

1-1-1986

## Seventy Two Years of Pharmaceutical Education Development in Thailand

Mitr Pathipvanich

Sunanta Pongsamart

Follow this and additional works at: <https://digital.car.chula.ac.th/tjps>



Part of the [Pharmacology Commons](#)

---

### Recommended Citation

Pathipvanich, Mitr and Pongsamart, Sunanta (1986) "Seventy Two Years of Pharmaceutical Education Development in Thailand," *The Thai Journal of Pharmaceutical Sciences*: Vol. 11: Iss. 4, Article 5.  
Available at: <https://digital.car.chula.ac.th/tjps/vol11/iss4/5>

This Article is brought to you for free and open access by the Chulalongkorn Journal Online (CUJO) at Chula Digital Collections. It has been accepted for inclusion in The Thai Journal of Pharmaceutical Sciences by an authorized editor of Chula Digital Collections. For more information, please contact [ChulaDC@car.chula.ac.th](mailto:ChulaDC@car.chula.ac.th).



บทความพิเศษ

SPECIAL ARTICLE

## Seventy Two Years of Pharmaceutical Education Development in Thailand

*Mitr Pathipvanich\* Ph.D., and Sunanta Pongsamart\* Ph.D.*

In concurrence with the idea of H.R.H. Prince Jakrabong of Phitsanulok that Thailand was in need of Pharmacist in places where medications were being dispensed such as: military pharmaceutical plants and in hospitals; and with the help of H.R.H. Prince Rangsit of Chinat, convinced the government to pass a law for the establishment of a "School of Compounding Physician" to teach the arts and sciences of preparing medications for use in the treatment and prevention of diseases. On June 2<sup>nd</sup>, 1914, the School of Compounding Physician was established in Rajabhedhayalai Medical College, Siriraj Hospital.

H.R.H. Prince Rangsit of Chinat firmly believed that physician should primarily be involved in diagnostic of diseases, in prescribing drugs and concerned with the effect of drugs on the patient. H.R.H. Prince Rangsit of Chinat further suggested that doctor of medicine should not have the legal right to prepare and dispense medications directly to the consumer. This legal responsibility to handle drugs should be granted only to pharmacists. However, a pharmacist was not allowed to infringe upon the duty of a physician.

The curriculum of "pharmacy" in the initial period required 3 years of course work. The first year involved taking joint basic science courses with the students in doctor of medicine program. These courses were physiology, botany, physics and anatomy. In the second and third year, students would have to take professional courses such as: materia medica, pharmacy, botany, chemistry, Latin and Thai medicine. The first lecturer was Dr. G. Bossoni, an Italian who was a licenced physician as well as a licenced pharmacist. The faculty also included Doctor Youg, Laung Adul and Khun Srisongyos with H.R.H. Prince Rangsit of Chinat himself taught Latin (at that time, all texts and prescriptions were written in Latin). During the third year, students would spend 6 months in fieldwork by working in the private pharmacies and at O-sot Sala (a government medical depot). The pharmacists who worked at O-sot Sala and private pharmacies were licenced from abroad, would supervise the externs throughout this 6 months externships. At the end of the third academic year, the externs must pass a comprehensive examination before they were awarded the degree of Pharmacy Graduate (Ph.G.). The first graduating class (1915) from the School of Compounding Physician, consisted of only two students: Mr. O-sot Kasemsuwan and Mr. Pow Savetaraserani. (These two students applied for studying doctor of medicine at the beginning but after finished pre-medicine courses they transferred to study pharmacy right after the School of Compounding Physician was established and two-years professional courses were offered.)

---

\* Faculty of Pharmaceutical Sciences, Chulalongkorn University.

In 1917, Rajabhedhayalai Medical College, Siriraj Hospital merged with Chulalongkorn University (which was founded on March 26<sup>th</sup>, 1916) with both Division of Medicine and Division of Pharmacy were retained in Rajabhedhayalai Medical College as before.

