



Associate Institutions

- 1. Research Institute of Pharmaceutical Sciences**
- 2. Natural Products Research Institute**
- 3. Medicinal Plant Garden**
- 4. Department of Pharmacy,
Seoul National University Hospital**
- 5. Continuing Education Center for
Advanced Pharmacy**
- 6. Pharmacy Information Library**
- 7. BK-21 Applied Pharmaceutical
Life Sciences Research Division**



1. Research Institute of Pharmaceutical Sciences

Location

Building #21-104, College of Pharmacy, Seoul National University, 1 Gwanak-ro, Gwanak-gu, Seoul 151-742, Korea

Tel: +82-2-880-7827, Fax: +82-2-884-8334

Homepage: <http://www.snurips.ac.kr>

History

The Institute was founded in the College March 24, 1981. To support the Institute and to promote research activities of the faculty members, the College established “The Foundation for Pharmaceutical Education and Research” by the funds donated from alumni as well as major domestic pharmaceutical industries. With the funds, the Foundation was legally incorporated into a non-profit organization, which was later approved by the University and the Ministry of Education on March 22, 1983. The Institute is the working institution of the Foundation ever since.

A brief history of the institute includes;

1981 Establishment of the Institute

1983 Establishment of the Foundation for Pharmaceutical Education and Research

1992 Completion of the Pharmaceutical Research Building

1997 Completion of the Pharmaceutical Animal Research Facility

1997 Promotion of the Institute to the Associate Research Institute of Seoul National University

1998 Designated as the Institute to the Associate Research Institute of the Korea Research Foundation

1998 Designated as the Advanced Material Support Research Institute by the Ministry of Education

2000 Completion of the Pharmaceutical Plant for Education and Research

2002 Renamed as the Seoul National University Research Institute of Pharmaceutical Science under the Seoul National University regime

Organization

The Institute consists of the Steering Committee, four Research Divisions, Central Instruments Laboratory, Pharmaceutical Animal Facility and Pharmaceutical Plant for Education and Research. The Steering Committee consists of seven members, i.e., Director, four Division heads, the Laboratory chief and a Faculty member. The four Research



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Divisions include Basic Pharmaceutical Science, Drug Development, Safety and Efficacy and Environmental Hygiene.

The research institute has most qualified researchers in the field. First of all, 43 faculties of the College of Pharmacy participate in the institute. Secondly, over 30 researchers with Ph.D. degree as well as over 250 graduate students take parts in the institute. Furthermore, 17 supportive assistants are responsible for the maintenance and service for the institute to support various research activities in the institute.

Central Instruments Laboratory

Location

Building #20,#21,#29, College of Pharmacy, Seoul National University, 1 Gwanak-ro, Gwanak-gu, Seoul 151-742, Korea

Tel: +82-2-880-2455/5680/7912/7942/7838

History

The central Instruments laboratory was established in 1981, when the Research Institute of Pharmaceutical Science was first built, to maximize the utility of the instruments by centralizing expensive research equipment.

Organization

The Central Instruments Laboratory consists of the NMR Room, the Mass Spectroscopy Room, the IR Spectroscopy Room, the Building #20 Instrument Laboratory, the Building #21 Instrument Laboratory and the Building #29 Instrument Laboratory.

The instruments for biological research are located at two places: the Building 29 Instrument Laboratory and the Building #20 Instrument Laboratory. Likewise, the instruments for chemical research are located at two places: the Building #21 Instrument Laboratory and the Building #20 Instrument Laboratory. Some essential chemical research equipment, such as the NMR, Mass Spectroscopy, and IR Spectroscopy, are located in separate rooms, in this case the NMR Room, the Mass Spectroscopy Room and the IR Spectroscopy Room, respectively. These rooms are located at the College of Pharmacy Building #21.

Currently, the central laboratory possesses more than 330 pieces of equipment, all of which are maintained and managed by six supportive technical assistants.



