

## Transforming pharmacy education through transnational partnerships

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## Evolution of Pharmacy practice

- Shift in focus:
  - Manufacturing
  - Distribution / dispensing
  - Patients – Rational use of medications to attain the most optimal outcome
- Physicians and pharmacists
  - Used to practice independently
  - Now part of healthcare team



## Pharmacists' patient care process

- Collect
- Assess
- Plan
- Implement
- Follow-up
  - Monitor
  - Evaluate



Joint Commission of Pharmacy Practitioner (JCPP)  
Pharmacists' Patient Care Process Workgroup



# Synergism in Pharmacy Education: A New Dimension

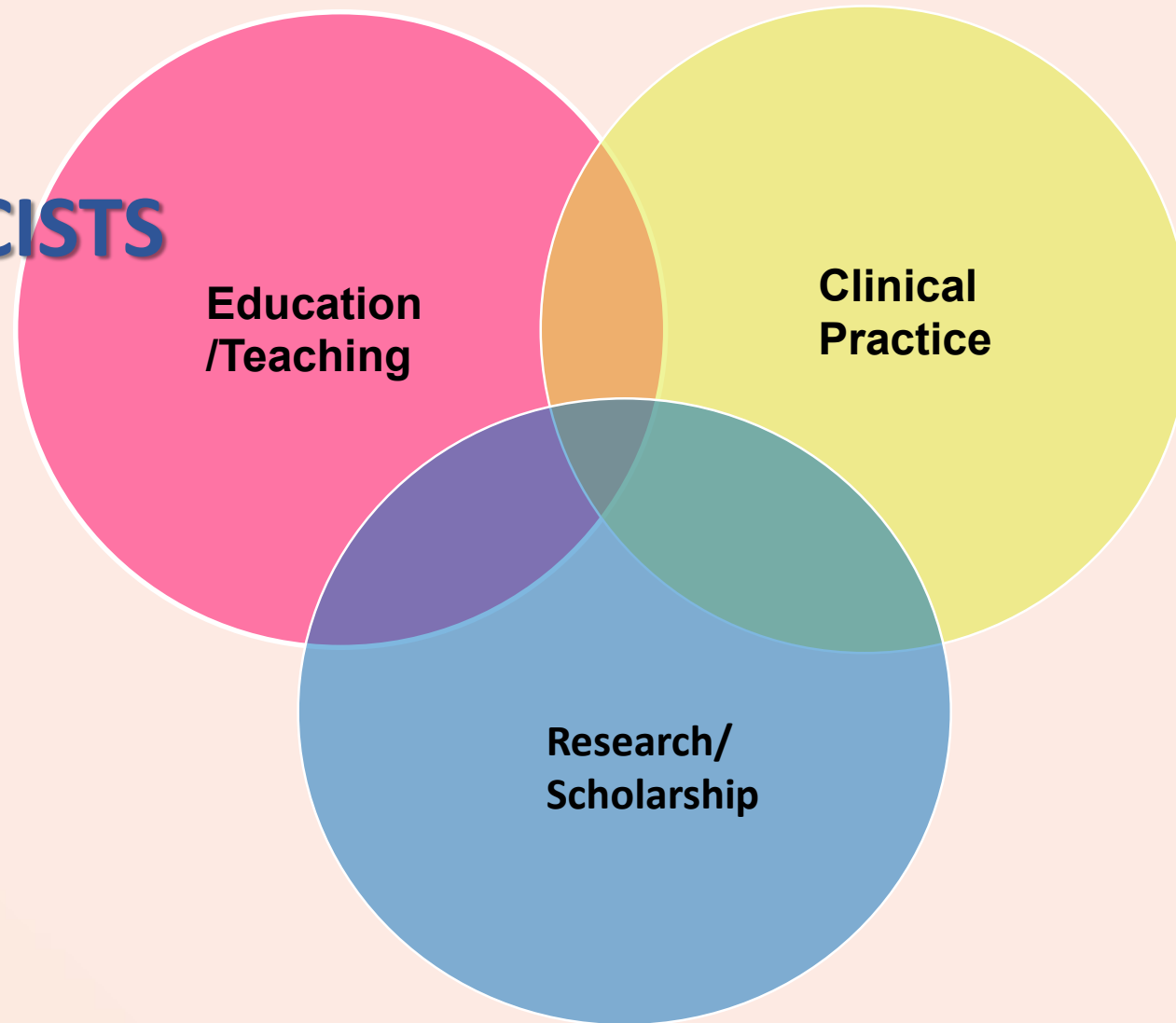
 UI Health | UIC  
**Clinical Pharmacist  
Practice Sites**