From the beginning, there were little interest for career in Pharmacy. There were only 2-3 applicants annually. Thus, the curriculum remained relatively unchange from 1921 to 1929. During this period, the curriculum was divided into two parts. The first two years were taught at the Division of Compounding Physician (in the Faculty of Arts and Sciences) in joint session with pre-medicine and science students. Classes were held at "Horwang" building, Wang Mai area on Phra Rama I road (which is now the National Stadium). In the third year, students would take classes in the Division of Compounding Physician, Faculty of Medicine, Siriraj Hospital which is an extension of Chulalongkorn University. Subjects taught in the first year was primarily basic sciences: botany, biology, chemistry, physics and Latin. In the second and third year, students were taught basic sciences as well as pharmaceutical sciences: chemistry, botany, materia medica, galenical pharmacy, dispensing pharmacy, prescription reading and pharmaceutical arithmetic. Most of the pharmacy subjects were taught by an Englishman, A.H. Hale M.P.S., Ph.G. There were also Thai instructors such as: Khun Sithiosot, Khun Bhesajgangovit and Phra Montri.

From 1929 to 1932, there was a slight change in the curriculum. The program was still divided into two parts. In the first year, students would take same courses as the first year sciences students. However, pharmacy students would enroll in the Division of Compounding Physician, Faculty of Arts and Sciences. Subjects taught were mainly basic sciences such as: biology, chemistry and physics. In the second and third year, students would take courses at the Division of Compounding Physician, Faculty of Medicine, Siriraj Hospital, Chulalongkorn University. The second part of the curriculum involved pharmaceutical sciences and fieldwork. Subjects taught were: pharmaceutical chemistry, technical pharmacy, prescription reading, dispensing pharmacy, materia medica, galenical pharmacy and pharmaceutical arithmetic. Again, most of the subjects were taught by A.H. Hale with assistance from Khun Sithiosot and Khun Bhesajgangovit.

On March 22<sup>nd</sup>, 1929, Pharmaceutical Society of Thailand was founded. The officers were :

Phra Montri	President
A.H. Hale	Vice-president
Khun Sithiosot	Secretary
Khun Bhesajgangovit	Treasurer
Chamlong Suvagondha	Social Secretary

In 1934, by Chulalongkorn University Act, Division of Compounding Physician was no longer just a subdivision of Faculty of Medicine and became an independent Department of Pharmacy. Classes were still being held at Siriraj Hospital. However, Department of Pharmacy still did not receive any budget appropriation. A.H. Hale was the only instructor in this period and when his employment was terminated in 1936, Department of Pharmacy almost had to be shut down.

In 1936, there were some pre-medicine graduate applied for places in the Department of Pharmacy. In response to increase interest in pharmacy profession, the executive committee of Faculty of Medicine had set up a sub-committee consisting of Khun Bhesajgangovit, Laung Chaleumcumperawach, Laung Lipitamsripayatt and Chamlong Suvagondha to revise the pharmaceutical curriculum. In addition to revise the curriculum the sub-committee also recommended to upgrade the degree awarded from Ph.G. to Diploma in Pharmacy (Dip. in Pharm.) The revised curriculum came into effect in 1937 and in the same year, Department of Pharmacy began to receive budget appropriation directly from the government. There were many new subjects added to this revised curriculum, for instance: pharmacology, pharmacognosy, pharmaceutical jurisprudence, physiology, clinical pathology, bacteriology, manufacturing pharmacy, pharmaceutical chemistry and pharmaceutical assaying. Most of the instructors were Thais: Laung Lipitamsripayatt, Khun Bhesajgangovit, Khun Katutat, Chamlong Suvagondha, Arch Kanchanalakshana, Kliau Bunnag, Tidtau Bunnag, Chalor Solasachinda, Khasem Pangsrivongse and many others. Dr. Arnold Vichouver was the only foreigner among the instructors.

Field Marshall P. Piboonsongram who was Rector of Chulalongkorn University in 1939 foresaw the importance of trained pharmacist in our society and consequently, appointed H.E. Dr. Tua Lapanukrom, Head of Sciences Department and Deputy Minister of the Ministry of Economic Affairs, to head the Department of Pharmacy effective May 19<sup>th</sup>, 1939. Dr. Tua was the first Director of Department of Pharmacy, Chulalongkorn University.

