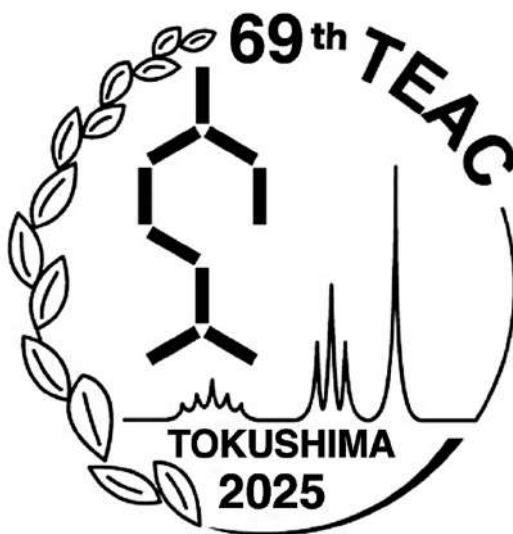


**The 69<sup>th</sup>**  
**Symposium on the Chemistry of Terpenes,**  
**Essential Oils and Aromatics**  
**TEAC 70th Anniversary Commemoration Program**  
**Participants Index**

November 1 – 4, 2025  
Tokushima Bunri University, Japan



Organized by: Symposium on the Chemistry of Terpenes, Essential Oils and Aromatics  
Co-organized by: The Chemical Society of Japan, The Pharmaceutical Society of Japan, The Japanese Society of Pharmacognosy, Tokushima Bunri University  
Supported by: Japan Oil Chemists' Society, The Society of Synthetic Organic Chemistry, Japan (SSOCJ), Tokushima Prefecture Tourism Association, Phytochemical Society of Asia (PSA), Natural Products Research Academy, Natural Products: Chemistry, Pharmacology and Nutrition (NPCPN)



## Access to Tokushima Bunri University and Campus Map

**Address:** Tokushima Bunri University, Tokushima Campus (Faculty of Pharmaceutical Sciences) Nishihama, Yamashiro-cho, Tokushima 770-8514, Japan

Further details are also available on the university website:

<https://www.bunri-u.ac.jp/about/campus/tokushima/tokushima.html>

## Access to the Tokushima Campus

### From JR Tokushima Station

The campus is located along National Route 55 in Yamashiro-cho, Tokushima City. Take a Tokushima City Bus bound for *Nanbu Junkan (South Circular, Left Route)* or *Yamashiro-cho (Fureai Kenkokan)*.  
Travel time: approx. 10 minutes.  
Get off at *Bunri Daigaku-mae* (in front of Bunri University).

### By Highway Bus (round trip services available):

- Tokushima – Takamatsu: 1 hr 30 min (24 services/day)
- Tokushima – Matsuyama: 3 hr 10 min (14 services/day)
- Tokushima – Kochi: 2 hr 40 min (8 services/day)
- Tokushima – Okayama: 2 hr 30 min (6 services/day)
- Tokushima – Hiroshima: 3 hr 45 min (4 services/day)
- Tokushima – Kobe (Sannomiya): 1 hr 50 min (78 services/day)
- Tokushima – Osaka (Umeda): 2 hr 25 min (142 services/day)
- Tokushima – Kyoto: 2 hr 50 min (14 services/day)
- Tokushima – Kansai International Airport: 2 hr 45 min (20 services/day)

### By Air

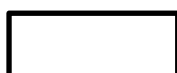
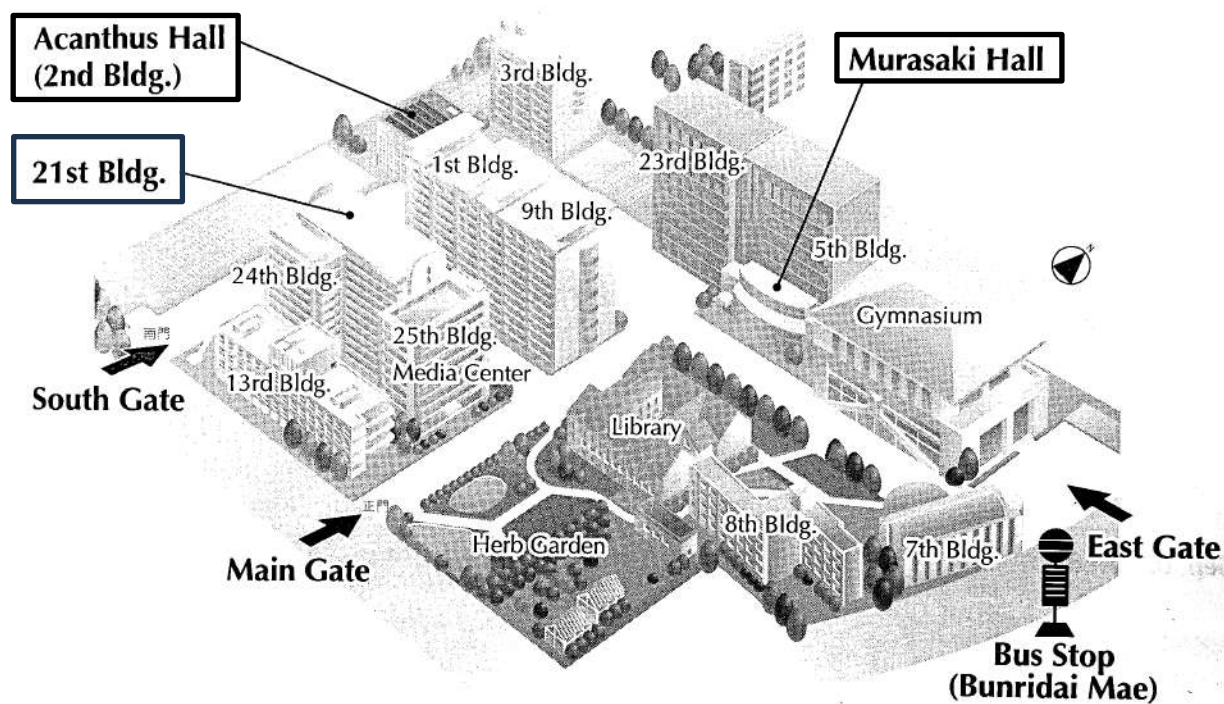
- Tokushima Airport – Tokyo (Haneda): 1 hr 10 min
- Tokushima Airport – Fukuoka: 1 hr 10 min
- Tokushima Airport – New Chitose (seasonal): 2 hr

From Tokushima Airport, the Airport Limousine Bus provides convenient access to Tokushima Station (approx. 30 min).

# Campus Map

## Tokushima Bunri University, Tokushima Campus

Nishihama, Yamashiro-cho, Tokushima 770-8514, Japan



Please refer to the photos shown in parentheses.



**Murasaki Hall**

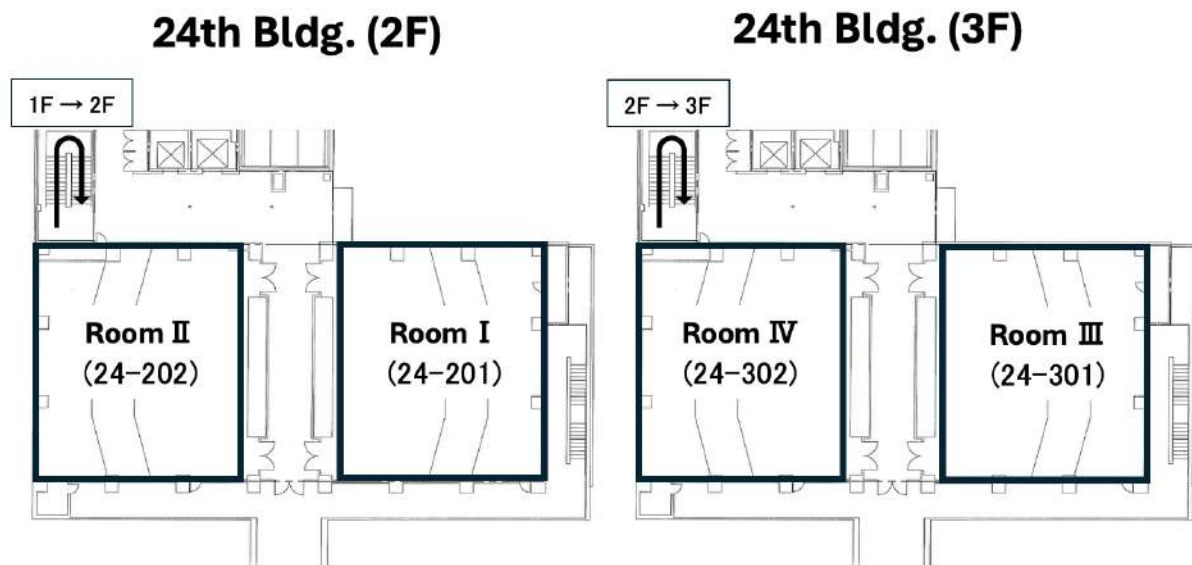
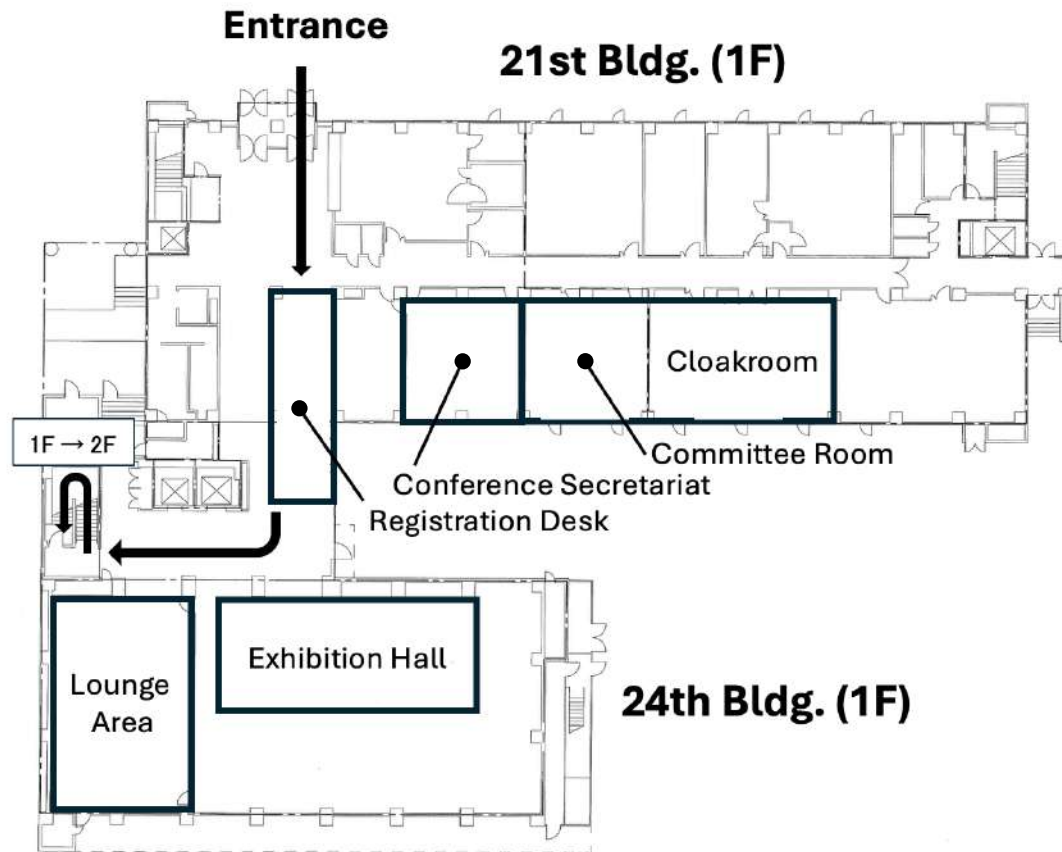


