THE INAUGURAL SYMPOSIUM OF THE PHYTOCHEMICAL SOCIETY OF ASIA 2015
August 30th – September 2nd 2015
Tokushima Bunri University

Certification for Participation

Mrs. Retno WIDYOWATI
Hiroshima University

This is to certify that the above person has participated in the Inaugural Symposium of the Phytochemical Society of Asia 2015 from August 30th to September 2nd 2015 at Tokushima Bunri University, Tokushima, Japan

Hironobu Takahashi

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Secretariat of the ISPSA2015

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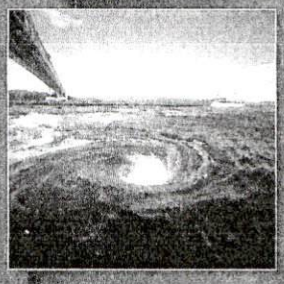
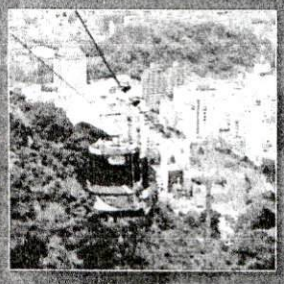

ISPSA 2015 TOKUSHIMA

INAUGURAL SYMPOSIUM OF THE PHYTOCHEMICAL SOCIETY OF ASIA 2015

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PROGRAM & ABSTRACTS

August 30th - September 2nd 2015

Venue : Tokushima Bunri University, Japan

17:15 **GM-03** **Distinct Transport Characteristics of Two Natural Auxins in Plants Under Gravitropic Stimulation**
**H. Kasahara*

17:30 **GM-04** **The Role of Secondary Metabolism is Still Largely Unclear, Un-expecting results!**
**H.R. El-Seedi*

Acanthus Hall

■Chairs: M. Stadler, H. Imagawa

14:15 **GA-01** **Screening of Lycopodaceae Plants of Thailand for Their Phytochemicals**
**N. Thasana, S. Thorroad, A. Jumraksa, P. Pongpamorn, T. Nilsu, N. Khunnawutmanotham, N. Chimnoi, S. Ruchirawat*

14:30 **GA-02** **Structure Elucidation of Resveratrol Octamers: Chiroptical Properties and Absolute Configuration**
**T. Ito, H. Ito, T. Nehira, R. Sawa, M. Iinuma*

14:45 **GA-03** **New Methyl Threonolactones and Pyroglutamates of *Spilanthes acmella***
**R. Widyowati, S. Sugimoto, Y. Yamano, H. Otsuka, K. Matsunami*

15:00 **GA-04** **Studies on The Constituents of *Dysoxylum acutangulum* and *Dysoxylum densiflorum***
**A.E. Nugroho, T. Momota, R. Sugiura, M. Hanzawa, E. Yajima, N. Yasuda, Y. Nagakura, H. Yoshida, O. Shirota, I.S. Ismail, A.H.A. Hadi, H. Fukaya, C.P. Wong, Y. Hirasawa, T. Kaneda, H. Morita*

15:15 **GA-05** **DNA Polymerases Inhibitory Polyprenylated Benzoylphloroglucinols from The Fruits of *Garcinia schomburgkiana***
**D.H. Le, K. Nishimura, Y. Mizushina, T. Tanahashi*

15:30 **GA-06** **New Triterpene Oligoglycosides from the Flower Buds of *Camellia sinensis* var. *assamica***
**T. Ohta, S. Nakamura, S. Nakashima, M. Yoshikawa, H. Matsuda*

15:45 **Break**

■Chairs: P. Rabarivelomanana, R. Bauer

16:15 **GA-07** **Phytochemistry and Biological Activities of some *Diospyros* Species from New Caledonia**
**C. Thieury, R. Le Guével, G. Herbette, V. Monnier, C. Antheaume, Y. Barguil, N. Lebouvier, E. Hnawia, Y. Asakawa, T. Guillaudeux, M. Nour*

GA-03

New Methyl Threonolactones and Pyroglutamates of *Spilanthes acmella*

Retno Widyowati[1,2], Sachiko Sugimoto[1], Yoshi Yamano[1], Hideaki Otsuka[1,3], Katsuyoshi Matsunami[1*]