Dr. Tua Lapanukrom devoted both time and energy to pattern the pharmaceutical curriculum after that of the Western nations, which at that time was a four-years program leading to Bachelor of Sciences degree. At the end of 1939, the government approved fund for the construction of building to house the Department of Pharmacy on the main campus area of Chulalongkorn University. The building was inaugurated on June 24<sup>th</sup>, 1941 (which was turned over to Faculty of Fine and Applied Arts, Chulalongkorn University since 1982)

During the first two years of four years curriculum, students would take classes at the pre-pharmacy school, Faculty of Arts and Sciences. The subjects were biology, chemistry, physics, botany, etc. During the last two years students would take classes at the Department of Pharmacy which the subjects primarily being pharmaceutical sciences: technical pharmacy, manufacturing pharmacy, bacteriology, pharmaceutical chemistry, pharmaceutical assaying, pharmacognosy, Thai medicinal plants, dispensing pharmacy and pharmacology. New subjects introduced in this curriculum were biochemistry, engineering chemistry, biological assaying, professional pharmacy and food chemistry. Most of the instructors were Thais. However, field work was still being conducted off campus.

In 1942, Department of Pharmacy was transferred from Chulalongkorn University to the University of Medical Sciences which consisted of four Faculties : Faculty of Medicine, Faculty of Pharmacy, Faculty of Dentistry and Faculty of Veterinary. However, classes were still being held at the Pharmacy building in Chulalongkorn University until 1982.

Class of 1943 was the first graduating class being awarded Bachelor of Sciences in Pharmacy degree (B.Sc. in Pharm.) and seven years later, curriculum leading to Master of Science in Pharmacy degree was offered. The four-years curriculum leading to B.Sc. in Pharmacy was continuously revised with numerous elective subjects being offered. This four-years program lasted until 1957, at which time the curriculum was increased to five-years program with the B.Sc. in Pharmacy degree given. The move to increase the curriculum from four-years to five-year actually started in 1955 but finalized in 1957.

From 1957 to 1964, the five-years curriculum was not divided into 2 parts (pre-pharmacy and professional) as before. Students would take all their classes at the Faculty of Pharmacy, University of Medical Sciences. In 1965, the continuous five-years curriculum was reversed to curriculum involving two years pre-pharmacy (students would jointly take basic science courses with pre-medicine, pre-dentistry, pre-veterinary, sciences and pre-medical technology students at the Faculty of Sciences) and three - years professional pharmacy courses would be taken at the Faculty of Pharmacy.

In 1969, the name of the University of Medical Sciences was changed to Mahidol University, to honour the "Father of Medicine" H.R.H. Prince Mahidol of Songkhla, the Prince Father of the present King Rama IX. At the same year another Faculty of Pharmacy was established, which the official name was Faculty of Pharmacy Payathai, Mahidol University, located on the Sriyudhya road. In 1972, the Faculty of Pharmacy (the first established Faculty of Pharmacy which was located in Chulalongkorn University campus) was again transferred from Mahidol University to Chulalongkorn University until at present and the Faculty of Pharmacy Payathai was then called Faculty of Pharmacy, Mahidol University until now. Faculty of Pharmacy, Chulalongkorn University has been changed to Faculty of Pharmaceutical Sciences in 1973. The Faculty of Pharmaceutical Sciences, Chulalongkorn University moved to the present site at Siam Square in 1982.

Today, there are six institutions offering five-years curriculum leading to B.Sc. in Pharmacy degree:

The University of Medical Sciences has been changed the name to Mahidol University on March 2<sup>nd</sup>, 1969, set up another Faculty of Pharmacy with official title as Faculty of Pharmacy, Payathai,

After the first found Faculty to Pharmacy was transferred to Chulalongkorn University in 1972 the latter established Faculty of Pharmacy was then called Faculty of Pharmacy, Mahidol University. The first class graduated in 1974.

Chiang Mai University began teaching courses in Pharmacy in 1966 and revolved into Faculty of Pharmacy in 1972 with the first class graduated in 1969.

Prince of Songkhla University began offering curriculum in Pharmacy in 1978 with the first class graduated in 1984.