**21st and 24th Bldg.**



**Acanthus Hall**

## Map for Room I – IV



## Day 1 (November 1)

### TEAC 70th Anniversary Commemorative Get-Together

From 6:00 PM to 8:00 PM\*

*\*All registered participants are welcome to attend at their convenience.*

MYRICA in Tokushima GRANDVRIO Hotel

3-5-1 Bandai-cho, Tokushima, Japan

TEL: +81- 88-624-1111

## Day 2 (November 2)

|               |                           |
|---------------|---------------------------|
| Murasaki Hall | Ceremony, Invited Lecture |
|---------------|---------------------------|

|               |                                  |
|---------------|----------------------------------|
| Acanthus Hall | Plenary Lecture, Invited Lecture |
|---------------|----------------------------------|

24th Bldg. (2F and 3F)

|        |                         |
|--------|-------------------------|
| Room I | Essential Oil Chemistry |
|--------|-------------------------|

|         |                                                                               |
|---------|-------------------------------------------------------------------------------|
| Room II | Terpenoid Chemistry, Essential Oil Chemistry,<br>Flavor and Fragrance Science |
|---------|-------------------------------------------------------------------------------|

|          |                      |
|----------|----------------------|
| Room III | Biological Chemistry |
|----------|----------------------|

|         |                                                    |
|---------|----------------------------------------------------|
| Room IV | Flavor and Fragrance Science, Biological Chemistry |
|---------|----------------------------------------------------|

## Day 3 (November 3)

|               |                                  |
|---------------|----------------------------------|
| Acanthus Hall | Plenary Lecture, Invited Lecture |
|---------------|----------------------------------|

24th Bldg. (2F and 3F)

|        |                                               |
|--------|-----------------------------------------------|
| Room I | Essential Oil Chemistry, Biological Chemistry |
|--------|-----------------------------------------------|

|         |                                           |
|---------|-------------------------------------------|
| Room II | Terpenoid Chemistry, Biological Chemistry |
|---------|-------------------------------------------|

|          |                                                                            |
|----------|----------------------------------------------------------------------------|
| Room III | Biological Chemistry, Terpenoid Chemistry                                  |
| Room IV  | Flavor and Fragrance Science, Biological Chemistry,<br>Terpenoid Chemistry |

**Banquet;** On-site participation is welcome. (12,000 JPY)

From 6:30 PM to 8:30 PM

Tokushima GRANDVRIO Hotel  
3-5-1 Bandai-cho, Tokushima, Japan  
TEL: +81- 88-624-1111

## Day 4 (November 4)

**Excursion** ~ One-day trip to the Naruto and Tokushima tour ~

(Reservation Required)

Tokushima Grandvrio Hotel ===== Naruto Park (Whirlpool Walk) =====  
(Meeting: 9:00 AM) (Visit: 10:00~11:30 AM)

===== Lunch & Anmitsu-kan (Orchid Viewing) =====  
(12 : 40~14 : 00)

=== Indigo Dyeing Experience (Ruafu Indigo Studio) =====  
(15 : 00~16 : 30)

===== Return to JR Tokushima Station  
(Arrival: 4:40 PM)

## 69<sup>th</sup> TEAC, Day 2 (November 2)

|       | Time Schedule                                                                                                                                                                                                                                            |                       |                        |                       |  | Session Chair                                                                |         |          |         |
|-------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|------------------------|-----------------------|--|------------------------------------------------------------------------------|---------|----------|---------|
|       | Room I                                                                                                                                                                                                                                                   | Room II               | Room III               | Room IV               |  | Room I                                                                       | Room II | Room III | Room IV |
|       | ex. 2 A I-1←Presentation Number<br>(K20250001) ←Registration Number                                                                                                                                                                                      |                       |                        |                       |  |                                                                              |         |          |         |
| 10:00 | <p style="text-align: center;">TEAC 70th Anniversary Ceremony<br/>Murasaki Hall</p> <p style="text-align: center;">Professor Dr. Her Royal Highness Princess Chulabhorn<br/>Krom Phra Srisavangavadhana<br/>President, Chulabhorn Research Institute</p> |                       |                        |                       |  | <p style="text-align: center;">Murasaki Hall</p>                             |         |          |         |
|       |                                                                                                                                                                                                                                                          |                       |                        |                       |  |                                                                              |         |          |         |
|       |                                                                                                                                                                                                                                                          |                       |                        |                       |  |                                                                              |         |          |         |
|       |                                                                                                                                                                                                                                                          |                       |                        |                       |  |                                                                              |         |          |         |
|       |                                                                                                                                                                                                                                                          |                       |                        |                       |  |                                                                              |         |          |         |
|       |                                                                                                                                                                                                                                                          |                       |                        |                       |  |                                                                              |         |          |         |
|       |                                                                                                                                                                                                                                                          |                       |                        |                       |  |                                                                              |         |          |         |
|       |                                                                                                                                                                                                                                                          |                       |                        |                       |  |                                                                              |         |          |         |
|       |                                                                                                                                                                                                                                                          |                       |                        |                       |  |                                                                              |         |          |         |
|       |                                                                                                                                                                                                                                                          |                       |                        |                       |  |                                                                              |         |          |         |
| 11:30 |                                                                                                                                                                                                                                                          |                       |                        |                       |  | <p style="text-align: center;">Lunch (60 min)</p>                            |         |          |         |
|       | Invited Lecture-1                                                                                                                                                                                                                                        |                       |                        |                       |  |                                                                              |         |          |         |
| 12:00 |                                                                                                                                                                                                                                                          |                       |                        |                       |  |                                                                              |         |          |         |
|       |                                                                                                                                                                                                                                                          |                       |                        |                       |  |                                                                              |         |          |         |
|       |                                                                                                                                                                                                                                                          |                       |                        |                       |  |                                                                              |         |          |         |
|       |                                                                                                                                                                                                                                                          |                       |                        |                       |  |                                                                              |         |          |         |
|       |                                                                                                                                                                                                                                                          |                       |                        |                       |  |                                                                              |         |          |         |
|       |                                                                                                                                                                                                                                                          |                       |                        |                       |  |                                                                              |         |          |         |
|       |                                                                                                                                                                                                                                                          |                       |                        |                       |  |                                                                              |         |          |         |
|       |                                                                                                                                                                                                                                                          |                       |                        |                       |  |                                                                              |         |          |         |
| 13:00 |                                                                                                                                                                                                                                                          |                       |                        |                       |  | <p style="text-align: center;">Lunch (60 min)</p>                            |         |          |         |
|       | 1PI-1<br>(K20250044)                                                                                                                                                                                                                                     | 1PII-1<br>(K20250007) | 1PIII-1<br>(K20250096) | 1PIV-1<br>(K20250025) |  |                                                                              |         |          |         |
| 13:15 | 1PI-2<br>(K20250045)                                                                                                                                                                                                                                     | 1PII-2<br>(K20250089) | 1PIII-2<br>(K20250037) | 1PIV-2<br>(K20250017) |  |                                                                              |         |          |         |
| 13:30 | 1PI-3<br>(K20250075)                                                                                                                                                                                                                                     | 1PII-3<br>(K20250101) | 1PIII-3<br>(K20250031) | 1PIV-3<br>(K20250024) |  |                                                                              |         |          |         |
| 13:45 | 1PI-4<br>(K20250013)                                                                                                                                                                                                                                     | 1PII-4<br>(K20250011) | 1PIII-4<br>(K20250074) | 1PIV-4<br>(K20250029) |  |                                                                              |         |          |         |
| 14:00 | Break (10 min)                                                                                                                                                                                                                                           |                       |                        |                       |  |                                                                              |         |          |         |
| 14:10 | 1PI-5<br>(K20250004)                                                                                                                                                                                                                                     | 1PII-5<br>(K20250022) | 1PIII-5<br>(K20250002) | 1PIV-5<br>(K20250102) |  |                                                                              |         |          |         |
| 14:25 | 1PI-6<br>(K20250020)                                                                                                                                                                                                                                     | 1PII-6<br>(K20250026) | 1PIII-6<br>(K20250010) | 1PIV-6<br>(K20250055) |  |                                                                              |         |          |         |
| 14:40 | 1PI-7<br>(K20250028)                                                                                                                                                                                                                                     | 1PII-7<br>(K20250027) | 1PIII-7<br>(K20250005) | 1PIV-7<br>(K20250016) |  |                                                                              |         |          |         |
| 14:55 | 1PI-8<br>(K20250063)                                                                                                                                                                                                                                     | 1PII-8<br>(K20250030) | 1PIII-8<br>(K20250032) | 1PIV-8<br>(K20250092) |  |                                                                              |         |          |         |
| 15:10 | 1PI-9<br>(K20250070)                                                                                                                                                                                                                                     | 1PII-9<br>(K20250034) | 1PIII-9<br>(K20250021) | 1PIV-9<br>(K20250023) |  |                                                                              |         |          |         |
| 15:25 | Break (10 min)                                                                                                                                                                                                                                           |                       |                        |                       |  | <p style="text-align: center;">Break (10 min)</p>                            |         |          |         |
| 15:35 | Invited Lecture-2                                                                                                                                                                                                                                        |                       |                        |                       |  |                                                                              |         |          |         |
| 16:05 |                                                                                                                                                                                                                                                          |                       |                        |                       |  |                                                                              |         |          |         |
| 16:10 | Break (5 min)                                                                                                                                                                                                                                            |                       |                        |                       |  |                                                                              |         |          |         |
|       | Plenary Lecture-1                                                                                                                                                                                                                                        |                       |                        |                       |  |                                                                              |         |          |         |
| 17:10 |                                                                                                                                                                                                                                                          |                       |                        |                       |  |                                                                              |         |          |         |
| 18:00 | Board meeting (Tokushima GRANDVRIO Hotel)                                                                                                                                                                                                                |                       |                        |                       |  |                                                                              |         |          |         |
|       |                                                                                                                                                                                                                                                          |                       |                        |                       |  | <p style="text-align: center;">Board meeting (Tokushima GRANDVRIO Hotel)</p> |         |          |         |
|       |                                                                                                                                                                                                                                                          |                       |                        |                       |  |                                                                              |         |          |         |
|       |                                                                                                                                                                                                                                                          |                       |                        |                       |  |                                                                              |         |          |         |
|       |                                                                                                                                                                                                                                                          |                       |                        |                       |  |                                                                              |         |          |         |
|       |                                                                                                                                                                                                                                                          |                       |                        |                       |  |                                                                              |         |          |         |
|       |                                                                                                                                                                                                                                                          |                       |                        |                       |  |                                                                              |         |          |         |
|       |                                                                                                                                                                                                                                                          |                       |                        |                       |  |                                                                              |         |          |         |
|       |                                                                                                                                                                                                                                                          |                       |                        |                       |  |                                                                              |         |          |         |
|       |                                                                                                                                                                                                                                                          |                       |                        |                       |  |                                                                              |         |          |         |
|       |                                                                                                                                                                                                                                                          |                       |                        |                       |  |                                                                              |         |          |         |
|       |                                                                                                                                                                                                                                                          |                       |                        |                       |  |                                                                              |         |          |         |

