



Associate Institutions

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





1. Research Institute of Pharmaceutical Sciences

Location

Building # 21-206, San 56-1, Sillim-dong, 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

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

Central Instruments Laboratory

The central laboratory was established to maximize the utility of the instruments by centralizing expensive research equipments. Currently, the central laboratory possesses over 330 equipments, which are maintained and managed by five expert scientists and 3 supportive technical assistants.

Animal Experimental Center

The animal facility (1,071m²), located in a separate building, was established to maintain research animals based on GLP guideline. To minimize the environmental contamination,



the animals were housed in a complete and semi-complete isolation in terms of the air supply. The rooms in the building were categorized into three separate zones; The toxicological study zone for maintaining SPF animals with complete environmental isolation, general animal study zone for maintaining SPF animals with semi-complete environmental isolation and office zone. Pathogen monitoring is routinely carried out for the toxicological study zone and the general animal study zone. The general access of the facility is strictly limited while the access of the graduate students and researchers may be granted provided that the individuals take animal handling course and follows the current guideline of the animal facility.

Pharmaceutical Plant for Education and Research

The pharmaceutical plant (1,590m²), 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 the cross contamination.

Staffs

The research institute has most qualified researchers in the field. First of all, 35 faculties of the College of Pharmacy participate in the institute. Secondly, over 49 researchers with Ph.D. degree as well as over 200 graduate students take parts in the institute. Furthermore, 18 supportive assistants are responsible for the maintenance and service for the institute to support various research activities in the institute. As a result of the support, approximately five research papers are published in a year for a researcher in the institute.

2. Natural Products Research Institute

Location

28 Yeongeon-dong, Jongro-go, Seoul 110-460

Tel: 82-2-740-8901, Fax: 82-2-762-8322

Homepage: <http://plazal.snu.ac.kr/~napri>

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 with the amalgamation with Kyungsung 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. By the Act on Research and Development of New Drugs Originated from Natural Products, 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 to the College of Pharmacy.

Organization

As of the year 2004, a total of 122 personnels are involved in the institute; 10 faculties, 17 associated faculties and 13 research fellows participate in the institute. The institute consists of four research Divisions, i.e., 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 interest of the division.

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 of natural products researches by 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.

Korea-China Collaboration Center for Traditional Oriental Medicine Research

Korea and China share a similar history of traditional medicines. The center serves as the window for the cooperative researches 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 Herb Garden

Location

San 153-10, Sulmoon-dong, Ilsan-gu, Koyang, Kyunggi-do

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

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

History and Objective

The medicinal plant garden has been created for the cultivation and preservation of important medicinal flora. The garden has been making significant practical contribution to manifold the effects of curriculum based lectures on pharmacology and pharmacognosy. It has been instrumental in cultivation of medicinal plants and specimens and carrying out research on active plant-ingredients.

1. Specimens: 6,612 m² (50 species)
2. Medicine specimens: 2,645 m² (100 species)
3. Cultivation: 9,917 m²
4. Shade plants: 331 m²
5. Creeping plants: 661 m²



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6. A Greenhouse: 331 m²

Activities

1. Medicinal herb cultivation and preservation
2. Sample plant cultivation for professors research
3. Examination of content of effective ingredients

4. Continuing Education Center for Advanced Pharmacy

Location

Building #142, San 56-1, Silim-dong, Gwanak-gu, Seoul 151-742, Korea

Tel: 82-2-880-7839, Fax: 82-2-874-4169

Homepage: <http://cepharmacy.snu.ac.kr>

Objectives

Pharmaceutical education training institute is primarily involved in planning and development of educational program and curriculum for the College of Pharmacy. The main goal of the institute is to provide reasonable pharmaceutical education through retraining of the educators. The institute is striving to contribute to the development of pharmacy, and thereby to the society, through cultivating pharmacists and providing continuous education for pharmacists and training for college students.

