



INDONESIAN ACADEMY OF SCIENCES
AKADEMI ILMU PENGETAHUAN INDONESIA



K O N I N K L I J K E N E D E R L A N D S E
A K A D E M I E V A N W E T E N S C H A P P E N
ACADEMY PROFESSORSHIP INDONESIA

SCIENTIFIC PROGRAMME INDONESIA – NETHERLANDS

Academy Professorship Indonesia

- Life Sciences -

Second-term Work Plan

1 July 2014 – 30 June 2016


KITLV-Jakarta

API Secretariat

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Work Plan Form API LS

Term : 2

Working period : 1 July 2014 – 30 June 2016

1. Title

Building medical research capacity through unifying basic science and clinical medicine

2. Personal details

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3. Activities for the second term of Academy Professorship in Life Sciences

The planned activities of the Academy Professorship Indonesia – Life Sciences (API-LS) for the second term (2015-2017) are described in three major areas: Education, Research, and Involvement in the Public and Community.

3.1. Education

Activities will be carried out to continue the work done in the first term of API-LS to achieve the mission: "Building research capacity through teaching and training of students in life science", which is carried out at the Eijkman Institute as the home institution and the University of Hasanuddin as the host institution.

In line with the objectives of the API-LS, the educational activities will be done through teaching and training of graduate and post-graduate students at the University of Hasanuddin and the teaching hospitals, Wahidin Sudirohusodo General Hospital and Hasanuddin University Hospital. There will be visits of the students and staffs from the host institution to the home institution for internship and have a real research atmosphere, where scientists from other places in Indonesia and foreign countries also work. Lectures and seminars of the API LS will also be made to other universities and institutions.

3.1.1. Postgraduate Teaching and Training

The names, programs, topics of study (titles of thesis), and statuses of the students currently supervised by the API LS are as follows:

Program	Name	Topic of study / thesis / dissertation	Status
Master Program	Yenti Purnamasari, S.Si.	Mutasi gen P dan S virus hepatitis B pada pasien hepatitis B kronis setelah 12 minggu pengobatan dengan antiviral <i>(Mutation of the hepatitis B virus S and P genes after 12-week antiviral treatment)</i>	started in January 2014 at the Hasanuddin University
PhD program	Luthfi Parewangi, MD	The dynamics of serological and molecular markers of Hepatitis B Virus in Chronic Hepatitis B Patients Treated with Lamivudine.	Started in 2012 at the University of Hasanuddin
	Masita Fujiko, MD	Pengaruh Muatan Virus, Peran Barrier Plasenta, Proses Persalinan Dalam Vertical Virus Hepatitis B: Kajian Serologi dan Molekuler <i>(The Role of Viral Load, Placenta Barrier, Delivery Process, in the Vertical transmission of Hepatitis B Virus Transmission)</i>	Started in April 2013 (at the University of Hasanuddin)
	Nu'man Daud , MD	Tentative topics: Characteristics hepatitis B Virus in different Clinical Stages of Chronic hepatitis B	To be started in the mid of 2014 at the Hasanuddin University

Program	Name	Topic of study / thesis / dissertation	Status
	Teguh Wijayadi, MD	Tentative Topic: Ablation of Hepatocellular Carcinoma: Molecular and Clinical Assessment	To be started in the mid of 2014 at the Hasanuddin University under the collaboration between Hasanudin University, Makassar, and Tarumanegara University, Jakarta.

3.1.2. Lectures and Seminars

Lectures, teaching and training will be given to academic students (under-graduate and post-graduate programs) and clinical residents at Hasanuddin University and the two academic hospitals (Wahidin Sudiro Husodo General Hospital and Hasanuddin University Hospital). To accomplish the task as an API LS in Indonesia, visits and lectures will also be made at other universities and institutions in Indonesia.

