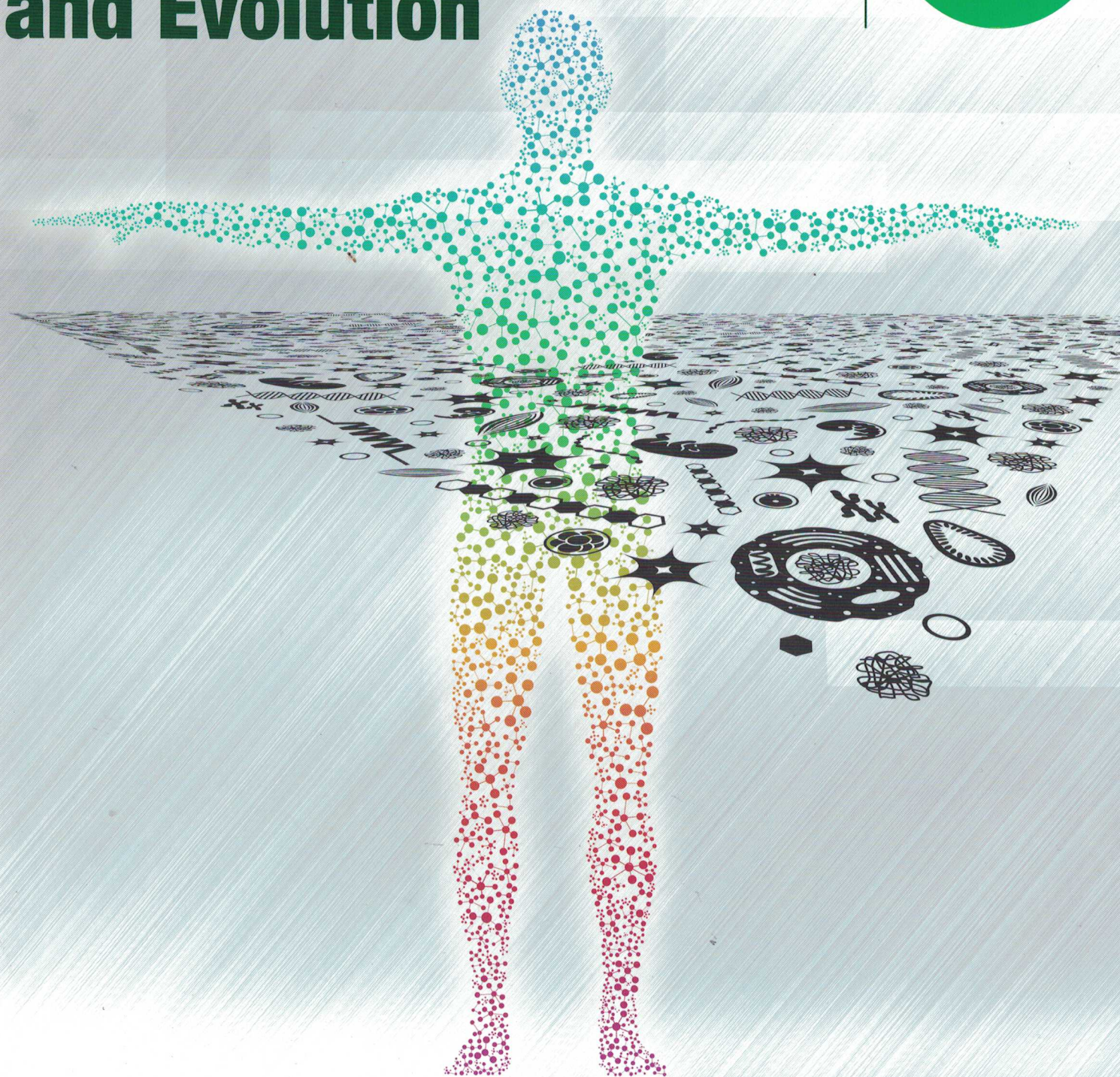


The 21st Takeda Science Foundation Symposium on Bioscience

Towards Understanding Human Development and Evolution

Program &
Abstracts



January 27 (Fri.) - 28 (Sat.), 2023

Venue: **Osaka International Convention Center**



Takeda Science Foundation

Supported by



ASHBi
WPI Kyoto University

POSTER SESSION

- P073** **Effects of Coconut Water (*Cocos Nucifera* Linn) on Physical Development and Survival Rate of Zebrafish (*Danio rerio*) Larvae**
Yhusi Karina Riskawati, Physiology Departement, Universitas Brawijaya, Malang / International PhD Program for Cell Therapy and Regenerative Medicine, Taipei Medical University
- P074** **The possibility of immune debt theory in Indonesian children post covid**
Christyaji Indradmojo, Medical Faculty, Malik Maulana Ibrahim Islamic State University, Malang
- P075** **Converging Pathways: A Histopathologic and Transcriptomics Approach to Dermatomyositis**
Francia V.A. De Los Reyes, Department of Neuromuscular Research, National Institute of Neuroscience, National Center of Neurology and Psychiatry
- P076** **Reconstitution of dopaminergic nerve circuit in planarian, an invertebrate flatworm**
Koto Matsubayashi, Ritsumeikan University
- P077** **Development and validation of the patient-reported questionnaire demonstrating daily disability in Korean patients with FSHD1**
Jong-Mok Lee, Kyungpook National University Hospital
- P078** **Altered Resting-State Network in Adolescents with Problematic Internet Use in Indonesia**
Kristiana Siste, Department of Psychiatry, Faculty of Medicine, Universitas Indonesia / Dr. Cipto Mangunkusumo National Central General Hospital, Jakarta
- P079** **Discovery of Food-Derived β -Carboline Alkaloids Ameliorate Lipid Droplet Accumulation in Human Hepatocytes**
Dya Fita Dibwe, Faculty of Health Sciences, Hokkaido University
- P080** **SNATIATION and ACHOO: Genetic Factors Leading to Unusual Triggers of Sneezing**
Melanie Grace Y Cruz, Far Eastern University - Dr. Nicanor Reyes Medical Foundation / Dr Jose N Rodriguez Memorial Hospital / Our Lady of Fatima University / East Avenue Medical Center
- P081** **Drug loaded poly(lactic-co-glycolic acid)-spheres as novel anticancer agents**
Karthick Velu, Sathyabama Institute of Science and Technology
- P082** **Association of Environmental Pollutants Exposure with Pulmonary Fibrosis: A Mini Review of Molecular Mechanism Mediated**
Bantari Wisynu Kusuma Wardhani, Lab of Pharmacology and Toxicology, Faculty of Military Pharmacy, The Republic of Indonesia Defense University

The possibility of immune debt theory in Indonesian children post covid

