

**AMERICAN PEPTIDE SYMPOSIUM
SAMPLE ABSTRACT #1**

NOTES:

Include title, author(s), affiliation(s), abstract text, references (*if any*) and diagram (*if any*) on pdf submitted.

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Application of Porous-Rigid Methacrylic Synbeads to Solid Phase Peptide Synthesis

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Over the last twenty years peptide therapeutics (API Peptides) have found large application as pharmaceuticals. Despite many peptide drugs are now produced in multi-tons scale on solid support,¹ inefficient large-scale manufacturing processes remain as problem as well. Here we demonstrate that Synbeads, a newly conceived methacrylic and highly porous polymer,² can be efficiently applied in peptides synthesis, giving significant benefits in term of solvents, reagents and costs. To demonstrate the efficiency of the optimized Synbeads, some peptides of pharmaceutical interest were synthesized, comparing different synthetic routes and linkers (i.e. Ramage, Rink and HMPA linker). Data show that Synbeads can be easily applied in numerous different reaction conditions allowing peptide production with high yields and product purity. Efficiency of Synbeads was also compared to commercially available traditional swelling supports showing that it is possible to reduce solvent consuming up to 50%. Moreover HR-MAS NMR experiments highlight the presence of highly accessible flexible linkers, characterised by high motility, covalently anchored to the characteristic rigid matrix of Synbeads.

1 T. Bruckdorfer, O. Marder, F. Albericio, *Current Pharmaceutical Biotechnology*, 2004, 5, 29-43.

2 A. Basso, P. Braiuca, L. De Martin, C. Ebert, L. Gardossi, P. Linda, S. Verdelli, A. Tam, *Chemistry: A European Journal*, 2004, 10, 1007-1013.

**AMERICAN PEPTIDE SYMPOSIUM
SAMPLE ABSTRACT #2**

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Synthesis of N-Urethane-Protected Thioureido Linked Peptidomimetics and Neoglycoconjugates Employing Novel N-Protected-β-Amino Alkyl Isothiocyanates

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Isothiocyanate and its equivalents are the important precursors for thiourea synthesis, which have wide range of applications. In peptide chemistry, isothiocyanates derived from α-amino acid esters are known (Fig. A). We have synthesized and isolated a new class of Nprotected amino acid derived isothiocyanates 1. Alternatively, benzotriazole derived isothiocyanate equivalent 2 has also been synthesized using thioacylating agent- Bt-CS-Bt. Their application for the synthesis of thioureido peptides 3, 5 and thiourea-linked glycoconjugates 4 has been demonstrated.

