Synthesis and application of β-amino γ-lactams in the study of interleukin-1 and cluster of differentiation-36 receptors modulating peptides

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In the study of peptide structure-activity relationships, the α-amino γ-lactam (Agl), so-called Freidinger-Veber lactam residues are important tools due in part to ability to favour β-turn conformers (Figure) [1]. In examinations of peptide molecular recognition, the β-amino γ-lactam (Bgl) residue has been less commonly used as the Agl counterpart but offers similar potential to stabilize turn conformers [2]. For example, notable activity has been exhibited by Bgl analogs of allosteric modulators of the interleukin-1 and the cluster of differentiation-36 receptors (IL-1R and CD-36) [2, 3]. Our presentation will describe advances in the synthesis and application of Bgl residues for studying peptide conformation and activity.

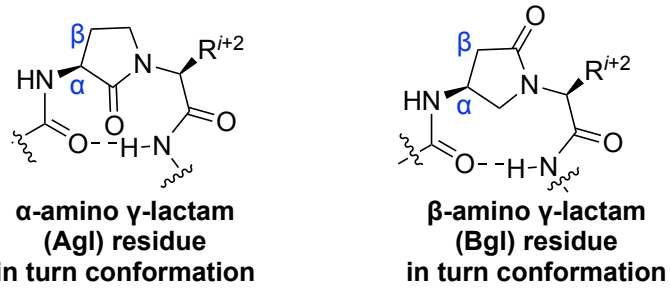

Figure. Structure of α-amino and β-amino γ-lactam (Agl and Bgl) dipeptides

References

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