Stamatia Vassiliou

Lecturer

Education

B.Sc. in Chemistry, University of Athens (1993)
Ph.D. in Chemistry (Organic Chemistry), University of Athens (1996)
Post Doctoral studies Laboratory of Organic Chemistry, University of Lyon 1, France (2000-2001)

Research Field of Interest

1. Medicinal Chemistry (Drug Design and Discovery, Combinatorial Chemistry)
2. Peptidomimetics (Phosphinic Pseudopeptides, Thiophosphinic pseudopeptides)
3. Organic Synthetic Chemistry (Synthetic Methodology)

Teaching

Undergraduate:
Organic Chemistry II (Laboratory training for Chemists)
Organic Chemistry III (Laboratory training for Chemists)
Organic Chemistry (Laboratory training for Biologists)

Graduate:
Biomolecules-Peptides

Selected Papers

(22) Three component Kabachnik-Fields condensation leading to substituted aminomethane-*P*-hydroxymethylphosphonic acids as a tool for screening of bacterial urease inhibitors. **Vassiliou, S.**, Grabowiecka, A., Kosikowska, P., Berlicki, L. *Arkivoc*, **2012**, *4*, 7-14.

(21) Cbz-aminomethylphosphonic acid and its structural variations: synthesis from a common precursor and a stability study. **Vassiliou S.** *Arkivoc*, **2012**, *4*, 33-43.

(20) Thiophosphinic Acids: Historic Overview and Recent Advances in their Synthesis and Applications. **Vassiliou S**. *Current Organic Chemistry*, **2011**, *15*, 2469-2480.

(19) Computer-aided optimization of phosphinic inhibitors of bacterial ureases. **Vassiliou S**., Kosikowska P., Grabowiecka A., Yiotakis A., Kafarski P. and Berlicki L. *J. Med. Chem.*, **2010**, *53*, 15, 5597-5606.

(18) Design, Synthesis, and Evaluation of Novel Organophosphorus Inhibitors of Bacterial Ureases. **Vassiliou S**., Grabowiecka A., Kosikowska P., Yiotakis A., Kafarski P. and Berlicki L. *J. Med. Chem.*, **2008**, *51*, 18, 5736–5744.

(17) The m18 aspartyl aminopeptidase of the human malaria parasite *Plasmodium falciparum.* Teuscher F., Lowther J., Skinner-Adams T.S., Spielmann T., Dixon M.W. , Stack C.M., Donnelly S., Mucha A., Kafarski P., **Vassiliou S.**, Gardiner D.L., Dalton J.P., Trenholme K.R. *Journal of Biological Chemistry*, **2007**, 282, *42*, 30817-30826.

(16) A simple synthesis of the metabotropic receptor ligand (2S)-α-(hydroxymethyl)-glutamic acid and its Fmoc protected derivatives. Yiotakis A., Magriotis P.A., **Vassiliou S.** *Tetrahedron-Assymetry*, **2007**, 18, *7,* 873-877.

(15) A synthetic method for diversification of the P_1' substituent in phosphinic dipeptides as a tool for exploration of the specificity of the S_1' binding pockets of leucine aminopeptidases. **Vassiliou S.**, Xeilari M., Yiotakis A., Grembecka, J., Pawełczak, M., Kafarski, P., Mucha, A. *Bioorganic & Medicinal Chemistry*, **2007**, 15, *9*, 3187-3200.

(14) Efficient enantioselective synthesis of orthogonally protected (R)-α-alkylserines compatible with the solid phase peptide synthesis. **Vassiliou S.**, Yiotakis A., Magriotis P.A. *Tetrahedron Letters*, **2006**, 47, *41*, 7339-7341.

(13) Improved Schöllkopf construction of quaternary α-amino acids: efficient enantioselective synthesis of integrin LFA-1 antagonist BIRT-377. **Vassiliou S.**, Magriotis P.A. *Tetrahedron-Assymetry,* **2006**, *17*, 11, 1754-1757.

(12) Novel applications of the Schöllkopf chiral auxiliary: A new and efficient enantioselective synthesis of β-lactams possessing a C-4 quaternary stereocenter. **Vassiliou S.**, Dimitropoulos C., Magriotis P.A. *Synlett,* **2003***, 15*, 2398-2400.

