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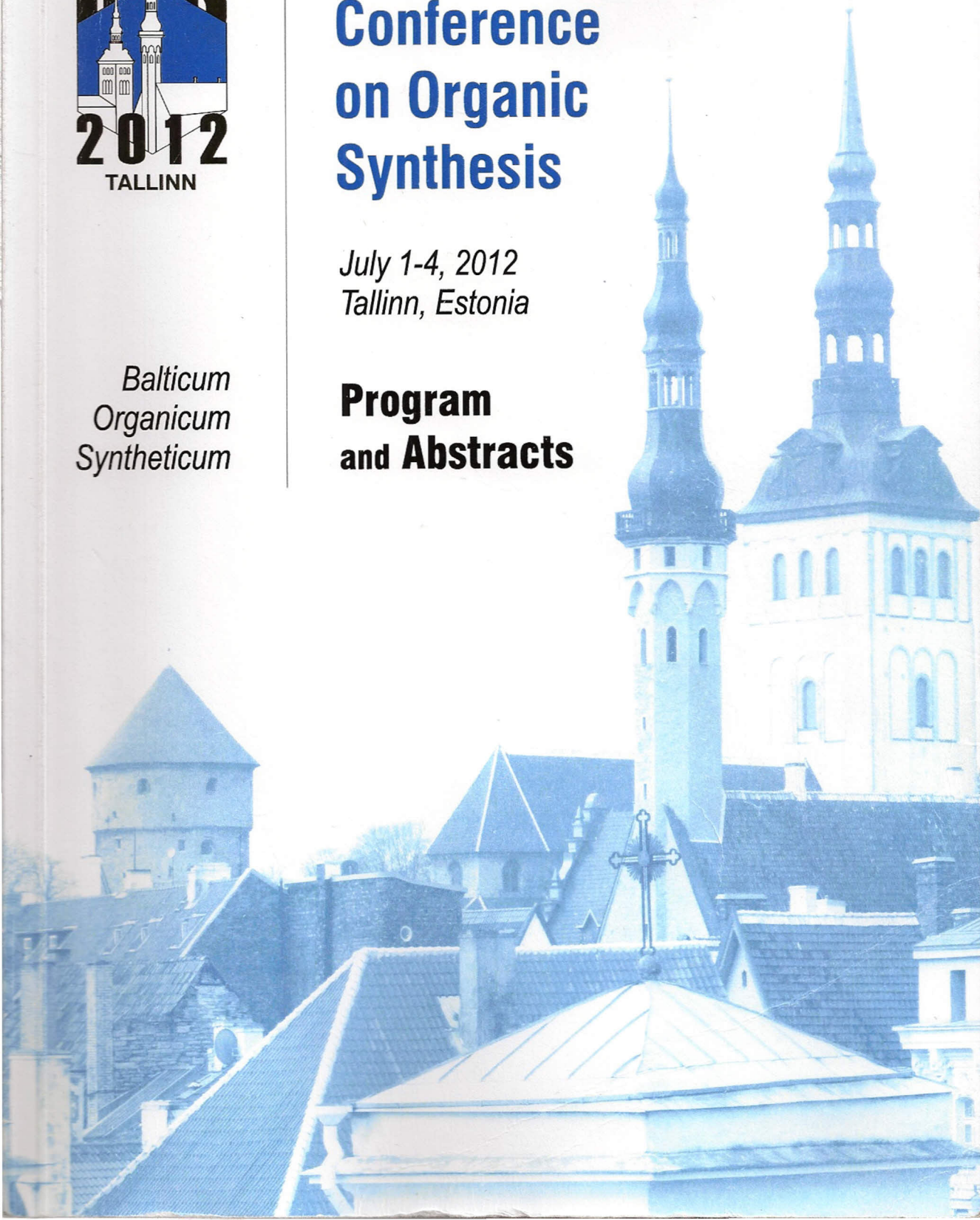
Program and Abstracts



SACCHAROPEPTIDES AND THEIR TRIAZOLE ISOSTERES

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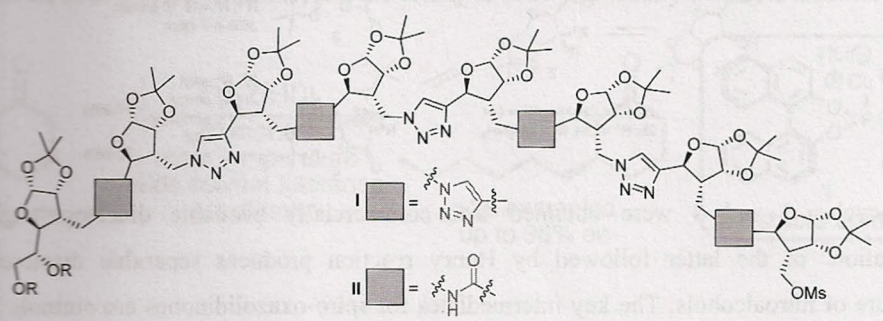
Oligopeptides arising from synthetic sugar amino acids exhibit interesting self-assembling structures in solution, and were intensively studied as peptidomimetics.[1] After the discovery of click synthesis of 1,2,3-triazoles,[2] the latter were studied as amide bond isosteres as they exhibit similar spatial arrangement and geometry.[3]

Herein we present the synthesis of furanose-based triazole- and amide-linked saccharopeptides **I** and **II**. Synthesis of all-triazole compound **I** was based on repetitive clicking of previously reported azide[4] and alkyne.[5] Triazole-linked tetrascaccharide was obtained in 67% yield over 5 steps. Synthesis of octamer **I** was completed by iterative addition of triazole containing disaccharide with overall 44% yield in 4 steps.



Synthesis of octasaccharide **II** was achieved in 5 step linear sequence with 34% overall yield. The approach was based on the sequential clicking of amide-tethered dimers that contain alkyne functionality and azide precursor. The studies of secondary structures of the target octamers together with their tetrameric and hexameric precursors are underway.

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