# 69<sup>th</sup> TEAC, Day 3 (November 3)

|       | Time Schedule                                                          |                         |                          |                         |
|-------|------------------------------------------------------------------------|-------------------------|--------------------------|-------------------------|
|       | Room I                                                                 | Room II                 | Room III                 | Room IV                 |
|       | ex. 2 A I-1 ← Presentation Number<br>(K20250001) ← Registration Number |                         |                          |                         |
| 9:00  | 2 A I-1<br>(K20250041)                                                 | 2 A II-1<br>(K20250035) | 2 A III-1<br>(K20250046) | 2 A IV-1<br>(K20250094) |
| 9:15  | 2 A I-2<br>(K20250087)                                                 | 2 A II-2<br>(K20250036) | 2 A III-2<br>(K20250049) | 2 A IV-2<br>(K20250083) |
| 9:30  | 2 A I-3<br>(K20250099)                                                 | 2 A II-3<br>(K20250042) | 2 A III-3<br>(K20250047) | 2 A IV-3<br>(K20250012) |
| 9:45  | 2 A I-4<br>(K20250019)                                                 | 2 A II-4<br>(K20250039) | 2 A III-4<br>(K20250056) | 2 A IV-4<br>(K20250048) |
| 10:00 | Break (10 min)                                                         |                         |                          |                         |
| 10:10 | 2 A I-5<br>(K20250058)                                                 | 2 A II-5<br>(K20250051) | 2 A III-5<br>(K20250001) | 2 A IV-5<br>(K20250103) |
| 10:25 | 2 A I-6<br>(K20250043)                                                 | 2 A II-6<br>(K20250053) | 2 A III-6<br>(K20250061) | 2 A IV-6<br>(K20250052) |
| 10:40 | 2 A I-7<br>(K20250098)                                                 | 2 A II-7<br>(K20250054) | 2 A III-7<br>(K20250064) | 2 A IV-7<br>(K20250033) |
| 10:55 | 2 A I-8<br>(K20250084)                                                 | 2 A II-8<br>(K20250057) | 2 A III-8<br>(K20250069) | 2 A IV-8<br>(K20250009) |
| 11:10 | Break (10 min)                                                         |                         |                          |                         |
| 11:20 | Invited<br>Lecture-3                                                   | Acanthus Hall           |                          |                         |
| 11:50 | Lunch (80 min)                                                         |                         |                          |                         |
| 13:10 | 2 P I-1<br>(K20250085)                                                 | 2 P II-1<br>(K20250060) | 2 P III-1<br>(K20250071) | 2 P IV-1<br>(K20250088) |
| 13:25 | 2 P I-2<br>(K20250086)                                                 | 2 P II-2<br>(K20250068) | 2 P III-2<br>(K20250073) | 2 P IV-2<br>(K20250038) |
| 13:40 | 2 P I-3<br>(K20250008)                                                 | 2 P II-3<br>(K20250072) | 2 P III-3<br>(K20250050) | 2 P IV-3<br>(K20250059) |
| 13:55 | 2 P I-4<br>(K20250015)                                                 | 2 P II-4<br>(K20250076) | 2 P III-4<br>(K20250097) | 2 P IV-4<br>(K20250014) |
| 14:10 | Break (10 min)                                                         |                         |                          |                         |
| 14:20 | 2 P I-5<br>(K20250095)                                                 | 2 P II-5<br>(K20250077) | 2 P III-5<br>(K20250100) | 2 P IV-5<br>(K20250006) |
| 14:35 | 2 P I-6<br>(K20250093)                                                 | 2 P II-6<br>(K20250081) | 2 P III-6<br>(K20250091) | 2 P IV-6<br>(K20250040) |
| 14:50 | 2 P I-7<br>(K20250067)                                                 | 2 P II-7<br>(K20250082) | 2 P III-7<br>(K20250065) | 2 P IV-7<br>(K20250066) |
| 15:05 | 2 P I-8<br>(K20250003)                                                 | 2 P II-8<br>(K20250090) | 2 P III-8<br>(K20250080) | 2 P IV-8<br>(K20250079) |
| 15:20 | Break (10 min)                                                         |                         |                          |                         |
| 15:30 | Plenary<br>Lecture-2                                                   | Acanthus Hall           |                          |                         |
| 16:30 | Break (5 min)                                                          |                         |                          |                         |
| 16:35 | Plenary<br>Lecture-3                                                   | Acanthus Hall           |                          |                         |
| 17:35 |                                                                        |                         |                          |                         |
| 18:30 | Banquet (Tokushima GRANDVRIO Hotel)                                    |                         |                          |                         |

| Session Chair                                  |                                          |                                     |                                               |
|------------------------------------------------|------------------------------------------|-------------------------------------|-----------------------------------------------|
| Room I                                         | Room II                                  | Room III                            | Room IV                                       |
|                                                |                                          |                                     |                                               |
| A. Ludwiczuk<br>(Med. Univ. Lublin)            | K. Harada<br>(Tokushima Bunri Univ.)     | T. Ishii<br>(Ryukyu Univ.)          | Y. Iijima<br>(Kogakuin Univ.)                 |
| E. Kuraya<br>(Natl. Inst. Tech, Okinawa Coll.) | H. Okamura<br>(Tokyo Univ.)              | D. Ueda<br>(Niigata Univ.)          | R. Baba<br>(Ogawa & Co., Ltd.)                |
| Break (10 min)                                 |                                          |                                     |                                               |
| T. Usuki<br>(Sophia Univ.)                     | T. Hirose<br>(Kitasato Univ.)            | S. Oda<br>(Kanazawa Inst. Technol.) | N. Yamasaki<br>(Nagoya Univ.)                 |
| H. Endo<br>(Shiono Koryo Kaisha, Ltd.)         | A. Yajima<br>(Tokyo Univ. Agric.)        | T. Raku<br>(Kohnan Chem. Co., Ltd.) | H. Nara<br>(Takasago International Co., Ltd.) |
| Break (10 min)                                 |                                          |                                     |                                               |
| Y. Okuno<br>(Natl. Inst. Tech, Wakayama Coll.) | Acanthus Hall                            |                                     |                                               |
|                                                |                                          |                                     |                                               |
| Lunch (80 min)                                 |                                          |                                     |                                               |
|                                                |                                          |                                     |                                               |
| Y. Akakabe<br>(Yamaguchi Univ.)                | T. Tsuruta<br>(Osaka Metropolitan Univ.) | T. Hamada<br>(Kagoshima Univ.)      | T. Masuda<br>(Osaka Metropolitan Univ.)       |
| Y. Saito<br>(Nagasaki Univ.)                   | Y. Kasai<br>(Tokushima Bunri Univ.)      | K. Takanashi<br>(Shinshu Univ.)     | H. Yamagiwa<br>(T. Hasegawa Co., Ltd.)        |
| Break (10 min)                                 |                                          |                                     |                                               |
| M. Dounoue<br>(Tokushima Bunri Univ.)          | T. Suzuki<br>(Hokkaido Univ.)            | M. Noji<br>(Tokushima Bunri Univ.)  | Y. Murakami<br>(San-Ei Gen F.F.I. Inc.)       |
| A. Ohsaki<br>(Nihon Univ.)                     | K. Kitamura<br>(Tokushima Bunri Univ.)   | Y. Yagi<br>(Okayama Univ. Sci.)     | S. Shiomi<br>(Tokushima Bunri Univ.)          |
| Break (10 min)                                 |                                          |                                     |                                               |
| H. Tsuda<br>(Nippon terpene Chemicals, Inc.)   | Acanthus Hall                            |                                     |                                               |
| Break (5 min)                                  |                                          |                                     |                                               |
| Y. Matsuo<br>(Suntory Global. Innov. Cent.)    | Acanthus Hall                            |                                     |                                               |
|                                                |                                          |                                     |                                               |
| Banquet (Tokushima GRANDVRIIO Hotel)           |                                          |                                     |                                               |

## **[Plenary Lectures]**

### **Acanthus Hall**

**November 2 (16 : 10~)**

Chairperson : Shinji Nagumo  
(Kogakuin University)

#### **Plenary Lecture-1**

Hybrid Synthesis of Structurally Complex Molecules Using Terpene Cyclases

Tetsuro Shinada (Osaka Metropolitan University)

**November 3 (15 : 30~)**

Chairperson : Hiroshi Tsuda  
(Nippon Terpene Chemicals, Inc.)

