DRUG DISCOVERY ALLIANCES INITIATIVE FOCUSING ON

NATURAL PRODUCTS

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Drug Discovery Alliances Expert Working Group (DA-EWG)

Mission Promote cross-border open innovation in Asia to deliver innovative drugs to people in Asia

Strategy Focus on critical drug R&D processes and promote them in collaboration with Asian countries

The APAC Natural Product Drug Discovery Consortium (ANPDC)

- A key function of APAC's DA to drive drug discovery and make use of open innovation platform in order to achieve the launch of innovative medicines for the people in Asia

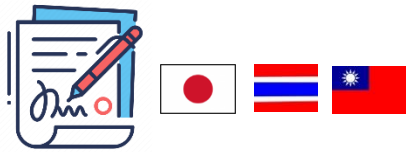
Objective and Uniqueness

- To construct *unique* and *successful* collaboration mechanism in Asia for the drug discovery using natural resources
  1. APAC driven consortium: under the "Guideline", participants need to commit promoting cross-border open innovation and capacity building
  2. Asian-wide consortium: Two Japanese pharma companies and many academia in Thailand and Taiwan are joining the consortium.
  3. Synergy between academia and industry: the member academia have established unique natural product library, Japanese industry has developed competitive drug discovery know-hows and technology
  4. Capacity building of Asian researchers and technology transfer: all the processes are done by in-kind contribution by Asian countries and Japanese pharma. This basic policy encourages Asian academia and Japanese pharma companies to evalua potential of natural products

Overview of the ANPDC collaboration in Thailand

2018

- Signing of the International Network Agreement on 15th October 2018 (APAC NPDD Consortium)
- The 1st collaborative project (Pre-pilot)



2019

- The 1st research intern (ECDD vs. Takeda)
- The 2nd collaborative project

2020

- The 2nd & 3rd research intern
  - Siriraj vs. Takeda
  - NSTDA vs. Eisai
- The 3nd – 5th collaborative project

2021

- The 6th - xth collaborative project

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天然物創薬コンソーシアム発足

製薬協 創薬にアジアの資源を活用

The Asahi Shimbun

Asia & Japan Watch

今年２月、天然物創薬について学ぶため、１人の男性研究者が来日した。タイ・バンコク出身のフォントン・カンジャナシリラットさん（２９）。日本製薬工業協会など、アジアの１３団体でつくる「アジア製薬団体連携会議」（ＡＰＡＣ）が、天然物創薬のプロジェクトを進めるために招いた初めての研修生だ。

アジアには豊…

こちらは有料会員限定記事です。有料会員に

Timeline of the Collaborative Projects

2018

1st project: June 2018
Pre-pilot project

Signing of the International Network Agreement on 15th October 2018

2019

Feb 2019
the 1st research intern

2nd project: Nov 2019
Natural product screening using HTS & iPSC technology

2020

Jan 2020
the 2nd & 3rd research intern

3rd project: July 2020
Tech transfer from Eisai to BIOTEC

4th project: Aug 2020
Phenotypic screening of natural products for potential use in Neurology & Oncology

5th project: Nov 2020
Target identification of hit compounds

2021

6th project: Apr 2021
Natural product screening using Eisai technology

two or more upcoming Projects

Collaborative Projects: Plan and Results

Year	Project	Plan/Objective(s)	Result(s)	Remark
2018	• Pre-pilot project on natural product screening using HTS	• System testing	✓ Done	
2019	• Tech transfer (the 1st research intern)	• 1 researcher/year	✓ Done	
	• Natural product screening using HTS & iPSC technology (Takeda-ECDD)	• Setup iPSC system • Find hit compounds • 10,000 screening	✓ Done ✓ 40 hits found ✗ ~5,000 screening	
2020	• Tech transfer (the 2nd & 3rd research intern)	• 2 researchers/year	✓ (1 on site & 1 online)	COVID-19 outbreak
	• Tech transfer from Eisai to BIOTEC (Eisai-BIOTEC)	• Develop crude extract library • tech transfer on phenotypic screening • Medicinal chemistry & drug design consultation	✓ 254 samples ✓ 1 technique ✓ Done	
	• Phenotypic screening of natural products for potential use in Neurology & Oncology (Takeda-Siriraj)	• Establish a platform for neurology & cancer drug screening • Find hit compounds	**Ongoing study**	
	• Target identification of hit compounds (Takeda-ECDD)	• Develop testing processes to identify target proteins • Structure–activity relationship (SAR) analysis	**Ongoin**	
2021	• Natural product screening using Eisai technology (Eisai-BIOTEC)	• Setup and develop testing processes for natural product screening • Develop the compound library system	**Ongoin**	

ศูนย์ความเป็นเลิศด้านชีววิทยาศาสตร์ (องค์การมหาชน)
Thailand Center of Excellence for Life Sciences
(Public Organization)