| Hospital (22)  | Ambulatory Clinics (39)  |
|--|--|
| <ul style="list-style-type: none"> <li>-<b>Critical care:</b> NSICU, MSICU, Transplant, ED</li> <li>-<b>Medicine:</b> General, Liver, Cardiology, Neurosurgery Stepdown</li> <li>-<b>Pediatrics:</b> General, PICU, NNICU, ICN</li> <li>-<b>ID</b></li> <li>-<b>Anesthesiology(OR)/Pain</b></li> <li>-<b>Oncology:</b> Medical, Stem Cell Transplant</li> <li>-<b>Warfarin</b> pharmacokinetics</li> <li>-<b>Pharmacogenomic:</b> personalized medicine</li> </ul> | <ul style="list-style-type: none"> <li>-<b>Dialysis</b></li> <li>-<b>Renal Hypertension</b></li> <li>-<b>Family Medicine</b></li> <li>-<b>Medicine Sub-specialties:</b> Heart Center, Rheumatology, Liver, Pulmonary, HIV, Neurology, Diabetes</li> <li>-<b>Oncology</b></li> <li>-<b>Pediatrics</b></li> <li>-<b>Women's Health</b></li> <li>-<b>Organ transplant</b></li> <li>-<b>Indigent Care</b></li> <li>-<b>Psychiatry</b></li> <li>-<b>Pharmacist-Managed:</b> Anti-thrombosis, Medication Therapy Management (MTM), Smoking Cessation</li> <li>-<b>Telemedicine:</b> HIV/ID, hepatitis</li> </ul> |



## ROLES OF CLINICAL PHARMACISTS



# Synergism in Pharmacy Education: A New Dimension



Since 1994

| US Universities                   | Thai Universities                  |
|-----------------------------------|------------------------------------|
| Auburn University                 | Chiang Mai University              |
| Ohio State University             | Burapha University                 |
| Purdue University                 | Chulalongkorn University           |
| University of Arizona             | Eastern Asia University            |
| University of Florida             | Huachiew Chalermprakeit University |
| University of Hawaii, Hilo        | Khon Kaen University               |
| University of Illinois at Chicago | Maharakham University              |
| University of Iowa                | Mahidol University                 |
| University of Kentucky            | Naresuan University                |
| University of Maryland, Baltimore | Payap University                   |
| University of Minnesota           | Phayao University                  |
| University of North Carolina      | Prince of Songkla University       |
| University of Texas               | Rangsit University                 |
| University of Utah                | Siam University                    |
| University of Washington          | Silpakorn University               |
| University of Wisconsin, Madison  | Srinakharinwirot University        |
| West Virginia University          | Thammasat University               |
|                                   | Ubon Ratchathani University        |

- >120 faculty obtained doctoral degrees in USA supported by Thai government scholarships
- 5-yr BS changed to 6-yr PharmD
- Pharmacist:Population ratio:  
1994 – 1:10,552  
2016 – 1:2,261
- Role of pharmacists endorsed by national health service initiatives and practice guidelines
- >500/year high quality international publications from original 8 Thai faculties of pharmacy



# Synergism in Pharmacy Education: A New Dimension



- Plan to start offering Pharm.D. program in 2014
- 5-year plan to train clinical pharmacy faculty and preceptors
- Systemically training program for clinical pharmacists in 3 TMU hospitals
- Second 5-year plan approved and started in 2020



# Synergism in Pharmacy Education: A New Dimension



- UIC faculty visiting TMU and affiliated hospitals
- TMU pharmacists came to UIC for clinical education (21 since 2014)
- TMU students came to UIC for summer program on 'Contemporary clinical pharmacy education and practice'
- TMU graduates enrolled in UIC Pharm.D. program
- Collaboration on developing clinical specialist track at TMU hospitals
- Collaboration with ACCP on Pharmacotherapy and Clinical Skills Development programs
- ACCP Taiwan Chapter





THE UNIVERSITY OF ILLINOIS AT CHICAGO PHARMACY

THE UNIVERSITY OF ILLINOIS AT CHICAGO PHARMACY

# 2019 International Summer Program on Contemporary Clinical Pharmacy Practice and Education





## Collaboration for advancing clinical education and practice

- Collaborative degree programs
- Faculty and preceptors training programs
- Pharmacists and faculty members enrolled in UIC Pharm.D. program
- UIC faculty delivering education programs in host countries

