



EUROPEAN
COMMISSION

Community research

EU Funded Research on Influenza in Animals

Christian Patermann
Director

Biotechnology, Agriculture and Food Research
DG Research
European Commission



EUROPEAN RESEARCH AREA

FOOD QUALITY AND SAFETY





EUROPEAN
COMMISSION

Community research

FP5: 1999-2002

**AI context: sporadic disease
of relevance only for animal
health**

- **AVIFLU 2002-2006 1.8 m€**
Pathogenesis and improved
diagnosis of avian influenza
infections
- **ESNIP 2001-2004 0.3m€**
European surveillance
network for swine influenza





EUROPEAN
COMMISSION

Community research

AI context: evolving epidemiological situation Asian H5N1 crisis

FP6: 2003-2006

- Unprecedented spread
- Public health,
- Risk of pandemic,
- Migratory birds
- Many unknowns

- Needs for
 - Increase knowledge
 - Improved diagnostics
 - Improved/new vaccines
 - Different control measures





EUROPEAN
COMMISSION

Community research

FP6: 2003-2006

- **LAB-ON-SITE:** New and Emerging Technologies: Improved Laboratory and On-Site Detection of OIE List A Viruses in Animals and Animal Products 1.5 m€
- **HEALTHY POULTRY:** Development of New Integrated Strategies for Prevention, Control and Monitoring of Epizootic Poultry Diseases 1.12 m€
- **FLUAID:** Generation of Information and Tools to Support the Management of the Avian Influenza Crisis in Poultry 1.2 m€
- **ESNIP 2:** European Surveillance Network for Influenza In Pigs 0.3 m€
- **EPIZONE:** Network of Excellence For Epizootic Disease Diagnosis and Control 14 m€

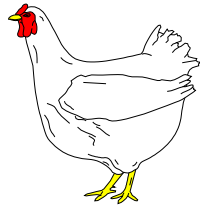
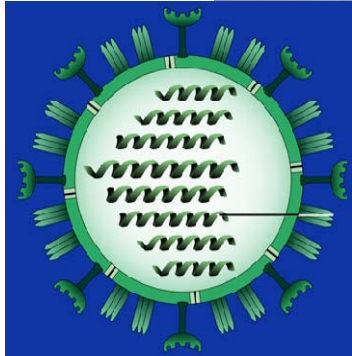




EUROPEAN
COMMISSION

Community research

FLUAID 2006-2008



- Prototype strains for EU vaccine bank and companion diagnostic tests Evaluation of antigenic drift in presence/absence of vaccination
- Penside tests
- Pathogenetic aspects in ducks & quail
- Transmission in presence/absence of vaccination in different species/breeds
- International cooperation: IT, UK, NL, FR, CH, Thailand, Vietnam, Indonesia, Pakistan, Australia, South Africa

FOOD QUALITY AND SAFETY

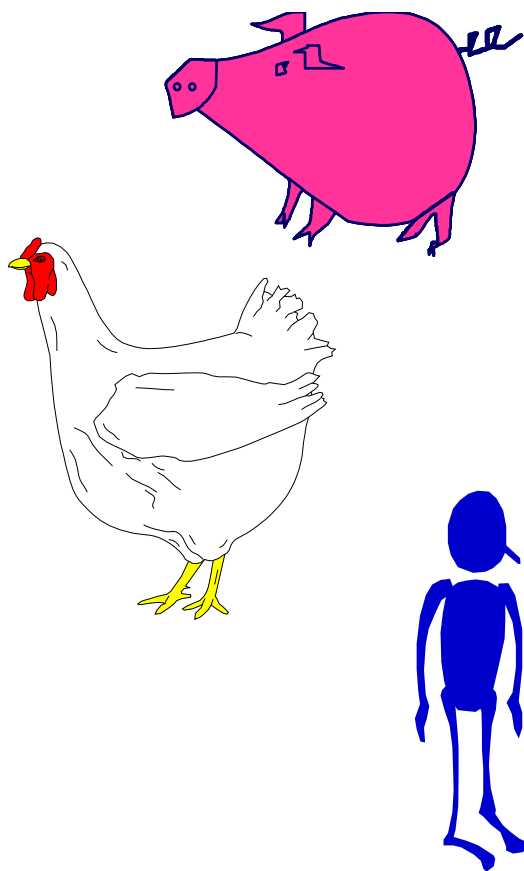




EUROPEAN
COMMISSION

Community research

ESNIP2 2006-2008



- **Epidemiology of Swine Influenza Virus in Europe**
- **Optimize diagnostic techniques for SI**
- **Public health risk of influenza in swine**
- **International collaboration: BE, UK, NL,IT, FR, DE,ES, BU, Hong Kong, USA**





EUROPEAN
COMMISSION

Community research

AI
FMD
CSF
ASF
BT

EPIZONE 2006-2010

- **Preparedness, prevention, detection and control of epizootic diseases**
- **Joint research:**
 - Diagnostics
 - Intervention strategies
 - Risk assessment
 - Surveillance and epidemiology
- **Spreading excellence, training**
- **International cooperation**
NL,UK,DE,SE,DK,IT,ES,FR,
BE, PL, TU,China, FAO

