



CENTER OF NUTRITION RESEARCH:

A PORTFOLIO

A. Background

Nutrition is the science that interprets the interaction of nutrients and other substances in food (e.g. vitamin like compounds, phytonutrients, antioxidants, phenolic, etc.) in relation to maintenance, growth, reproduction, health and disease of an organism. It includes food intake, absorption, assimilation, biosynthesis, catabolism and excretion.

The aspects of Nutrition from the viewpoint of science, stretches from biomolecular aspects, physiological, metabolism and biomarkers, consumption of food and nutrients, behavior and nutrition education, socio - anthropology of nutrition, nutritional deficiencies, nutritional excess, the implementation on the aspects of dietetic infectious diseases and degenerative disease (individual), and culminate on nutrition policies at hospitals and public health.

There is a nutritional epidemiology transition in Indonesia as developing country which may effect on health status among Indonesian people. This nutrition research center was built in 2013 to conduct studies (both observational and experimental and/or in vivo/in vitro) related to human nutrition, health and disease. Our research includes examining the effects of nutrient or dietary intake, diet composition, diet intervals, variation in nutritional status, or interventions ranging from, but not limited to, whole foods/dietary patterns, dietary supplements, or alternative delivery modes, on health-related outcomes in humans. Nutrients may encompass macronutrients, micronutrients (vitamins/minerals), phytonutrients, and other food components (functional foods/nutraceuticals).

Our research center is committed to conducting inovative both basic nutrition science and translational nutrition research which study how Indonesian people's differences in requirements and responses to diet (macronutrients and micronutrients) affect their nutritional needs. We believe that our advances in nutrition science are



Vision: *Our vision is to use scientific evidence on nutrition to ensure optimal health in the life course.*

Mission: *To enhance understanding of human nutrition, disease prevention, health and human development through greater knowledge of how genetic, epigenetic, and metabolic mechanisms affect people's requirements and responses to nutrition.*

B. Our Goals

Short-term and Mid-term :

- a. To execute excellent nutrition research *roadmap* along with Diponegoro University research roadmap.
- b. To publish in scopus indexed journal, all research which has been conducted by all members / people who is willing to contribute in this center.
- c. To collaborate with another research center who may has same interest on several themes of nutrition aspects (based on roadmap).
- d. To initiate research partnership and community empowerment partnership with government(s), company(s), other research center, and university(s).
- e. To contribute on establishing Sustainable Development Goals (SDG's) especially in priority number 2 and 3 of SDG's

Long-term :

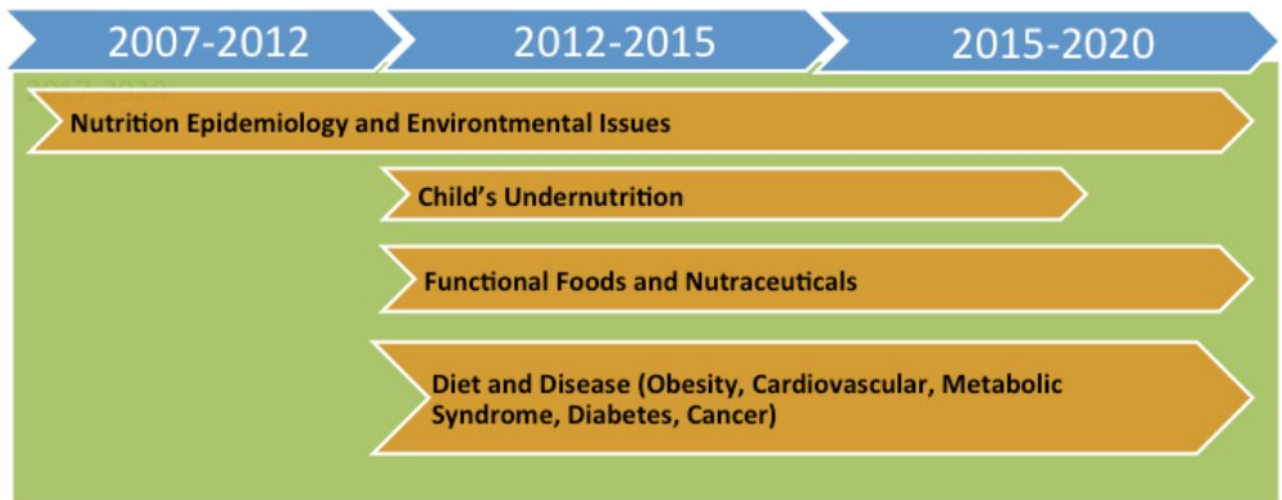
- a. To enhance global research networking of nutrition and health area with industry and international NGO representatives.
- b. Establishing local collaboration and international collaboration to compete on global research funding for example Bill & Mellinda Gates Foundation and USAID.
- c. Establishing nutrition research center at regional and international level.
- d. To produce and register paten, commercial products/model based on research evidenced



