Pharmaceutical Sciences Research
Naresuan University
Naresuan University is located in Phitsanulok Province, 350-km to the North of Bangkok. The university has made its strong commitment to provide quality education to the population in the area and contribute to innovative research in health, technological, social and humanity sciences.

The Faculty of Pharmaceutical Sciences has been established since 1992. The faculty was the first in Thailand to offer a 6-year educational program for new-entry students, commencing the Doctor of Pharmacy (Pharm. D.) degree after graduation. We have also offered an undergraduate program, leading to the Bachelor of Science in Cosmetic Sciences degree since the year 2006. Additionally, the faculty has been providing opportunities for graduates to pursue their advanced degrees (both master and doctoral levels) in many areas of specialization: community pharmacy, pharmaceutical care, pharmaceutics, cosmetic sciences, pharmaceutical chemistry and natural products, as well as pharmacology and biomolecular sciences. Our graduates have successfully occupied competitive positions in well-known public and private organizations.
Currently, the faculty members have been working collectively in 15 research units:

- Bioscreening Research
- Natural Products
- Medicinal Chemistry
- Basic Physicochemical Studies
- Pharmaceutical Biotechnology
- Drug Delivery System
- Pharmaceutical Technology
- Pharmacological Research
- Biotechnology and Molecular Biology Research
- Biomaterial and Regenerative Medicine
- Pharmacokinetics
- Cellular Biology and Toxicology
- Pharmaceutical Outcomes
- Pharmaceutical Care
- Tobacco Control.

Two technical research units, namely animal cell culture and radioactive research units, also provide facilities for researchers if needed.

Research in the Faculty of Pharmaceutical Sciences at Naresuan University is well-funded by funding agencies in the country and internationally. We have secured research funding from governmental agencies, non-governmental organizations, pharmaceutical industries, professional organization and International Foundation of Sciences.
For more information, please contact:
  Assoc. Prof. Dr. Chanthornrat Sitthiworanan
  Dean
  Faculty of Pharmaceutical Sciences
  Naresuan University
  Muang, Phitsanulok 65000
  THAILAND
  Tel +66-55-96-3603
  Fax +66-55-96-3731
We aim at exploring biological active compounds from natural resources such as plants used in Asian traditional medicines and marine organisms. The research activity includes in vitro biological activity test, isolation and identification of bioactive compounds from crude extracts. Analytical method development for phytochemicals is also of our interest.

Our ongoing research involving with the search for lead compounds for degenerative diseases from natural sources such as anti-oxidants, acetylcholinesterase inhibitors, phosphodiesterase-5 inhibitors and anti-androgens. HPLC, ELISA, online-LC/MS/MS coupled with DPPH assay are used as tools for analysis of bioactive compounds.

SELECTED PUBLICATIONS


2. Nuengchamnong, N., de Jong, C.F., Bruyneel, B., Niessen W.M.A., Ingkaninan, K., Ith I (2005) HPLC on-line coupled to mass spectrometry...


STAFF
Main Researchers
- Associate Professor Dr. Kornkanok Ingkaninan
- Associate Professor Dr. Jarupa Viyoch

Graduate students
- Prapapan Temkitthawon
- Nunruthai Suprom
- Sontaya Sukying
- Kanokwan Changwichit
- Juranya Onlom
- Jukkarin Srivilai
- Nattayaporn Reamyindee

Research assistant
- Narumon Singkwang

CONTACT INFORMATION
Kornkanok Ingkaninan, PhD.
Associate Professor
Department of Pharmaceutical Chemistry and Pharmacognosy
Faculty of Pharmaceutical Sciences, Naresuan University
Muang, Phitsanulok 65000
THAILAND
Tel +66-55-963618
Fax +66-55-963731
E-mail: k_ingkaninan@yahoo.com
The focus of our work is to develop biomaterials derived from natural sources, including chitosan, starches and silk cocoon, as carriers and scaffolds for biomolecules and cell delivery in cosmetics and tissue engineering applications. Additionally, searching natural compounds that can promote function and/or differentiation of skin cells and/or stem cells attracts our attention.
SELECTED PUBLICATIONS (2011-2005)


