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Molecular Oncology

An Update in Clinical Application

Insight On Infection Related Oncology

October 5-7, 2012

2nd BANDUNG BIOMOLECULAR
MEDICINE CONFERENCE

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Conference Book

Presented By



Faculty of Medicine
Padjadjaran University
Bandung, INDONESIA

**2nd BANDUNG BIOMOLECULAR
MEDICINE CONFERENCE**



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Message from the Chairman

Dear Colleagues

On behalf of the organizing committee it's really our great pleasure to invite general physicians, specialist, biochemists, biomolecular-scientists and students to participate in **Bandung Biomolecular Medicine Conference 2012**, with this year theme "**Molecular Oncology-an Update in Clinical Application, Insight on Infection Related Oncology**". This international conference will take place in Bandung city, Indonesia, with world class-expert speakers from several continents. We sincerely believe, this conference will beneficially improve our understanding and gain new insight in biomolecular medicine, especially on infection and oncology field, for all participants.

Global environment- and sosioeconomics-changes along with rapid progress of medical-science and technology, pursue the health-practitioners to over the best quality of health-services to the community. Regarding to give the best quality of health-services, it obvious that collaboration of multi-disciplinaries with multi-professionals is a must.

This scientific meeting rising the theme of environment related diseases, especially in infection and oncology. Both of these diseases contribute to the highest morbidity and mortality rates in Indonesia; as our institution (Faculty of Medicine, Universitas Padjadjaran-Hasan Sadikin General Hospital-Cicendo Eye Center Hospital) make a focus both in infection and oncology research using local man-power and resources.

This scientific meeting is aimed to discuss overviews and current research findings in infection and oncology field to lead our steps for its clinical application and the improvement of our therapy

intervention. We are pretty sure that this meeting will be an exciting and fruitful of fresh discussion.

We are really looking forward to welcoming all of you in Bandung.

Prof. Dr. Muhammad Nurhalim Shahib, dr
Chairman of Bandung Biomolecular Medicine Conference 2012



Message from the Dean

Dear Colleagues,
Welcome to Bandung, the capital city of West Java, INDONESIA
Welcome to Faculty of Medicine, Universitas Padjadjaran and Hasan Sadikin Hospital Bandung.

This year we are proudly present the 2nd **Bandung Biomolecular Medicine Conference**. There are so many exciting and fulfilling initiatives taking place in our faculty and the medical research centers, as we achieve an excellence in our missions of education, research, patient care and service to community.

This international conference is in accordance with 55th anniversary of Universitas Padjadjaran, as our theme for this event covers the environment related diseases, especially in infection and oncology, of which both contribute to the highest morbidity and mortality rates in Indonesia. Our faculty has committed to education and research, as these are the pillars of an academic medical center that rest squarely on the foundation of clinical care.

For the next two days of our gathering, we sincerely welcome all the participants and distinguish speakers to discuss about Biomolecular Medicine Research, as well as enjoying the unforgettable memory in Bandung, Paris van Java.

Again, the Faculty of Medicine, Universitas Padjadjaran appreciated your interest to gather here in this international conference and welcome your involvement to strengthen our network, resulting in more collaborative research projects.

Prof. Tri Hanggono Achmad, MD, PhD
Professor in Biochemistry

Organizing Committee

Patron : Prof. Dr. Ir. Ganjar Kurnia, DEA
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Chairman : Prof. Dr. M. Nurhalim Shahib, dr
Co-Chairman : Syamsudin Surialaga, dr., MS

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2. Putri Tessa, dr., MKes., AIFO
3. Wulan Mayasari, dr., MHKes
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5. Gita Widya, dr
6. Ajeng Pratiwi, dr
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3. Eva M Hidayat, dr

Registration :

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2. Titing N, dr., MKes., AIFO
3. Vicke Yunivita, dr., MKes

Scientific

Workshop :

1. Dr. Sunarjati Sudigdoadi, dr., SpMK
2. Lia Faridah, dr., MSi
3. Dr. Ani Melani Maskoen, drg., MKes
4. Edhyana Sahiratmadja, dr., PhD

5. Dimas Erlangga Luftimas, dr

Symposium :

1. Sari Puspa Dewi, dr., MHPE
2. Edhyana Sahiratmadja, dr., PhD
3. Djanuarsih, dr

Exhibition :