3.2. Research

Research activities are carried out with the following objectives:

- To undertake basic research aimed at understanding the characteristics of hepatitis viruses and their relationships with:
 - Disease progression and pathogenesis
 - Clinical and public health implication
 - Host and virus relationship
- To communicate the findings to the scientific community and public

3.2.1. Research at the Home Institution (Eijkman Institute)

3.2.1.1. Research activities being done:

- Investigation of immune epitopes of hepatitis B virus in chronic hepatitis B patients in Indonesia (*Ni Ketut Dias Nursanty*)
- Characterization of hepatitis B virus in blood donors with Occult Hepatitis b Infection (*Susan Irawati Ie*)
- Mutational pattern of hepatitis B virus X gene in Indonesian patients with HBV-related chronic liver diseases (Chronic hepatitis, Liver Cirrhosis and Liver Cancer) (*Korri El-Khobar*)
- Investigation of hepatitis B virus characteristics in Relapsed Chronic Hepatitis B Patients Treated with Nucleot(s)ide Analogues (*Turyadi*)
- Analysis resistance associated amino acid variants (RAVs) in chronic hepatitis patients treated with Direct Antiviral Agents (*Meta Dewi Thedja*)

3.2.1.2. *Publications being prepared:*

- Occult hepatitis B in young adults in Banjarmasin, South Kalimantan, Indonesia [*E Darmawan, Turyadi, KE El Khobar, NKD Nursanty, MD Thedja, DH Muljono*] – submitted to Journal of Medical Virology on January 15th 2014, Manuscript ID: JMV-14-3946 (revision until May 23rd 2014)
- Genogeography and Immune Epitope Characteristics of Hepatitis B Virus Genotype C Reveals Two Distinct Types: Asian and Papua-Pacific [*MD Thedja, SI Ie, E Sidarta, Turyadi, M Roni, J Verhoef, S Marzuki, DH Muljono*] – submitted to Virus Research on March 21st 2014, Manuscript ID: Virus-D-14-00121
- Evolutionary Study and Phylodynamic Pattern of Human Influenza A/H3N2 Virus in Indonesia from 2008 to 2010 [*Agustiningsih, et al*] – to be submitted to PlosOne.
- Molecular Epidemiology of Hepatitis B Virus Transmission in Family Members of HBV-Related Chronic Liver Disease Patients [*Iskandar MY, et al*] – to be submitted to Hepatology International
- Hepatitis B virus genotype determination using simple Restriction Fragment Length Polymorphism (RFLP) based on Single Nucleotide Polymorphism (SNPs) diagnostic sites in the preS/S region (*Thedja MD, et al*) – to be submitted to the American Journal of Tropical Diseases and Hygiene
- T-cell epitopes of hepatitis B virus surface and core antigen in Indonesia (*Nursanty NKD, et al*) – to be submitted to BMC Research Note
- Characterization of Hepatitis B Virus Gen X of Chronic Hepatitis B Patient in Indonesia (*El Khobar KE, et al*) – to be submitted to Virology Journal
- Mutational Pattern of Hepatitis B Virus Polymerase Gene in Patients Treated with Nucleos(t)ide Analogues (*El-Khobar KE, et al*) – to be submitted to Journal of Medical Virology
- Seroepidemiology and Molecular Characteristics of Hepatitis B virus in Ternate (*Ie SI et al*) – to be submitted to Journal of Gastroenterohepatology.

3.2.2. *Research at the Host Institution (Hasanuddin University)*

3.2.2.1. *Capacity Building*

Exchange of scientists from the Home and Host Institutions:

- (1) Visits of Senior Scientists from different disciplines (Microbiology, Internal Medicine, Obstetrics and Gynaecology) from Hasanuddin University visited Eijkman Institute, with activities to plan and evaluate on-going research activities, and discuss various aspects of capacity building and collaboration. Some of them will come again to do laboratory (bench) works to combine the methods done in their laboratories with those implemented at Eijkman Institute.
- (2) Training of PhD and Master Students at Eijkman Institute
- (3) Visit of Scientists from Eijkman Institute to assist the instalment of laboratory system and to train Scientists at Hasanuddin University.

