PANDE PUTU ERAWIJANTARI

Biological Information-PhD candidate | Gut Microbiome Researcher

CONTACT

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PORTFOLIO

Linkedin : linkedin.com/in/erawijantari-pande-putu
Researchgate : researchgate.net/profile/Erawijantari_Pande_Putu
Twitter : https://twitter.com/erawijantaript

SUMMARY

As a PhD candidate in Biological Information, I have incorporated skills in biology and bioinformatics. Originally trained in biology, I have worked on the deep-sea metagenomics study, synthetic biology and phytochemical effectiveness as anticancer. Afterward, I started to study deeply on bioinformatics with the help of the enormous data and computational tools that currently available publicly. My current research mainly focuses on the dynamics of human gut microbiome in the gastrointestinal-related diseases. This study uses the multi-omics approach which involves the metagenomics and metabolomics analyses on human fecal samples. In the future, I hope my contribution can help to understand the microbiome as effects or consequences in gastrointestinal related diseases and treatment effectiveness. Outside research, I like to spend my spare time on reading, watching, or traveling. To keep myself motivated, I like to constantly challenge myself, do the positive self-talk and self-tracking by journaling which can sharpen my focus on achieving the goals I set.

EDUCATION

PhD CANDIDATE
2017-Present

TOKYO INSTITUTE OF TECHNOLOGY - JAPAN
Major in biological information at the School of Life Science and Technology.
Focus of research is in gut microbiome dynamics in gastrointestinal-related diseases
Supervised by Associate Professor Takuji Yamada

MASTER OF SCIENCE
2015-2017

TOKYO INSTITUTE OF TECHNOLOGY - JAPAN
Major in biological information at the School of Life Science and Technology.
Master thesis focused on the effect of gastrectomy as gastric cancer treatment on human gut microbiome.

BACHELOR OF SCIENCE
2010-2014

INSTITUTE TEKNOLOGI BANDUNG (BANDUNG INSTITUTE OF TECHNOLOGY) - INDONESIA
Major in biology at the School of Life Science and Technology.
Bachelor thesis focused on the mutation and expression of beta glucosidase gene isolated from the Kawio Island, Sangihe Talaud, North Sulawesi, Indonesia deep sea metagenome.

RESEARCH

HEREDITARY COLORECTAL CANCER
2018-Present

GUT MICROBIOME PROFILE OF PATIENTS WITH HEREDITARY COLORECTAL CANCER
Numerous studies have indicated that gut microbiome plays important roles in development of colorectal cancer. The link between the gut microbiome with the hereditary form of colorectal cancer is yet to be discovered. Understanding the roles of microbiome in the hereditary colorectal cancer can help to decipher the ‘nature’ vs ‘nurture’ problem in microbiome study, especially related to colorectal cancer.

GUT MICROBIOME
2017-Present

GASTROINTESTINAL BARIER ALTERATION EFFECT ON HUMAN GUT MICROBIOME
Alterations of gastrointestinal structure caused by surgery or other medical operations may affect the human gut microbiome conditions. Understanding this alteration effect can provide a better understanding on the effectiveness of the medical treatment to the patients’ outcome based on the gut microbiome point of view.

GASTRECTOMY GUT MICROBIOME
2015-Present

THE EFFECT OF GASTRECTOMY AS GASTRIC CANCER TREATMENT ON HUMAN GUT MICROBIOME
Several researches have been carried out to observe the effect of gastrectomy for morbid obesity. However its effect as gastric cancer treatment still remains unknown. In order to analyze the effect, this study was performed for comprehensive characterization of human gut microbiome in the fecal sample from the gastrectomy patients with the history of gastric cancer.

PHYTOCHEMICAL ANTI CANCER
2014-2015

PHYTOCHEMICAL COMPOUND ANALYSIS AS ANTICANCER ON THE CELL LINE MODEL
Phytochemical compound is a candidate for cancer medicines. In addition, *In vitro* human cell line models have been widely used for cancer pharmacogenomics studies as well as in the screening of anticancer candidate from phytochemical compound. This study aimed to provide a better understanding on the mechanism of phytochemical compound as the cancer treatment based on the cell line model. Several results of this study have already been published.

SYNTHETIC BIOLOGY
2013-2014

WHOLE CELL BIOCATALYST FOR PET PLASTIC DEGRADATION
This research used synthetic biology approach to design an *Escherichia coli* that could degrade the polyethylene terephthalate (PET) plastics. This project has won gold medal at the International Genetically Engineered Machine (iGEM) Giant Jambore 2014.