Christyaji Indradmojo¹, Yhusi K Riskawati², Tias P Griana³, Luthfia A Almas³, Ika N Syakhsiyah³

¹Medical Faculty, Malik Maulana Ibrahim Islamic State University, Malang

²Physiology Departement, Faculty of Medicine Universitas Brawijaya, Malang

³Medical Faculty, Malik Maulana Ibrahim Islamic State University, Malang

Observations at MTsN 1 Malang City in August 2022 showed an unusual phenomenon, namely the number of children who did not attend school because they had the flu. There are 2 seasons in Indonesia that change around October and April. The Ma fhad (Students Islamic Dormitory) reports that its capacity of 100 people, out of 42 boys, 2 children remained, while the others were sent home for treatment for flu. Although not fatal, this phenomenon is certainly an early warning of the health status of the community, especially children. Interesting things that need to be studied related to factors that affect immunity, including the relaxation of the PSBB (modified lockdown) due to the Covid-19 Pandemic, vaccination coverage, reduced exposure to seasonal viruses, social interaction after long-term quarantine, and the evolution of the immune system. Individuals due to lack of natural exposure. The development of the concept of debt immunity seems to be in line with this phenomenon. But at the same time, this has the potential to be misleading, which causes people to be mistaken in making decisions, such as, for example, feeling that vaccines have no benefit, so they choose natural immunization without calculating the disadvantages. Studies from the literature related to debt immunity, the evolution of immunity related to the level of exposure, and patterns of social interaction on the level of community immunity are of interest to us in understanding the phenomenon that has occurred. We conducted a literature review of publicly available information to explore risk factors with the keywords debt immunity, evolution of human immunity, and post-covid immunity profile. The occurrence of flu similar to seasonal flu but occurs outside the time of changing seasons is an alarm for the public and health practitioners. Viruses may experience faster evolution than individual immunity, giving rise to new patterns that need to be anticipated immediately so as not to become the next pandemic or even a double pandemic which will certainly burden the existing health system and have the potential to cause a catastrophic situation. The result is early detection of influencing factors, as well as an examination of concepts that seem reasonable but untested, need to be carried out immediately so as not to cause misguidance in people's behavior related to their health.