**Petty Patent (Thailand)**


2. Viyoched J, Ngoenkam J. Thermosensitive Hydrogel of Blending Crab Chitosan/Starch for controlled release of therapeutic agents or biomaterials. Approved Number: 4943, Approved Date: 2 July 2009. Applicant: National Center for Genetic Engineering and Biotechnology (BIOTEC), Thailand

**Patent (International)**

STAFF

Main Researchers

- Associate Professor Dr. Jarupa Viyoch
- Associate Professor Dr. Kornkanok Ingkaninan

Graduate students (2010-2011)

- Kunchit Kongros (PhD)
- Atchahriya Faikrua (PhD)
- Khemjira Phetdee (PhD)
- Narisara Tiraravesiy (PhD)
- Wongnapa Nakyai (PhD)
- Paveena Amornnopparattanakul (MS)
- Jutatip Kwankaew (MS)

- Khwanjit Itsarasook (MS)
- Sawanya Yakaew (MS)
- Tammanoon Rungsang (MS)
- Racharat Rukchay (MS)
- Sirintip Intaraprasit (MS)
- Paichit Intpanya (MS)

CONTACT INFORMATION

Jarupa Viyoch, PhD.
Associate Professor
Faculty of Pharmaceutical Sciences
Naresuan University
Muang, Phitsanulok 65000
THAILAND
Tel ++66-55-963618
Fax ++66-55-963731
E-mail: jarupaviyoch4@yahoo.com
We aim to develop delivery systems that enhance drug bioavailability and improve drug stability for pharmaceutics and cosmetics. The main research focuses on nano/microencapsulation employing lipid and polymer as a carriers, gastroretentive DDS, time-controlled pulsatile release DDS. Vaccine and tissue engineering are also our interests. Recently, the curcuminoids stability was improved by incorporation into solid lipid nanoparticles (SLN) using hot melt microemulsion technique. The clinical results also revealed that compared to the cream base, curcuminoids loaded SLNs cream significantly improve skin wrinkles, hydration, biological elasticity and viscoelasticity. The polymeric nanoparticle system based on chitosan and dextran sulfate has been successfully developed to incorporate amphotericin B, a model drug, to reduce nephotoxicity. Examples of current research are as followed:

- Development of 3-dimension scaffold from silk fibroin for chondrocyte cultivation
- Development of cosmetic products based on Thai natural products such as pigment extract of silk cocoon, pomegranate peel extract and long pepper extract
- Development of delivery systems for lutein extract from silk cocoon
- Development of floating drug delivery system (pellets, tablets, capsules)
- Development of pulsatile release drug delivery systems.
SELECTED PUBLICATIONS


**Patent**

STAFF

Main Researchers
- Assistant Professor Dr. Waree Tiyaboonchai
- Assistant Professor Dr. Soravoot Rujivipat
- Associate Professor Dr. Tasana Pitaksuteepong
- Associate Professor Dr. Srisagul Sunghthongjeen
- Assistant Professor Dr. Anothai Tangsumranjit

Graduate students
- Wanachat Chaiyasan
- Nukanya Tokton
- Pataranapa Nimtrakul
- Patravee Niomprem
- Ingdao Rodleang
- Chawonkorn Kasetvetin
- Worawut Kriangkrai
- Sakonjan Treesingchai

Research assistants
- Wilaiwan Phlongmee
- Sanipon Chanburee
- Chanattanapol Yenyu
- Pratthana Chomchalao

CONTACT INFORMATION

Waree Tiyaboonchai PhD.
Assistant Professor
Department of Pharmaceutical Technology
Faculty of Pharmaceutical Sciences, Naresuan University
Phitsanulok 65000, THAILAND
Tel ++66-55-961873  Fax ++66-55-963731
E-mail: wareet@nu.ac.th