Khonkaen University set up Faculty of Pharmaceutical Sciences in 1980, the first class will graduate in 1987.

Silpakorn University established her Faculty of Pharmacy in 1985 and began accepting student into her program this year.

The Curricula of these six institutions are slightly different, however, the main core courses are similar. Current curricula are summarized in table 1 and elective subjects are in table 2.

**Table 1 THE PHARMACEUTICAL CURRICULUM IN THAILAND**

Course Title	C.U.		M.U.		CM.U.*		PS.U.		K.U.		S.U.	
	(Cr.)	Y.	(Cr.)	Y.	(Cr.)	Y.	(Cr.)	Y.	(Cr.)	Y.	(Cr.)	Y.
General Chemistry	(7)	1	(7)	1	(8)		(8)	1	(4)	1	(6)	1
Physics	(7)	1	(5)	1	(8)		(8)	1	(6)	1	(7)	1
			(2)	2								
Organic Chemistry	(3)	1	(2)	1	(8)		(8)	2	(4)	1	(3)	2
	(3)	2	(3)	2								
Biology	(8)	1	(7)	1	(8)		(8)	1	(4)	1	(4)	1
			(4)	2								
Mathematics	(4)	1	(4)	1	(6)		(8)	1	(3)	1	(3)	1
Statistics	(3)	2	(2)	1	(3)		(3)	2	(3)	1	(3)	2
Computer program	(3)	2										
English	(6)	1	(6)	1	(6)		(6)	1	(6)	1	(6)	1
			(4)	2	(3)		(3)	2				
Social Sciences					(2)				(2)	1	(3)	1
Civilization	(3)	2										
Behavioral Sciences	(2)	2			(3)						(3)	2
Physical Chemistry	(2)	2			(4)		(4)	2	(3)	1	(3)	2
Food for Life	(2)	2										
Food Chemistry			(4)	5	(5)				(3)	5		
Biochemistry			(6)	2	(6)		(5)	3	(4)	2		
Clinical Biochemistry							(2)	3				
Biopharmacy	(3)	2					(3)	5			(6)	2
	(4)	3									(6)	3
											(5)	4
Microbiology	(6)	4	(6)	3	(5)		(6)	4	(4)	2		
Parasitology					(2)				(2)	2		
Anatomy and Physiology	(10)	3	(8)	3	(9)		(4)	2	(4)	1		
							(6)	3	(4)	2		
Principle of Disease	(2)	3			(2)							

**Table 1 THE PHARMACEUTICAL CURRICULUM IN THAILAND (Cont.)**

Course Title	C.U.		M.U.		CM.U.*		PS.U.		K.U.		S.U.	
	(Cr.)	Y.	(Cr.)	Y.	(Cr.)	Y.	(Cr.)	Y.	(Cr.)	Y.	(Cr.)	Y.
Basic Pathology									(4)	3	(5)	5
Society and Culture	(3)	2										
Politics and Government							(2)	2				
Earn Culture									(2)	1		
Philosophy			(2)	2								
Psychology							(2)	2	(3)	2	(2)	1
Sociology			(2)	1								
Economics	(2)	2	(2)	1	(3)		(2)	3	(2)	2	(4)	2
Accounting	(2)	2			(3)		(2)	2	(3)	3		
Pharmaceutical Orientation	(2)	1	(2)	2	(1)		(1)	2	(1)	2	(1)	1
Pharmacy in Primary Health Care											(1)	1
Public Health	(2)	2	(2)	3	(3)		(2)	3	(2)	2	(2)	3
Pharmaceutical Calculation and Prescription	(2)	2			(2)		(1)	2	(2)	2		
Analytical Chemistry									(3)	1	(4)	2
Inorganic Pharmaceutical Chemistry	(3)	3	(4)	3	(3)		(3)	3	(4)	3		
Pharmaceutical Chemistry											(2)	2
											(8)	4
Botany			(4)	2	(4)							
Pharmaceutical Botany	(6)	3	(2)	2	(2)		(6)	3	(3)	3		
			(4)	3								
Biological Products					(6)						(3)	4
Pharmacognosy	(6)	4	(6)	3	(6)		(6)	4	(5)	4	(3)	2
											(3)	3
Pharmaceutical Control					(14)		(4)	3			(2)	2
							(8)	4			(8)	3
											(3)	5
Pharmaceutical Analysis	(2)	3	(8)	4			(4)	2	(8)	3		
	(8)	4										
Pharmaceutical Technology			(2)	2	(4)				(8)	2		
									(6)	3		
Pharmaceutics	(6)	3			(16)		(8)	3			(8)	3
	(6)	4					(6)	4			(6)	4
											(6)	5
Biopharmaceutics	(2)	4	(4)	4	(2)		(2)	4	(4)	4		
Dispensing Pharmacy	(6)	5	(3)	5	(2)		(3)	5	(3)	4		
Pharmacology	(4)	3	(8)	4	(7)		(8)	4	(8)	3	(8)	4
	(8)	4										
Clinical Pharmacology	(4)	5	(5)	5			(3)	5	(5)	4		
									(5)	5		
Pharmacotherapeutics											(5)	5
Clinical Pharmacy			(3)	5	(2)							