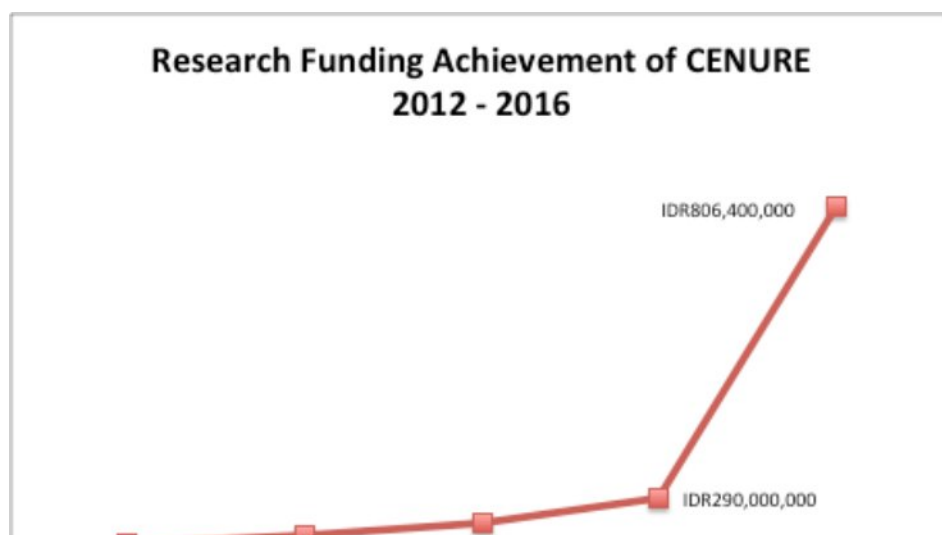
C. Ourcontributes:

- a. On behalf of Diponegoro University, we contribute to numbers of scopus indexed publications.
- b. Bringing up Diponegoro University on national and international research and empowerment partnership.
- c. Supporting Diponegoro University Research Road Map.
- d. Empowering community especially at coastal region based on research evidence.

Research's Focus Since 2014 (After previous evaluation on 2013)



D. Research Funds





This is a line graph whose x-axis shows years from 2012 to 2016. The y-axis indicates the funding achievements of our research center members that were funded in fiscal years 2012 through 2016.

Our source of funding was different between years. In 2012, our source of funding was coming from **Diponegoro University (DIPA Faculty of Medicine) and Ministry of Health (RISBINIPTEKDOK Grant)**. In 2013, our source of funding was coming from **Diponegoro University (DIPA Faculty of Medicine), Directory of Research and Community Services, Ministry of Education and Culture, and Research Collaboration with Hokkaido University, Graduate School of Health Sciences**. In 2014, source of research grant was funding by **Diponegoro University (DIPA Faculty of Medicine), Directory of Research and Community Services, Ministry of Education and Culture, and Research Collaboration with Jazan University, Faculty of Dentistry, King Saudi Arabia**. In 2015, source of research grant was funding by **Diponegoro University (DIPA Faculty of Medicine), Directory of Research and Community Services, Ministry of Research, Technology, and Higher Education, and Research Collaboration with Hokkaido University, Graduate School of Health Science – Kariadi Center Hospital, Grant from Department of Education, Central Java Government**. In 2016 is our peak of research grant. Our peoples achieved 806.400.000 IDR from **Diponegoro University (DIPA Faculty of Medicine), Directory of Research and Community Services, Ministry of Research, Technology, and Higher Education**. Unfortunately we haven't composed any International research grant (for example National Institute of Health (NIH) USAID, National Institute of Science (NIS) USIAD, Bill and Melinda Gates Foundation .etc)

