Galectins (S-type lectins) are an evolutionarily conserved family of endogenous lectins that bind carbohydrates with high specificity. These molecules are found both intracellularly and in the extracellular milieu and are functionally active in converting glycan-containing information into cell biological programs. As reported in the first Special Issue of IJMS, the galectin signature of human cells likely plays a key role in regulating biological processes that are critical for cell physiology as well as for tumour growth and progression. Furthermore, the interaction of specific galectins with sugar residues on lymphoid cells and cytokines is able to modulate the immune-response. Specific galectins have been detected in different cancer types and represent potential target molecules to be considered for improving cancer diagnosis and for exploring new therapeutic strategies. For this reason, we are launching this new Special Issue titled: Galectins in Cancer and Translational Medicine 2.0 just in time to collect in advance original preclinical and clinical studies that represent the frontier research in tumor therapy, immunology and translational medicine.