WELCOME MESSAGE FROM THE CHAIRMAN OF 
ORGANIZING COMMITTEE

Distinguished Guests, Ladies and Gentlemen

Welcome to Indonesia the lovely country, especially to Surabaya, the city of heroes, and to the Airlangga University which lies at east Java, for all guests and the participant International Seminar on Medicinal Chemistry (ISMC) 2011.

It is the first time for us in Airlangga University to hold International Seminar on Medicinal Chemistry. This seminar is jointly organized by four Indonesian universities (Airlangga University, University of Indonesia, Bandung Institute of Technology, and Gajah Mada University), with Indonesian Institute of Science (LIPI) and Indonesian Medicinal Chemistry Association (PERAKMI).

At 2009, seminar medicinal chemistry was held with Timmerman Award. But now in 2011, the six collaborating institutes decided to develop this activity to become International Seminar on Medicinal Chemistry (ISMC). The activities in ISMC are divided into three parts. The first is workshop on medicinal chemistry; the second part is Timmerman Award competition; and the third part is the seminar which consists of plenary lectures, poster session, and presentation of Timmerman Award to the winners.

The Workshop is kindly handled by Schrodinger Inc., USA. Twenty eight participants from Indonesia and Malaysia attend this intensive workshop on computer-aided drug design. The plenary lectures will be given by Professor Timmerman and other outstanding medicinal chemists working in areas of medicinal chemistry. Sixty four posters will be presented during the poster session. We hope all participants can join together and discuss everything about recent scientific research and other academic activities.

I would like to express our gratitude to Professor Timmerman, all the plenary lecturers, workshop trainers, juries of Timmerman Award, workshop participants, Timmerman Award participants, seminar participants, Organizing Committee members, and everyone who contributed to the success of this event. Finally, I would like to thank the six institutions which give trust to Faculty of Pharmacy Airlangga University to hold this ISMC 2011. For the future I hope the collaboration of the six institutions will maintain this activity which will give the advantage to the development of medicinal chemistry.

Best regards,
Dr. Bambang Tri Purwanto
Chairman of Organizing Committee

ORGANIZING COMMITTEE

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International Seminar on Medicinal Chemistry 
and Timmerman Award 
Surabaya 2011
LIST OF POSTER PRESENTATIONS

<table>
<thead>
<tr>
<th>POSTER NUMBER</th>
<th>TITLE AND AUTHOR(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>P-1</td>
<td>3D-Molecular Screening of Diketopiperazine Derivatives on Stryphnodendron adansoni Dehydroxysquamine Synthese using Vinh Broto Sastio</td>
</tr>
<tr>
<td>P-3</td>
<td>MOLECULAR MODELING AND SYNTHESIS OF 3-(2,4-DICHLOROBENZYL)1-HYDROXYUREA Sukho Harjitojo, Sinwandro, Partawo, Win Darsono</td>
</tr>
<tr>
<td>P-4</td>
<td>Molecular Modeling Of Interaction Between O-(benzoyl)salicylic Acid Derivatives with The Cyclooxygenase Receptor Site of COX-2 Yuzal Widyanupra, Dijarin and Sinwandro</td>
</tr>
<tr>
<td>P-5</td>
<td>In silico study of Biactive Compounds in Andrographic paniculata as Antidiabetic Agent Firdayani, Bombang Sjianto and Sinaningsih</td>
</tr>
<tr>
<td>P-6</td>
<td>Antimalaria In Silico Screening against the Target of Plasmidien jactarum Enzyme Carrier Protein Reductase (PETNR) using Indonesian Natural Compound Database Arvy Yansen, Rino, Farii Ponada, Azizuddin</td>
</tr>
<tr>
<td>P-7</td>
<td>COMPUTATIONAL APPLICATION FOR SYNTHESIS HP2009* Maulana Tegar, Hari Purnomo, Sukandayani A.M.</td>
</tr>
<tr>
<td>P-8</td>
<td>DRUG DESIGN OF MH2011 AS ANALGETIC-ANTIPYRETIC IS BETTER THAN ACETAMINOPHEN BASED ON COMPUTATIONAL APPROACH Maudana Tegar, Hari Purnomo</td>
</tr>
<tr>
<td>P-9</td>
<td>Synthesis of 4-Methoxycinnamamide and Its N-Methylated Derivatives by Reaction of 4-Methoxycinnamic Acid with Amines Using Dicyclohexyl carbodiimide as Coupling Reagent Padi Pernowo, Marcellino Rudyanto, Jini Ekowati</td>
</tr>
<tr>
<td>P-10</td>
<td>Synthesis of O-Methylsalicylic Acid from Salicylic Acid via Reaction with Dimethyl Sulfate and Acid-Base Catalyzed Hydrolysis Hadi Poerwono, Suzana, Marcellino Rudyanto</td>
</tr>
<tr>
<td>P-11</td>
<td>Derivatization of Phenols by Mannich Reaction and Brine Shrimp Lethality Test of Some Obtained Products Marcellino Rudyanto, Moehemad Fauzy, Ainna Hendi Kuruputuah, Mahmood, Johan Heriadi, Tinta Baya, and Suzana</td>
</tr>
<tr>
<td>P-12</td>
<td>Asymmetric synthesis of 2,5-diepi-Pumiliotoxin C from a chiral auxiliary, R-phenyl glycinol Melamay Ika Sulistyowati, Shigeru Sasaki, Takayasu Yamauchi and Kimio Higashiyama</td>
</tr>
<tr>
<td>P-13</td>
<td>SUBSTITENTS EFFECT ON SYNTHESIS OF ENZYMELHNEBENZOHYDRAZIDES FROM BENZOIC ACID Suzana, Marcellino Rudyanto, Tutuk Budjati</td>
</tr>
</tbody>
</table>

