



HOKKAIDO UNIVERSITY

Title	Emerging & Re-Emerging Infectious Diseases : How to Fight against Them?
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Emerging & Re-Emerging Infectious Diseases

– How to Fight against Them ? –

Nov 02/09

Hokkaido Univ

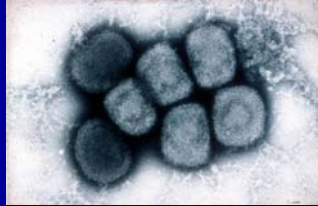
山は高く険しい



Japan Alps : Jandarm

Toyama Institute of Health
Takeshi KURATA

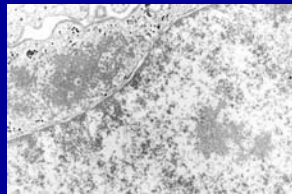
WHO/Eradication Program



Small pox (Variola)
1967~1980



Polio (1989~)
No hope at a moment



Measles
(after Polio Eradication)

❌ Human to Human Infection without Intermediate Hosts.

I . Emerging Infectious Diseases

More than 30 viral diseases

More than 15 Bacterial & Paracytic Diseases

II . Re-Emerging Infectious Diseases

At a moment, No hope to be eradicated

Rabies, Yellow Fever, Malaria, TB, Influenza, Dengue Fever/HF, Westnyle Fever, etc etc etc

Recognition of a New Disease

→Discovery→Control

Nearly All of the Emergent Disease Episodes Have Involved Zoonotic Infectious Agents.

Transmission of the Etiologic Agent to Human from an Ongoing Reservoir Life Cycle in **Animals** or **Arthropods** Without Establishment of a New Life Cycle in Humans.

No way to predict
When or
Where

The Next Important New Zoonotic
Pathogen will Emerge.

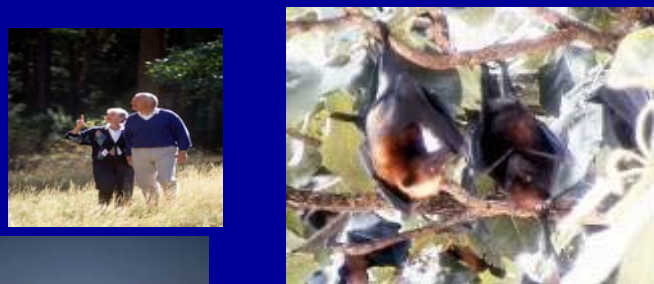
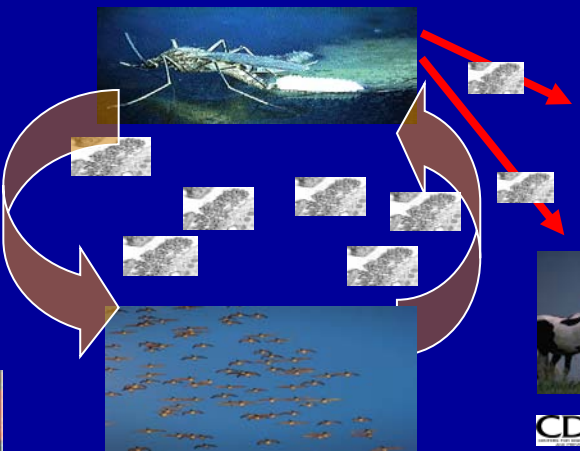
Emergence of Zoonotic Diseases

1. Exemplified by Arbovirus Diseases
2. Venezuelan Equine Encephalitis
3. Equine Morbillivirus Outbreak (Australia)
4. Lassa Fever
5. Ebola Hemorrhagic Fever
6. Rabies
7. Hanta Virus Pulmonary Syndrome
8. SARS
9. BSE in Cattle & New v CJD
10. Influenza - Avian derived
11. etc etc etc etc etc etc etc etc etc

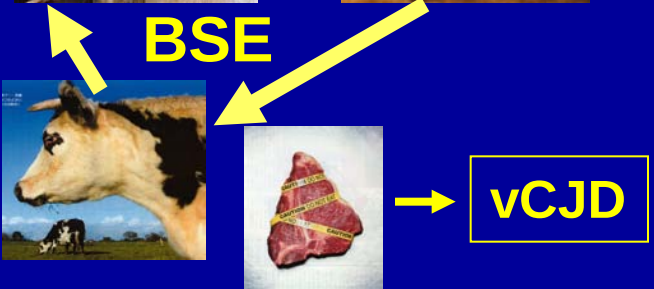
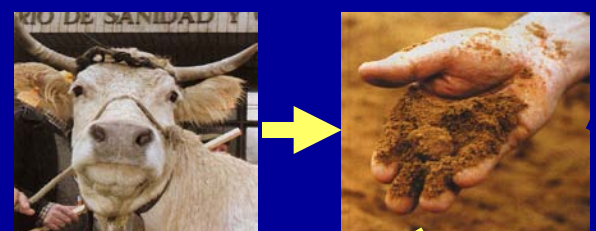
Pathogen Hunting in Nature

Active Program in Zambia And Other Countries For Hunting Pathogens at Natural Reservoir by Hokkaido University Zoonosis Research Center

—The Trial is Quite Unique and Important



Transmission of BSE



Hunting Targets
 ??????????????????
 Unknown Reservoir

We Wish Success of
Hunting Activity at
Zoonosis Research
Center, Hokkaido
University