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# ABSTRACT BOOK

## International Veterinary Immunology Symposium

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and production of a novel monoclonal antibody recognising ADGRE1 (F4/80) on porcine macrophages (Waddell et al., 2018).

The Immunological Toolbox welcomes project proposals and enquires for the creation of new reagents and assays. The facility boasts expertise which allows projects to be individually tailored according to requirements, with advice on procedures and protocols also available. A steering committee comprising of veterinary immunology experts review project proposals, which are prioritised project proposals on the basis of the nature of the tool(s) requested, community requirements, their utility, and accessibility. For access and more information please visit [www.immunologicaltoolbox.co.uk](http://www.immunologicaltoolbox.co.uk) or email Roslin.Toolbox@roslin.ed.ac.uk

## P043

### **Cows selected for resistance to mastitis show contrasted immune responses compared to mastitis susceptible cows**

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Mastitis remains an important disease in dairy farming nowadays. Genetic selection of animals for increased resistance to mastitis is

a relevant strategy to reduce the burden that mastitis entails on dairy cows. A divergent selection scheme based on somatic cell counts and clinical mastitis records was set-up on Prim'Holstein cows at the INRA experimental unit of Le Pin-au-Haras. In order to better define the mechanism underlying genetic resistance to mastitis, inflammatory challenges as well as immunization with a model antigen were performed on cows from these two different lines.

LPS was infused in one healthy udder quarter of each cow approx. 1 month post-partum. Milk was collected 4, 8, 12 and 24h post-infusion. Somatic cells recruited in milk were counted and the cytokines/chemokines CXCL8, IL-6 and IL-1 $\beta$  were measured by ELISA. For adaptive response studies, cows were immunized 15 days before dry-off with ovalbumin and the response was evaluated 15 days after dry-off. Response to immunization was evaluated by measuring IFN $\gamma$  and IL-17A and upon antigen stimulation in whole blood assays.

Although LPS triggered mastitis in all infused quarters, mastitis resistant cows (n= 16) showed decreased inflammatory response compared to more susceptible cows (n= 25) at t=8h post-infusion. No differences were observed between the two groups in terms of response to immunization.

Altogether, these results suggest that, in response to intra-mammary LPS challenge, cows selected for resistance to mastitis are better able to control the inflammatory response.