CALL FOR PAPERS

The prevalence of obesity and diabetes has increased fast worldwide in the last 2 decades while the new antidiabetic therapies coming to the market are relatively limited compared to other disease areas. In addition to shortage of validated druggable targets, lack of translational animal models in obesity and diabetes research has prevented in-depth understanding of the pathogenesis of disease progression to effectively test novel therapeutic agents. While much data obtained from rodent models is often untranslatable into patients, it has been well established in academic and pharmaceutical research that nonhuman primate (NHP) models of obesity, dysmetabolism, and diabetes most closely resemble progression and clinical manifestation of the human disease. Furthermore, many diabetic complications, such as cardiomyopathy, nephropathy, nonalcoholic fatty liver disease (NAFLD)/steatohepatitis (NASH), and retinopathy, are also found in NHP models. Therefore, NHP models of obesity, dysmetabolism, and diabetes have been used as the most translatable tool not only in basic scientific research for understanding the disease mechanisms, but also for testing novel therapeutic agents as proof of concept before moving to clinical trials.

However, different animal models have different advantage and limitations in different stages of the research. The objective of this special issue is to foster a greater understanding of the values and limitations of different animal models in obesity and diabetes research. We invite investigators to contribute reviews and original papers describing recent findings in the field of translational features of animal models of obesity, dysmetabolism, and diabetes in basic research and pharmaceutical application.

Potential topics include, but are not limited to:

- Animal models for metabolic diseases and diabetes research: pros and cons
- Rodent and other species versus nonhuman primate models
- Spontaneously developed versus diet induced dysmetabolic and diabetic models
- Animal models of diabetic complications: cardiomyopathy, nephropathy, and NASH
- Translation of animal models of dysmetabolism in pharmaceutical research
- Novel animal models and technology in laboratory research

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