Tasana Pitaksuteepong  PhD.
Associate Professor
Department of Pharmaceutical Technology
Faculty of Pharmaceutical Sciences, Naresuan University
Phitsanulok 65000, THAILAND
Tel ++66-55-961877  Fax ++66-55-963731
E-mail: tasanap@nu.ac.th
Srisagul Sungthongjeen PhD.
Associate Professor
Department of Pharmaceutical Technology
Faculty of Pharmaceutical Sciences, Naresuan University
Phitsanulok 65000, THAILAND
Tel ++66-55-961885  Fax ++66-55-963731
E-mail: sungts2000@yahoo.com

Soravoot Rujivipat PhD.
Assistant Professor
Department of Pharmaceutical Technology
Faculty of Pharmaceutical Sciences, Naresuan University
Phitsanulok 65000, THAILAND
Tel ++66-55-961876  Fax ++66-55-963731
E-mail: soravootr@nu.ac.th, soravoot_rujivipat@hotmail.com
Our group is interested in two primary research areas: drug discovery and nutraceuticals. We particularly focus on investigating the pharmacological activities of natural compounds that have potentials for use as medicinal and/or nutraceutical agents. The experiments have been conducted both in vitro (enzymatic or cell culture-based assays) and in vivo (animal models). Currently, our research include:

- Chemopreventive effects of silk protein against colorectal cancer
- Hepatoprotection of turmeric in ethanol-induced liver damage
- Neuroprotection of herbal plant extract against oxidative stress
- Retina protection of lutein against free radicals and UV irradiation
- Cholesterol lowering effects of silk protein and plant extract
- Antioxidant of natural compounds
- Immunomodulatory activity of beta-glucans from wild mushroom
- Role of LDL and oxidized LDL on neurodegenerative disease/Alzheimer’s
- Effects of plant extract on dopamine and NMDA receptors in animal brain
SELECTED PUBLICATIONS


**STAFF**

**Main Researchers**
- Assistant Professor Dr. Nanteetip Limpeanchob
- Assistant Professor Dr. Sakonwan Praputbut (Sangsree)
- Dr. Thanasak Teakthong
- Dr. Kwanchai Rattanamanee

**Graduate students**

**Ph.D. (Pharmaceutical Sciences)**
- Waraporn Kaewkon
- Acharaporn Duangjai
- Ponthipa Meepayung
- Prayut Poowaruttanawiwit
- Panit Yamcheun

**M.S. (Pharmacology and Biomolecular Sciences)**
- Kanittaporn Trisat
- Pattachai Pinnak
- Ruttiya Thongrung
- Pataranapa Nimtrakul
• Pattravee Niamprem
• Sathid Ieamjongjun
• Choomphunut Aonsri
• Phakhamon Lapphanichayakool
• Thitiya Sanpundorn
• Chanudom Wongmor
• Kanlayanee Pholrachom
• Oraya Khruangthip
• Akachai Khuekankaew
• Anusak Kruemuang

CONTACT INFORMATION
Nanteetip Limpeanchob, Ph.D.
Assistant Professor
Department of Pharmacy Practice
Faculty of Pharmaceutical Sciences
Naresuan University, Phitsanulok 65000
THAILAND
Tel: ++66-55-961822
Fax: ++66-55-963731
Email: nanteetipl@nu.ac.th
RESEARCH FOCUS

- The role of silk protein extracts and Thai medicinal plant constituents on wound healing using established ex-vivo porcine skin model.
- The effects of herbal extracts coated scaffolds on wound healing using ex-vivo porcine skin model.
- Application of the ex-vivo porcine skin model for melanoma study.
- Development of cell-based model of NFAT nuclear-cytoplasm translocation for screening of immunosuppressant and immuno-enhancing agents.
- Relationship between Single Nucleotide Polymorphisms and common diseases found in Thais.
- Calcium signaling and apoptosis pathway.
SELECTED PUBLICATIONS


STAFF

Main researchers

- Assistant Professor Anan Ounaroon Ph.D.
- Assistant Professor Nuttawut Saelim Pharm.D., Ph.D.

