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Autores	Assoni L, Couto AJM, Vieira B, Milani B, Lima AS, Converso TR, Darrieux M.
Autor (es) USF	Assoni L, Couto AJM, Vieira B, Milani B, Lima AS, Converso TR, Darrieux M.
Autores Internacionais	
Programa/Curso (s)	Programa de Pós-Graduação Stricto Sensu em Ciências da Saúde
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Resumo	<p>Klebsiella pneumoniae is among the most relevant pathogens worldwide, causing high morbidity and mortality, which is worsened by the increasing rates of antibiotic resistance. It is a constituent of the host microbiota of different mucosa, that can invade and cause infections in many different sites. The development of new treatments and prophylaxis against this pathogen rely on animal models to identify potential targets and evaluate the efficacy and possible side effects of therapeutic agents or vaccines. However, the validity of data generated is highly dependable on choosing models that can adequately reproduce the hallmarks of human diseases. The present review summarizes the current knowledge on animal models used to investigate K. pneumoniae infections, with a focus on mucosal sites. The advantages and limitations of each model are discussed and compared; the applications, extrapolations to human subjects and future modifications that can improve the current techniques are also presented. While mice are the most widely used species in K. pneumoniae animal studies, they present limitations such as the natural resistance to the pathogen and difficulties in reproducing the main steps of human mucosal infections. Other models, such as Drosophila melanogaster (fruit fly), Caenorhabditis elegans, Galleria mellonella and Danio rerio (zebrafish), contribute to understanding specific aspects of the infection process, such as bacterial lethality and colonization and innate immune system response, however, they but do not present the immunological complexity of mammals. In conclusion, the choice of the animal model of K. pneumoniae infection will depend mainly on the questions being addressed by the study, while a better understanding of the interplay between bacterial virulence factors and animal host responses will provide a deeper comprehension of the disease process and aid in the development of effective preventive/therapeutic strategies.</p>
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