**Table 1 THE PHARMACEUTICAL CURRICULUM IN THAILAND (Cont.)**

Course Title	C.U.		M.U.		CM.U.*		PS.U.		K.U.		S.U.	
	(Cr.)	Y.	(Cr.)	Y.	(Cr.)	Y.	(Cr.)	Y.	(Cr.)	Y.	(Cr.)	Y.
Drug Evaluation									(2)	5		
Drug Knowledge											(2)	3
Hospital and Comunity Pharmacy	(3)	5	(2)	5	(4)		(5)	5	(2)	4		
Drug Specialties and Information											(3)	5
Pharmaceutical Administration	(3)	5	(3)	4	(3)		(2)	4	(2)	4	(3)	3
											(2)	4
Pharmaceutical Jurisprudence	(2)	5	(2)	5	(2)		(2)	5	(2)	4	(2)	5
Organic Pharmaceutical Chemistry	(6)	5	(6)	4	(6)		(6)	5	(3)	4		
									(3)	5		
Toxicology	(4)	5			(2)		(3)	5	(5)	4	(3)	5
Manufacturing Pharmacy	(6)	5	(3)	4	(6)		(3)	4	(6)	4	(6)	5
			(3)	5			(3)	5				
Electives	(4)	5	(6)	5	(15)		(4)	2	(3)	2	(4)	4
									(4)	5	(4)	5
Special Project			(2)	5								
Professional Practice	500 hrs		300 hrs		300 hrs		300 hrs		500 hrs		500 hrs	

- \* = INCOMPLETE DATA
- C.U. = CHULALONGKORN UNIVERSITY
- M.U. = MAHIDOL UNIVERSITY
- CM.U. = CHIANG MAI UNIVERSITY
- PS.U. = PRINCE OF SONGKHLA UNIVERSITY
- K.U. = KHONKAEN UNIVERSITY
- S.U. = SILPAKORN UNIVERSITY
- (Cr) = CREDIT
- Y = ACADEMIC YEAR THAT COURSE BEING TAKEN

**Table 2 ELECTIVE SUBJECT**

University	Course Title (credit)		
Chulalongkorn University Faculty of Pharmaceutical Sciences	Cosmetic Science I, II (2) (2)	Clinical Pharmacy I, II (2) (2)	Drug Marketing and Detailing I, II (2) (2)
	Special Problems in Manufacturing Pharmacy (2) (2)	Experimental in Medicinal Chemistry I, II (2) (2)	Special Problems in Organic Pharmaceu- tical Chemistry I, II (2) (2)
	Advanced Medicinal Analysis I, II (2) (2)	Advanced Biopharmacy I, II (2) (2)	Enzyme and Drug Bio- transformation I, II (2) (2)
	Special Problems in Biopharmacy I, II (2) (2)	Food Chemistry I, II (2) (2)	Food Additive I, II (2) (2)
	Nutrition I, II (2) (2)	Plant Chemistry I, II (2) (2)	Advanced Pharma- cognosy I, II (2) (2)
	Microbiological Analysis (4)	Biomedical Electronic I, II (2) (2)	Physiological Methods in Drug Research I, II (2) (2)
	Special Problems in Pharmacology I, II (2) (2)	Special Problems in Toxicology I, II (2) (2)	Supervised Reading (1)
	Biochemical Pharmacology (2)	Drug Metabolism and Toxicological Implications (1)	Experimental Model for Study of Drug Metabolism and Toxicology (1)
	Clinical Toxicology (2)	Pharmacist and Community Health (2)	Community Pharmacy (2)
	Bioproducts (4)	Industrial Microbiology (4)	Health Policy; Planning and Management (2)
Mahidol University Faculty of Pharmacy	Nutrition in Health and Disease (4)	Microbiological Control (4)	Manufacture of Pharmaceutical Dosage form (4)