E. List of Indexed Scopus Publications (recent 5 years)

1. **Diana Nur Afifah, Muhammad Sulchan, Dahrul Syah, Yanti, Maggy Thenawidjaja Suhartono, Jeong Hwan Kim**. Purification and Characterization



2. **Diana Nur Afifah, Muhammad Sulchan**, DahrulSyah, Yanti, Maggy T. Suhartono. Isolation and identification of fibrinolytic protease-producing microorganisms from *Red Oncomand Gembus*, Indonesian fermented soybean cakes. *Malaysian Journal of Microbiology*, Vol 10(4) 2014, pp. 273-279.
3. **Diana Nur Afifah, Muhammad Sulchan**, DahrulSyah, Yanti, Maggy T. Suhartono. The use of Red Oncom Powder as Potential Production Media for Fibrinogenolytic Protease Derived from *Bacillus licheniformis* RO3. *Procedia Food Science* 3 (2015) 453 – 464.
4. **Ninik Rustanti**, RetnoMurwani, Saiful Anwar. Combined Inorganic Iron (FeSO₄) and Steamed Pumpkin (*Cucurbitamoschata*) Fortification in Fresh Noodles Can Increase Hemoglobin Levels in Iron Deficient Mice. *Pak. J. Nutr* 2015; 14 (6): 316-321.
5. Faeq A Quadri, Heni Hendriyani, **Adriyan Pramono**, M.Jafer. Knowledge, attitudes and practices of sweet food and beverage consumption and its association with dental caries among schoolchildren in Jazan, Saudi Arabia. *East Med Health J* 2015; 21(6): 403 – 411.
6. M. Zen Rahfiludin, **Adriyan Pramono**, Onny Setiani. Effect of vitamin A, zinc and vitamin E supplementation on immune response in seropositive leprosy subjects. *Pak. J Nutr* 2016; 15(1): 40 – 44.
7. **Adriyan Pramono, Nuryanto, Etisa Adi M, Binar Panunggal, Gemala Anjani**. Hyperuricemia and its Association with the Presence of Metabolic Syndrome among Indonesian Obese Adolescents. *Pak. J Nutr* 2016; 15(3): 238 – 243.
8. **Mexitalia M**, Yamauchi T, Utari A, Sjarif DR, **Subagio HW**, Soemantri A, Ishida T. The role of uncoupling protein 2 and 3 genes polymorphism and energy expenditure in obese Indonesian children. *J PedEndocrinol Metab* 2013; 26(5-6): 441-447.



F. People (s)

Coordinator : Dr. Diana Nur Afifah, M.Si
Vice coordinator : Gemala Anjani, PhD

Members:

1. Prof. dr. H.M. Sulchan, MSc, SpGK (K)
2. Prof. Dr. dr. Hertanto WS, MS, SpGK (K)
3. Fitriyono Ayustaningwarno, STP, MSi
4. Adriyan Pramono, SGz., MSi
5. Ninik Rustanti, STP, MSi
6. Nurmasari Widiyastuti, SGz., MSi.Med
7. Ani Margawati, PhD
8. Nuryanto, S.Gz, M.Si
9. Binar Panunggal, SGz., MPH
10. Ahmad Syauqi, SGz., MPH
11. Choirun Nissa, SGz., MGizi
12. Deny Yudhi Fitranti, SGz., MSi
13. dr. Etisa Adi M, MSi., SpGK
14. dr. Aryu Candra, MEpid
15. Etika Ratna Noer, SGz., MSi
16. Fillah Fithra Dieny, SGz., MSi
17. Hartanti Sandi, SGz., MSc
18. dr. Enny Probosari, MSi.Med
19. dr. Zulfa Juniarto, MSi.Med., Sp.And., PhD
20. dr. M. Ali Sobirin, PhD
21. Dr. dr. M. Mexitalia, SpA (K)
22. Dr. rer. nat. Siswo Sumardinono, ST, MT
23. Ir. Ervia Yudiati, MSc
24. drh. Dian Harjanti, PhD
25. Dina Pangestuti, S,TP., M.Sc

Noted

Our research center open to anyone who is willing to get involved and contribute to the research/collaboration related to food and nutrition