Inflammation modulation by peptide conformation demarcation

Y. Hamdane, R. Mulamreddy, P. S. Chauhan, J. Poupart, A. Geranurimi, S. Vutla, W. D. Lubell

Département de Chimie, Université de Montréal, Complexe des Sciences, B-3015 1375 Avenue Thérèse-Lavoie-Roux Montréal, Québec H2V 0B3 Canada

The interleukin-1 and CD36 receptors are interesting targets because of their respective roles in inflammation and innate immunity. Our laboratory has developed peptides that allosterically modulate these receptors by pathway specific biased signaling modes that lead to functional selectivity [1,2]. Employing constrained lactam and *N*-amino-imidazol-2-one analogs of such peptides, relevant turn geometry has been identified for the biological activity of the modulators[1,3-6]. Our presentation will discuss novel approaches for creating turn mimic libraries bearing respectively α-amino-β-substituted-γ-lactams [1,3,4], α-amino-γ-substituted-δ-lactams[5] and 4- and 5-position substituted *N*-aminoimidazol-2-one residues [6] to sample a wide range of χ-space within a fixed β-turn geometry to provide detailed information concerning bioactive conformations for modulation of inflammation.

References

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