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[2]*Faculty of Pharmacy, Airlangga University, Jl. Dharmawangsa dalam, Surabaya, Indonesia*

[3]*Faculty of Pharmacy, Yasuda Women's University, 6-13-1 Yasuhigashi, Asaminami-Ku, Hiroshima, Japan*

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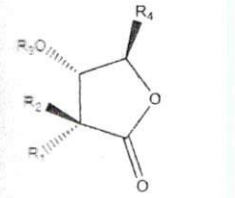
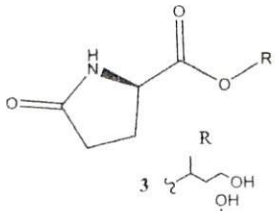
[Objective] *Spilanthes acmella* is a medicinal plant that distributed in the tropical and subtropical regions with rich source of therapeutic and medicinal constituents. The main constituents, "spilanthol" and "acmellonate", are used to reduce the pain associated with toothaches and induce saliva secretion. It is also used traditionally as treatment of rheumatism, tongue paralysis, antipyretic, sore throat, and gum infections [1]. It contains phytosterols, essential oils, sesquiterpenes, α- and β-bisabolenes and cadinenes, flavonoid glucoside and a mixture of long chain hydrocarbons. In recent years, other bioactive metabolites have been isolated as vanillic acid, *trans*-ferulic acid, *trans*-isoferulic acid, scopolelin, 3-acetylaleuritolic acid and β-sitostenone [2].

[Methods] The aerial parts of *Spilanthes acmella* were collected in Purwodadi, Indonesia, then extracted with methanol. The obtained methanol extract was concentrated and partitioned with *n*-hexane, ethyl acetate, and 1-butanol.

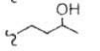
[Results] On investigation of the 1-butanol layer of this plant, a new methyl threonolactone glucoside (**1**), a new methyl threonolactone fructofuranoside (**2**) and two new pyroglutamates (**3**, **4**) along with 2-*C*-methyl-D-threono-1,4-lactone (**5**), 2-deoxy-D-ribono-1,4-lactone (**6**), methyl pyroglutamate (**7**), dendranthemoside A (**8**), dendranthemoside B (**9**), ampelopsisionoside (**10**), dendranthemoside B2 (**11**), benzyl-α-L-arabinopyranosyl-(1-6)-β-D-glucopyranoside (**12**) and chicoriin (**13**) were isolated by various chromatographic techniques such as silica gel, ODS column chromatography and HPLC. The structures of these compounds were determined as follows by spectrometric analysis (UV, IR, 1D- and 2D-NMR, and HR-ESI-MS).



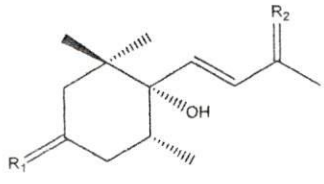
	R_1	R_2	R_3	R_4
1	CH_3	OH	Glc	H
2	CH_3	OFru	H	H
5	CH_3	OH	H	H
6	H	H	H	CH_2OH



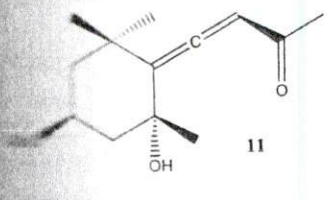
3 R =

4 R = 

7 R = CH_3



	R_1	R_2
8	H/α-OGlc	H/α-OH
9	H/α-OGlc	O
10	O	H/α-OGlc



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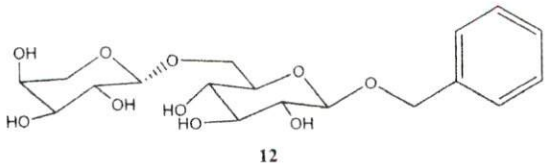

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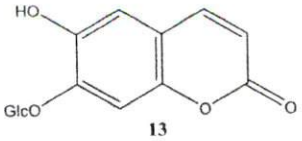

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[1] Dubey, S. *et al.* (2013) Advances in Pharmacological Sciences, ID 423750, doi: 10.1155/2013/423750

[2] Veda, P., *et al.* (2013) EXCLI Journal 12, 291 – 312