Activities

1. Continuing education of pharmacists and training of College students
2. Retraining of pharmacy-related educators
3. Planning and development of pharmaceutical curriculums and educational program
4. Study of social pharmacy

5. Pharmaceutical Plant for Education and Research

Location

Building # 142, San 56-1, Silim-dong, Gwanak-Gu, Seoul 151-742, Korea

Tel: 82-2-880-1345,1346, Fax: 82-2-872-1795

Homepage: <http://www.snupharm.ac.kr/ppper>



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, and thereby improving their quality to develop 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 clinical demonstration goods for developing new medicines.

Organization

The plant is in a five-story building. In 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 where activities like, raw materials measurement, medicine preparation, filtration of injection, filling, sterilization and packaging, are conducted. Professors offices and laboratories are in the fourth floor while large lecture rooms and pharmaceutical service training institute are located in the fifth floor.

Major Equipments available

Fluid Bed Dryer (Namjumachine, 100Lts)
V Type Mixer (Namjumachine 120Lts)
Gyro Shifter (Namjumachine 30kg/hr)
Fitz Mill (Namjumachine 30kg/hr)
Hot Wind Dryer (Namjumachine, Empty volume 0.6m³)
Oscillator (Namjumachine, 100~120kg/hr)
Drum Mixer (Namjumachine, 9L)
Ball Mill (Namjumachine, BM-2)
High speed Mixer (Sejongpharmatech, SM-15)
Rotary Tablet Press Machines (Sejongpharmatech, GRC-14)
Tablet Hardness Tester (Erweka, TBH300MD)
Auto Capsule Filling Machines (Sejongpharmatech, SF-8)
Coating Machine (Sejongpharmatech, SFC-30)
Auto Packing Machine (Sejongpharmatech, 60~120pack/min(1line))
Rotary Granulator (Sejongengineering, Rotary type-12inch)
Powder Compactor (Jwoon, 2L)
Filling and closing Machine for Ampoules (Jwoon, 1500ample/H)
Flow Granulator/Coater (Freund Industrial, 400g)



Associate Institutions

Moisture Analyzers (METTLER Toledo, HR73)
Anemometer (Rion, AM-09T)
Particle Counter (Rion, KR-12A)
Integrity Tester (Pall, FFS02AM)

6. Department of Pharmacy, Seoul National University Hospital

Location

28 Yeongeon-dong, 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 in Seoul National University Hospital provides accurate and prompt pharmacy service for patients. It also helps patients understand the medicinal therapy and provides education on how to take medicine. It has been working to equip people, engaged in medical care and pharmaceutical business, with up-to-date and professional information.

Organization

Department of Pharmacy, Seoul National University Hospital, consists of three main divisions

- 1) Medicine Division - to deal with medicinal information and clinical medicine.
- 2) Medicine Dispensing Division - for providing medicines for both, outpatient and admitted inpatients
- 3) Childrens Medicine Dispensing Division - for preparing medicines and injections for infants

There are total 102 members, including 57 pharmacists, 12 special pharmacists, 19 staff members and 12 temporary employees, who prepare medicines as per prescription and manage sales.

7. Animal Experimental Center

Location

Building #141, San 56-1, Sillim-dong, 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 is provided with proper management systems for keeping experimental animals, and 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 three 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 experiment to expansion and improvement of facilities like installation of equipments and personnel recruitment. The administration committee, formed in late 1998 to upgrade the level of animal experiment, first scrutinizes the experimental plan and then confirms the ethical procedures. The regulations for managing and using animals have been made based on the Guide for the care and use of laboratory animals (ILARM national Research Council, USA).

8. BK 21 Applied Pharmaceutical Life Sciences Research Division

Location

Building #21-110, San 56-1, Sillim-dong, 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 future transnational applied pharmaceutical life sciences professionals
- To become the world's best research institute in on applied pharmaceutical life sciences
- To become the drug development hub of the world
- To serve as an international liaison between the university and the industry for the global drug development.

Purpose

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

Summary of the BK21 Project

Project duration : 2006-2012 (7 years)

Participants/year : 39 professors, 290 or more graduate students, 20 or more post-doctoral fellows

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Seoul 151-742, Korea

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