FOOD QUALITY AND SAFETY





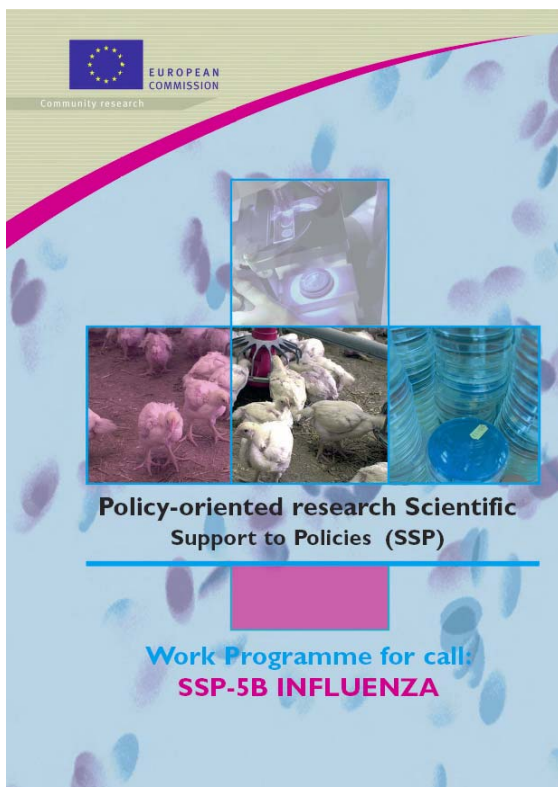
EUROPEAN
COMMISSION

Community research

A Dedicated Call for Proposals: SSP-5B INFLUENZA Specific Tasks

1. Sustainable management of Europe's natural resources (*AVIAN INFLUENZA*)

New and more environment friendly production methods to improve animal health and welfare including research on animal diseases (...) and development of marker vaccines



- **Influenza vaccine development for avian species (STREP)**
- **Improved diagnosis and early warning systems (STREP)**
- **Ecology and pathogenesis of avian influenza infections (STREP)**
- **Migratory birds (STREP/CA)**
- **AI virus survival (STREP)**
- **Reinforcement of the Community and national reference laboratories network for avian influenza (CA)**
- **Transfer of technology and training particularly for INCO target countries (CA or SSA)**





EUROPEAN
COMMISSION

Community research

A Dedicated Call for Proposals: SSP-5B INFLUENZA Specific Tasks

1. Sustainable management of Europe's natural resources (*AVIAN INFLUENZA*)

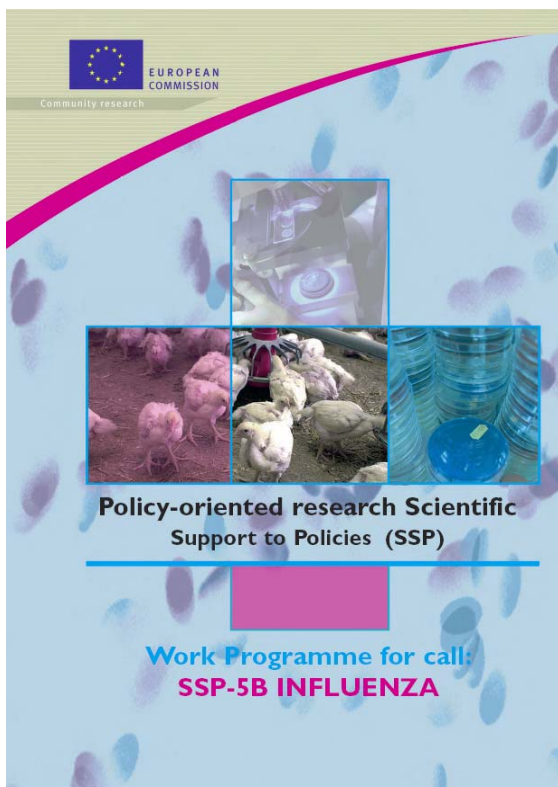
*New and more environment friendly production methods to
improve animal health and welfare including research
on animal diseases (...) and development of marker
vaccines*

**Recommendations of EFSA, FAO,
OIE & WHO**

Agreed by DG SANCO

Indicative budget: 10 m€

FOOD QUALITY AND SAFETY





EUROPEAN
COMMISSION

Community research

FP7 2007-2013: Food, agriculture and biotechnology research Objectives

- Build a European Knowledge-Based Bio-Economy (KBBE)
- Respond to social and economic challenges:
 - ➔ High quality food and sustainable food production
 - ➔ Food-related disorders (cardiovascular, obesity ...)
 - ➔ **Infectious animal diseases and zoonoses**
 - ➔ Sustainable agriculture/fishery and climate change
 - ➔ Clean biomaterials from renewable bio-resources
- Involve all stakeholders (incl. industry) in research
- Support to CAP, **CAHP**
- Respond quickly to emerging research needs





EUROPEAN
COMMISSION

Community research

Activity 1:

Sustainable production and management of biological resources from land, forest and aquatic environments