1. Silvita Fitri R, dr., MKes
2. Nova S, dr
3. Ike R. Husen, dr

Free Paper :

1. Bremmy Laksono, drg
2. M. Ersyad Hamda, dr
3. Irma Kamelia, dr

Peer review coordinator :

1. Rovina Ruslami, dr., SpPD., PhD

Peer review members :

1. Edhyana Sahiratmadja, dr., PhD
2. Bremmy Laksono, drg
3. Prof M. Nurhalim Shahib, dr
4. Prof A. Purba, dr
5. Dr. Achadiyani, dr
6. Dr. Ani Melani, drg
7. Dr. Reni Farenia, dr
8. Dr. med. Setiawan, dr
9. Dr. Sunarjati S, dr
10. Dr. Vita M, dr
11. Achmad Faried, dr., PhD

Publication :

1. Rudolf Andean, dr., SpPD
2. M. Ersyad Hamda, dr
3. Bayu, dr

Logistics :

1. Bremmy Laksono, drg
2. Haryono T, dr
3. Julius B, dr

Consumtion :

1. Dra. Anna M, MKes
2. Nursiah N, dr
3. Dra. Inne Kuswandinah
4. Trully Sitorus, dr., SpFK

Code of Conduct

General Rules

- All programs will start on time as scheduled; any change of schedule will be announced with prior notice.
- All programs are available only for those participants registered at Bandung Biomolecular Medicine Conference.
- Additional rules which are not listed above will be arranged later.
- Moderator will open each session and lead the discussion.
- If one or more speakers are absent, the remaining time will be used for discussion.
- Time allocation for each presenter are as follows:

| Program | Presentation time (minute) | Discussion time(minute) |
|---------------------|----------------------------|--------------------------|
| Oral Presentation | 5 | 2 |
| Poster Presentation | 5 | 2 |

Speakers

- For every presentation the organizing committee provides LCD data projector + laptop.
- Speakers are expected to submit all presentation materials at least 2 hours prior to their schedule and an opportunity to check the above materials are made available no later than 1 hour prior to their schedule at the slide counter.
- This arrangement must be made by speaker him/herself and when the materials are ready they will be tagged as ready for use. A receipt will be provided.
- Speakers should be present 15 minutes prior to their schedules and spend only the time allocated for the presentation.
- Slide counters are available at the Information desk (see map)

Poster Presentation

- All posters could be mounted on by Thursday, 4 October, 2012 at 3 p.m at Poster Area (see map).
- Posters should be taken off by Saturday, 6 October, 2012 by 4 p.m

Program at a Glance

| Time | Friday, October 5 th , 2012 | Saturday, October 6 th , 2012 |
|---------------|--|--|
| | 1 st Day Symposium | 2 nd Day Symposium |
| 08.00-08.30 | Registration | Registration |
| 30-10.00 | Opening Ceremony StudiumGenerale <i>(New trend in cancer related infection and their relation to local resources therapy)</i> | Symposium III-IV <i>(New trend in molecular diagnostics for cervical cancer)</i> |
| 10.00 - 10.30 | Coffee Break | Coffee Break |
| 10.30 - 12.00 | Symposium I <i>(Infection related oncology)</i> | Symposium V <i>(Vaccine development)</i> |
| 12.00 - 13.00 | Lunch | Lunch |
| 13.00 - 14.00 | Oral and Poster Presentation | Oral and Poster Presentation |
| 14.00 - 15.00 | | Closing ceremony |
| 15.00 - 15.15 | Coffee Break | |
| 15.15 - 16.00 | Symposium II <i>(New paradigm of infection related to oncology)</i> | |
| 19.00 - 22.00 | Welcome Dinner by Chancelor of Unpad | |

Glance of Speakers

Prof. Dr. Muhammad Nurhalim Shahib, dr (UNPAD, Indonesia)

Prof. Nurhalim Shahib is a professor and lecturer of in Faculty of Medicine, Universitas Padjadjaran (FK Unpad), Bandung, in Biochemistry and Molecular Biology. He has a major role in pioneering and developing the Molecular Biology research in Universitas Padjadjaran. In 1989, he established the first master program for Biotechnology and Molecular Biology in FK Unpad. Prof. Nurhalim Shahib got his first patent (1995) for his invention technology to recycle the hospital-infectious-waste product. His other patents are: Transport Nutrient Process through Cell Membrane without Radioactive (2008), Dry Extract Composition of *Carica papaya* Linn, *Phyllanthus niruri* Linn and *Curcuma xanthoriza* Rox B for anti-Dengue (2009). There is another patent under submission. He received the Patent Award in 2009 from Universitas Padjadjaran for his excellent achievement.



