

Ecological Studies on Flying Foxes and Their Involvement in Rabies- Related and Other Viral Infectious Diseases

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SATREPS 2014



Ecological studies on flying foxes and their involvement in rabies-related and other viral infectious diseases

Protecting People from Dangerous Viruses by Investigating the Ecology of Flying Foxes!



Key Information 

<To be Updated>
FY2023 SATREPS
 Invitation for Research Proposals
 Sept.6th - Nov. 7th (at noon), 2022

■ Quick access

SATREPS **SUSTAINABLE DEVELOPMENT GOALS**





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■ SNS



Principal Investigator (Affiliation)	 	 
	Prof. HONDO Eiichi (Graduate School of Bioagricultural Sciences, Nagoya University)	Dean Srihadi Agungpriyono (Faculty of Veterinary Medicine, Bogor Agricultural University (IPB))
Research Institutions in Japan	Nagoya University / Tokyo University of Agriculture and Technology / Yamaguchi University	
Research Institutions in Indonesia	Bogor Agricultural University	
Adoption fiscal year	FY 2014	

Keywords

Record of a long
time collaboration

The need of
Indonesian
Government

Global impact

Sophisticated
(*state of the art*)
technology and
method on
particular matter

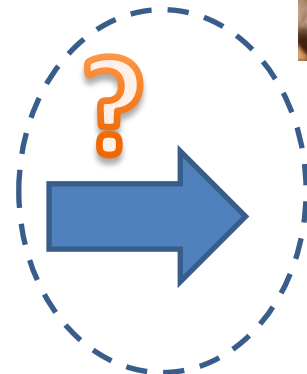
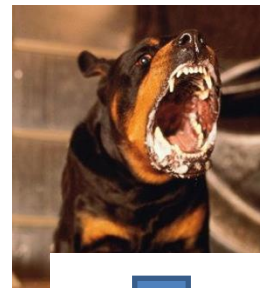
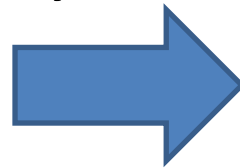
Human and
technology
development
(knowledge transfer,
skill and equipment)

Research results:
joint publications

Multi-sectors
linkages (MoRTHE,
MoA, MoH, MoF,
universities, LIPI)

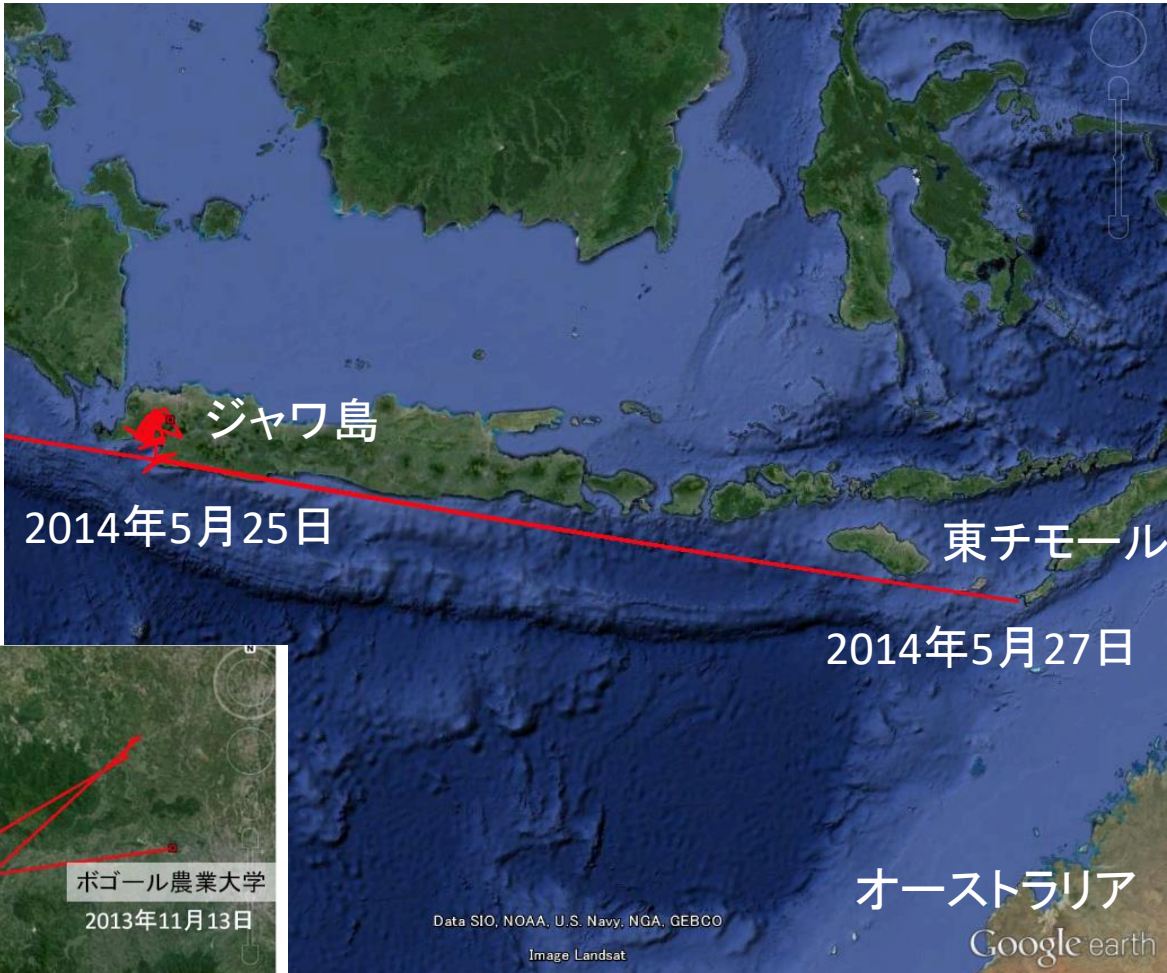
Rabies dan Flying Fox (*Pteropus sp.*)