3. Animal welfare, breeding and production

- Exploitation of genetic knowledge, new breeding methods
- Animal physiology and behaviour
- **Better understanding and control of infectious animal diseases, including zoonoses (avian flu, BSE etc.)**
- **Tools for monitoring, prevention and control of diseases**
- **Ecology of known or emerging infectious agents**
- Impacts of different farming systems on climate
- Safe disposal of animal waste, improved by-product management

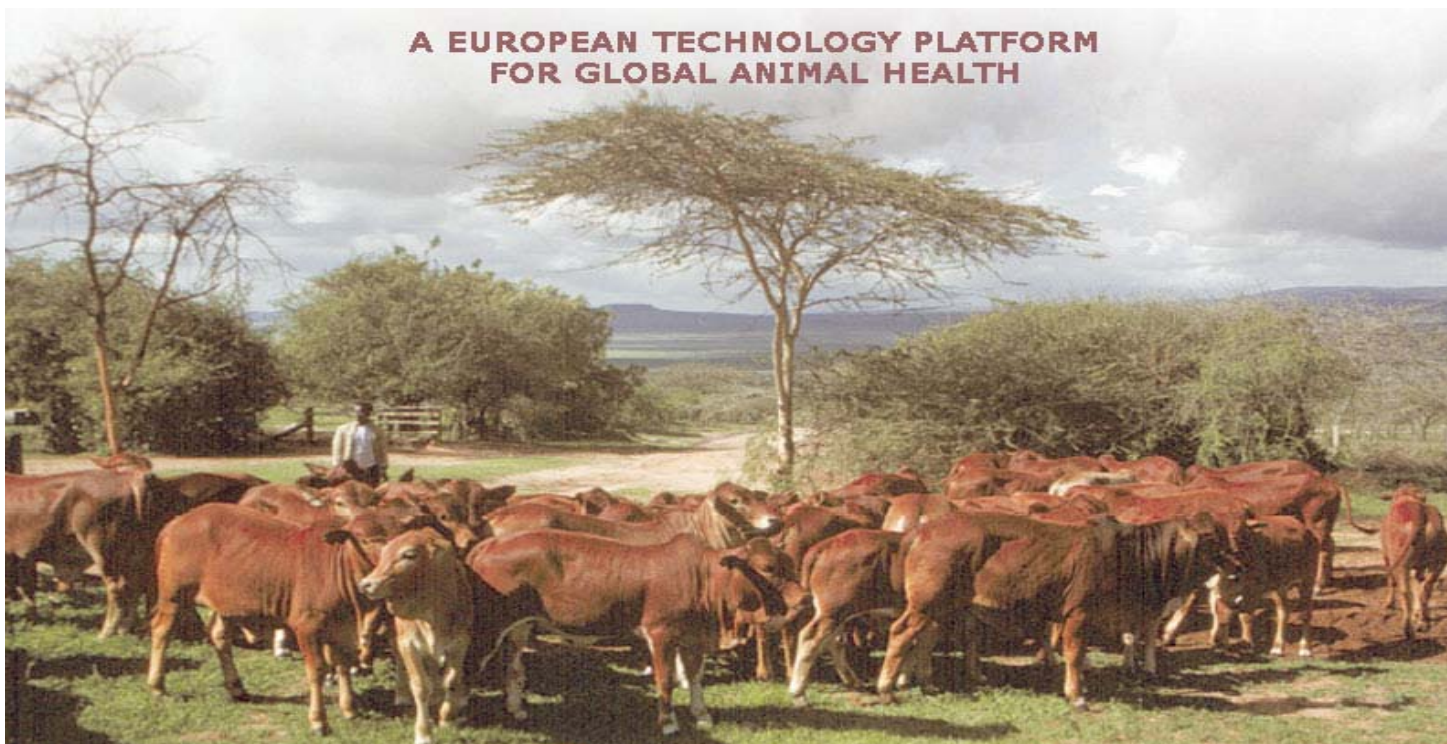




EUROPEAN
COMMISSION

Community research

European Technology Platform for Global Animal Health



- <http://www.ifah.be/Europe/euplatform/platform.htm>

FOOD QUALITY AND SAFETY





EUROPEAN
COMMISSION

Community research

Technology Platform Global Animal Health

- **Stakeholders:** IFAH (animal health industry); Copacogeca (farmers); EuropaBio; FVE (Veterinarians); research organisations; universities; OIE; FAO; WHO; ILRI; consumers; EFSA, CVOs; EMEA; HMA; IABs
- **Vision paper:** “ETP Global Animal Health” final August 2005)
- **Strategic Research Agenda:** in preparation, foreseen March 2006
- **Website:**
<http://www.ifah.be/Europe/euplatform/platform.htm>





EUROPEAN
COMMISSION

Community research

Conclusions

- **Complex disease, many unknowns**
- **Need for an integrated response with respect to:**
 - disciplines (eg EPIZONE)
 - actors (TP)
- **Need to strengthen research efforts:**
 - improve knowledge
 - improve disease prevention and control tools
- **Need to pursue efforts at national, EU and global levels**
- **Need for close cooperation between human and animal influenza research**

