21st Summerschool in Immunotoxicology
The 21st summerschool in immunotoxicology will be held in Rouen (Normandy, France) from 24th to 26th September 2012. The selected scientific theme is “Prediction of Hypersensitivity Reactions: From the Bench to the Bedside.”

Any further information on the scientific programme, venue and registration is available at: www.school-immunotoxicology.org.

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New Animal Models in Immunotoxicity Evaluation

**MINI-PIGS**

Mini-pigs are increasingly used in non-clinical regulatory toxicity studies. A study on the efficacy of infliximab in human in vitro and in vivo models concluded that mini-pigs can be used as a useful animal model to assess immunotoxicity. This conclusion was based on the observation that mini-pigs have a similar immune response to humans, making them a valuable tool for studying immunotoxicity.

**DOGS**

Despite their extensive use as a major non-rodent species in immunotoxicity studies, dogs have been underutilized in this field. However, their value in assessing immunotoxicity has been recognized, and recent studies have shown that dogs can be used to evaluate the immunogenicity potential of therapeutic proteins. For example, a study on the immunogenicity potential of adalimumab and infliximab suggested that mini-pigs can be used as a useful animal model to assess immunogenicity.

**INDUSTRIAL PRACTICE**

In industry, the use of mini-pigs and dogs for immunotoxicity studies has been increasing. The use of these animal models is particularly relevant in the development of biopharmaceuticals, where the potential for immunogenicity is a major concern. The use of mini-pigs and dogs in these studies has been shown to be effective in identifying potential immunogenicity issues and in facilitating the development of appropriate strategies to mitigate these risks.

**HUMAN IMMUNE RESPONSES**

In humans, the immune response to therapeutic proteins is complex and multifaceted. The use of humanized mice and transgenic mouse models has been invaluable in understanding the immune response to therapeutic proteins. These models have been instrumental in identifying potential immunogenicity issues and in developing strategies to mitigate these risks.

**TRANSLATIONAL RESEARCH**

Translational research is a process that aims to bridge the gap between basic research and clinical practice. It is critical to the development of safe and effective therapeutic proteins. The use of mini-pigs and dogs in translational research has been particularly valuable, as these models allow for the assessment of the potential immunogenicity of therapeutic proteins in a preclinical setting, thereby facilitating the development of strategies to mitigate these risks.

In summary, the use of mini-pigs and dogs in immunotoxicity studies has been shown to be effective in assessing the potential immunogenicity of therapeutic proteins. Their use in translational research has been particularly valuable in facilitating the development of safe and effective therapeutic proteins.