communities of the world to ensure that the benefits of the BRI are widely shared. There will be open access to scientific facilities and information among participants in ANSO. The grooming and empowerment of young scientists will be a particular focus of ANSO. The ANSO Scholarship for Young Talents is one of the main approaches to achieve this goal. The program provides full scholarships to 335 outstanding young students, which including 190 PhD students and 145 master students from all over the world to pursue graduate degrees at the university of the UCAS (The University of Chinese Academy of Sciences) each year.

### • UCAS Scholarship for International Students

The University of Chinese Academy of Sciences (UCAS) has set up the UCAS Scholarship for International Students to sponsor young talents all over the world to pursue Master's or Doctoral degree or to attend courses, to conduct research or pay academic visits at UCAS faculties/CAS institutes. The Scholarship also encourages current international graduate students to come for study by exchange programs or joint programs.



The scholarship consists of both a full scholarship and a partial scholarship. The full scholarship provides tuition waiver, monthly stipend, basic accommodation and medical insurance; while the partial scholarship covers some items of the Full. Since 2016, the Scholarship has been majorly sponsoring postgraduates.

Please refer to UCAS website (<http://english.ucas.ac.cn/>) for more information.

Scholarships	ANSO		CGS		UCAS	
<b>Objects</b>	Ph.D.	Master	Ph.D.	Ph.D.	Ph.D.	Master
<b>Tuition</b>	Exemption					
<b>Stipend USD/month</b>	850-1000	570	840	700	570	
<b>Insurance</b>	110 USD/year					
<b>Accommodation</b>	Basic accommodation (shared room)					
<b>Duration</b>	Up to 4 years		Up to 3 years			
<b>Deadline</b>	Normally by the end of March					

## 4 Very Important Note

- (1) Every applicant can **ONLY** apply to **ONE** institute/college and supervisor;
- (2) Please choose major, host supervisor and host institute **CAUTIOUSLY** before submission. After enrolment at UCAS, applications for the change of these items are **SELDOM** considered.
- (3) One applicant can **ONLY** have one account in the Online Application System. Please **DO NOT** apply for more than one account. Otherwise, your applications may **NOT** be processed.
- (4) ALL uploaded documents should be in Chinese or in English; otherwise notarial translations in Chinese or English are required. Once translated, the original documents and their notarial translations are required to submit together to the application system. Please use a scanner to prepare all the required documents in **COLOR**. Images captured by mobile phone or camera are **NOT** acceptable. Copies are also **NOT** acceptable.
- (5) The university has the right to request applicants to provide the original or notarial hardcopies of their application documents for further qualification checks if the uploaded documents are insufficient. Applicants shall **GUARANTEE** all the information and application documents submitted in this application are authentic and accurate, otherwise they will be disqualified from admission.
- (6) Application with incomplete documents, lack of some required documents or wrong personal information will **NOT** be processed.
- (7) Please **DO NOT** send any hardcopy of application materials directly to the International Students Office of UCAS. **NONE** of the application documents will be returned.
- (8) The Chinese Government Scholarship, ANSO Scholarship for Young Talents and UCAS Scholarship for International Students **DO NOT** request for application processing fee.
- (9) Processing fee is **NON-refundable** in **ANY** case.
- (10) One can apply for more than one scholarship programs but once awarded by one of the programs, he/she will lose the qualification for other programs in turn according to the evaluation time;
- (11) Once admitted, students **MUST** register on the assigned date on the admission notice. Otherwise, students should apply to UCAS for early or late registration.

## 5 Supervisors Information

Please refer to the following website for the detail of supervisors.

<http://english.simm.cas.cn/fa/fas/>

# **Shanghai Institute of Materia Medica Chinese Academy of Sciences**

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