Graduate students

- Nikhom Naksupun
- Ratchanee Kumlue
- Eakkachai Kreukankeaw

CONTACT INFORMATION

Nuttawut Saelim Pharm.D., Ph.D.
Assistant Professor
Faculty of Pharmaceutical Sciences
Naresuan University, Phitsanulok 65000
THAILAND
Tel +66-84-6207980
Fax +66-55-963731
Email: nut456zz@yahoo.com

Anan Ounaroon, Ph.D.
Assistant Professor
Faculty of Pharmaceutical Sciences
Naresuan University, Phitsanulok 65000
THAILAND
Tel +66-86-9982041
Fax +66-55-963731
Email: ananounaroon@yahoo.com
Our Pharmacokinetics Research Unit consist of a group of pharmacokineticists who have been contributing to pharmacokinetic research. Our research areas include clinical pharmacokinetics, therapeutic drug monitoring, bioequivalence, drug-drug interaction, food-drug interaction and toxicokinetics. Various in vitro, in vivo and in silico techniques are employed.

SELECTED PUBLICATIONS


STAFF
Main Researchers
Assistant Professor Dr. Manupat Lohitnavy
Dr. Pakwawadee Sermsappasuk
Dr. Oranun Kerdpin
Dr. Sarawut Oo-Puthinan
Instructor Ornrat Lohitnavy

Graduate student
Mr. Chanudom Wongmor

CONTACT INFORMATION
Manupat Lohitnavy, PhD.
Assistant Professor
Department of Pharmacy Practice
Faculty of Pharmaceutical Sciences, Naresuan University,
Muang District, Phitsanulok 65000
THAILAND
Tel +66-55-961807
Fax +66-55-963731
E-Mail: manupatl@gmail.com
Center of Pharmaceutical Outcomes Research (CPOR)

CPOR is a research center established to coordinate research and graduate training efforts among faculty with an interest in pharmaceutical outcomes and policy research on pharmaceuticals, biopharmaceuticals and other health care technology. The center provides medical facilities, pharmaceutical and device companies and governmental agencies with analyses on the safety and cost-effectiveness of medicines in order to achieve a better understanding of the risks and benefits of medical and pharmaceutical interventions.

Research works are focused on understanding the effects and uses of pharmaceuticals in real world populations. Research area covers not only evidence-based medicine (meta-analysis/s systematic review), retrospective database analysis, health economics but also other clinical research including health services research, clinical effectiveness, drug safety research, rational use of drug, drug use evaluation/review, medication safety management

The mission of the program is to conduct research on the effects and uses of pharmaceuticals in populations in order to improve patient outcomes through population-based interventions, policy and system

Previously organized trainings
Sept 2009 Patient reported outcomes & outcomes research
June 2010 Meta-analysis and systematic review
Nov 2010 Meta-analysis and systematic review
April 2011 Retrospective database analysis

SELECTED PUBLICATIONS


STAFF

Main researchers
- Nathorn Chaiyakunapruk PharmD, PhD
- Sirada Maphanta PharmD, BCPS
- Chanthonrat Sithiworanun PhD
- Piyarat Nimpitakpong PhD
- Athargan Nakhum PharmD
- Supachai Insuk PharmD
- Chuenjid Kongkaew PhD
- Arom Jedsadayanmata PharmD, PhD
- Mungkorn Prapunwattana DrPH
- Pakawadee Sermsulpasuk PhD
- Suthathip Pongchaoren MD, PhD
- Peerapon Wong MD
- Teerapon Dhippayom PharmD, PhD
- Nilwan U-pakdee PhD