Animal Experimental Center

Location

Building #141, College of Pharmacy, Seoul National University, 1 Gwanak-ro, Gwanak-gu, Seoul 151-742, Korea

Tel: +82-2-880-8727

History and Objective

The center is established in December 1996 to support the researchers in carrying out animal experiments. The center keeps experimental animals, and is equipped with facilities like special cleaning and sterilization section and sophisticated instruments for conducting animal experiment, animal breeding and microbiological experiments. A support service team, consisting of one assistant and four animal feeders, is in charge of the maintenance of the facilities related to animal experiment. A group of professors, in charge of the animal experiments, and the steering committee of the institute, jointly examine and take decision on all relevant matters starting from legal regulations and ethical rules linked to animal experiments to expansion and improvement of facilities like installation of equipment and personnel recruitment. The Institutional Animal Care and Use Committee (IACUC) is responsible for reviewing all requests to use vertebrate animals, and ensuring compliance with federal regulations. The regulations for managing and using animals have been made based on the Guide for the Care and Use of Laboratory Animals (Institute of Laboratory Animal Resources, Commission on Life Sciences, National Research Council, USA).

Organization

The animal facility (1,071 m²), located in a separate building, was established to maintain research animals based on GLP guideline. To minimize the environmental contamination, animals are housed in a complete and semi-complete isolation in terms of air supply. The rooms in the building are categorized into three separate zones; the SPF animal zone for maintaining SPF animals with complete environmental isolation, a general animal zone for maintaining SPF animals with semi-complete environmental isolation and an office zone. Pathogen monitoring is routinely carried out for the SPF animal zone and the general animal zone. The general access to the facility is strictly limited while the access of the graduate students and researchers may be granted, provided that the individuals take an animal handling course and follow the current guideline of the animal facility.



Associate Institutions

Pharmaceutical Plant for Education and Research

Location

Building #142, College of Pharmacy, Seoul National University, 1 Gwanak-ro, Gwanak-gu, Seoul 151-742, Korea

Tel: +82-2-880-1346, Fax: +82-2-872-1795

Homepage: <http://www.snupharmpper.kr>

History and objectives

The plant was founded on March 11, 2001 to produce highly competent individuals equipped with basic knowledge and its practical application in business. The plant has been designed to provide final year undergraduate students with practical training relevant to pharmaceutical plant, such as, practice in pharmacology, medicinal chemistry and pharmaceutical plant practice, thereby improving the quality of students in order to work in the 21st pharmaceutical industry. The academic program is devised to equip students with hand-on practical experience along with theoretical knowledge. Particular emphasis has been given in studying facts related to exploitation and production of new medicines.

Organization

The pharmaceutical plant (1,590 m²), located in a separate building, was established to facilitate the undergraduate education with pharmaceutical production and to provide facility for pilot scale production of test formulations. The facility was built according to the current KGMP guidelines and provides up-to-date production facilities for the production of solid dosage forms and parenteral formulations. The utilities (i.e., water and air) are separately supplied for solid dosage form production and parenteral formulation production to eliminate cross contamination.

The plant is in a five-story building. On the first floor, there are guard office, communication office, machine room and electricity room. The second floor is provided with facilities for conducting solid medicine manufacturing processes, such as, analysis of raw materials, mixing, drying, triangular positioning, capsule filling, coating, packaging etc. The third floor is called the injection floor as activities like raw material measurement, medicine preparation, filtration of injection, filling, sterilization and packaging are conducted there. Professors' offices and laboratories are on the fourth floor while large lecture rooms and pharmaceutical service training institute are located in the fifth floor.



2. Natural Products Research Institute

Location

Building #20, College of Pharmacy, Seoul National University, 1 Gwanak-ro, Gwanak-gu, Seoul 151-742, Korea

Tel: +82-2-880-2455, Fax: +82-2-762-8322

Homepage: <http://www.snunapri.ac.kr>

History

On Dec. 27, 1939, Natural Products Research Institute was founded as an affiliate of Kyungseong Imperial University in Kaesung Branch. The original institute was established to study Chinese medicinal resources in Manchuria, China and the Korean peninsula. With the liberation in 1945, Seoul National University was founded through amalgamation of Kyungseong Imperial University. The institute marked the first research institute of Seoul National University. The research institute was later renamed as the Natural Products Research Institute in 1992. Under the Research and Development of New Drugs Originated from Natural Products Act, the institute was designated as the National Center for Research and Development of New Drugs Originated from Natural Products from the Ministry of Health and Welfare of Korea. In 2001, the institute was merged with the College of Pharmacy. In 2008, the institute was relocated to pharmacy building #20 in Gwanak campus.

Organization

As of 2004, a total of 122 persons are involved in the institute; 7 faculties and 5 research fellows participate in the institute. The institute consists of four research divisions: Natural Product Chemistry, Natural Products Resources, Biological Activity Research and Industrial Technology Cooperation.