- Rabies Indonesia most important zoonosis
- History: Virus from bats to dogs → human
- Other viral diseases: hendra, nipah, japanese encephalitis, paramyxovirus...etc)



Moving of the flying fox

East Timor and Kupang area (Nusa Tenggara Timur) is the highest for rabies..



SATREPS研究室の設置

ボゴール農業大学(IPB)
(Agungpriyono他)

インドネシア共和国
人獣共通感染症
センターIPB



JBIC ODA Loan No. IP-433



人獣共通感染症センターIPB 実験室



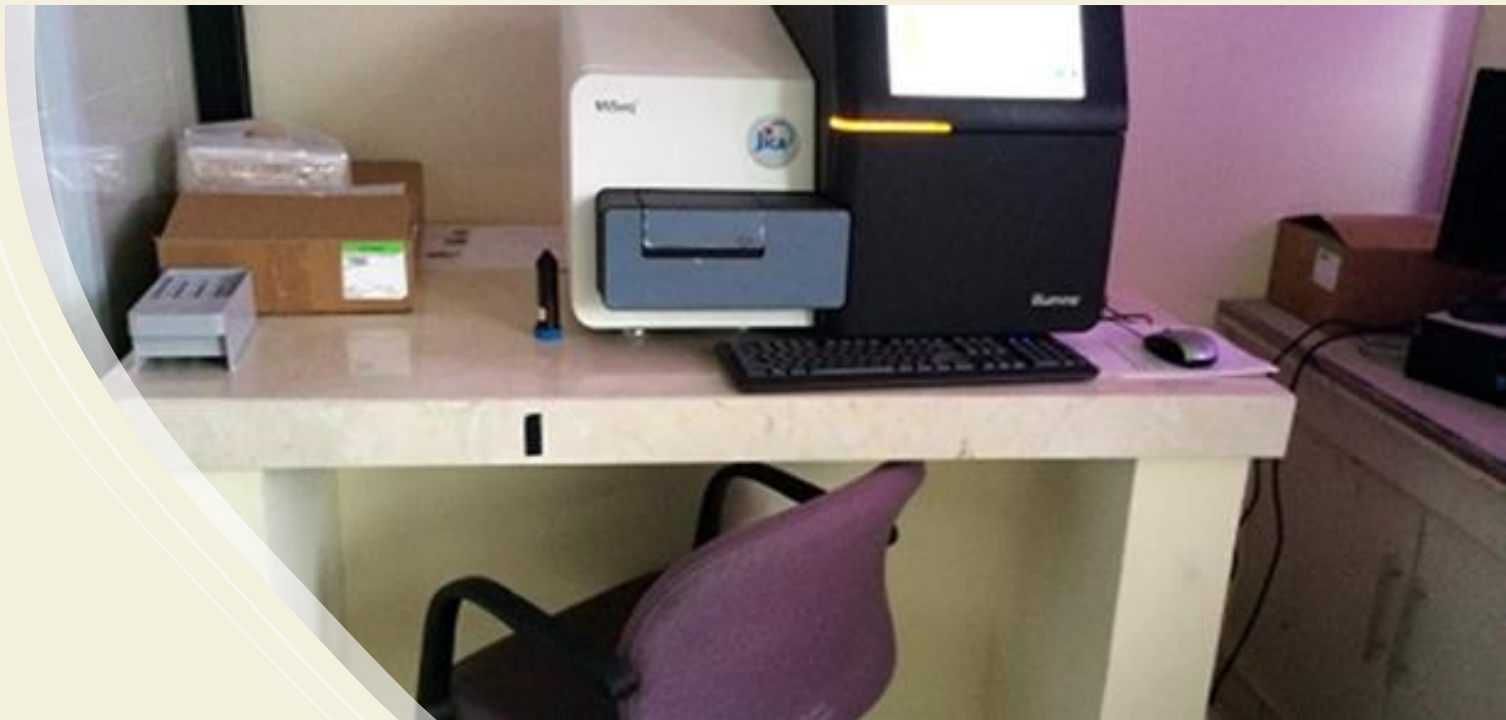
実験室

JICA長期派遣研究員
執務室

SATREPS研究室(予定)







Top Technology, Top Scientist



NAGOYA UNIVERSITY



YAMAGUCHI UNIVERSITY
山口大学



Prof. Eiichi Hondo: Nagoya University
(animal behavior and biomorphology)

Prof. Tetsuya Mizutani: Tokyo Univ of Agriculture and Technology
(identification and full genome analysis of virus)

Prof. Ken Maeda: Yamaguchi University
(Novel virus identification in bats)



Benefits Indonesian Site

Increasing capacity of Diagnostic Lab in IPB (BSL-3, Next Generation Sequencer and others)

Human development through internship, training, postgraduate study (MEXT scholarship)

IPB National Zoonosis Center as hub and coordinating office for the network

Scientific Publication

- 1) "Potential risk of viral transmission from flying foxes to domestic animals and humans on the southern coast of West Java, Indonesia" by **Chaerul Basri/IPB University** was accepted in The Journal of Veterinary Medical Science in 2017.
- 2) "Daytime behavior of *Pteropus vampyrus* in a natural transmission" by **Yupadee Hengjan / Nagoya University** was accepted in The Journal of Veterinary Medical Science in 2017
- 3) "Nighttime behavioral study of flying foxes on the southern coast of West Java, Indonesia" by **Yupadee Hengjan/Nagoya University** was accepted in The Journal of Veterinary Medical Science in 2018
- 4) "Isolation of Pteropine orthoreovirus from *Pteropus vampyrus* in Garut, Indonesia" by **Hitoshi Takemae/Nagoya University** was accepted in Virus genes in 2018