Prof. Dr. med. Tri Hanggono Achmad, dr (UNPAD, Indonesia)



Prof. Tri Hanggono is a professor and lecturer of Biochemistry and Molecular Biology in Faculty of Medicine, Universitas Padjadjaran (FK Unpad), Bandung, Indonesia. He recently appointed as a Dean of FK Unpad. Following his Doctorate program (1995) in Department of Clinical Biochemistry, School of Medicine, University of Bonn, he has been actively involved in education and reforming research-development in FK Unpad. His academic-background and research-background has brings this Medical Faculty and University to the higher level of academic-research atmosphere. He has very strong commitment to rebuilt this institution into a world class research university, as he stated this commitment with motto "from West Java to the World".

Prof. Peter Temple-Smith, PhD (Monash University, Australia)



Prof. Peter Temple-Smith is a zoologist by training and a reproductive biologist by discipline and research experience. His early research was on the breeding biology of native Australian fauna, an area in which he continues to retain a research interest. He is the Director of the Education Program in Reproductive Biology (now the Education Program in Reproduction and Development, EPRD) and Senior Research Fellow in the Centre for Reproduction and Development at MIMR, Monash University. He has published over 110 papers in peer-reviewed journals and conference proceedings and was co-investigator and co-author of a publication describing the sequencing of the platypus genome. His current research interests include comparative reproduction, sperm structure and function and manipulation of mammalian gametes, structure and function of the epididymis, the use of induced pluripotent stem cells in developing new tools for assisted reproduction of endangered species, and control of fibrosis in wound healing and fibrotic diseases.

Prof. Takashi Matozaki, MD., PhD (Kobe University, Japan)



Prof. Takashi Matozaki is the professor of Division of Molecular and cellular Signaling, Department of Biochemistry and Molecular Biology, Kobe University Graduate School of Medicine. He is also the Visiting Professor for Laboratory of Biosignal Sciences, Gunma University. His current main research topic is about the tyrosine phosphorylation signals. He has had consistent and constant outstanding performance as a research scientist and academic, as well as a high international standing and reputation, with a very notable past and continuing publication record. He has strong interest in research on the signals regulating maturation of neurons.

Dr. Wing-Kin Sung, PhD (NUS, GIS, Singapore)

Dr. Wing-Kin Sung received both the B.Sc. and the Ph.D. degree in the Department of Computer Science from the University of Hong Kong in 1993, 1998, respectively. He is an associate professor in the Department of Computer Science, School of Computing, NUS. Also, he is a senior group leader in Genome Institute of Singapore (GIS). He has over 15 years experience in Algorithm and

Bioinformatics research. He also teaches courses on bioinformatics for both undergraduate and postgraduate. Recently, he was conferred the 2003 FIT paper award (Japan), the 2006 National Science Award (Singapore), and the 2008 Young Researcher Award (NUS) for his research contribution in algorithm and bioinformatics.

Prof. Hirokazu Hirai, MD., PhD (Gunma University, Japan)

Prof. Hirokazu Hirai is the director of Biosignal Genome Resource Centre, Institute for Molecular and Cellular Regulation, and also the chairman of Division of Medical Neuroscience, Gunma University Graduate School of Medicine. He has had consistent and constant outstanding performance as a research scientist and academic, as well as, a high international standing and reputation, with a very notable past and continuing publication record. He

has strong interest in research on the signals regulating maturation of neurons. And with his fellowship members at his laboratory, they develop new technology for epigenome analysis.

Prof. Ate G. J. van der Zee, MD., PhD (State University of Groningen, The Netherlands)

Prof. Ate is the head of Department of Obstetrics & Gynaecology and also the director of the Division of Gynaecology Oncology of University Medical Center Groningen. His major research focus on interdisciplinary, translational research, aiming for personalized medicine in Gynaecologic Oncology. This include the ovarian cancer research, development and validation of new biomarkers for early diagnosis of cervical cancer, and development and validation of new diagnostic and therapeutic approaches in vulvar cancer.

