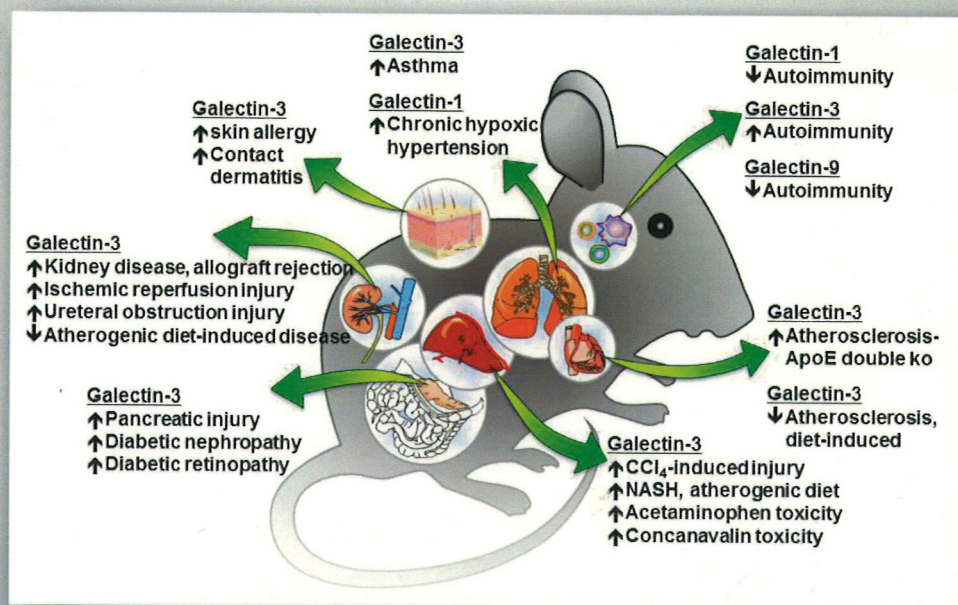


Galectins and Disease Implications for Targeted Therapeutics



EDITED BY

Anatole A. Klyosov and Peter G. Traber

**Galectins and Disease
Implications for
Targeted Therapeutics**

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**Galectins and Disease
Implications for
Targeted Therapeutics**

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Before agreeing to publish a book, the proposed table of contents is reviewed for appropriate and comprehensive coverage and for interest to the audience. Some papers may be excluded to better focus the book; others may be added to provide comprehensiveness. When appropriate, overview or introductory chapters are added. Drafts of chapters are peer-reviewed prior to final acceptance or rejection, and manuscripts are prepared in camera-ready format.

As a rule, only original research papers and original review papers are included in the volumes. Verbatim reproductions of previous published papers are not accepted.

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The Role of Galectin-3 in Malignant Melanoma

**Gordana Radosavljevic,¹ Ivan Jovanovic,¹ Jelena Pantic,¹
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Mechanisms by which Galectin-3 participate in regulation of innate and acquired immune responses include adhesion of neutrophils, chemoattraction of monocytes/macrophages and activation of mast cells and T-cell survival. We have demonstrated proinflammatory effects of Galectin-3 in several experimental models of T-cell-mediated inflammatory and autoimmune diseases. Galectin-3 is also expressed in malignant cells and is involved in tumor development and progression as well as tumor immune escape. Using Galectin-3-deficient mice and malignant melanoma model we recently showed that the expression of Galectin-3 in the host cells facilitate establishment of metastasis in the lung. Mechanisms contributing to resistance to melanoma in Galectin-3-deficient mice appear to be the lower tumor cell adhesion and modulation of immune responses. Galectin-3-deficient mice had higher serum levels of IFN-gamma and IL-17 and a decrease in the percentage and total number of regulatory CD4⁺Foxp3⁺T cells compared to wild-type mice. Protective effects of Galectin-3 deficiency on metastatic melanoma spread was dependent on NK cells and associated with an enhanced cytotoxic activity of splenic NK cells *in vitro* and increased frequency of effective

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