#### **Plenary Lecture-2**

Studies on the Structure and Biological Activity of Compounds Derived from Terpenes and Essential Oils Combined with Sugars and Amino Acids

Tomoyuki Fujita (Shinshu University)

**November 3 (16 : 35~)**

Chairperson : Yoshihide Matsuo  
(Suntory Global Innovation Center Limited)

#### **Plenary Lecture-3**

Natural Product Chemistry Makes Food and People Richer and Healthier

Hirofumi Yamamoto (Tokushima Bunri University)

## **[Invited Lectures]**

### **Murasaki Hall**

**November 2 (11 : 30~)**

Chairperson : Hiroshi Imagawa  
(Tokushima Bunri University)

#### **Invited Lecture-1**

Development of Aroma Ingredients, Care for People, Respect the Environment

Makoto Emura (Takasago International Corporation)

### **Acanthus Hall**

**November 2 (15 : 35~)**

Chairperson : Nobuyuki Mase  
(Shizuoka University)

#### **Invited Lecture-2**

Selective Synthesis of Chroman Derivatives via Oxidation and Cyclization

Yujiro Hoshino (Yokohama National University)

**November 3 (11 : 20~)**

Chairperson : Yoshiharu Okuno  
(National Institute of Technology, Wakayama College)

#### **Invited Lecture-3**

Terpenes and Aromatics obtained from Medicinal and Bio-functional Edible Plant Resources  
Based on MONOTORI Science

Toshio Morikawa (Kindai University)

## November 2

Room I (24th Bldg. 2F)

[Essential Oil Chemistry]

(13 : 00~)

Chairperson: N. Baldovini (Cote d'Azur Univ), S. Marumoto (Kindai Univ)

- 1P I -1** Aromadendranes and secoaromadendranes of *Plagiochila* sp. and their bioactivity  
Yoshinori Asakawa<sup>1</sup>, Hirohumi Yamamoto<sup>1</sup>  
<sup>1</sup>*Institute of Pharmacognosy, Tokushima Bunri University*
- 1P I -2** *Frullania* species: Rich sources of eudesmanolides and bibenzyls with various bioactivity  
Yoshinori Asakawa<sup>1</sup>, Hirohumi Yamamoto<sup>1</sup>  
<sup>1</sup>*Institute of Pharmacognosy, Tokushima Bunri University*
- 1P I -3** Argentine, Japanese and New Zealand Ferns: Characteristic scent, pungent, bitter and sweet compounds  
Yoshinori Asakawa<sup>1</sup>, Alicia Bardon<sup>2</sup>  
<sup>1</sup>*Institute of Pharmacognosy, Tokushima Bunri University*  
<sup>2</sup>*Faculty of Pharmacy, Tucman National University*
- 1P I -4** Search for anti-malarial compounds from the wood of *Nandina domestica*  
Mitsuki Kawata<sup>1</sup>, Kenichi Harada<sup>2</sup>, Yukiko Miyazaki<sup>3</sup>, Miwa Kubo<sup>1</sup>  
<sup>1</sup>*Faculty of Pharmaceutical Sciences, Tokushima Bunri University*  
<sup>2</sup>*Pharmaceutical Sciences at Kagawa Campus, Tokushima Bunri University*  
<sup>3</sup>*Department of Molecular Infection Dynamics, Institute of Tropical Medicine (NEKKEN), Nagasaki University*

(14 : 10~)

Chairperson: Y. Yaoita (Tohoku Med. Pharm. Univ), H. Miyazato (Nagaoka Co., Ltd.)

- 1P I -5** Exploration of fruity aroma compounds in Japanese hops "MURAKAMI SEVEN"  
Emiko Tanaka<sup>1</sup>, Taeko Tsukahara<sup>1</sup>, Tetsu Sugimura<sup>1</sup>, Kanako Sasaki<sup>1</sup>  
<sup>1</sup>*Kirin Holdings Company, Limited Institute for Future Beverages*
- 1P I -6** Development of an analytical method for the volatile sulfur-containing odorants contributing to the characteristic aromas and its application to citrus essential oils  
Daiki Kawashima<sup>1</sup>, Ryoko Baba<sup>1</sup>, Jun Matsunaga<sup>1</sup>, Kanako Higuchi<sup>1</sup>, Kenji Kumazawa<sup>1</sup>  
<sup>1</sup>*Ogawa & Co., Ltd.*

**1P I -7** Study on 4,8-dimethyldeca-4,7,9-trienal isomers identified from the headspace aroma of blooming gardenia flowers

Hiroki Yamagiwa<sup>1</sup>, Munetaka Kobayashi<sup>1</sup>, Kensuke Sakamaki<sup>1</sup>

<sup>1</sup>*T. Hasegawa Co., Ltd.,*

**1P I -8** Aroma components of leaves in *Angelica acutiloba* Kitagawa

Shiro Ezoe<sup>1</sup>, Katsumi Nakano<sup>2</sup>, Toshio Tanaka<sup>2</sup>, Keiko Kurokawa<sup>2</sup>, Yoshihiko Akakabe<sup>1</sup>

<sup>1</sup>*Graduate School of Sciences and Technology for Innovation,  
Yamaguchi University*

<sup>2</sup>*Agricultural Producers, Cooperative Corporation Umoregi no Sato,*

November 2

Room II (24th Bldg. 2F)

[Terpenoid Chemistry]

(13 : 00~)

Chairperson: H. Ito (Tokyo Univ. Pharm. Life Sci.), T. Yoneyama (Tokushima Bunri Univ.)

**1P II-1** Configurational elucidation of epoxides by analyzing the HMBC intensities

Masaru Hashimoto<sup>1,2</sup>, Ryuhi Kanehara<sup>2</sup>, Kako Shirakawa<sup>1</sup>, Yuki Oinuma<sup>1</sup>,  
Hayato Sakashita<sup>1</sup>, Kazuaki Tanaka<sup>1,2</sup>

<sup>1</sup>*Faculty of Agriculture and Life Science, Hirosaki University*

<sup>2</sup>*The United Graduate School of Agricultural Science, Iwate University*

**1P II-2** Synthesis and structural determination of mushroom-derived oxysterols by direct oxidation of steroid skeletons

Yui Kanda<sup>1</sup>, Hinata Togo<sup>1</sup>, Shoji Kobayashi<sup>1,2</sup>

<sup>1</sup>*Graduate School of Engineering, Osaka Institute of Technology*

<sup>2</sup>*Faculty of Engineering, Osaka Institute of Technology*

**1P II-3** Structure-activity relationships for *Saprolegnia parasitica* of Oridamycin A and its analogs

Naoto Yamasaki<sup>1,2</sup>, Mori Miyuu<sup>1</sup>, Asano Yui<sup>1</sup>, Hirofumi Yamamoto<sup>1</sup>

<sup>1</sup>*Faculty of Pharmaceutical Sciences, Tokushima Bunri University*

<sup>2</sup>*Graduate School of Pharmaceutical Sciences, Department of Basic Medicinal Sciences, Nagoya University*

**1P II-4** Branching synthesis of terpenoids utilizing  $\pi$ -allyl Pd complex

Kenichi Harada<sup>1</sup>, Yuichiro Nakaoka<sup>2</sup>, Ibuki Abe<sup>2</sup>, Miwa Kubo<sup>2</sup>,  
Yoshiyasu Fukuyama<sup>2</sup>

<sup>1</sup>*Faculty of Pharmaceutical Sciences at Kagawa Campus, Tokushima Bunri University*

<sup>2</sup>*Faculty of Pharmaceutical Sciences, Tokushima Bunri University*

(14 : 10~)

Chairperson: S. Kobayashi (Osaka Inst. Tech.), S. Wakamori (Tokyo Univ. Agric.)

**1P II-5** Synthetic study of antimalarial meroterpenoid natural products, akedanones

Masahiro Iwahori<sup>1</sup>, Goh Sennari<sup>1,2</sup>, Tomoyasu Hirose<sup>1,2</sup>, Toshiaki Sunazuka<sup>1,2</sup>

<sup>1</sup>*Graduate School of Infection Control Sciences, Kitasato University*

<sup>2</sup>*Omura Satoshi Memorial Institute, Kitasato University*

- 1P II-6** Chemo–enzymatic synthesis of dolabellane-type diterpenes  
Eigo Fukuda<sup>1</sup>, Seiya Endo<sup>1</sup>, Hiyuma Kurosaki<sup>1</sup>, Atsushi Nakayama<sup>1,2</sup>,  
Yoko Yasuno<sup>1</sup>, Tomohisa Kuzuyama<sup>3</sup>, Tetsuro Shinada<sup>1</sup>  
<sup>1</sup>*Graduate School of Science, Osaka Metropolitan University*  
<sup>2</sup>*Graduate School of Pharmaceutical Sciences, The University of Osaka*  
<sup>3</sup>*Graduate School of Agricultural and Life Sciences, The University of Tokyo*
- 1P II-7** Organophotoredox-catalyzed synthesis of halogenocyclobutanes via  
cross-[2+2] cycloaddition reaction  
Asuka Mizutani<sup>1</sup>, Kenta Tanaka<sup>2</sup>, Hiroyoshi Takamura<sup>1</sup>, Yujiro Hoshino<sup>3</sup>,  
Isao Kadota<sup>1</sup>  
<sup>1</sup>*Graduate School of Environmental, Life, Natural Science and Technology, Okayama University*  
<sup>2</sup>*Research Institute for Interdisciplinary Science, Okayama University*  
<sup>3</sup>*Graduate School of Environmental and Information, Yokohama National University*
- 1P II-8** Stereodivergent synthetic approach to  $\alpha$ -tocopherols  
Ayaka Nakamine<sup>1</sup>, Kei Kitamura<sup>1</sup>, Hiroto Kaku<sup>1</sup>  
<sup>1</sup>*Faculty of Pharmaceutical Sciences, Tokushima Bunri University*
- 1P II-9** Synthesis of flavanol (2-phenyl-3-chromanol) using Baeyer-Villiger oxidation  
as the key reaction  
Takuya Hara<sup>1</sup>, Yuichi Kato<sup>2</sup>, Yujiro Hoshino<sup>1,2</sup>  
<sup>1</sup>*College of Engineering Science, Yokohama National University*  
<sup>2</sup>*Graduate School of Environment and Information Sciences, Yokohama National University*

## November 2

Room III (24th Bldg. 3F)

[Biological Chemistry]

(13 : 00~)

Chairperson: A. Sawabe (Kindai Univ.), T. Myoda (Tokyo Univ. Agric.)