P-14 | The synthesis of 0-(4-fluorobenzyl)pyroscam and the analgesic activity test is mice (Mus musculus) Tri Widianto, Sinwarono, Fitriyah Abdullah |
| P-16 | SYNTHESES AND CYTOTOXICITY ASSAY OF ANALOGUES OF ß-K-3A, A NOVEL FROM Sphingomyces sp. 517-02 Yasda Anita, M. Hanafi, Marissa. Teni |
| P-17 | CNS DEPRESSANT ACTIVITY TEST OF THE NEW COMPOUND 4-RIFUOXYMETHOXYBENZOYLPHENYLUREA Bombang Tri Purwantoro |
| P-18 | XANTHONE ACT AS ANTI-INFLAMMATION AND INHIBITOR FOAM CELLS FORMATION IN ATHEROSCLEROSIS RATS Dwi Laksono Adiputro, M. Ara Widodo, Rochmad Romdoni, Djarqan Sargowo |
| P-19 | Studies of antifungal, antioxidant and anti alpha glucosidase activity from tropical and temperate plants. R Arthur Ario Lelono, Savro Toshibane |
| P-20 | POTENTIAL ANTI-OXIDATIVE AND ANTI-FUNGAL ACTIVITIES FROM EUGENIA POLYANTHA WIGHT Radm Arthur Ario Lelono |
| P-21 | STUDY OF ß-MANGOSTIN COMPOUND AND ANTIDIABETIC ASSAY FROM FRUIT HULL OF GARCINIA MANGOSTANA LNN. Dewiendara Dyuh Wulanrini, Tatilr Ersam |
| P-22 | Toxicity Assay Of Salicyl Oxytrylco as ß-K-3A Analogue to Mice Dwiwianjanti, J.D. Hanafi, M. Benjarajahor S.S. S.Mangein, Megawati |
| P-23 | THE EFFECTIVENESS OF 2,4-DIKLOROBENZOITICUREA AS ANTI-COENVALUS WITH ELECTROSHOCK METHOD IN MICE Agustin Kirmishanti, Diri Kurnia |
| P-24 | ANTI-OXIDANT ACTIVITY OF TAMARINDUS PULP (Tamarindus indica L.) EXTRACT IN METH-NOL COMPARE TO EXTRACT IN WATER USING DPPH (1,1-Diphenyl-2-Picryl Hydrazyl) Farida Shub, Susama Hendrastina, Almanza, Zarin Firdia |
| P-25 | COMPARISON BETWEEN ACTIVITY AND MECHANISM OF INHIBITION OF ESSENTIAL OIL BETEL LEAF (Piper betle, Linn) WITH EUGENOL AGAINST SOME OF BACTERIAL PATHOGENS Muhammad Yanss Misiqja, Amir Sayfar, Erzie Hernoauvi Foeuwaningtih and Andria Agusti |
| P-26 | EFFECTIVENESS OF ETHANOL EXTRACT AND HAIR GEL ETHANOL EXTRACT OF GRAPE SEEDS (Vitis vinifera L.) RED varietis FOR HAIR GROWTH PROMOTORS ON RATS Ni Juh Dewi Ariyani, Agulina Kirishanti, Ivan Mariani Halin, Prastiti Internals Seminar on Medieval Chemistry and Timmerman Award Surabaya 2011 |
Antioxidant Activity of Tamarind Pulp (Tamarindus indica L.)
Extract in Methanol Compare to Extract in Water Using DPPH (1,1-Diphenyl-2-Percyi Hydrazyl)