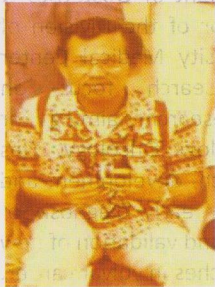
He obtained more than 20 grants as the principal investigator. He is also the author of 230 PubMed-listed papers, and more than 50 papers for international, non-refereed journals, many professional articles in Dutch journals and book chapters.

Mark Daniels, BA (Bionoetikos Ltd, Hongkong)

Mr. Mark Daniels has more than 30 years experiences in life sciences and biotechnology in North America, Europe, and Asia, and twenty years international sales, marketing, and business development experiences in emerging markets with focus on Asia. He has broad technical knowledge and experience in life sciences, diagnostics, and medical systems (genomics, proteomics, biopharmaceuticals, technology development). He also has extensive

management experiences, both in collaborative projects with global universities and companies, and directly with building and supporting technical and sales teams in Asia and North America.

Prof. Dr. Ridad Agoes, dr., MPH., DAPE (UNPAD, Indonesia)



Prof Ridad finished his Ph.D. degree from Universitas Padjadjaran. He is an associate professor in the Public Health and Parasitology Department, Universitas Padjadjaran. He has over 15 years experience both in Public Health and Parasitology research. He also teaches courses for both undergraduate and postgraduate in Universitas Padjadjaran. He has strong interest in entomology and community research. Currently he involved in epidemiological study about climate variability and its influence on the bionomics of mosquitoes as vectors and the intensity of dengue fever.

Sri Hartini, dr., SpPK (K), MARS (Dharmais Hospital, Indonesia)

dr. Sri Hartini is a clinical pathologist – oncology consultant at Dharmais National Cancer Center Hospital, Jakarta. She was the head of clinical pathology laboratorium in Dharmais Hospital, and now she is also a lecturer of postgraduate studies biomedic sciences majoring oncology at University of Indonesia. She has strong interest in immunology and cancer research, and has published many research.

Dr. Juniastuti, dr., MKes (UNAIR, Indonesia)

Dr. Juniastuti is the staff and lecturer of Microbiology Department, Airlangga University, Surabaya, Indonesia. She also finished her PhD program at Airlangga University. Her research interest is infectious diseases, particularly in the Hepatitis Virus Research. She obtained several grants and has published many publication regarding the hepatitis virus research.

Dr. rer. Nat. Chaidir, Apt (BPPT, Indonesia)

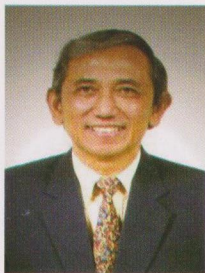


Dr. Chaidir is the head of Pharmaceutical Technology Division and also the Program Director of Herbal Medicine for Cancer and Degenerative Diseases at the Agency for the Assessment and Application of Technology (BPPT). He finished his PhD program from Wurzburg University, Germany. His current research activities including isolation and identification bioactive secondary metabolites from Indonesian medicinal plants and endophytic fungi, study of secondary metabolites production in plant cell culture, isolation and identification deep-sea bacteria isolated from Java trench region, and development of traditional medicine to evidence-based herbal medicine.

Dra. Maria Lina Rosilawati, M. Biomed (BATAN, Indonesia)



Dra Maria is a researcher of microbiology and Biology Molecular Fields at Center for Application of Isotopes and Radiation Technology, National Nuclear Energy Agency (BATAN), Jakarta since 1983. Her main research interests is Detection of MDR *Mycobacterium tuberculosis* directly from sputum samples by radioisotope-based PCR-dot blot hybridization and Application of radioisotope and non radioisotope -based PCR- dot blot/reverse dot & line blot hybridizations for genotyping high- risk HPV (Human Papillomavirus) form clinical specimens. She has published many articles in many scientific journals.

Prof. Herman Susanto, dr., SpOG (K) (UNPAD, Indonesia)

Prof Herman is the associate professor of Obstetry and Gynecology Department Hasan Sadikin Hospital Bandung. He is the chairman of Oncology Working Group of Medical Research Unit Universitas Padjadjaran. His main research interest is HPV research. In the last 2 years he and his working group members have been doing many research related to HPV. They had been build up the HPV strain and specific genomic population database from Bandung variant. They also developed research for HPV vaccine development.

