New treatments for cancer, diabetes, and heart disease—you may have a pig to thank

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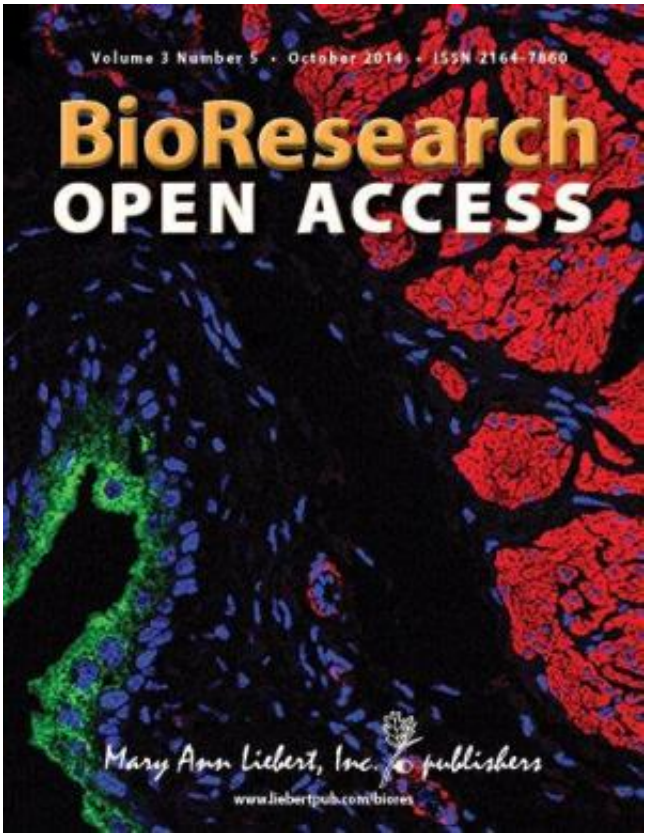

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Genetically engineered pigs, minipigs, and microminipigs are valuable tools for biomedical research, as their lifespan, anatomy, physiology, genetic make-up, and disease mechanisms are more similar to humans than the rodent models typically used in drug discovery research. A

Comprehensive Review article entitled "Current Progress of Genetically Engineered Pig Models for Biomedical Research," describing advances in techniques to create and use pig models and their impact on the development of novel drugs and cell and gene therapies, is published in *BioResearch Open Access*.

Gökhan Gün and Wilfried Kues, Friedrich-Loeffler-Institute (Neustadt, Germany), Istanbul Technical University, and Istanbul University Faculty of Veterinary Medicine (Turkey), discuss the technologies that have made it possible to develop transgenic pig models of human diseases, such as targeted gene transfer and genome sequencing. The authors review current progress in creating transgenic pig models for cancer, cardiovascular diseases, diabetes, neurodegenerative diseases, ophthalmology, and xenotransplantation. These models will enable researchers to study disease processes, identify new drug targets, test novel cell therapies to restore diseased tissues and organs, and assess methods to correct or replace mutated genes.

"This review provides an excellent update of recent progress in the field of pig transgenics for biomedical research," says *BioResearch Open Access* Editor Jane Taylor, PhD, MRC Centre for Regenerative Medicine, University of Edinburgh, Scotland.

More information: The article is available on the *BioResearch Open Access* website at http://online.liebertpub.com/doi/full/10.1089/biores.2014.0039.

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