**Table 2 ELECTIVE SUBJECT (Cont.)**

University	Course Title (credit)		
Khonkaen University Faculty of Pharmaceutical Sciences	Computer in Pharmacy (4)	Drug Control (4)	Business English (4)
	Drug Marketing (4)	Hospital Pharmacy (4)	Cosmetic and Dermatological Preparation (4)
	Community Pharmacy (4)	Special Study in Herbal Medicine (4)	Special Problem in Organic Pharmaceu- tical Chemistry (4)
	Cosmetic and Dermatological Preparation (4)	Special Training in Toxicology (4)	Advanced Manufacturing Pharmacy (4)
	Drug Control (4)	Drug Marketing (4)	
	Clerkship in Community Pharmacy (4)		
Silpakorn University Faculty of Pharmacy	Special Problems in Biopharmacy (4)	Current Topics in Metabolic and Functional Disorder (4)	Nutrition and Dietotherapy (4)
	Special Problems in Pharmaceutics (4)	Cosmeticology (4)	Hospital Pharmacy (4)
	Clinical Pharmacy Clerkships (4)	Special Problems in Community Pharmacy (4)	Pharmacist and Rural Health Care (4)
	Drug Marketing and Detailing (4)	Current Topics in Pharmaceutical Chemistry (4)	Special Problems in Medical Analysis (4)
	Special Problems in Pharmacology (4)	Environmental Toxicology (4)	Pharmacology Neuropsychoactive Drugs (4)
	Special Problems in Pharmacognosy (4)	Indigenous Medicines (4)	Agropharmaceuticals (4)
	Special Problems in Manufacturing Pharmacy (4)	Industrial Hygiene (4)	Plant Managemant (4)
	Quality Control and Assurance System (4)		
	Dermatological Preparation I, II (3) (3)	Special Problems in Pharmaceutical Preparation I, II (3) (3)	Special Problems in Organic Pharmaceu- tical Chemistry I, II (3) (3)
	Prince of Sonkhla University Faculty of Pharmacy		

**Table 2 ELECTIVE SUBJECT (Cont.)**

University	Course Title (credit)		
Prince of Sonkhla University Faculty of Pharmacy	Advanced Medicinal Analysis I, II (3) (3)	Pharmaceutical Biological control I, II (3) (3)	Phytochemistry I, II (3) (3)
	Advanced Pharmacognosy I, II (3) (3)	Medicine from Natural Products I, II (3) (3)	Special Problems in Pharmacognosy I, II (3) (3)
	Drug Marketing (3)	Manufacturing Pharmacy Management (3)	Drug Information Center I, II (3) (3)
	Special Projects in Pharmacy Administration I, II (3) (3)	Social Pharmacy (3)	Cosmetic Production I, II (3) (3)
	Aerosols I, II (3) (3)	Advanced Manufacturing Pharmacy I, II (3) (3)	

### References

1. Pharmacy Graduate 1954, Pharmaceutical Education in Thailand, Faculty of Pharmacy, Bangkok.
2. Book of 36<sup>th</sup> Anniversary of Pharmaceutical Education (1949), The Evolution of Faculty of Pharmacy in the period 1913-1949. Bangkok.
3. Prachote Plengvidhya (1982), Bicentennials of Pharmaceutical Education in Rattanakosin, in Pharmaceutical Sciences B.E. 2325-2525, p.85-113, Chulalongkorn University, Bangkok.