

Second International Symposium on Candidate Genes for Animal Health

16–18 August 2002, Montpellier – France

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INTRODUCTION

Following the First International Symposium on “Candidate Genes for Animal Health” held in Rostock (Germany) in 1999, the Second International Symposium on this topic was organised by CIRAD and INRA in Montpellier (France). It took place in August 2002, after the 28th Conference of the International Society of Animal Genetics (ISAG) in Göttingen (Germany) and right before the 7th World Congress on Genetics Applied to Livestock Production (7WCGALP) also held in Montpellier.

The sequential schedule and the European location of these three meetings allowed all of us involved in the Genetics of Animal Diseases, to share up-to-date results, and to explore the state of the art of the complementary quantitative and molecular approaches.

The *centre international en recherches agronomiques pour le développement* (CIRAD) and the *institut national de la recherche agronomique* (INRA) were honoured to welcome distinguished scientists from all over the world who attended the Second CGAH Symposium. Around 100 participants from 31 countries were registered and contributed oral and poster communications. The studies presented during the symposium addressed one common interest: genes for disease resistance. But the models and approaches varied. Several livestock species were studied (ruminants, pigs, chickens...) and different types of diseases, both infectious (bacterial, viral and parasitic) and non-infectious, were analysed as well as refined immune mechanisms. The methods presented to identify target genes covered the main molecular techniques available, showing different levels of characterisation: QTL, SNP... Emerging techniques approaching functional genomics as a tool for exploring the genetic variability of genetic resistance were presented. Strategies and opportunities to utilise different facets of these “genes for animal health” to breed for disease resistance were addressed and discussed during this symposium.

At the same time, the participants had the opportunity to submit a paper for publication in this special issue of GSE, and fifteen articles were selected jointly by the Editorial Board of the journal and by the Guest Editors.

I

NOVEL STRATEGIES AND TOOLS OF THE CANDIDATE GENE APPROACH

II

MECHANISMS OF DEFENSE AGAINST INFECTIONS

III

GENETIC RESISTANCE / SUSCEPTIBILITY TO INFECTIOUS DISEASES

IV

GENETIC RESISTANCE / SUSCEPTIBILITY TO NON-INFECTIOUS DISEASES

V

**APPLICATIONS: BREEDING PROGRAMMES
AND MARKER-ASSISTED SELECTION**

