IADR General Session
Seoul, Republic of Korea • June 22-25, 2016
94th General Session & Exhibition of the IADR
3rd Meeting of the IADR Asia Pacific Region
35th Annual Meeting of the IADR Korean Division

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Seoul, Republic of Korea

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#IADR2016
Microbiology / Immunology – Microbiology/Immunology/Oral Biofilms

Chairpersons: K. Bao and J. Lewis

SE1603 8 a.m. Proteomic Interactions of Anaeroboglotus Genus within In Vitro Mutispecies Biofilms. K. BAO*, G. SELBASAKIS, N. SELENEK, T. THURNHEER, N. BOSTANC (Oral Microbiology and Immunology, Institute of Oral Biology, Center of Dental Medicine, University of Zurich, Zurich, Switzerland)

S1604 8:15 a.m. Prevention of Biofilm Formation of Periodontopathogens using Quorum Sensing Inhibitors. E. RYU*, J. SMY, K. KO, K.-S. JUNG, B. CHOI (SCHOOL OF DENTISTRY, SEOUL NATIONAL UNIVERSITY, SEOUL, Korea (the Republic of))

E1605 8:30 a.m. Antibacterial-activity Potential of Terpenoid Derived From Myrmecoda Perand Sp. Against Enterococcus Faciles. ATCC 29212. H. DHARSONO*, D. KURNIA, M.H. SATARI (Conservative Dentistry, Faculty of Dentistry, Universitas Padjadjaran, Bandung, West Java, Indonesia)

E1606 8:45 a.m. Targeted Therapy for Periodontal Pathogens. LEWIS*, J. HUTCHERSON, K. SINCLAIR, P. HOFFMAN (Philips Institute of OCMB, Virginia Commonwealth University, Richmond, Virginia, USA)

E1607 9 a.m. Transcriptomics Analysis of Enterococcus Faciles. Biofilm Revealed New Regulatory Pathways. C. SENEVIRATNE*, T. SURIYANARAYANAN, S. SWARUP, N. NAGARAJAN, C. ZHANG (National University of Singapore, Singapore, Singapore)

E1608 9:15 a.m. Streptococcus Oralis Maintains Biofilm Stability in a Supragingival Biofilm Model. T. THURNHEER*, G. SELBASAKIS (Oral Microbiology and Immunology, Institute of Oral Biology, Center of Dental Medicine, University of Zurich, Zurich, Switzerland)

Seq#: 219 Saturday, 25 June 2016, 8 a.m. – 9:30 a.m.

Oral & Maxillofacial Surgery – Oral & Maxillofacial Surgery II

Chairperson: H. Mahmoud

1613 8 a.m. OPT & CBCT: Correlations for IADN. Assessment of Wisdom Teeth. H. MAHMOOD*, R. HANDA, M. MOHAMAD (Birmingham Dental Hospital, Birmingham, United Kingdom)

SC1614 8:15 a.m. Preclinical Evaluation of Bisphosphonate Administration in Cleft Bone Grafts. A. QUACH, O.J. OLSON, M. HOANG, T. YU, S. HA, C. BHOOT, K. BUL, R. KIM, K. TING. C. HONG* (School of Dentistry, University of California – Los Angeles. Los Angeles, California, USA)


C1616 8:45 a.m. Intracellular Signaling Pathways of Osteogenesis Stimulated by Magnesium Ion. S. YOSHIZAWA, A. BROWN, A. BARROWSKY, A. CHAYA, C.-C. HUNG, M. SHE-HABELDIN, C. SFEIR* (Oral Biology, University of Pittsburgh, Pittsburgh, Pennsylvania, USA)

C1617 9 a.m. A Preliminary Study on Individual 3D Printing Titanium Fixation Plates for Orthognathic Surgery. X. WANG* (Oral & Cranio-maxillofacial Science, Shanghai Ninth People's Hospital, Shanghai P.R., China)

19:15 a.m. Discussion.

Seq#: 220 Saturday, 25 June 2016, 8 a.m. – 9:30 a.m.

Oral Medicine & Pathology – Oral Medicine & Pathology III

Chairperson: M. Herzberg

C1609 8 a.m. Cetylpyridinium- and Zinc-chloride Inhibit Bacterial Growth and Malodorous Gas Production. J.-H. KANG*, B. CHO, J.-W. PARK (Oral Medicine and Oral Diagnosis, School of Dentistry and Dental Research Institute, Seoul National University, Seoul, Korea (the Republic of))

1610 8:15 a.m. Localization of Calprotectin (S100A8/A9) During Oral Epithelial Cell Division. P. ARYGRIS, M. HERZBERG* (Diagnostic and Biological Sciences, University of Minnesota, Minneapolis, Minnesota, USA)

8:30 a.m. Discussion.