Sony Suhandono, PhD (ITB, Indonesia)

Mr Sony is the lecturer and also researcher of School of Life Sciences and Technology, Institut Teknologi Bandung. He finished both his Bsc and PhD program from Dept of Biochemistry and Genetics, Newcastle University, United Kingdom. His main research interest is in molecular pharming. He has many research and publications both in national or international journals.

Dr Neni Nurainy, Apt (PT Biofarma, Indonesia)

Dr Neni is the Project Manager of Research and Development Division of PT.Biofarma. She finished her PhD program from University of Indonesia, and Post Doctoral Research Fellow from University of Melbourne, Australia. Her main research interest is about cancer vaccine, conjugation of polysaccharide into protein, adjuvant and antigen delivery system, dengue and TB vaccine candidate, and also DNA based vaccine.

Abstract**Stadium Generale**

Molecular Targeting Therapy In Oncology: Implementation Of Herbal Therapy Based On Genes Expression And Strategy To Improve Translational Research

M. Nurhalim Shahib

Molecular Biologist and Biochemist
 Dept Of Biochemistry, Faculty of Medicine-Universitas Padjadjaran Bandung-Indonesia
 Coordinator of Post Graduated Basic Medical Science, Faculty of Medicine-Universitas Padjadjaran Bandung-Indonesia
 Email: nurhalimshahib@yahoo.com

Continuing the government program in developing and increasing generic drugs in Indonesia, the use of natural sources as the traditional medicine is needed to be created into clinical trial supporting the national commodity in medicine. The objective of this study is to perform the anti cancer formula extracted from plant medicine as a basic material that can be tested and applied to the clinical trial.

Basically, cancer is caused by abnormalities in cell cycle and its regulations which are organized by specific proteins coded by the specific genes. The development of cancer therapy from natural sources in Indonesia has not yet any progress in clinical trial, that is why almost entire cancer therapies depend on the imported products. The obstacle in developing cancer therapy in Indonesia is caused by rigidity of the strategy using the bioactive from natural products at which the modern medicine based only on the active molecule. This will take much time and high budget to obtain the optimal results. In addition, cell death pathway and cell survival have not yet entirely understood, the specific type of cell death in cancer is very important to avoid any normal cell from injury. Further information about some cancers are drug resistant and the others have the ability to relaps, indicates that cell death associating with cell survival pathway is not a single pathway but multi pathways which makes the cancer cell is difficult to be killed. It means the cancer treatment could not rely only on a single active compound. Based on the all aspects mentioned above, we suggest that to eliminate cancer cells is required a combination therapy.

Abstract

A17

Intratypic Variants in Capsid Protein Gene L1 of HPV-16 from Bandung Isolates

Edhyana Sahiratmadja^{1,2}, Ani Melani Maskoen^{1,2}, Herman Susanto³

1. Dept. of Biochemistry, Faculty of Medicine Universitas Padjadjaran, Bandung Indonesia
2. Health Research Unit, Faculty of Medicine Universitas Padjadjaran, Bandung Indonesia
3. Dept. of Obstetrics and Gynecology, Faculty of Medicine Universitas Padjadjaran, Bandung Indonesia

Objective. Cervical cancer is associated with persistent high risk human papillomavirus (HPV) infection, with the most common infection by HPV-16 and -18. The vaccine available commercially at the moment contains major capsid protein L1. The L1 gene of HPV has several intratypic variants. Interestingly, a specific Javanese variant 6826 T in L1 was published recently. This study aimed to explore further about the Javanese variant in L1 HPV-16 in Sundanese samples.

Methods. DNA samples from biopsy of positive HPV-16 cervical carcinomas from Bandung, Indonesia (n=9) were amplified using primers specific for the L1 regions. Products were sequenced and analyzed.

Results. The sequence of L1 HPV-16 showed intratypic variants among the samples. The Javanese variant 6826T in L1 region was found in 4 of 9 samples. Compared to the reference published in Genebank, our samples have deleted regions and insertions.

Conclusion. The majority of the positive HPV-16 cervical cancers from Bandung, Indonesia has variants that might be associated with the ethnicity of the patients, leading to vaccine design in certain population. Further bioinformatics assessment for epitopes prediction as vaccine development need to be explored in region where the HPV prevalence is high.