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ANIMAL MODELS OF HUMAN DISEASE

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Animal Models of Human Disease

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Abstract: The crucial role of animal models in biomedical research calls for philosophical investigation of how and whether knowledge about human diseases can be gained by studying other species. This Element delves into the selection and construction of animal models to serve as preclinical substitutes for human patients. It explores the multifaceted roles animal models fulfil in translational research and how the boundaries between humans and animals are negotiated in this process. The Element also covers persistent translational challenges that have sparked debates across scientific, philosophical, and public arenas regarding the limitations and future of animal models. Among them are persistent tensions between standardization and variation in medicine, as well as between strategies aiming to reduce and recapitulate biological complexity. Finally, the Element examines the prospects of replacing animal models with animal-free methods. The Element demonstrates why animal modeling should be of interest to philosophers, social scientists, and scientists alike.

Keywords: animal models, animal-based research, translational models, preclinical research, animal-free methods

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