

Arid zones' rodents and reptiles as valuable laboratory animal models for bio-clinical research: a review.

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Gerbillus tarabuli, *Psammomys obesus* and *Uromastix acanthinura* are seasonally breeding desert animals that represent a real proof of adaptation to the arid environment. They are well customized to water scarcity by substantial metabolic water production. Furthermore, to escape the harsh arid environment, they adjust their births to the most favourable conditions during the year, establishing thus an ecophysiological adapted annual reproductive cycle with alternant sexual active period and a rest period, suitable for each species. These three animals contribute actively to the conservation of the desert ecosystem. However, urban expansion is taking place in this area, invading their ecological niches, inevitably suffering from increasing light pollution and traffic noises. These effects will undeniably impact the temporal organization of their physiological functions, and thus, biodiversity. In conclusion, these arid animals have unique and fascinating characteristics, as experimental models for biological and clinical studies. This work aims to elicit all assets in order to generate a dynamic based on the wise and reasonable use of biodiversity.

Keywords: *Gerbillus tarabuli*, *Psammomys obesus*, *Uromastix acanthinura*, Biodiversity, Arid zones.