Division of Natural Products Chemistry

The division focuses on the isolation, purification and structural elucidation of natural products. Particularly, the division is interested in a number of important classes of compounds including terpenoids, alkaloids, flavonoids. In addition to the isolation and structural determination of new drugs from natural products, the quality control issue for herbal drugs is one of the primary research interests of the division.



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Division of Biological Function of Natural Products

The primary function of the division is to characterize biological activities, both in in vitro and in vivo, of natural products. In particular, the division is interested in the studies of pharmacodynamics and metabolism of natural products in human. The class of drugs of the primary interests includes agents with anti-cancer/virus, anti-inflammatory, anti-thrombotic, and anti-obesity activities as well as drugs for cardiovascular system and central nervous system.

Division of Natural Products Resources

The division is primarily interested in the production of natural products by plant tissue and cell culture techniques. The division is also focused on the studies on herbal materials using molecular taxonomy techniques. In addition, recent research activities of the division include the investigation on the distribution of natural products resources and operation of economic plants experimental station.

Division of Natural Products Informatics

The primary goal of the division is to integrate pharmacological properties of natural products, their chemical structures and information on the originating plant by modern computer technology. As a result, the division is primarily responsible for the establishment and management of TradiMed database for future reference of natural products.

International Collaboration

The institute has been interested in the contribution to the international community through cooperative scientific activities with various international organizations on the subjects of traditional medicine and natural product sciences

WHO Collaborating Center for Traditional Medicine

As part of collaborating research activities on traditional medicine, the institute was designated as a WHO Collaborating Center in 1988. The institute has since contributed to the promotion of health of mankind through the utilization of traditional medicines. The primary goal of the center is to promote collaboration in natural products researches through workshops and seminars.

UNESCO Regional Research Center for the Chemistry of Natural Products in Southeast Asia

In order to enhance public welfare around the world, UNESCO has supported research programs for wider uses of natural products. As a Regional Research Center, the institute



offers long and short-term training programs and workshops for natural products chemists in Southeast Asia. The Korea-China Collaboration Center for Traditional Oriental Medicine Research in Korea and China shares a similar history of traditional medicines. The center serves as the window for cooperative research on traditional medicines in both countries, and is a part of the international activities of the project entitled “New Korean Drugs Development Project”.

3. Medicinal Plant Garden

Location

1. Main Garden: 243-7 Tapsakgol-gil, Ilsandong-gu, Goyang-si, Gyeonggi-do

Tel: +82-31-977-1521, Fax: +82-31-977-1521

Homepage: <http://www.snuherb.ac.kr>

2. Economic Plants Research Station: 278-3 Hoyeon-ro, Gyeonggi-do

History and Objective

Medicinal Plant Garden was established at Sinsul-dong, outskirts of Seoul, in 1954, to cultivate and maintain medicinal plants for educational and research purposes. The Garden moved to several locations in Seoul and vicinities due to the increasing numbers of plants, and it is now located in Goyang-si since 1995. The Garden's principle function is to educate undergraduate and graduate students enrolled in pharmacognosy and medicinal plants related courses. It maintains the largest living medicinal plant collection listed on the Korean Pharmacopoeia, and Korean Herbal Pharmacopoeia.

The Garden is consisted of specimen, shade plant, and creeping plants gardens. It also maintain greenhouse to cultivate subtropical and tropical medicinal plants.

Activities

- Medicinal plants cultivation and preservation
- Supply medicinal plants for research purposes
- Educate local community people on medicinal plants

4. Department of Pharmacy, Seoul National University Hospital

Seoul National University Main Hospital

Location

101 Daehak-ro, Jongro-gu, Seoul 110-744, Korea

Tel: +82-2-2072-2328, Fax: +82-2-766-1443

Homepage: <http://pharm.snuh.org>

Objectives and Mission

The Department of Pharmacy at the Seoul National University Main Hospital provides accurate and prompt pharmaceutical care for its patients. It aids in helping patients understand their medical therapy and also provides patients education regarding prescribed drugs. In addition, the Department of Pharmacy is dedicated towards equipping professionals as well as engaging in medical care and pharmaceutical business with up-to-date and expert information.

Organization

The Department of Pharmacy at the Seoul National University Main Hospital consists of the following three main divisions.