- 1PⅢ-1** Studies on skin discoloration caused by secretions from stink bugs  
Hiroshi Imagawa<sup>1</sup>, Noria Hirashima<sup>1</sup>, Yudai Yamada<sup>1</sup>, Minami Inoue<sup>1</sup>,  
Tsuyoshi Yanagimoto<sup>1</sup>, Hiroko Tamura<sup>1</sup>, Yusuke Kasai<sup>1</sup>, Yoshinori Asakawa<sup>2</sup>  
<sup>1</sup>*Faculty of Pharmaceutical Sciences, Tokushima Bunri University*  
<sup>2</sup>*Institute of Pharmacognosy, Tokushima Bunri University*
- 1PⅢ-2** Production of *Monascus* pigments in a prototype of practical interface fermentor  
Shinobu Oda<sup>1</sup>, Fuka Kumazaki<sup>1</sup>, Shinta Shibuya<sup>1</sup>  
<sup>1</sup>*Genome Biotechnology Laboratory, Kanazawa Institute of Technology*
- 1PⅢ-3** Structure-diversity-oriented transformation of quinoidal pigments derived from aphids  
Kei Kitamura<sup>1</sup>, Chiharu Ozakai<sup>1</sup>, Rio Hirooka<sup>1</sup>, and Hiroto Kaku<sup>1</sup>  
<sup>1</sup>*Faculty of Pharmaceutical Sciences, Tokushima Bunri University*
- 1PⅢ-4** Cyclization of vitamin E and K by a terpene cyclase  
Nene Ogawa<sup>1</sup>, Lemesheva Valeriia<sup>1</sup>, Daijiro Ueda<sup>1</sup>, Tsutomu Sato<sup>1</sup>  
<sup>1</sup>*Graduate School of Science and Technology, Niigata University*

(14 : 10~)

Chairperson: T. Kamada (Iwate Univ.), H. Kawabe (Nihon Univ.)

- 1PⅢ-5** Gold nanoparticles with *Entrema japonicum* and its antioxidant and anti-inflammatory studies  
Christian Nanga Chick<sup>1,2</sup>, Mahiro Takano<sup>1</sup>, Francoise Eya'ane Meva<sup>2</sup>,  
Toyonobu Usuki<sup>1</sup>  
<sup>1</sup>*Faculty of Science and Technology, Sophia University*  
<sup>2</sup>*Faculty of Medicine and Pharmaceutical Sciences, The University of Donala*
- 1PⅢ-6** Search of functional ingredients in *Phyllostachys edulis* - skin-beautifying effects-  
Akiyoshi Sawabe<sup>1,2</sup>, Sawa Fusamune<sup>2</sup>, Haruka Konai<sup>2</sup>, Moeno Amaike<sup>2</sup>,  
Ryuji Takeda<sup>3</sup>  
<sup>1</sup>*Graduate School of Agriculture, Kindai University*  
<sup>2</sup>*Faculty of Agriculture, Kindai University*  
<sup>3</sup>*Faculty of Health and Welfare, Kansai University of Welfare Sciences*

- 1PIII-7** HELASA Micellar Cleansing Gel: From Medicinal Plant Waste to Sustainable Skincare Innovation
- Danka R. Bukvicki<sup>1</sup>, Ana Z. Alimpić Aradski<sup>1</sup>, Nataša P. Jović-Jovičić<sup>2</sup>, Marija J. Ajduković<sup>2</sup>, Predrag T. Banković<sup>2</sup>, Yoshinori Asakawa<sup>3</sup>, Tatsuro Yoneyama<sup>3</sup>
- <sup>1</sup>*Faculty of Biology, University of Belgrade*  
<sup>2</sup>*Institute of Chemistry, Technology and Metallurgy, University of Belgrade*  
<sup>3</sup>*Faculty of Pharmaceutical Sciences, Tokushima Bunri University*
- 1PIII-8** Novel dihydrofuran cembrane-type diterpene from Okinawan soft coral *Sarcophyton* sp.
- Kazuki Tani<sup>1</sup>, Karen Takashima<sup>1</sup>, Tsukasa Orita<sup>2</sup>, Kozue Sakao<sup>2</sup>, Takahiro Ishii<sup>1</sup>
- <sup>1</sup>*Faculty of Agriculture, University of the Ryukyus*  
<sup>2</sup>*Faculty of Agriculture, Kagoshima University*
- 1PIII-9** Isolation and structural determination of products formed by an insect terpene synthase
- Chai Yi<sup>1</sup>, Daijiro Ueda<sup>1</sup>, Narumi Fujikawa<sup>1</sup>, Tsutomu Sato<sup>1</sup>
- <sup>1</sup>*Graduate School of Science and Technology, Niigata University*

## November 2

### Room IV (3F) [Flavor and Fragrance Science], [Terpenoid Chemistry], [Biological Chemistry]

(13 : 00~)

Chairperson: Y. Asikin (Univ. Ryukyus), S. Hattori (Soda Aromatic Co., Ltd.)

- 1PIV-1** Investigation into the characteristics of Geisha varieties through comparative analysis of the fragrance compounds in coffee bean powder  
Yuna Kyoho<sup>1</sup>, Takayuki Honda<sup>2</sup>, Taro Suzuki<sup>3</sup>  
<sup>1</sup>*Graduate School of Science and Technology, Meiji University*  
<sup>2</sup>*School of Science and Technology, Meiji university*  
<sup>3</sup>*SAZA COFFEE Co., Ltd.*
- 1PIV-2** Extraction of aroma compounds contained in coffee beans using deep eutectic solvent  
Ai Nakayama<sup>1</sup>, Yu Shibata<sup>1</sup>, Meiichiro Koyoshi<sup>1</sup>, Ayaka Suzuki<sup>2</sup>, Tatsuya Okayama<sup>2</sup>, Lokadi Pierre Luhata<sup>1</sup>, Toyonobu Usuki<sup>1</sup>  
<sup>1</sup>*Faculty of Science and Technology, Sophia University*  
<sup>2</sup>*Fuso Chemical Co., Ltd.*
- 1PIV-3** High-throughput structure determination of natural trace compounds using the crystalline sponge method combined with headspace sampling  
Kazuhiko Sakaguchi<sup>1</sup>, Nao Tamaki<sup>1</sup>, Akihiro Kawaraya<sup>1</sup>  
<sup>1</sup>*Corporate Research & Development Division, Takasago International Corporation*
- 1PIV-4** Synthesis and odor properties of optically active 7-alken-4-olides  
Yasutaka Shimotori<sup>1</sup>, Tetsuo Miyakoshi<sup>2</sup>  
<sup>1</sup>*Faculty of Engineering, Kitami Institute of Technology*  
<sup>2</sup>*Department of Applied Chemistry, Meiji University*

(14 : 10~)

Chairperson: T. Mino (Chiba Univ.), T. Wakayama (Ehime Univ.)

- 1PIV-5** The study of the olfactory attraction of volatile components in foods to mice  
Eri Kakimoto<sup>1</sup>, Motoko Ohata<sup>1</sup>, Kyoya Akaishi<sup>1</sup>, Akira Hosono<sup>1</sup>, Kazumi Osada<sup>1</sup>  
<sup>1</sup>*Graduate School of Bioresource Sciences, Nihon University*

- 1PIV-6**      Syntheses of natural aroma compounds in terpenoids with an interface bioreactor  
Rika Nyubu<sup>1</sup>, Kurumi Nakahashi<sup>1</sup>, Takuto Ikemura<sup>1</sup>, Shinobu Oda<sup>1</sup>  
<sup>1</sup>*Genome Biotechnology Laboratory, Kanazawa Institute of Technology*
- 1PIV-7**      A novel approach for the bioproduction of flavor and fragrance ingredients, utilizing promiscuous enzyme as a template  
Hiroyuki Jomen<sup>1</sup>, Toshiaki Narukami<sup>1</sup>, Mao Inoue<sup>1</sup>, Makoto Emura<sup>1</sup>, Ryota Hidese<sup>2</sup>, Tomohisa Hasunuma<sup>2</sup>  
<sup>1</sup>*Corporate Research & Development Division, Takasago International Corporation*  
<sup>2</sup>*Engineering Biology Research Center, Kobe University*
- 1PIV-8**      Improving thermostability of ambrein synthase by protein engineering  
Emi Omori<sup>1</sup>, Tomoha Yamazawa<sup>1</sup>, Kazuhiko Ishikawa<sup>2,3</sup>, Tomomi Kubota<sup>2</sup>, Daijiro Ueda<sup>1</sup>, Tsutomu Sato<sup>1</sup>  
<sup>1</sup>*Graduate School of Science and Technology, Niigata University*  
<sup>2</sup>*National Institute of Advanced Industrial Science and Technology*  
<sup>3</sup>*Matsutani Chemical Industry Co., Ltd.*
- 1PIV-9**      Synthesis of squalenes exhibiting ionophoric nature and their self-assembly properties  
Ngoc Linh Tran<sup>1</sup>, Rintarou Ootani<sup>1,2</sup>, Hirohmi Watanabe<sup>1</sup>, Takashi Arimura<sup>1,2</sup>, Hiroko Isoda<sup>1,2</sup>  
<sup>1</sup>*National Institute of Advanced Industrial Science and Technology, Research Institute for Sustainable Chemistry*  
<sup>2</sup>*University of Tsukuba*

## November 3

### Room I (24th Bldg. 2F)

### [Essential Oil Chemistry]

(9 : 00~)

Chairperson: A. Ludwiczuk (Med. Univ. Lublin), E. Kuraya (Natl. Inst. Tech., Okinawa Coll.)

**2A I -1** *Artemisia annua*, a possible remedy for treatment of COVID-19

P. Agrawal<sup>1</sup>, G. Blunden<sup>2</sup>

<sup>1</sup>*Research and Development Natural Product Inc.*

<sup>2</sup>*School of Pharmacy & Biomedical Sciences, University of Portsmouth*

**2A I -2** Anti-inflammatory selected essential oils and terpenes evaluated by in vitro and in silico methods

Fatih Demirci<sup>1</sup>, Betül Demirci<sup>1</sup>

<sup>1</sup>*Faculty of Pharmacy, Anadolu University*

**2A I -3** Biological and phytochemical evaluation of *Daphne* sp. from Turkey

Gözde Öztürk<sup>1</sup>, Betül Demirci<sup>2</sup>, Tomasz BAJ<sup>1</sup>

<sup>1</sup>*Faculty of Pharmacy, Anadolu University*

**2A I -4** Variability of volatiles in *Mentha longifolia* (L.) accessions

Éva N. Zámbooriné Németh<sup>1</sup>, Helga H. Szalontay<sup>2</sup>, Péter R. Radácsi<sup>1</sup>,  
Katalin P. Patonay<sup>2</sup>

<sup>1</sup>*Medicinal and Aromatic Plants, Hungarian University of Agriculture and Life Sciences*

<sup>2</sup>*Food and Wine Research Institute, Eszterházy Károly Catholic University*

(10 : 10~)

Chairperson: T. Usuki (Sophia Univ.), H. Endo (Shiono Koryo Kaisha, Ltd.)

