H. Sato LAB. [The Battle between Virus and Cells]



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Molecular Virology

https://www.kailab.iis.u-tokyo.ac.jp

Morbillivirus

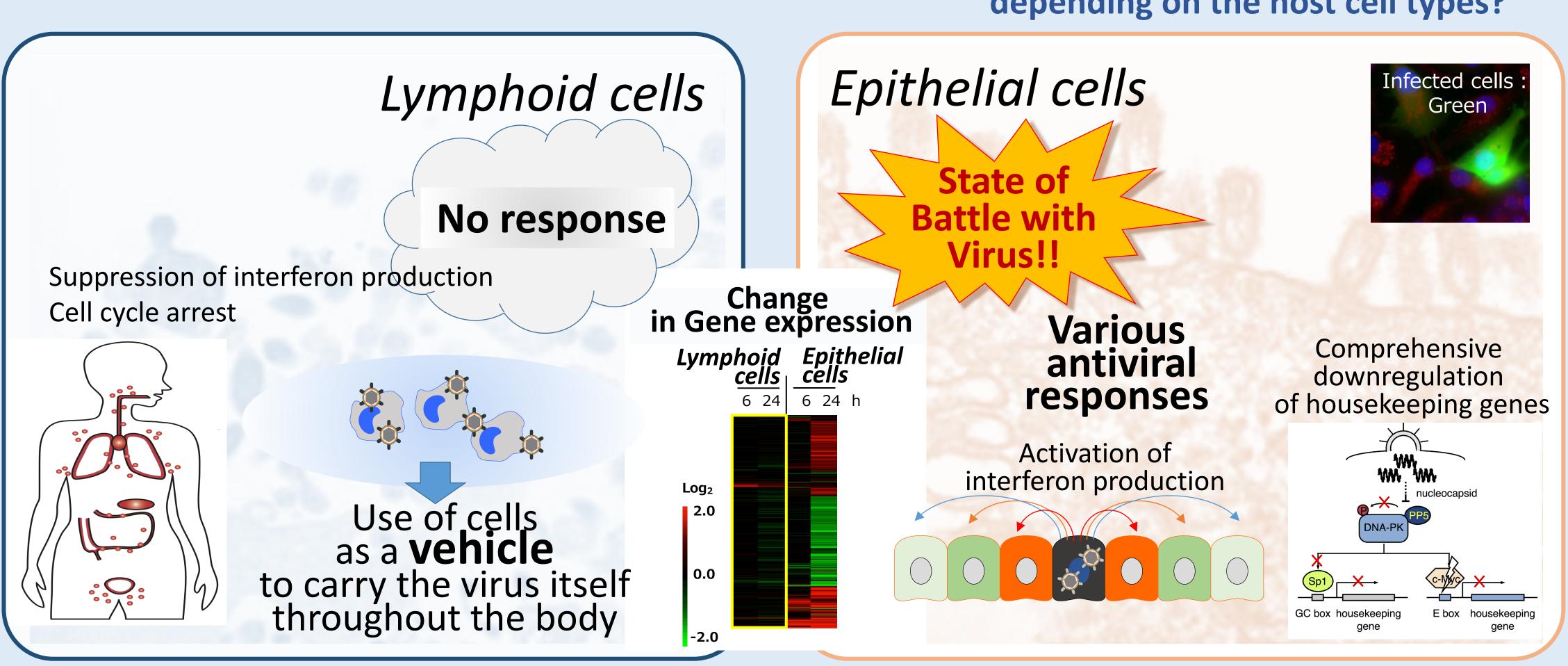
Measles virus (The cause of measles virus in humans)
Canine distemper virus etc.

Causes serious and fatal symptoms when infected

Aiming to elucidate the understanding of the battle between virus vs cells

Morbillivirus proteins are multifunctional.

Why does the Mobilivirus show a completely different post-infection response depending on the host cell types?



Development of recombinant bivalent vaccine

Caused by Leishmania protozoan

Leishmaniasis

- Infected 12 million people in 88 countries
- Vectored by sandflies
- Dogs are also a reservoir animal.
- Epidemiological studies have shown that a decrease in local canine leishmania also reduces human leishmania.

Canine distemper virus vaccine strain

Generate Recombinant virus carrying the Leishmania antigen gene

Vaccinate dogs with Recombinant virus

Challenge Leishmania protozoans to dogs

Leishmania Protozoan Challenge Experiment Non Vaccination of recombinant virus



Tecombinant virus

Leishmania forms ulcers.

Significantly reduced ulcers

Recombinant virus is effective!