- Division of Pharmaceutical Administration

The Division of Pharmaceutical Administration is responsible for supervising drug use and managing the administrative and financial affairs of the Department of Pharmacy. It is composed of two section managers, nine pharmacists, one resident pharmacist, and one technician. This division is further classified into the Pharmaceutical Administration and Drug Information Section and the Clinical Pharmacy Section.

The Pharmaceutical Administration and Drug Information Section is responsible for managing pharmaceutical administration, providing drug-related information, and supporting the Pharmacist Organization. The Clinical Pharmacy Section is in charge of providing clinical pharmaceutical care such as Therapeutic Drug Monitoring (TDM), Total Parenteral Nutrition (TPN) and Anti-Coagulation Service (ACS).

In addition to supervising the aforementioned affairs, the Division Director also establishes basic administrative programs and organizes conferences as well as events within the Department of Pharmacy. The Division Director also supervises the relationship between the Department of Pharmacy and other departments within the hospital to maintain an amicable environment.



- Division of Dispensing

The Division of Dispensing provides accurate and prompt distribution of prescribed drugs to patients, as well as patient education. Since the start of the separation between prescription and drug dispensing policy, the Division of Dispensing is now mainly focusing on inpatients rather than outpatients, through the development and improvement of novel dispensing systems. Also, the division actively participates in quality assurance activities in the hospital in order to enhance the quality of activities related to the Pharmacy Department.

The division consists of two section managers, two chief pharmacists, twenty-three pharmacists, seven part-time pharmacists, and twelve technicians. The division is further divided into the Inpatient Dispensing Sections for Adult and the Outpatient Dispensing Sections for adult patients. The Inpatient Dispensing Section for Adult is responsible for dispensing prescribed medicine for adult inpatients and formulating pharmaceutical products unavailable in the market. Also, in order to maximize productivity, a separate Operating Room (OR) Pharmacy is open at the hospital OR. The Inpatient Dispensing Section for Adult is now capable of operating a more productive dispensing system by adopting the Unit Dose System (UDS). It also educates its pharmacists to provide professional patient counseling for patients to be discharged.

The Outpatient Dispensing Section for Adult is responsible for accurately and promptly dispensing prescribed medicine for adult outpatients who are excused to receive drugs from the hospital pharmacy after the start of separation between prescription and drug dispensing policy. Currently, these outpatients consist approximately 25~30% of all the outpatients at the hospital.

- Division Pediatric Dispensing

The Division of Pediatric Dispensing consists of the Pediatric Dispensing Section and the Injectable Drug Dispensing Section, and two section managers, twenty-one pharmacists, seven part-time pharmacists, and eight technicians. The Pediatric Dispensing Section is responsible for dispensing prescribed medicine to both pediatric outpatients and inpatients, performing patient medication, and completing administrative affairs. Since patients are children, there is a need for a variety of doses, and even a higher need for multiple dosage forms such as pulverized medicine and syrups. In addition, oral medicine for pediatric patients is dispensed per dose unit and packaged separately inside a clean bench.

The Injectable Drug Dispensing Section is responsible for preparing anticancer drugs, antibiotics, and TPN solutions for adults as well as pediatric patients. This section consists of three different parts: TPN Dispensing Room, 112 Ward Injectable Drug Dispensing Room, and Pediatric Injectable Drug Dispensing Room.



Associate Institutions

SMG-SNU Boramae Medical Center

Location

41 Boramae-Gil, Dongjak-gu, Seoul 156-707, Korea

Tel: +82-2-870-3272, Fax: +82-2-870-1476

Homepage: <http://www.brmh.org/depthome/PH/>

Objectives and Mission

The Department of Pharmacy at the SMG-SNU Boramae Medical Center consists of pharmacists with expert pharmaceutical knowledge who are responsible for all issues related to medication and drugs. It aims to provide professional pharmaceutical care to ensure that patients receive the best pharmacotherapy possible.