**2A I -5** Improving antimicrobial efficacy through fractionation of essential oils

Agnieszka Ludwiczuk<sup>1</sup>, Francesco Giancola<sup>1</sup>, Katarzyna Lach-Wójtowicz<sup>1</sup>,  
Anna Biernasiuk<sup>2</sup>

<sup>1</sup>*Department of Pharmacognosy with the Medicinal Plant Garden, Medical University of Lublin*

<sup>2</sup>*Faculty of Pharmacy, Medical University of Lublin*

**2A I -6** Bibenzyls and bis-bibenzyls of bryophytes: Diversity, distribution, bioactivity and the future prospects

Kakali Sen<sup>1</sup>, Yoshinori Asakawa<sup>2</sup>

<sup>1</sup>*Faculty of Sciences, University of Kalyani*

<sup>2</sup>*Institute of Pharmacognosy, Tokushima Bunri University*

- 2A I -7** Analytical studies on ancient agarwood samples  
Nicolas Baldovini<sup>1</sup>, Sakura Takamatsu<sup>2</sup>, Sylvie Michel<sup>3</sup>, Olivier R. P. David<sup>4</sup>  
<sup>1</sup>*Université Côte d'Azur*  
<sup>2</sup>*Graduate School of Agriculture, Ehime University*  
<sup>3</sup>*UFR de Pharmacie, Université Paris Cité*  
<sup>4</sup>*Institut Lavoisier, Université Paris Saclay-Versailles*

- 2A I -8** The chemical composition of the essential oils from  
*Bidens pilosa* L. var. *radiata* Sch. Bip.  
Akiko Touyama<sup>1</sup>, Eisuke Kuraya<sup>2</sup>  
<sup>1</sup>*Okinawa Flora Co., Ltd.*  
<sup>2</sup>*National Institute of Technology, Okinawa College*

**(13 : 10~)**

Chairperson: Y. Akakabe (Yamaguchi Univ.), Y. Saito (Nagasaki Univ.)

- 2P I -1** Aroma characteristics of *Alpinia zerumbet* (Pers.) Burt & R.M. Sm. growing in Bolivia  
Eisuke Kuraya<sup>1</sup>, Akiko Toiuyama<sup>2</sup>, Kazunari Jahana<sup>3</sup>  
<sup>1</sup>*National Institute of Technology, Okinawa College*  
<sup>2</sup>*Okinawa Flora Co., Ltd.*  
<sup>3</sup>*RYUX Inc.*
- 2P I -2** Aroma Fingerprinting and Chemometric Classification of 26 Finger Lime (*Citrus australasica*) Cultivars Grown in Japan  
Eisuke Kuraya<sup>1</sup>, Akiko Toiuyama<sup>2</sup>  
<sup>1</sup>*National Institute of Technology, Okinawa College*  
<sup>2</sup>*Okinawa Flora Co., Ltd.*
- 2P I -3** Fluorescent alkaloids from *Quassia amara* and their fluorescent properties for living cells  
Ayumi Ohsaki<sup>1</sup>, Masahiko Hoshino<sup>1</sup>, Mizuki Sonohata<sup>1</sup>, Tomoya Hirano<sup>2</sup>, Hiroyuki Kagechika<sup>3</sup>  
<sup>1</sup>*College of Humanities and Sciences, Nihon University*  
<sup>2</sup>*Faculty of Pharmacy, Osaka Medical and Pharmaceutical University*  
<sup>3</sup>*Laboratory for Biomaterials and Bioengineering, Institute of Integrated Research, Institute of Science, Tokyo*
- 2P I -4** Structure revision of eremophilane-type sesquiterpenoids from plants of the family Asteraceae  
Yasunori Yaoita<sup>1</sup>, Koichi Machida<sup>1</sup>  
<sup>1</sup>*Faculty of Pharmaceutical Sciences, Toboku Medical and Pharmaceutical University*

(14 : 20~)

Chairperson: A. Ohsaki (Nihon Univ.), M. Dounoue (Tokushima Bunri Univ.)

- 2P I -5**      Chemical composition of *Ligularia cyathiceps* collected in Yunnan Province, China  
Shusei Takimoto<sup>1</sup>, Yoshinori Saito<sup>2</sup>, Yosuke Matsuo<sup>2</sup>, Yasuko Okamoto<sup>3</sup>, Ryo Hanai<sup>4</sup>,  
Koji Yamada<sup>2</sup>, Fumika Yakushiji<sup>2</sup>, Takashi Tanaka<sup>2</sup>, Xun Gong<sup>5</sup>, Chiaki Kuroda<sup>4</sup>  
<sup>1</sup>*School of Pharmaceutical Sciences, Nagasaki University*  
<sup>2</sup>*Graduate School of Biomedical Sciences, Nagasaki University*  
<sup>3</sup>*Faculty of Pharmaceutical Sciences, Tokushima Bunri University*  
<sup>4</sup>*College of Science, Rikkyo University*  
<sup>5</sup>*Kunming Institute of Botany, Chinese Academy of Sciences*
- 2P I -6**      Chemical compositions of *Aconitum sessiliflorum* collected in Qinghai province, China  
Eisuke Matono<sup>1</sup>, Yoshinori Saito<sup>1</sup>, Yosuke Matsuo<sup>1</sup>, Ryo Hanai<sup>2</sup>, Koji Yamada<sup>1</sup>,  
Fumika Yakushiji<sup>1</sup>, Takashi Tanaka<sup>1</sup>, Xun Gong<sup>3</sup>, Chiaki Kuroda<sup>2</sup>  
<sup>1</sup>*Graduate School of Biomedical Sciences, Nagasaki University*  
<sup>2</sup>*College of Science, Rikkyo University*  
<sup>3</sup>*Kunming Institute of Botany, Chinese Academy of Sciences*
- 2P I -7**      Structure diversity of diterpenes from *Salvia prattii*  
Hiroshi Kawabe<sup>1</sup>, Yukiko Nobe<sup>1</sup>, Yasuko Okamoto<sup>2</sup>, Miwa Kubo<sup>2</sup>, Kenichi Harada<sup>3</sup>,  
Yoshiyasu Fukuyama<sup>2</sup>, Hiroshi Hirota<sup>1</sup>, Gong Xun<sup>4</sup>, Ayumi Ohsaki<sup>1</sup>  
<sup>1</sup>*College of Humanities and Sciences, Nihon University*  
<sup>2</sup>*Faculty of Pharmaceutical Sciences, Tokushima Bunri University*  
<sup>3</sup>*Faculty of Pharmaceutical Sciences at Kagawa Campus, Tokushima Bunri University*  
<sup>4</sup>*Kunming Institute of Botany, Chinese Academy of Science*
- 2P I -8**      Chemical composition and antioxidant activity of the hexane fraction from  
leaf extracts of *Odontonema strictum*  
Lokadi Pierre Luhata<sup>1</sup>, Moena Hirao<sup>1</sup>, Natsuki Mori<sup>1</sup>, Toyonobu Usuki<sup>1</sup>  
<sup>1</sup>*Faculty of Science and Technology, Sophia University*

## November 3

### Room II (24th Bldg. 2F)

### [Terpenoid Chemistry]

(9 : 00~)

Chairperson: H. Okamura (Univ. Tokyo), K. Harada (Tokushima Bunri Univ.)

- 2A II -1** Total synthesis of *cis*-xanthophyll using photoisomerization  
Yuki Okura<sup>1</sup>, Naoto Yamasaki<sup>1</sup>, Shinichiro Fuse<sup>1</sup>  
<sup>1</sup>*Graduate School of Pharmaceutical Sciences, Nagoya University*
- 2A II -2** Synthesis of common tetracyclic skeletons of terpenes using a sequential intramolecular Diels-Alder reaction  
Ayumu Fujioka<sup>1</sup>, Kota Yamazaki<sup>2</sup>, Okuma Syunki<sup>1</sup>, Takahiro Suzuki<sup>2</sup>, Keiji Tanino<sup>2</sup>  
<sup>1</sup>*Graduate School of Chemical Science and Engineering, Hokkaido University*  
<sup>2</sup>*Faculty of Science, Hokkaido University*
- 2A II -3** Construction of a tricyclic skeleton of dolastane-type diterpenoids derived from brown algae  
Yukika Yoshino<sup>1</sup>, Keisuke Nishikawa<sup>1</sup>, Tomoki Tsuruta<sup>1</sup>, Yoshiki Morimoto<sup>1</sup>  
<sup>1</sup>*Graduate School of Science, Osaka Metropolitan University*
- 2A II -4** Development of photochemical esterification and lactonization *via* C-H bromination  
Sakura Kodaki<sup>1</sup>, Haru Ando<sup>1</sup>, Kenta Tanaka<sup>2</sup>, Hiroyoshi Takamura<sup>1</sup>, Isao Kadota<sup>1</sup>  
<sup>1</sup>*Graduate school of Environmental, Life, Natural Science and Technology, Okayama University*  
<sup>2</sup>*Research Institute for Interdisciplinary Science, Okayama University*

(10 : 10~)

Chairperson: T. Hirose (Kitasato Univ.), A. Yajima (Tokyo Univ. Agric.)

- 2A II -5** Synthetic studies of Aplyronine A using a unique stereocontrol method  
Shuto Sekiyama<sup>1</sup>, Ryutaro Sawada<sup>1</sup>, Koki Yoshida<sup>1</sup>, Shinji Nagumo<sup>1</sup>  
<sup>1</sup>*School of Advanced Engineering, Kogakuin University*
- 2A II -6** Studies on the asymmetric total synthesis of toxicodenane C derived from the lacquer tree  
Tomoki Tsuruta, Ming Wei, Keisuke Nishikawa, Yoshiki Morimoto  
<sup>1</sup>*Graduate School of Science and Engineering, Kagoshima University*

- 2A II-7** Synthetic study of Spiroalanfurantone B  
Misaki Nakamura<sup>1</sup>, Hisanaka Ito<sup>1</sup>  
<sup>1</sup>*School of Life Sciences, Tokyo University of Pharmacy and Life Sciences*
- 2A II-8** Synthetic study of Venturicidins based on our original acyclic stereocontrol  
Wakaba Koshizuka<sup>1</sup>, Yuta Sanada<sup>1</sup>, Kazuo Tsujimoto<sup>1</sup>, Shinji Nagumo<sup>1</sup>  
<sup>1</sup>*Department of Chemistry and Life Science, Kogakuin University*

**(13 : 10~)**

Chairperson: T. Tsuruta (Osaka Met. Univ.), Y. Kasai (Tokushima Bunri Univ.)