During COVID-19 pandemic:

- Online conferences and education programs
- APPE type experiences



# Synergism in Pharmacy Education: A New Dimension

- ❖ Recorded lectures
- ❖ Live on-line case discussions
- ❖ UIC faculty visit to Malta
- ❖ Clinical rotations at UIC
- ❖ Research collaboration



UNIVERSITY OF MALTA  
*L-Università ta' Malta*

Students from >20 countries  
Since 2014



USA-EU Collaborative Degree  
**Postgraduate Professional  
Doctorate in Pharmacy**  
University of Malta (Malta) in collaboration  
with University of Illinois at Chicago (USA)






## Assessing the impact of transnational partnerships

- Sustainable and cascading collaborations
- Pharmacists and faculty members empowered to impact education and patient care





# UIC PHARMACIST

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# UNIVERSITY OF ILLINOIS AT CHICAGO COLLEGE OF PHARMACY



# POZEN Plaza

## Global Partners

The UIC College of Pharmacy's longstanding relationship with National Taiwan University has elevated pharmacy education and patient care in Taiwan and beyond

Established by more than 150 years, the UIC College of Pharmacy and National Taiwan University (NTU) maintain a close, vibrant bond and forged over nearly two decades of interaction and formally solidified by a 2007 gift from NTU's renowned pharmaceutical executive vice president, Dr. Hsin-Hsin Hsu.

UIC's support of NTU established Taiwan's first PharmD program, being the provision for an ever-growing array of academic and clinical opportunities that have enhanced patient care, together with new opportunities and motivated clinical pharmacy practice in the Asian nation.

"NTU is a hub and we're proud to be a part of that," says Dr. Alan Lee, professor emeritus and director of International Clinical Pharmacy Education at UIC.

**Developing a beneficial relationship**

Two decades ago, Lee participated in a national planning conference in Taiwan, a big first brought him with the campus of NTU, Taiwan's most prestigious public university and one of the globe's top-ranked institutions of higher learning. As Lee maintained communications with NTU faculty and students, following his visit and later connected personally at his home schools together, a deeper relationship blossomed.

"Over time, we got to know each other well and saw the benefits of being engaged with one another," Lee says, noting that UIC has forged vibrant international alliances, building meaningful partnerships with the likes of Peking Union Medical College in Beijing and the National University of Singapore.

UIC's longstanding internal relationship with NTU (approximate date: formal partnership in 2007) when Hsu, as NTU president, visited UIC, established the Joint UIC-National Taiwan University Doctoral Development Fund at UIC.

UIC faculty have helped NTU update course content, served as speakers at NTU-hosted symposiums on clinical practice and leadership in pharmacy practice, ran programs on clinical teaching skills and provided the development of UIC's computer pharmacy program. UIC also helped NTU open Taiwan's first operating room pharmacy, which included having NTU pharmacists at UIC hospital and clinics while UIC personnel also advised on the launch of an ambulatory clinic at NTU that currently provides training in pharmacy across Taiwan.

"They are doing at NTU and they're taking what they've learned to improve clinical pharmacy practice, education and patient care," says Dr. Jon Engle, UIC senior associate dean responsible for international affairs, and vice Executive Director of Accreditation of ACPE. "They've been committed on both sides in making this a true partnership so that we're all making a difference."

Dr. Paul Li, an associate professor at the NTU School of Pharmacy and UIC's former PharmD instructor, contributed to transforming pharmacy education at NTU.

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**A model for other international partnerships**

The success of UIC's partnership with NTU has led the College of Pharmacy to seek similarly fruitful collaborations with other international partners, establishing relationships with institutions in more than a dozen countries, including Thailand, Malaysia and the Philippines.

"Part of our mission is to serve society, and that service isn't limited to the Chicago area," UIC College of Pharmacy Dean Dr. Glen Schuchman says. "Our relationship with NTU has helped us better define the value we can bring to these relationships."

With NTU, Lee says UIC has been able to improve global pharmacy education by advancing education, practice and scholarship to drive improved patient care.

**The value of UIC in an expanding and vibrant growing region**

"The value of UIC is an opportunity and vibrant growing region for all the pharmacists and students from NTU," Lee says. "We have pharmacists, having the same discipline, can learn, create a vision, light the platform and build a bridge."

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