

# Research and development of diagnostic reagents for animals

1. Title of Research : Research and development of diagnostic reagents for animals

## 2. Research Team Members

Department	Name	Position
Graduate institute of animal vaccine technology	Guan-Ming Ke	Associate professor
Graduate institute of animal vaccine technology	Li-Ting Cheng	Associate professor
Graduate institute of animal vaccine technology	Yao-chi Chung	Associate professor
Graduate institute of animal vaccine technology	Hsian-Yu Wang	Associate professor
Department of Tropical Agriculture and International Cooperation	Jai-Wei Lee	Professor
General Research Service Center	Chao-Hung Chen	Assistant professor rank research fellow

## 3. Description of Industrial Needs and

### Research Result Applications

This research is to develop diagnostic reagents for animals. Animal diagnostic reagents are mainly for the detection of disease, vaccine efficacy, differential diagnosis of immune animals and naturally

infected animals. Testing reagent products are mainly and early diagnostic monitoring infected or diseased animals, for processing isolation or treatment which can quickly control epidemics and avoid major domestic economic losses due to wide outbreaks of infection. For important diseases or emerging diseases, diagnostic reagents are an important tool in the livestock industry for the government to prevent and control emerging diseases. Thus, diagnostic reagents are required for livestock of industrial research and development.

## 4. Performance of Research Team

- (1) Antibody products for 5 serotypes of virus monoclonal in chicken infectious bronchitis.
- (2) Bovine ephemeral fever viral G protein monoclonal antibody.
- (3) Stem cell line for canine mitochondrial transplant therapy.
- (4) Immortalized bat cell lines for commercial vaccine production.
- (5) Techniques of serum-free suspension cell culture.
- (6) Four technical transfer authorizations The amount of technical transfer authorization is NT\$1,419,800.
- (7) Practical Course- " Research and development of industrialized biologics

- (8) Twelve industry-university cooperation programs with a total value of NT\$8,000,000.
- (9) Publishing five SCIE journal papers.
- (10) There are 17 master's and doctoral students supervised.

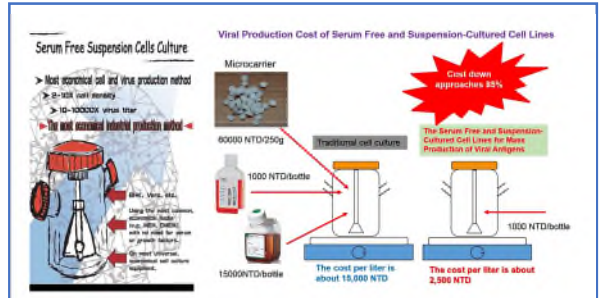


Fig 4 : Techniques of serum-free suspension cell culture.



Fig 1 : Products of chicken infectious bronchitis and bovine ephemeral fever antibodies.



Fig 5 : Practical Course- " Research and development of industrialized biologics " .

Fig 2 : Stem cell line for canine mitochondrial transplant therapy.

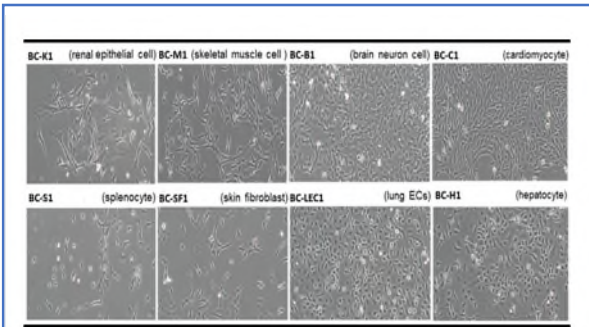


Fig 3 : Immortalized bat cell lines for commercial vaccine production.