3.2.2.2. *Scientific Activities*

❖ On-going research:

- (1) The dynamics of serological and molecular markers of Hepatitis B Virus in Chronic Hepatitis B Patients Treated with Lamivudine

- Research topic for Postgraduate (S3/PhD) program at the Hasanuddin University by Luthfi Parewangi, MD
- (2) The Role of Viral Load, Placental barrier, and Delivery Process in the Vertical Transmission of Hepatitis B Virus: serological and molecular study
 - Research topic for Postgraduate (S3/PhD) program at the Hasanuddin University by Masita Fujiko, MD
- (3) Mutation of the hepatitis B virus S and P genes after 12-week antiviral treatment
 - Research topic for Master (S2) program at the Hasanuddin University by Yenti Purnamasari
- (4) Vertical Transmssion of hepatitis B virus: A study of hepatitis B virus infection among 5000 pregnant mothers in Makassar and the efficacy of hepatitis b vaccination in babies born to HBV-infected mothers Principal Investigator: Maisuri Chalid MD, PhD)
 - The study has been started in January 2014, and is aimed to finish in 3 years. In this study, seroepidemiological and molecular examinations will be done. This study combines multiple disciplines of medical specialization fields (Obstetrics, Pediatrics, and Public Health) on 5000 pregnant mothers in South Sulawesi
 - University of Hasanuddin has provided a grant to this research project (Rp. 85,000,000.- per year)
- (5) Characterization of Occult Hepatitis B in Blood Donors in Makassar
 - This study is a continuation of the previous study: Serological assessment and NAT among Blood Donors in Makassar , and is planned to finish in 2 years
 - University of Hasanuddin has provided a grant to this research project (Rp. 85,000,000.- per year)

❖ Other research activities that have been started/planned:

- (1) Hepatitis B vaccination in adolescent and Young Adults in Makassar: To what extent are Makassar young adults protected (A collaborative study of the Hepatitis Research Group of Hasanuddin University and the Medical Faculty),
- (2) Hepatitis transmission in Hemodialysis Center (A collaborative study of the Hepatitis Research Group of Hasanuddin University and the Department of Internal Medicine and Hemodialysis Unit)

3.2.2.3. *Publications being prepared:*

- Mutational Patterns in Hepatitis B Virus (HBV) Reverse Transcriptase Protein in Treatment-Naïve Chronic HBV Patients (Kambuno NT, et al) – to be submitted to Hepatology International
- Serology and Nucleic Acid Testing (NAT) of Hepatitis B I Blood Donors from Makassar (Syahril R, et al) – to be submitted to Vox Sanguinis Journal
- Mother-to-child transmission of hepatitis B virus in Makassar (Chalid M, et al) – to be submitted to a regional journal of Obstetrics and Gynaecolgy

3.2.2.4. *Collaboration*

- ❖ Based the MOU between Hasanuddin University and Fondazione Italiana Fegato (FIF)/University of Trieste that was signed in 2013, two PhD students will be sent to the University of Trieste, Italy, in 2015. The works will be co-supervised by Prof. Claudio Tiribelli and the API-LS.

3.3. Involvement of the Academy Professor in the Public and Community

In order to achieve the objective to build medical research capacity in Indonesia, the API LS needs to have supports from many parties related to scope of health and medicine. This could be accomplished by maintaining the communication and network gained from the tasks to serve the Public and Community including:

- (1) The assignment as the member of the Strategic and Technical Advisory Committee for Hepatitis (STAC-Hep), which is an advisory committee to the Director General of WHO.(started in March 2014)
- (2) The assignment assigned as the member of the Coalition to Eradicate Viral Hepatitis in Asia Pacific (CEVHAP) since July 2013.
- (3) The Chairmanship of the National Committee for Viral hepatitis,

4. Expenditure plan for the next year

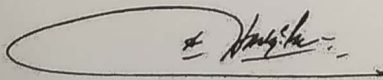
The operational budget will be used to support the following activities:

- Logistics, transportation and accommodation for sample collection,
- Purchase of reagents for laboratory work at the host and home institutions. Several topics of research are entering the stage when molecular analyses have to be done
- Seminars at the Host University and other institutions are planned on the following topics: How to communicate in science; Host-agent interaction in the pathogenesis of infection; other related topics.
- Exchanges of scientists from the home institution to the host institution to enhance the capacity building at Hasanuddin University
- Purchase of The budget will also be used for stationary, article production and publication, and incentives for the RA(s).

5. Signatures

Submitted by:

Date: 10 May 2014



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Submitted to

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