



11.45 – 12.15 hrs.

## Individual variation in stress response

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### Summary

Stress refers to the whole range of responses to environmental challenges, including psychological, behavioural and physiological components, particularly in their non specific aspects. The success of these adaptive responses is an important factor in the efficiency of animal production as well as for animal welfare. A wide range of individual variation has been described, with correlated consequences on production traits. The influence of genetic factors has been largely documented by family studies, comparisons of breeds / strains, and selection experiments. Environmental factors during development can also permanently modify stress responses, but their influence on farm animals are much less known. Except a few examples of monogenic traits like stress susceptibility in pigs, most of stress-related phenotypes are influenced by many genes interacting with each other and with environmental factors. Molecular genetic approaches allow the exploration of chromosomal regions and gene polymorphisms influencing these traits, opening the way towards a more efficient selection for desirable phenotypes.

### CV

#### **Pierre Mormède**

Pierre Mormède, D.V.M., Ph.D., is Director of Research at the French National Institute of Agronomic Research (INRA), and the head of the Laboratory for Stress Neurogenetics co-sponsored by INRA and the French Institute for Health and Medical Research (INSERM), in the Institut François Magendie for Neuroscience, University Victor Segalen, Bordeaux 2 (France). Dr. Mormède received a D.V.M. degree from the Veterinary School of Maisons-Alfort and a Ph.D. in Biology of Behavior from the University Paul Sabatier in Toulouse (France). He subsequently received post-doctoral training at the Salk Institute, San Diego, California.

Dr. Mormède is a member of the Society for Animal Science, Endocrine Society, Société des Neurosciences, Société de Neuroendocrinologie Expérimentale.

Dr. Mormède is the author of more than 150 refereed papers, reviews and chapters, and the member of the Editorial Board of Psychoneuroendocrinology, Behavior Genetics, Genes Brain and Behavior and Veterinary Research. His principal interests are in the psychobiology of stress and drug abuse, and molecular genetics of individual variations in behavioral reactivity to environmental constraints.