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**Formato** 

In the post-genomic era, many efforts have been devoted to better understanding the biological information encoded by the cell "glycome" in normal and pathologic conditions. The glycan signature of human cells plays a pivotal role in regulating fundamental biological processes, which are critical for cell physiology and for cancer as well. Galectins (also worded S-type lectins) are an evolutionarily conserved family of endogenous lectins, which bind carbohydrates with high specificity. These molecules, which can be found both intracellularly and in the extracellular milieu, are functionally active in converting glycan-containing information into cell biological programs. This fashionable mechanism of signal transduction plays a relevant role in regulating several biological functions, including RNA splicing, gene transcription, cell migration and differentiation, apoptosis, immune response, and tumor growth and progression. It is not surprising, indeed, that a large number of studies on galectin-glycan interactions and galectins expression and function in human diseases have been published in the recent literature, spanning from immunology to cardiovascular medicine, from diagnostic Pathology to nuclear medicine. The aim of this Special Issue of IJMS is to collect selected contributions in the field reporting data, concepts, and new ideas, which have the potential to be translated in a clinical setting in the near future, in order to improve the diagnosis and treatment of cancer and other relevant human diseases.