WORK EXPERIENCES

STUDENT INTERN-DATA ANALYST
2018-Present

METABOLOGENOMICS, INC.
Contribute as data analyst related to gut microbiome related diseases and treatment effectiveness.
This company has focus on developing technology for stratified health care based on personalized gut microbiome.

RESEARCH ASSISTANT
2017-Present

YAMADA LABORATORY, SCHOOL OF LIFE SCIENCE AND TECHNOLOGY, TOKYO INSTITUTE OF TECHNOLOGY
Conduct primary and secondary source research as Research Assistant to Associate Professor Takuji Yamada. Contribute to methods development for the eukaryotic fraction detection and metagenomics analysis pipeline.

RESEARCH SCIENTIST
2014-2015

BIOMOLECULAR AND BIOMEDICAL RESEARCH CENTER, ARETHA MEDIKA UTAMA, BANDUNG, WEST JAVA, INDONESIA
Carried out analyses on the phytochemical bioactive screening and the potential of Mesenchymal Stem Cells for cancer treatment using human cells line model.

ON JOB TRAINING
2013

ENVIRONMENTAL AFFAIRS DEPARTMENT, PT NEWMONT NUSA TENGGARA, SUMBAWA, WEST NUSA TENGGARA, INDONESIA
Participated in the environmental assessment as the results of mining process and propose the solutions based on the analysis.

PUBLICATIONS

2016

Widowati W, Darsono L, Suherman J, Fauziah N, Maesaroh M, **Erawijantari PP**. Anti-inflammatory effect of mangosteen (*Garcinia mangostana* L.) peel extract and its compounds in LPS-induced RAW264.7 cell. Nat Prod Sci. 2016 Sep;22(3):147-153.

2016

Widowati W, Wijaya L, Laksmitawati DR, Widyanto RM, **Erawijantari PP**, Fauziah N, Bachtiar I, Sandra F. Tea flavonoids induced differentiation of peripheral blood-derived mononuclear cells into peripheral blood-derived endothelial progenitor cells and suppressed intracellular reactive oxygen species level of peripheral blood-derived endothelial progenitor cells. Nat Prod Sci. 2016 Jun;22(2):87-92.

2015

Nurhayati B, Wibowo MS, Widyastuti Y, **Erawijantari PP**, Widowati W, Pratama MRF, Kartawinata TG. In silico Analysis of Plantaricin EF that Expressed by Plasmid-Associated Bacteriocin Production Gene of Lactobacillus plantarum IBL-2 for Anti-Candida Agent Potential. Res J Microbiol. 2015 Dec;10(12):582-591.

2015

Kartika D, Widyanto B, **Erawijantari PP**, Widowati W. In vitro study of Myristica fragrans seed (Nutmeg) ethanolic extract and quercetin compound as anti-inflammatory agent. International Journal of Research in Medical Sciences. 2015 Sept; 3(9): 2303-2310.

CONFERENCE PRESENTATIONS

2018

Erawijantari PP, Mizutani S, Shiroma H, Yachida S, Yamada T.Metagenomic and metabolomic profiling to characterize the effect of gastrectomy as gastric cancer treatment on human gut microbiome. June 26-28, 2018; *7th International Human Microbiome Consortium : Translating microbiome science.*

2018

Erawijantari PP, Mizutani S, Shiroma H, Yachida S, Yamada T. Characterization of human gut microbiome and metabolome of gastric cancer patients after gastrectomy. March 5, 2018; *Keystone Symposia on Molecular and Cellular Biology: Manipulation of the Gut Microbiota for Metabolic Health.*

2015

Erawijantari PP, Moeis MR. Mutation and expression of β-glucosidase gene isolated from Kawio island, North Sulawesi Deep Sea, Metagenome. Nov 3, 2014; *5th International Conference on Mathematics and Natural Science.*

ACHIEVEMENTS

2018

International Human Microbiome Consortium 2018-Early Career Scientist Bursary recipient.

2017

Japanese Government (Monbukagakusho:MEXT) Scholarship recipient for PhD Student.

2015

Japanese Government (Monbukagakusho:MEXT) Scholarship recipient for Master Student.

2014

Gold medalist as ITB_Indonesia team on iGEM (International Genetically Engineered Machine)

EXPERTISE

- Bioinformatics
- Data analysis and Statistic
- Biology molecular
- Python Programing
- R Programing
- Linux

REFERENCES

TAKUJI YAMADA, ASSOCIATE PROFESOR
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Tokyo Institute of Technology, Tokyo, Japan
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LANGUAGE

INDONESIA : native proficiency
ENGLISH : professional working proficiency
JAPANESE : elementary proficiency