Graduate students & Research Fellow
- Piyameth Dilokthornsakul PharmD
- Surasak Saokaew PharmD
- Prayut Peewaratanawinit PharmD
- Rosarin Sruamsiri BPharm, MBA
- Wimonchat Tangamornsuksan PharmD (CPOR fellow)

CONTACT INFORMATION
Nathorn Chaiyakunaprk PharmD, PhD
Associate Professor
Director of Center of Pharmaceutical Outcomes Research
Faculty of Pharmaceutical Sciences
Naresuan University
Muang, Phitsanulok 65000
THAILAND
Mobile Phone: +66-84-009-4460
Office Phone: +66-55-961-826
Fax: +66-55-963731
E-mail: chaiyakunapr@wisc.edu
http://www.pha.nu.ac.th/nathorn/
We aim at conducting researches through providing and developing pharmaceutical care services. The research areas include internal medicine, critical care, ambulatory care, primary care, community pharmacy, home health care, health policy, and health promotion e.g. smoking cessation. Pharmacy education and professional training are also of our interests.

Our ongoing research involves roles of “Pharmacy and Therapeutic Committee (PTC)” and other strategies on rational drug use policy.
SELECTED PUBLICATIONS

SELECTED RESEARCH PRESENTATIONS

**SELECTED PHARMACEUTICAL SERVICES**
1. Phuwarattanavivit P, Sakunrak I, Kraiket B. Warfarin clinic at Naresuan University Hospital.
2. Sakunrak I, Maphanta S, Thananithisak P. Medication refill service at Naresuan University Hospital.
3. Unlamlert W, Maphanta S. Critical care service at Intensive Care Unit (ICU), Naresuan University Hospital.
4. Thananithisak C, Kitikannakorn N, Ruengbandit T, Thoopmongkol J. Smoking cessation service at Naresuan Community Pharmacy.
5. Danwilai K. Internal medicine service at Naresuan University Hospital.

**STAFF**

*Main Researchers*
- Dr. Sirada Maphanta
- Dr. Nantawarn Kitikannakorn
- Dr. Teerapon Dhippayom
- Dr. Chuanchom Thananithisak
- Dr. Aulchana Fuangchan
- Asst. Prof. Athagran Nakham
- Itsarawan Sakunrak
- Jeeraya Thoopmongkol

*Graduate students*
- Adinat Umnuaypornlert
- Sirimas Pansang
- Prayuth Phuwarattanavivit
- Naruemon Bamrungsawad

*Research assistant*
- Tidawan Jeenkul
CONTACT INFORMATION
Nantawarn Kitikannakorn, PhD.
Department of Pharmacy Practice
Faculty of Pharmaceutical Sciences
Naresuan University
Muang, Phitsanulok 65000
THAILAND
Tel ++66-55-961841
Fax ++66-55-963731
E-mail: nantawarnk@nu.ac.th
Tobacco Control Research Unit acts as a focal point for tobacco research, education, cessation, and training for Naresuan University as well as for the Thailand lower northern region. It encompasses several faculty members, their students, fellows, and staff, whose work extends from cessation and pharmacotherapy, surveillance and monitoring of tobacco industry, tobacco control project evaluation to action-oriented policy interventions.

SELECTED PUBLICATIONS


STAFF

Main Researchers
- Assistant Professor Dr. Piyarat Nimpitakpong
- Associate Professor Dr. Nathorn Chaiyakunapruk
- Assistant Professor Dr. Narongsak Noothong
- Associate Professor Dr. Pinyupa Plianbangchang
- Dr. Chuanchom Thananithisak

Research assistants
- Nara Thiamkee
- Linda Keawluang

CONTACT INFORMATION
Piyarat Nimpitakpong, PhD.
Assistant Professor
Department of Pharmacy Practice
Faculty of Pharmaceutical Sciences, Naresuan University
Muang, Phitsanulok 65000 THAILAND
Tel ++66-55-963618 Fax ++66-55-3731
E-mail: ohpiyarat@yahoo.com