Organization

The Department of Pharmacy at the SMG-SNU Boramae Medical Center consists of five main divisions

- Inpatient Pharmacy - provides medication and patient education to admitted inpatients
- Outpatient Pharmacy - provides medication and patient education to outpatients
- Injectable Medicine Division - prepares injectable drugs such as anti-cancer agents, total parenteral nutrition (TPN), and other injectable formulations for in- and outpatients
- Medication Management Division - responsible for the management of stockpiling and allocating drugs, and other administrative issues
- Drug Information Division - provides information about medicine, prepare and present the Pharmacy & Therapeutics Committee (P&T), publish formularies and newsletters, host seminars, manage ADR monitoring as well as therapeutic drug monitoring

Seoul National University Bundang Hospital

Location

166 Gume-ro, Bundang-gu, Gyeonggi-do 463-707, Korea

Tel: +82-31-787-3852, Fax: +82-31-787-4073

Homepage: <http://www.snubh.org/parthompi/index.asp?deptCode=041>

Objectives and Mission

Firmly rooted in expertise and compassion, the Department of Pharmacy at the Seoul National University Bundang Hospital thrives to provide exemplary pharmaceutical care, ultimately aiming towards community development and the enhancement of public health. Its



vision is to provide accurate pharmaceutical therapy and management as well as up-to-date expert information regarding the utilization of drugs. Providing patients with utmost care, the department recognizes the importance of cooperation when working as a member within a larger healthcare team.

Organization

The Department of Pharmacy at the Seoul National University Bundang Hospital consists of three main divisions

- General Medication Division - to provide medication for outpatients as well as inpatients through the Outpatient Pharmacy and Inpatient Pharmacy
- Medication Management Division - to manage administrative matters of the Department of Pharmacy, provide drug information, and educate pharmacists
- Special Medication Division - to prepare injectable drugs and pulverized formulations, as well as provide consultations by clinical pharmacists

5. Continuing Education Center for Advanced Pharmacy

Location

Building #17, Yeongeon Campus, College of Pharmacy, Seoul National University, 101 Daehak-ro, Jongro-gu, Seoul 110-744, Korea
Tel: +82-2-740-8550, Fax: +82-2-874-4169
Homepage: <http://www.snucepharm.ac.kr>

Objectives

Continuing education center for advanced pharmacy is established to develop pharmaceutical educational program in corporation with college of pharmacy. The main goal is to provide and educate the current pharmaceutical knowledge and skills to pharmacists and other health care related professionals, thus improving their professional competencies

Programs

- Clinical Pharmacy Continuous Education Program
- Advanced Clinical Pharmacy Continuous Education Program for Preceptors
- The Pharmaceutical R & D Executive Leadership Program
- KFDA Good Manufacturing Practice Education Program
- Herbal Medicine Continuous Education Program
- On-line Clinical Pharmacy Continuous Education Program



Associate Institutions

6. Pharmacy Information Library

Location

Building #20-106, College of Pharmacy, Seoul National University, 1 Gwanak-ro, Gwanak-gu, Seoul 151-742, Korea

Tel: +82-2-880-2457

Homepage: <http://www.snurips.ac.kr>

History

Pharmacy Information Library was founded when the College of Pharmacy merged with Natural Products Research Institute and their libraries were relocated to the pharmacy building (bldg. #20) on Gwanak campus in Feb 2008.

Pharmacy Information Library holds foreign and domestic monographs, periodicals, theses and dissertations related to the field of pharmacy. It currently possesses 4,641 volumes of books, 5,151 volumes of periodicals, and 551 volumes of theses and dissertations.

Organization

There are book stacks, a periodicals room where students can read magazines, a computer zone where students can use the Internet, and reading rooms. The Reading Room is the place to study freely with borrowed materials or individual books. Various individual study and exam preparation can be done in the Reading Room. A self-service photocopy machine and a printer are available at the library.

Service Hours

09:00~18:00 (Mon.~Fri.)

7. BK 21 Applied Pharmaceutical Life Sciences Research Division

Location

Building #21-212, College of Pharmacy, Seoul National University, 1 Gwanak-ro, Gwanak-gu, Seoul 151-742, Korea

Tel: +82-2-880-5686, Fax: +82-2-889-2692

Homepage: <http://www.snupharmbk21.ac.kr>

Vision & Mission

- To become the best college of pharmacy in the world



- To produce the world's best transnational professionals in the applied pharmaceutical life sciences.
- To become the world's best research institute in on applied pharmaceutical life sciences
- To become the world's hub for drug development
- To serve as an international liaison between the university and the industry for the global drug development.

Purpose

To nurture quality education for students through financial support of its master's and doctoral students as well as its post- doctoral fellows

Summary of the BK21 Project

Project duration : 2006.3 - 2013.2 (7 years)

Participants/year : 39 professors, 337 or more graduate students, 15 or more post-doctoral fellows

College of Pharmacy, Seoul National University

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