C1611 8:45 a.m. Clinical Efficacy of Mouth-exercising Device Adjunct to Local Ointment. Intral-esional Injections and Surgical Treatment for Oral Submucous Fibrosis: A Randomized Controlled Trial. V. HAZAREY*, P. PATIL (Oral Pathology, Govt. Dental College Nagpur, Nagpur, Maharashtra, India)

C1612 9 a.m. Increased Human Beta-defensin-1 Promoted Keratinocyte Differentiation in Oral Lichen Planus. H. DAN*, Y. ZHOU, L. JIANG, X. ZENG, Q. CHEN (Department of Oral Medicine, West China College of Stomatology, Sichuan University, Chengdu, China)

9:15 a.m. Discussion.

Seq#: 219 Saturday, 25 June 2016, 8 a.m. – 9:30 a.m.

Oral Session, Hall E4

Periodontal Research-Therapy – New Horizons in Bone Regeneration

Chairperson: F. Hughes

1618 8 a.m. Effects of Different Colagen Membranes on Osteoblastic Differentiation of Mesenchymal Stem Cells. N. CURAV, P. BUXTON, M. MEHR, C. UREMORI, F. HUGHES* (Dental Institute, Kings College London, London, United Kingdom)

S1619 8:15 a.m. Neuropeptide Y Enhances the Osteogenic Potential of Periodontal Ligament Stem Cells. F. WINNING, T. KARL, G. LINDEN, S. KILLOUGH, C. IRWIN, F. LUNDY* (Queen's University Belfast, Belfast, United Kingdom)

SC1620 8:30 a.m. Effects of Particle Size and Glass Composition on Bioactive Glasses. N. HAMED*, R. HILL, D. GILLAM, N. KARPKHINA (Dental Physical Science Unit, Institute of Dentistry/Queen Mary University of London, London, United Kingdom)

SC1621 8:45 a.m. Protein Expression During Early Stages of Bone Regeneration Under Hypoxic and Hypophbic Titanium Domes. F. CALCIOLI*, N. MARDAS, X. DEREKA, A. ANAGNOSTOPOULOS, G. TSANGARIS, P. LELOVAS, N. KOSTOMITSPOULOS, N. DONOS (Centre for Oral Clinical Research, Queen Mary University of London, London, UK, United Kingdom)


SC1623 9:15 a.m. Role of Autologous Platelet Concentrates (APC) in Periodontal Bone Regeneration – A Systematic Review. S. RAVI*, S. M (department of periodontics, saveetha dental college, Chennai, Tamilnadu, India)
Antibacterial-activity of Terpenoid of *Myrmecodia pendans* plant against *Enterococcus faecalis* ATCC 29212

Hendra Dian Adhita Dharsono*, Dikdik Kurnia**, Mieke H.Satari***

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Objective: *Enterococcus faecalis* (EF) found to be close-related to the progression of pulpal and periradicular re-infections due to its survival nature in harsh environment in the root canal system post-endodontic treatment. It is predominantly isolated from a failed endodontic treatment case. Antibacterial agent used in endodontic treatment plays an important role during mechano-chemical preparation of the root canal in eliminating microorganisms. Chlorhexidine (CHX) is widely used and is an effective antibacterial agent against EF. Previous studies have introduced alternative antibacterial agent extracted from plants, *Myrmecodia pendans* Merr&Perry (MP), an indigenous plant from Papua, possesses potential antibacterial-active phytochemical compounds and have been used empirically as natural medicine.

Purpose: This study was done to determine a single active compound derived from MP and to investigate its activity against EF ATCC 29212 in comparison to CHX.

Method: Ethyl-acetate soxhlet method was performed to extract MP, subsequently separated and purified through chromatography method to isolate single-compound. Isolated compound structure was then characterized using spectrophotometer UV, IR, 1H-NMR, 13C-NMR, 2D NMR dan MS. Antibacterial activity of the isolated compound was tested using Kirby-Bauer method with 0.5 McFarland bacteria solution in blood agar plate. Isolated compound was diluted to 5,000 and 10,000 ppm with CHX used as positive control. Minimum Inhibitory Concentration (MIC) and Minimum Bactericide Concentration (MBC) were performed. All specimen were tested in triplication.

Result: Following characterization, the compound is determined as terpenoid group compound of terpenoid. Mean inhibition zones after 24h incubation in blood agar plates for 10,000ppm, 5,000ppm, and positive control are 16.7, 13.6, and 14,6 mm respectively. Terpen MIC against EF is 78.125 ppm with MBC of 2500 ppm.

Conclusion: Terpen isolated from MP shows higher antibacterial activities than CHX and potential to be develop as an antibacterial agent in treating endodontic cases.

Keywords: *Enterococcus faecalis*, terpenoid, *Myrmecodia pendans*, antibacterial activity
VERIFICATION OF ATTENDANCE AND PRESENTATION

The International Association for Dental Research verifies that:

Hendra Dharsono

attended the IADR/APR General Session & Exhibition
in Seoul, Republic of Korea, June 22-25, 2016, and presented the following research:

Antibacterial-activity Potential of Terpenoid Derived From Myrmecodia Pendans sp. against Enterococcus Faecalis ATCC 219212