- 5) "The spleen morphophysiology of fruit bats" by **Desrayni Hanadhita/IPB University** was accepted in Anatomia Histologia Embryologia in 2019

Scientific Publication

- 6) “Extracellular matrix composition of different spleen compartments of fruit bats” by **Desrayni Hanadhita/IPB University** was accepted in Anatomia Histologia Embryologia in 2019
- 7) “Detection and isolation of tick-borne bacteria (Anaplasma spp., Rickettsia spp., and Borrelia spp.) in Amblyomma varanense ticks on lizard (Varanus salvator)” by **Supriyono/IPB University** was accepted in Microbiology and Immunology in 2019
- 8) “Mosquito-borne viruses, insect-specific flaviviruses (family Flaviviridae, genus Flavivirus), Banna virus (family Reoviridae, genus Seadornavirus), Bogor virus (unassigned member of family Permutotetraviridae), and alphamesoniviruses 2 and 3 (family Mesoniviridae, genus Alphamesonivirus) isolated from Indonesian mosquitoes” by **Supriyono/IPB University** was accepted in The Journal of Veterinary Medical Science in 2020.
- 9) “Role of pattern recognition receptors and interferon-beta in protecting bat cell lines from encephalomyocarditis virus and Japanese encephalitis virus infection” by **Ronald Tarigan/IPB University** was accepted in Biochemical and Biophysical Research Communications in 2020
- 10) “Distinct interferon response in bat and other mammalian cell lines infected with Pteropine orthoreovirus” by **Ronald Tarigan/IPB University** was accepted in Virus genes in 2021.

FORUM RISET BIOSAFETY LEVEL (BSL) - 3
OF BIOSAFETY LEVEL (BSL) - 3 LABORATORY

an Hewan - Institut Pertanian Bogor (IPB)

Medicine - Bogor Agricultural University (IPB)

SATRE

8 Mei 2017



Conclusion

- The Project sincerely hopes that the Indonesian stakeholders including RISTEK-DIKTI, Ministry of Agriculture, and Ministry of Environment and Forestry as well as IPB will work together for the continuous research with sustainable financing support in order to contribute to not only Indonesia but also to the world.

Thank you!

