

**【イベント】**  
**第16回アジア天然物会議 (ANPC)**

**【概要】**

第16回アジア天然物学会は2023年8月31日に開催されました。エジプト、中国、米国、日本、台湾など5か国の6人の研究者が天然物化学に関する発表を行いました。

発表者たちは、メタボロミクスや生物変換などの天然物分野の最新のアプローチや、薬物発見の分野での薬用植物の利用、また新たな副次代謝産物を誘導するための生物系での相互作用の研究などについて議論しました。最後に、天然物が抗ウイルス剤として果たす役割についても説明しました。

この会議は、天然物のさまざまな側面での価値と可能性をさらに明らかにし、天然物の開発と研究に新たな視点を提供しました。

**Concanavalin A (Con A)** is a plant lectin derived from *Canavalia ensiformis* Jack beans which induces a well-established AIH model in mice that simulates the pathophysiology of AIH disease in humans.

A single intravenous dose of Con A in mice can initiate immune cell infiltration, mainly neutrophils, and T-cells, leading ultimately to liver inflammation and necrosis. The main T-cells involved in Con A-induced liver injury are CD4<sup>+</sup> T-cells with their two subsets, T-helper Th-1 and Th-2 that produce different cytokines. TNF- $\alpha$  is the key cytokine of Th1, while IFN- $\gamma$  and IL-6 are among the main cytokines of Th2.

**Conclusion** In this study, we investigated the potential anti-pulmonary fibrosis effects of the natural compound specuzehaide (SN) both *in vivo* and *in vitro*.

**Yhiya Amen 氏の発表スライドの一例**

**Sea lamprey: The Vampire Fish**

- Jawless, eel like fish parasites native to the Atlantic Ocean
- Invasive species in the Great Lakes of North America
- Attaches to the body of the fish and feeds on the blood and bodily fluids
- Huge economic loss to the fishing industry in the mid 1900s

**Yanliang Wu 氏の発表スライドの一例**

LCMS-based metabolomic  
 NMR-based metabolomic

Data analysis

- ✓ The ATP interaction in triple culture had the richest profile with 750 mass entities.
- ✓ In microbial interaction at fungal level (AT) around 50 unique chemical entities have been induced which were not produced in monocultures.
- ✓ For cross interaction between bacteria and fungi, the extract of *Asai* culture (between *Trichoderma* and *Bacillus*) had the most abundant of 36 unique mass features.
- ✓ Interestingly, a group of induced chemical features had been observed in the triple culture of ATP. Newly induced NMR signal depended on ITS and ATIS of interaction level, two of these signals located in aromatic region (B, 7 and B, 3 zone).
- ✓ In general, the antibacterial activity of mixed culture extracts was stronger than the single culture.
- ✓ The methanolic extract of mixed culture of two microbial kingdom: bacteria (B) and fungi (F) showed a potent inhibitory effect against human pathogen bacteria.

**Sonam Tamrakar 氏の発表スライドの一例**

**Introduction**

- A virus is a small infectious organism—much smaller than a fungus or bacterium—that must invade a living cell to reproduce (replicate).
- The twenty-first century has witnessed a wave of severe infectious disease outbreaks, not least the COVID-19 pandemic, which has had a devastating impact on lives and livelihoods around the globe.
- Coxsackie B virus belongs to the Picornavirus family and can cause a variety of diseases, Coxsackie group B virus is responsible for several syndromes:
- Viral prodrome including fever, fatigue, malaise, myalgia, gastrointestinal upset such as nausea, vomiting, diarrhea and abdominal pain

Fahd Mohamed Amin 氏の発表スライドの一例

**Moustafa Zohair 氏の発表スライドの一例**

**Flow chart of PDMA**

**Finding Candidate Precursors for New Glucosides by PDMA**

Validate candidate precursors

TeSheng Chang 氏の発表スライドの一例

**Future Vision :**

**International Natural Products Conference (INPC)**



In the near future, we plan to start INPC and other branch conferences. We hope to expand our conference activities and make opportunities to have more collaborative research around the world.