

## **The french mouse clinic (Institut Clinique de la Souris), a research infrastructure of excellence for translational research and functional genomics: Highlights on genetic engineering**

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The Institut Clinique de la Souris-ICS (Mouse Clinical Institute-MCI) is a research infrastructure of excellence for translational research and functional genomics. Founded in 2002 by Pierre Chambon, operated by Inserm, CNRS and the University of Strasbourg, it provides a comprehensive set of specialised services to academic and industrial users and is a major player in the European post-genomics era programs. The ICS combines the capacity of generating mutant mice on a large scale with a high-throughput and comprehensive phenotypic analysis of the animals. The Institute's phenotyping platforms are adapted for the study of genetically engineered mouse models and genetic reference populations but can also be used for preclinical studies including the validation of therapeutic targets as well as pharmacological and toxicological studies in the mouse. The three highly interactive departments Genetic Engineering and Model Validation, Phenotyping and Mouse Supporting Services generate approximately 200 genetically modified mice per year. Phenotypic analysis cover hematology, immunology, inflammation, blood chemistry, metabolism, cardiovascular respiratory, sensory organs, cognition, learning, behavior, reproduction, morphology. With the recent project PHENOMIN (part of the call for projects called National Infrastructures in Biology and Health), the goal of the ICS is to give birth to a national infrastructure specialized in development, analysis and conservation of mice models. This project federates teams of excellence in mouse genetics (Strasbourg, Orléans, Marseille and Villejuif). In my talk, I will present the ICS and focus on the research performed in the Genetic Engineering and Model Validation Department. Highlights on the latest developments (CreERT2 mouse lines, ZFN-TALENS) will be given.

### **Biography**

Marie-Christine Birling completed her Ph.D. at the Neurochemistry centre in Strasbourg and her postdoctoral studies in Britain (London and Edinburgh). She is working since more than 10 years at French Mouse Clinic (Institut Clinique de la souris; ICS) where she is the Head Associate of the Genetic Engineering and Model Validation department. She is an internationally recognized expert mouse genome engineering and has designed more than 500 genetically engineering mouse models. She is involved in PHENOMIN (the french National Infrastructure for Mouse Phenogenomics), Gencodys, GENCODYS (a research consortium dedicated to discover the functions and dysfunctions of the brain), EUCommtools and IMPC.