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ABSTRACT

Nowadays, there is a strong demand in public to replace synthetic antioxidant by natural ones. Usually, Tamarind pulp (Tamarindus indica L.) is added as a flavor in culinary, fresh drink, and snack, also available from traditional to modern market. In order to find a natural antioxidant, a simple method using DPPH (1,1-Diphenyl-2-Percyi Hydrazyl) was carried out qualitatively and quantitatively on testing antioxidant activity of Tamarind pulp extract in methanol compared to extract in water. The violet color of DPPH (1,1-Diphenyl-2-Percyi Hydrazyl) fades after the addition of extract indicated the antioxidant activity. Quantitative analysis was done by visible spectrophotometry at maximum wavelength 516 nm. The result showed antioxidant activity of Tamarind extract in methanol by EC50 = 5689.31 ppm and extract in water by EC50 = 15043.22 ppm.

Keywords: antioxidant activity, extract in methanol, extract in water, tamarind pulp (Tamarindus indica L.), DPPH

Comparison Between Activity and Mechanism of Inhibition of Essential Oil Betel Leaf (Piper Betle, Linn) With Eugenol Against Some of Bacterial Pathogens

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ABSTRACT

Introduction: Betel (Piper betle, L.) leaf is traditionally known to be useful for the treatment of various diseases like bad breath, boil and abscesses, conjunctivitis, constipation, headache, hysteria, itch, mastitis, masto ditis, leucorrhoea, stomatitis, ringworm, swelling of gum, rheumatism, abrasion, cuts, and injuries etc as folk medicine. Objectives: This research has the objective of comparing the antibacterial activity of the essential oil of betel leaf (Piper betle, Linn) and eugenol as the basis for choosing a substance to be developed as an antimicrobial drug. Materials and Methods: The betel leaf was obtained from Balitro Bagor, distilled by steam distillation process. The essential oil of betel leaf that obtained was analyzed by Gas Chromatography-Mass Spectroscopy. The activity test of antibacterial of essential oil of betel leaf (Piper betle, Linn) and eugenol was carried out by using the method microcultivation against the bacteria Proteus mirabilis, Proteus vulgaris, Salmonella typhi, Staphylococcus aureus, and Streplococcus mutans. The bacteria were cultured in nutrient broth until their growth densities reached the turbidity of 0.5 McFarland units. The results were recorded after 24 hours of incubation at 37°C. Results: The bacterial inhibition zone was measured at 3 mm. The results of activity of the essential oil of betel leaf and eugenol were compared to the results of the activity of the standard antibiotic. The results showed that the essential oil of betel leaf and eugenol had antibacterial activity against the bacteria tested.

Keywords: essential oil, betel leaf, eugenol, antibacterial, Proteus mirabilis, Proteus vulgaris, Salmonella typhi, Staphylococcus aureus, Streplococcus mutans

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