- 2P II-1** Synthetic studies of Illisimonin A based on intramolecular Diels-Alder reaction  
Shotaro Kosugi<sup>1</sup>, Muhammad Aiman bin Mohd Fariz<sup>1</sup>, Yuki Yukutake<sup>1</sup>,  
 Riko Nagahama<sup>1</sup>, Takahiro Suzuki<sup>2</sup>, Keiji Tanino<sup>2</sup>  
<sup>1</sup>*Graduate School of Chemical Science and Engineering, Hokkaido University*  
<sup>2</sup>*Faculty of Science, Hokkaido University*
- 2P II-2** Synthesis of 7-hydroxyorobanchol and 6,7-didehydroorobanchol  
Megu Sato<sup>1</sup>, Kiyono Uchida<sup>1</sup>, Hironori Okamura<sup>1</sup>, Yusuke Ogura<sup>1</sup>,  
 Hirosato Takikawa<sup>1</sup>  
<sup>1</sup>*Graduate School of Agricultural and Life Sciences, The University of Tokyo*
- 2P II-3** Rapid skeletal construction of spiro-meroterpenoid  
Mitsuki Kato<sup>1</sup>, Ryo Katsuta<sup>1</sup>, Ken Ishigami<sup>1</sup>, Shinnosuke Wakamori<sup>1</sup>  
<sup>1</sup>*Department of Chemistry for Life Sciences and Agriculture, Tokyo University of Agriculture*
- 2P II-4** Synthetic studies of halioxepine B  
Yuto Morita<sup>1</sup>, Tatsuo Saito<sup>1</sup>, Arata Yajima<sup>1</sup>  
<sup>1</sup>*Faculty of Life Sciences, Tokyo University of Agriculture*

**(14 : 20~)**

Chairperson: T. Suzuki (Hokkaido Univ.), K. Kitamura (Tokushima Bunri Univ.)

- 2P II-5** Study on chemical transformation of grayanotoxin based on biosynthetic hypothesis  
Hinata Togo<sup>1</sup>, Taiga Tsuruyama<sup>1</sup>, Shoji Kobayashi<sup>1</sup>  
<sup>1</sup>*Graduate School of Engineering, Osaka Institute of Technology*

- 2P II-6** Synthetic studies of marinoquinolone A  
Kanon Hayashi<sup>1</sup>, Tatsuo Saito<sup>2</sup>, Arata Yajima<sup>2</sup>  
<sup>1</sup>*Graduate School of Life Sciences, Tokyo University of Agriculture*  
<sup>2</sup>*Faculty of Life Sciences, Tokyo University of Agriculture*
- 2P II-7** Synthetic studies on Arthrobotrisins  
Atsuto Kanda<sup>1</sup>, Hironori Okamura<sup>1</sup>, Yusuke Ogura<sup>1</sup>, Hirosato Takikawa<sup>1</sup>  
<sup>1</sup>*Graduate School of Agricultural and Life Sciences, The University of Tokyo*
- 2P II-8** Synthetic studies on jaspic acid  
Naoki Matsuura<sup>1</sup>, Hironori Okamura<sup>1</sup>, Yusuke Ogura<sup>1</sup>, Hirosato Takikawa<sup>1</sup>  
<sup>1</sup>*Graduate School of Agricultural and Life Sciences, The University of Tokyo*

November 3

Room III (24th Bldg. 3F)

[Biological Chemistry]

(9 : 00~)

Chairperson: T. Ishii (Univ. Ryukyus), D. Ueda (Niigata Univ.)

- 2AIII-1** Structures and Biological Activities of Halogenated Triterpenoids from Japanese Red Alga, *Chondria armata*  
Shusaku Shimazu<sup>1</sup>, Fumito Tani<sup>2</sup>, Satoaki Onitsuka<sup>1</sup>, Hiroaki Okamura<sup>1</sup>, Toshiyuki Hamada<sup>1</sup>  
<sup>1</sup>Graduate School of Science and Engineering, Kagoshima University  
<sup>2</sup>Institute for Materials Chemistry and Engineering, Kyushu University
- 2AIII-2** Structure and biological activity of terpenoids isolated from *Ovula ovum*  
Nozomi Shiiba<sup>1</sup>, Tomoki Tsuruta<sup>2</sup>, Keisuke Nishikawa<sup>2</sup>, Yoshiki Morimoto<sup>2</sup>, Momochika Kumagai<sup>1</sup>  
<sup>1</sup>Graduate School of Agriculture, Forestry and Fisheries, Kagoshima University  
<sup>2</sup>Graduate School of Science, Osaka Metropolitan University
- 2AIII-3** Protective effect of sweet orange essential oil and (+)-limonene in an in vitro co-culture Parkinson's model  
Horváth, Gy.<sup>1</sup>, Heilmann, L.<sup>1</sup>, Szilágyi-Utczás, M.<sup>2</sup>, Rák, T.<sup>1,3</sup>, Sipos, K.<sup>4</sup>, Csutak, A.<sup>3</sup>, Pandur, E.<sup>4</sup>  
<sup>1</sup>Department of Pharmacognosy, University of Pécs-Faculty of Pharmacy  
<sup>2</sup>Center for Sports Nutrition Science, Hungarian University of Sport Science  
<sup>3</sup>Department of Ophthalmology, University of Pécs-Medical School Clinical Centre  
<sup>4</sup>Department of Pharmaceutical Biology, University of Pécs-Faculty of Pharmacy
- 2AIII-4** New diterpenoids and  $\beta$ -glucuronidase inhibitors from FORSYTHIAE FRUCTUS  
Shogo Nishikawa<sup>1</sup>, Yusuke Shimomoto<sup>1</sup>, Sara Morishita<sup>1</sup>, Ryuya Takada<sup>1</sup>, Yoshiaki Manse<sup>1</sup>, and Toshio Morikawa<sup>1,2</sup>  
<sup>1</sup>Pharmaceutical Research and Technology Institute, Kindai University  
<sup>2</sup>Antiaging Center, Kindai University

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Chairperson : S. Oda (Kanazawa Inst. Tech.), T. Raku (Konan Chemical Industry Co., Ltd.)

- 2AIII-5** Biotransformation of *cis*-jasmone by human lung microsomes  
Shinsuke Marumoto<sup>1</sup>, Yoshiharu Okuno<sup>2</sup>, Mitsuo Miyazawa<sup>3</sup>  
<sup>1</sup>*Joint Research Center, Kindai University*  
<sup>2</sup>*National Institute of Technology, Wakayama College*  
<sup>3</sup>*Kindai University*
- 2AIII-6** New cadinene-type sesquiterpene from Japanese marine soft coral of the genus *Xenia*  
Masachi Shioiri<sup>1</sup>, Ryoma Nakagawa<sup>1</sup>, Ryoya Suzuki<sup>1</sup>, Kazumi Nimura<sup>2</sup>,  
Ryosuke Fukada<sup>3</sup>, Kazuki Tani<sup>4</sup>, Takahiro Ishii<sup>3,4</sup>, Takashi Kamada<sup>1</sup>  
<sup>1</sup>*Faculty of Science and Technology, Shizuoka Institute of Science and Technology*  
<sup>2</sup>*Shizuoka Prefectural Research Institute of Fishery and Ocean*  
<sup>3</sup>*The United Graduate School of Agricultural Science, Kagoshima University*  
<sup>4</sup>*Faculty of Agriculture, University of the Ryukyus*
- 2AIII-7** Chemical structure and biological activity of terpenoids isolated from liverworts collected from Hyogo Prefecture, Japan  
Takuto Igarashi<sup>1</sup>, Kosuke Sato<sup>1</sup>, Jin Kawano<sup>1</sup>, Tatsuro Miyaji<sup>1</sup>, Yoshinori Asakawa<sup>2</sup>,  
Takashi Kamada<sup>1</sup>  
<sup>1</sup>*Faculty of Science and Technology, Shizuoka Institute of Science and Technology*  
<sup>2</sup>*Shizuoka Prefectural Research Institute of Fishery and Ocean*  
<sup>3</sup>*The United Graduate School of Agricultural Science, Kagoshima University*  
<sup>4</sup>*Faculty of Agriculture, University of the Ryukyus*
- 2AIII-8** Touch care treatment with kuromoji (*Lindera unbellata* Thunb.) aroma  
- The effects on lung cancer patients - Part 2  
Kazutoshi Sakurai<sup>1</sup>, Eiko Tamai<sup>1</sup>, Yumi Oguma<sup>2</sup>, and Kenichi Urakami<sup>1</sup>  
<sup>1</sup>*Cancer Diagnostics Research Division, Shizuoka Cancer Center Research Institute*  
<sup>2</sup>*Nurse head, Shizuoka Cancer Center Hospital*

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Chairperson : T. Hamada (Kagoshima Univ.), K. Takanashi (Shinshu Univ.)

- 2PIII-1** Anti-hyperlipidemic activity of saffron (*Crocus sativus* L.) originating in Oita prefecture  
Ryuya Takada<sup>1</sup>, Akino Yogi<sup>1</sup>, Nobuhiro Hasegawa<sup>3</sup>, Koji Kakutani<sup>1,2</sup>,  
Toshio Morikawa<sup>1,2</sup>  
<sup>1</sup>*Pharmaceutical Research and Technology Institute, Kindai University*  
<sup>2</sup>*Antiaging Center, Kindai University*  
<sup>3</sup>*Hasseya*

- 2PⅢ-2**      Structure analysis of products formed by photooxidations of 7-dehydrocholesterol and vitamin D3  
Kosuke Otsuka<sup>1</sup>, Syunki Otake<sup>1</sup>, Daijiro Ueda<sup>1</sup>, Tsutomu Sato<sup>1</sup>  
<sup>1</sup>*Graduate School of Science and Technology, Niigata University*
- 2PⅢ-3**      Identification and classification of biosynthetic enzyme genes involved in the production of secondary metabolites in Marchantiophyta (Liverworts)  
Hironobu Takahashi<sup>1</sup>, Yoshinori Asakawa<sup>1</sup>  
<sup>1</sup>*Faculty of Pharmaceutical Sciences, Tokushima Bunri University*
- 2PⅢ-4**      Activator of Nrf2-ARE pathway from *Citrus medica* var. *sarcodactylus*  
Yoshiharu Okuno<sup>1</sup>, Miyu Natsumi<sup>1</sup>, Masato Shima<sup>1</sup>  
<sup>1</sup>*National Institute of Technology, Wakayama College*

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Chairperson : Y. Yagi (Okayama Univ. Sci.), M. Noji (Tokushima Bunri Univ.)

