

Title: Animal models for limbal stem cell deficiency: a critical narrative literature review

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Figure 1. Publications relevant to the construction of this figure were identified through a comprehensive search conducted on PubMed, Medline, and the Web of Science Core Collection. The search criteria were restricted to articles published in the English language. After the initial screening using predefined search terms, the studies were then manually filtered to include only those involving animal models exhibiting total limbal stem cell deficiency. The definition of total limbal stem cell deficiency encompassed injuries that involved the entire circumferential limbus, with or without epithelial removal. The categorization of the studies was based on their purpose: **therapeutic studies** involve testing interventions like stem cell therapy or biomedical devices; **biological pathway and/or biomarker studies** delve into understanding biological pathways and discovering novel disease biomarkers related to LSCD; and **model development studies** focus solely on creating innovative animal models for LSCD. The following search terms were used for initial screening: “limbal stem cell deficiency” [Title/Abstract], “limbal stem cell failure” [Title/Abstract], “limbal injury” [Title/Abstract], “ocular surface chemical injury” [Title/Abstract], “ocular surface alkali injury” [Title/Abstract], “LSCD” [Title/Abstract], “limbal insufficiency” [Title/Abstract], “limbal alkali injury” [Title/Abstract], “ocular surface burns” [Title/Abstract]. The list of articles used for the construction of this figure is provided below.

List of studies involving mouse models

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1. Afsharkhamseh N, Movahedan A, Gidfar S, Huvard M, Wasielewski L, Milani BY, et al. Stability of limbal stem cell deficiency after mechanical and thermal injuries in mice. *Exp Eye Res.* 2016;145:88-92.
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