Reference

Abbasi J. Study Suggests Lasting Immunity After COVID-19, With a Big Boost From Vaccination. *JAMA*. 2021;326(5):376-377. doi:10.1001/jama.2021.11717Kaplonek, P., et al., Early cross-coronavirus reactive signatures of humoral immunity against COVID-19. *Science Immunology*. 6(64): p. eabj2901Schultze, J. L., & Aschenbrenner, A. C. (2021). COVID-19 and the human innate immune system. *Cell*, 184(7), 1671-1692. <https://doi.org/10.1016/j.cell.2021.02.029>Ibarrondo, F.J., et al., Rapid Decay of Anti-SARS-CoV-2 Antibodies in Persons with Mild Covid-19. *New England Journal of Medicine*, 2020. 383(11): p. 1085-1087.Long, Q.X., et al., Clinical and immunological assessment of asymptomatic SARS-CoV-2 infections. *Nature Medicine*, 2020. 26(8): p. 1200-1204.Willyard, C., What the Omicron wave is revealing about human immunity. *Nature*, 2022. 602(7895): p. 22-25.



Christyaji Indradmojo, Sp.EML, Yhusi K. Riskawati, M.Sc2, Tyas P. Griana, M.Biomed1,
Luthfia A. Almas1, S. Ked1, Ika N. Syakhsiyah, S. Ked1
Medical Faculty, Maulana Malik Ibrahim State University, Malang1, Physiology Departement, Faculty of Medicine University Brwijaya,
Malang2

1. Abstract

Observations at MTsN 1 Malang City in August 2022 showed an usual phenomenon, namely the number of children who did not attend school because they had the flu.

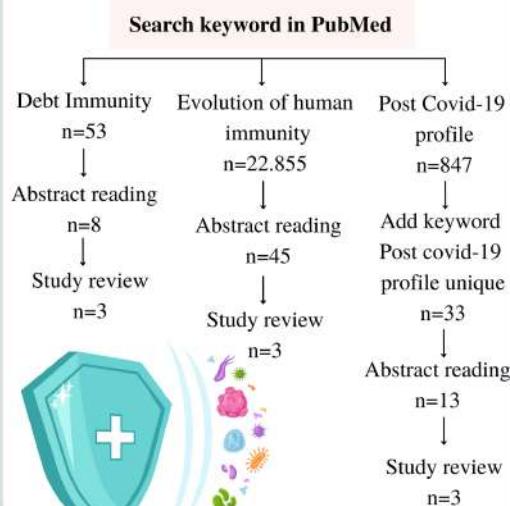
There are 2 seasons in Indonesian that change around October and April. The *ma'had* (Students Islamic Dormitory) reports that is capacity of 100 people, out of 42 boys, 2 children remined, while the others were sent home for treatment for flu. Although not fatal, this phenomenon is certainly an early warning of the health status of the community, especially children.

2. Aim of Study

Factors that affect immunity

- Including the relaxation of the PSBB (modified lockdown)
- Vaccination coverage
- Reduced exposure to seasonal viruses
- Social interaction after long-term quarantine
- The evolution of the immune system

3. Method



4. Discussion

The occurrence of flu similar to seasonal flu but occurs outside the time of changing seasons is an alarm for the public and health practitioners. Viruses may experience faster evolution than individual immunity, giving rise to new patterns that need to be anticipated immediately so as not to become the next pandemic or even a double pandemic which will certainly burden the existing health system and have the potential to cause a catastrophic situation.

5. Conclusions

Early detection of influencing factors, as well as an examination of concepts that seem reasonable but untested, need to be carried out immediately so as not to cause misguidance in people's behaviour related to their health

References:

1. Abbas, A. K., Lichtman, A. H., Pillai, S. 2016. Basic Immunology Abbas: Ed. 5. Elsevier
2. Yousaf, M., Raza S. H., MahmoodN. 2022. Immunity Debt or Vaccination Crisis? A Multy-Method Evidence on Vaccine Acceptance and Media Framing for Emerging COVID-19 Variant. Elsevier
3. Cohen, R., Mantovani, M. P., Somekh, E. 2022. European Pediatric Societist Call for an Implamantation of Regular Vaccination Programs to Contrast to Immunity Debt Associated to Covid-19 Pandemic in Children, European Pediatric Association.