- 2PⅢ-5**      Cytochrome P450s involved in the marchantin biosynthetic pathway in *Marchantia polymorpha*  
Nagisa Kimura<sup>1</sup>, Yuka Kobayashi<sup>1</sup>, Miki Mizuta<sup>2</sup>, Masaharu Mizutani<sup>2</sup>, Hirofumi Yamamoto<sup>1</sup>, Hironobu Takahashi<sup>3</sup>, Hiroyoshi Kubo<sup>1</sup>, Kojiro Takanashi<sup>1</sup>  
<sup>1</sup>*Graduate School of Science and Technology, Shinshu University*  
<sup>2</sup>*Graduate School of Agricultural Science, Kobe University*  
<sup>3</sup>*Faculty of Pharmaceutical Sciences, Tokushima Bunri University*
- 2PⅢ-6**      Functional modification of drimenol synthase from a marine bacterium by site-directed mutagenesis  
Kotoha Hiroshima<sup>1,2</sup>, Keisuke Fujiyama<sup>2</sup>, Hiroshi Takagi<sup>2</sup>, Naoko Morita<sup>2</sup>, Nhu Ngoc Quynh Vo<sup>2</sup>, Yu Zheng<sup>2</sup>, Tetsuya Yamamoto<sup>1</sup>, and Shunji Takahashi<sup>1,2</sup>  
<sup>1</sup>*Graduate School of Engineering, Tokyo Denki University*  
<sup>2</sup>*RIKEN Center for Sustainable Resource Science*
- 2PⅢ-7**      Expanding the diversity of the terpene skeleton and structure through identification of noncanonical class IE and IF terpene synthase  
Tohru Abe<sup>1</sup>, Tohru Taniguchi<sup>2</sup>, Daijiro Ueda<sup>1</sup>, Takashi Abe<sup>1</sup>, Tsutomu Sato<sup>1</sup>  
<sup>1</sup>*Niigata University*  
<sup>2</sup>*Hokkaido University*

**2PⅢ-8**

Expanding the diversity of the sesquiterpene skeleton and structure through genome mining of noncanonical class IB terpene synthases

Saya Sugisawa<sup>1</sup>, Shogo Iwakata<sup>1</sup>, Ikiru Otsuka<sup>1</sup>, Shuya Azuma<sup>1</sup>, Yuka Takaba<sup>1</sup>, Yumika Suzuki<sup>1</sup>, Yu Shinohara<sup>1</sup>, Daijiro Ueda<sup>1</sup>, Tohru Taniguchi<sup>2</sup>, Masahiro Fujiihashi<sup>3</sup>, Tetsuro Shinada<sup>4</sup>, Tsutomu Sato<sup>1</sup>

<sup>1</sup>*Graduate School of Science and Technology, Niigata University*

<sup>2</sup>*Faculty of Advanced Life Science, Hokkaido University*

<sup>3</sup>*Graduate School of Agricultural Sciences, Kyoto University*

<sup>4</sup>*Graduate School of Science, Osaka Metropolitan University*

## November 3

### Room IV (3F) [Flavor and Fragrance Science], [Essential Oil Chemistry] [Biological Chemistry], [Terpenoid Chemistry]

(9 : 00~)

Chairperson: Y. Iijima (Kogakuin Univ.), R. Baba (Ogawa & Co., Ltd.)

- 2AIV-1** Flavor characteristics of special variety of buckwheat 'Irinoya Zairai' cultivated in Nagano

Yukako Ikeuchi<sup>1</sup>, Masanobu Onishi<sup>2</sup>, Kaho Yamaki<sup>1</sup>, Yusuke Murakami<sup>1</sup>

<sup>1</sup>*Flavor & Taste Unit of R&D, San-Ei Gen F.F.I., Inc.*

<sup>2</sup>*R&D Headquarters San-Ei Gen F.F.I., Inc.*

- 2AIV-2** Development of environment-friendly sunscreen from higher plants eaten by Japanese macaques in Yakushima

Keisuke Ichikawa<sup>1</sup>, Kiara Matsunaga<sup>1</sup>, Goro Hanya<sup>2</sup>, Yusuke Teruya<sup>3</sup>,  
Takahiro Ishii<sup>3</sup>, Takashi Kamada<sup>1</sup>

<sup>1</sup>*Faculty of Science and Technology, Shizuoka Institute of Science and Technology*

<sup>2</sup>*Center for Ecological Research, Kyoto University*

<sup>3</sup>*Faculty of Agriculture, University of the Ryukyus*

- 2AIV-3** Volatile compounds of unripe habanero chilli pepper

Mato Atarashi<sup>1</sup>, Koji Nakamoto<sup>1</sup>, Takashi Akioka<sup>1</sup>, Kazuaki Nakahara<sup>1</sup>

<sup>1</sup>*Takata Koryo Co., Ltd. R&D*

- 2AIV-4** Diversity of floral scent components in wild *Rosa* species of the subgenus *Rosa*

Naomi Oyama-Okubo<sup>1</sup>, Yuki Mikanagi<sup>2</sup>

<sup>1</sup>*Institute of Vegetable and Floriculture Science, NARO*

<sup>2</sup>*Natural History Museum and Institute, Chiba*

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Chairperson : N. Yamasaki (Nagoya Univ.), H. Nara (Takasago International Corp.)

- 2AIV-5** Diversity investigation of the essential oils' effect in inflammation models *in vivo* – acute lung injury

Eszter Csikós<sup>1</sup>, Kata Csekő<sup>2</sup>, Amir Reza Ashraf<sup>1</sup>, Ágnes Kemény<sup>2</sup>,  
Zsuzsanna Helyes<sup>2</sup>, Györgyi Horváth<sup>1</sup>

<sup>1</sup>*Department of Pharmacognosy, Faculty of Pharmacy, University of Pécs*

<sup>2</sup>*Department of Pharmacology and Pharmacotherapy, Medical School, University of Pécs*

- 2AIV-6** Development of glycosylation reactions based on activation of alkynes by platinum salts

Mao Kawata<sup>1</sup>, Yusuke Kasai<sup>1</sup>, Hiroshi Imagawa<sup>1</sup>  
<sup>1</sup>*Faculty of Pharmaceutical Sciences, Tokushima Bunri University*

**2AIV-7** Towards an AI-assisted experimental design for coupling reactions

Shinya Shiomi<sup>1</sup>, Masahiro Yoshida<sup>1</sup>  
<sup>1</sup>*Faculty of Pharmaceutical Sciences, Tokushima Bunri University*

**2AIV-8** Green ozonolysis method using fine bubble technology:  
Improving gas utilization and process safety

Nobuyuki Mase<sup>1</sup>, Kohei Sato<sup>1</sup>, Tetsuo Narumi<sup>1</sup>  
<sup>1</sup>*The Research Institute of Green Science and Technology, Shizuoka University*

**(13 : 00~)**

Chairperson: T. Masuda (Osaka Met. Univ.), H. Yamagiwa (T. Hasegawa Co., Ltd.)

**2PIV-1** Analysis of aroma characteristics of Okinawan traditional rice cake “muchī”

Misaki Kashima<sup>1</sup>, Moena Oe<sup>1</sup>, Yonathan Asikin<sup>1</sup>, Kensaku Takara<sup>1</sup>  
<sup>1</sup>*Faculty of Agriculture, University of the Ryukyus*

**2PIV-2** Evaluation of aroma characteristics for various soy sauces by integrated analysis of  
aroma components and sensory analysis

Hikaru Uchida<sup>1</sup>, Kaito Shimada<sup>2</sup>, Akane Matsuda<sup>2</sup>, Yoko Iijima<sup>2</sup>  
<sup>1</sup>*Graduate School of Engineering, Kogakuin University*  
<sup>2</sup>*School of Advanced Engineering, Kogakuin University*

**2PIV-3** Aroma characteristics of C8 saturated and unsaturated alcohols and their ketones

Ryusei Saito<sup>1</sup>, Shiro Ezoe<sup>1</sup>, Kenji Ueda<sup>1</sup>, Yoshihiko Akakabe<sup>1</sup>  
<sup>1</sup>*Graduate School of Sciences and Technology for Innovation, Yamaguchi University*

**2PIV-4** Research on volatile compounds in rosemary essential oil that enhance lemon flavor

Yuri Moriyama<sup>1</sup>, Kana Nakamura<sup>1</sup>, Hanna Ochi<sup>1</sup>, Shoko Sakamaki<sup>1</sup>  
<sup>1</sup>*Soda Aromatic Co., Ltd.*

**(14 : 20~)**

Chairperson: Y. Murakami (San-Ei Gen F.F.I., Inc.), S. Shiomi (Tokushima Bunri Univ.)

**2PIV-5** Enhancing mechanism of antioxidant activity of rosemary diterpenoid polyphenols  
in aqueous solution by cysteine thiol

Toshiya Masuda<sup>1</sup>, Tomoka Hamasaki<sup>1</sup>, Kazumi Kameda<sup>1</sup>, Akiko Masuda<sup>1</sup>  
<sup>1</sup>*Graduate School of Human and Ecology, Osaka Metropolitan University*

- 2PIV-6** Analysis of aroma compounds in spices using comprehensive two-dimensional gas chromatography–mass spectrometry and machine learning-based structure analysis method  
Azusa Kubota<sup>1</sup>, Ayumi Kubo<sup>1</sup>, Masaaki Ubukata<sup>1</sup>  
<sup>1</sup>*JEOL Ltd.*
- 2PIV-7** The potential of flavor GC-MS analysis with conventional liquid auto-sampler and PDMS sheet  
Masataka Wakayama<sup>1</sup>, Mitsunori Sato<sup>1</sup>  
<sup>1</sup>*Integrated Medical and Agricultural School of Public Health, Ehime University*
- 2PIV-8** Application of MALDI-TOFMS for structure determination of isoprenoidquinones tail variation  
Kimitoshi Sakamoto<sup>1</sup>, Yuuki Izuka<sup>1</sup>, Motomichi Matsuzaki<sup>2</sup>  
<sup>1</sup>*Faculty of Agriculture and Life Science, Hirosaki University*  
<sup>2</sup>*Department of Molecular Life Sciences, Tokai University School of Medicine*

