

## EDUCATION, SCIENCE AND TRAINING

### SENATE LEGISLATION COMMITTEE – QUESTIONS ON NOTICE 2003-2004 SUPPLEMENTARY ESTIMATES HEARING

**Outcome:** CSIRO  
**Output Group:** - CSIRO

#### **DEST Question No. E529\_04**

Senator Carr asked on 5 November 2003.

#### **Question:**

Is the CSIRO currently undertaking any research with viable samples of diseases which if they escaped from CSIRO could potentially pose a communicable disease threat to Australia's human, livestock or native animal populations or our native or cropping plant populations?

#### **Answer:**

CSIRO has provided the following response.

#### *Current research on viable samples of diseases*

Several CSIRO Divisions conduct research on diseases as described below:

#### **CSIRO Plant Industry**

CSIRO Plant Industry undertakes research on plant diseases and uses viable samples of plant pathogens for some of this research.

CSIRO Plant Industry conducts this research so as to understand disease processes in crop plants and develop ways to reduce the impact of disease in Australia's agricultural crops, for example by developing disease resistant crop varieties such as Mackellar, which is the world's first wheat variety resistant to Barley Yellow Dwarf Virus (BYDV). BYDV can cause yield losses in Australian barley, oats and wheat as high as 40 – 50 per cent.

All work conducted within CSIRO Plant Industry with the types of organisms in question is conducted in strict accordance with the requirements of the various relevant regulatory bodies (for example the Australian Quarantine and Inspection Service and the Office of the Gene Technology Regulator).

#### **CSIRO Australian Animal Health Laboratory**

The Australian Animal Health Laboratory (AAHL) was designed and built for the purpose of diagnosis and research with a wide range of exotic animal diseases. It is the highest quality microbiological containment laboratory and animal facility in the world and has an outstanding record of safe handling of hazardous disease agents. Escape of a disease agent from AAHL is a theoretical possibility but considered very low. The likelihood of disease spreading to Australian animals (or plants) as the result of an escape is even lower.

AAHL undoubtedly has the best facilities in the world for keeping infected animals in biocontainment. There are 28 animal rooms for large animals, all of which exceed the design parameters for Pathogen Containment (PC) animal houses, and two of them meet requirements for PC 4 animal houses. These facilities have allowed AAHL staff to lead (or collaborate in) research investigations with a number of newly-emerging diseases. As part of

world's best practice in the biocontainment of diseases, AAHL is reviewed twice yearly by an external security assessment group known as the AAHL Security Advisory Group (ASAG).

### **CSIRO Entomology**

In respect of the last part of the question, CSIRO Entomology has a range of viable insect and plant pathogens that are intended for use as biological control agents of pest insects and weeds. By the very nature of such research programs, these pathogens are assessed before importation and/or release to determine their host-range and potential to infect native fauna and flora, and their potential impact on agricultural systems. Formal risk assessments are undertaken by Biosecurity Australia (Department of Agriculture, Fisheries and Forestry) and the Department of Environment and Heritage as part of the regulatory control and permit approval process associated with the use of biological control agents.

### **CSIRO Health Sciences and Nutrition**

CSIRO Health Sciences and Nutrition is working on influenza virus, measles virus, para-influenza virus, and respiratory syncytial virus. These viruses are primarily non-pathogenic laboratory strains or vaccine strains, or are clinical strains already circulating in the community. Hence, they do not pose a threat to Australia's human or animal population.