(11) Integrated transition metal catalysed reactions: Synthesis of polysubstituted 4-(phenoxymethyl)-3-pyrrolines and their isomers by one-pot coupling of propargylamines, vinyl sulfones (or nitroalkenes) and phenols. Clique B., **Vassiliou S.**, Monteiro N., Balme, G. *European Journal of Organic Chemistry*, **2002**, *9*, 1493-1499.

(10) RXP 407, a Selective Inhiobitor of the N-Domain of Angiotensin I-Converting Enzyme, Blocks in Vivo the Degradation of Hemoregulatory Peptide Acetyl-Ser-Asp-Lys-Pro with No Effect on Angiotensin I Hydrolysis C. Junot, M.-F. Gonzales, E. Ezan, J. Cotton, G. Vazeux, A. Michaud, M. Azizi, **S. Vassiliou**, A. Yiotakis, P. Corvol, V. Dive. *Journal of Pharmacology and Experimental Therapeutics*, **2001**, 297, 2, 606-611.

(9) An effective One-Pot Synthesis of 3-Benzylfurans and their Potential Utility as Versatile Precursors of 3,4-Dibenzyltetrahydrofuran Lignans. Formal Synthesis of (±)-Burseran. S. Garcon, **S.Vassiliou**, M. Cavicchioli, B. Hatman, N. Monteiro amd G. Balme. *J.Org.Chem*, **2001**, *66*, 4069-4073.

(8) Phosphinic peptide inhibitors as tools in the study of the function of zinc metallopeptidases. V.Dive, K.Lucet-Levannier, D.Georgiadis, J. Cotton, **S.Vassiliou**, P.Cuniasse, and A.Yiotakis. *Biochemical Society Transactions*, **2000**, 28, 4, 455-460.

(7) A convenient method to synthesize phosphinic peptides containing an aspartyl or glutamyl aminophosphinic acid. Use of the phenyl group as the carboxyl synthon. D.Georgiadis, , M.Matziari, **S.Vassiliou**, V.Dive, A.Yiotakis. *Tetrahedron*, **1999**, *55*, 14635-14648.

(6) Phosphinic pseudotripeptides as potent inhibitors of Matrix

Metalloproteinases: A structure-activity study. **S.Vassiliou**, A.Mucha, P.Cuniasse, D.Georgiadis, K. Lucet-Levannier, F.Beau, R.Kannan, G.Murphy, V. Knauper,M.-C.Rio, P.Basset, A.Yiotakis, V.Dive. *J.Med. Chem .* **1999**, 42, 2610-2620.

(5) RXP 407, a phosphinic peptide, is a potent inhibitor of Angiotensin I Converting Enzyme able to differentiate between its two active sites. V.Dive, J.Cotton, A.Yiotakis, A.Michaud, **S.Vassiliou**, J.Jiracek, G.Vazeux, M-T.Chauvet, P.Cuniasse, P.Corvol. *Proceedings of the National Academy of Sciences USA*, **1999**, 96, 4330-4335.

(4) Phosphinic peptides, the first potent inhibitors of astacin, behave as extremely slow-binding inhibitors. Yiallouros I., Vassiliou S., Yiotakis A., Zwilling R., Stocker W. and Dive V. *Biochemical Journal* **1998**, 331, 375-379.

(3) Structure of Astacin with a Transition-State analogue Inhibitor. F.Grams, V.Dive, A.Yiotakis, S.Vassiliou, R.Zwilling,W. Stocker, W.Bode. *Nature Struct.Biol*. **1996**, *3*, 8, 671-675.

(2) Protection of the Hydroxiphosphinyl Function of Phosphinic Dipeptides by Adamantyl. Application to the Solid-Phase Synthesis of Phosphinic Peptides. A.Yiotakis, **S.Vassiliou**, J.Jiracek, V.Dive. *J. Org. Chem*. **1996***, 61*, 19, 6601-6605.

(1) Cyclic peptides with a phosphinic bond as potent inhibitors of a Zinc Bacterial Collagenase. A.Yiotakis, A.Lecoq, **S.Vassiliou**, I.Raynal, P.Cuniasse, V.Dive*, J.Med. Chem .* **1994**, *37*, 2713-2720.

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