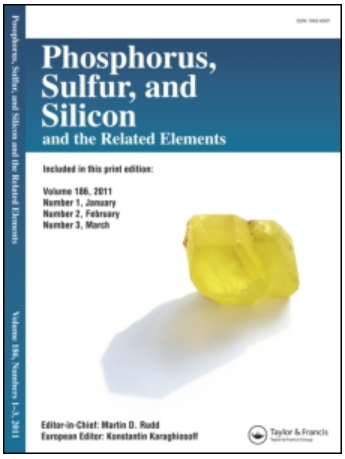

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Synthesis of New Phosphono Desmuramyldipeptide Analogs

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Synthesis of New Phosphono Desmuramyldipeptide Analogs

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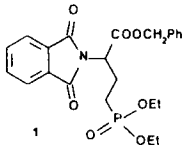
Muramyldipeptide (MDP) is the minimal bacterial cell wall moiety with immunomodulating activity [1]. It is known that *N*-acetylglucosamine part is not essential for immunomodulating activity and it can be replaced by phthalimido or adamantyl substituted side chains [2]. In our previous work we have modified the peptide backbone of phthalimido-MDP analogs by introducing the phosphonamide or phosphinamide moiety at the end of the acyclic side chain or between Ala and Glu [3,4]. We report the synthesis of phthalimido-MDP analog **2**, where the ω-carboxylic group of Glu is replaced by phosphonate moiety. Compound **1**, which is orthogonally protected *D,L*-Abu(P), was prepared from benzyl 4-bromo-2-phthalimidobutyrate and triethyl phosphite. After removal of the phthalimide protecting group the obtained compound was coupled with Boc-*L*-Ala. Boc group was removed and the product was coupled with 5-phthalimidopentanoic acid to give **2**. Both benzyl and ethyl protection can be selectively removed under mild conditions (catalytic hydrogenation, NaI).



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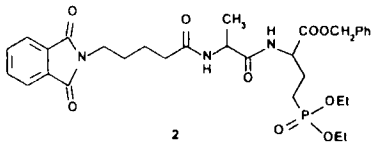

2

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