

IOANNA NIKITOPOULOU CV



Personal Information

Name: Ioanna
Surname: Nikitopoulou
Date of birth: 11/09/1980
Nationality: Greek
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Ilioupolis, Athens, Greece
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Education and Degrees

- 1999-2004: BSc Diploma in Biology, Faculty of Biology, School of Sciences, National and Kapodistrian University of Athens, Greece.
- 2005-2007: MSc Diploma in Clinical Biochemistry and Molecular Genetics, Faculties of Biology, Nursing and Chemistry, National and Kapodistrian University of Athens, Greece.
- 2007-2010: PhD Diploma in Immunology, Department of Pathophysiology, Faculty of Medicine, School of Health Sciences, University of Athens and Institute of Immunology, Biomedical Sciences Research Center 'Alexander Fleming'.

Research activities

- 2002-2003: Diploma thesis: *'Investigation of the role of Integrin Linked Kinase (ILK) in glomerular epithelial cells'*, Institute of Biology, National Center for Scientific Research 'Demokritos', Athens, Greece.
- 2006-2007: MSc Diploma thesis: *"Investigating the role of autotaxin in the pathogenesis of Rheumatoid Arthritis"*, Institute of Immunology, Biomedical Sciences Research Center 'Alexander Fleming', Athens, Greece.
- 2007-2010: Ph.D. thesis: *"The role of autotaxin and LPA signalling in the pathogenesis of chronic inflammatory diseases"*, Institute of Immunology, Biomedical Sciences Research Center 'Alexander Fleming', Athens, Greece.
- 2011-Today: Post-doctoral fellow, 1st Department of Critical Care Medicine & Pulmonary Services, 'Marianthi Simou' Laboratory, Medical School of Athens University, Evangelismos Hospital, Athens, Greece.

Publications

Nikitopoulou I, Kaffe E, Sevastou I, Sirioti I, Samiotaki M, Madan D, Prestwich GD, Aidinis V. (2013). A metabolically-stabilized phosphonate analog of lysophosphatidic acid attenuates collagen-induced arthritis. *PLoS ONE* 8(7): e70941.

Maniatis NA, Sfika A, **Nikitopoulou I**, Vassiliou AG, Magkou C, Armaganidis A, Roussos C, Kollias G, Orfanos SE, Kotanidou A. (2012). Acid-induced acute lung injury in mice is associated with P44/42 and c-Jun N-terminal kinase activation and requires the function of tumor necrosis factor α receptor I. *Shock*. 38(4):381-6.

Nikitopoulou I, Oikonomou N, Karouzakis E, Sevastou I, Nikolaidou-Katsaridou N, Zhao Z, Mersinias V, Armaka M, Xu Y, Masu M, Mills GB, Gay S, Kollias G, Aidinis V. (2012). Autotaxin expression from synovial fibroblasts is essential for the pathogenesis of modeled arthritis. *J Exp Med*. 209(5):925-33.

Fotopoulou S, Oikonomou N, Grigorieva E, **Nikitopoulou I**, Paparountas T, Thanassopoulou A, Zhao Z, Xu Y, Kontoyiannis DL, Remboutsika E, Aidinis V. (2010). ATX expression and LPA signalling are vital for the development of the nervous system. *Dev Biol*. 339(2):451-64.

Oikonomou N, Thanasopoulou A, Tzouveleki A, Harokopos V, Paparountas T, **Nikitopoulou I**, Witke W, Karameris A, Kotanidou A, Bouros D and Aidinis V. (2009). Gelsolin mediated epithelial apoptosis is a primary pathologic insult in pulmonary inflammation and fibrosis. *Thorax*. 64(6):467-75.

Scientific skills

- Tissue culture techniques:

Primary cell cultures for cells isolated from mouse tissues, synovial fibroblast cultures, lung fibroblast cultures and bone marrow-derived macrophage cultures. Adherent cell line cultures, cell suspension cultures, hybridoma cultures for the production of antibodies.
Cell line and primary cell transfections with plasmids and siRNAs.

- Animal handling (rodents)

Mice breeding, genetic screening, mating maintenance of mouse transgenic lines, surgery.

Experience in animal models for human diseases (Induction of Collagen-induced arthritis in mouse strains, use of huTNF transgenic animal model of rheumatoid arthritis).

Pharmacological studies in mouse strains (treatment of mice using antibodies and inhibitors).

Rat handling, induction of monocrotaline model of pulmonary arterial hypertension.

- Molecular biology techniques

Protein analysis, protein isolation from tissues and cells, protein electrophoresis SDS-PAGE, Western blot.

Nucleic acid analysis, DNA and RNA isolation from tissues and cells, qualitative and quantitative control (agarose electrophoresis and optical density measurement), PCR and RT-PCR analysis, quantitative real-time PCR.

- Cell biology techniques

Immunocytochemistry and immunohistochemistry (using color and fluorescence, single and multiple labelings).

Flow cytometry (intracellular and surface stainings).

Fluorescence and optical microscopy.

- Histopathological and immunopathological tissue evaluation

Tissue preparation, processing and sectioning of paraffin blocks.

Haematoxylin-eosin staining and Immunohistological stainings using specific antibodies against molecules-markers.

Languages

English: Proficiency Certificate of Cambridge University

French: Diplome d' Etudes Superieures

Native language Greek

Awards

- I. Nikitopoulou, V. Mersinias, N. Oikonomou, E. Karouzakis, S. Gay, G. Kollias, V.Aidinis, An essential role of the Lysophosphatidic acid-generating enzyme Autotaxin in synovial fibroblast activation and in the pathogenesis of Rheumatoid Arthritis, 4th ENII-MUGEN Immunology Summer School, May 17-24, 2009, Sardinia, Italy, Best oral presentation prize.
- I. Nikitopoulou, V. Mersinias, N. Oikonomou, E. Karouzakis, S. Gay, G. Kollias, V.Aidinis, Investigating the role of Autotaxin in synovial fibroblast activation and the pathogenesis of Rheumatoid Arthritis, 60th Hellenic Society of Biochemistry and Molecular Biology conference, November 20-22, 2009, Athens, Best oral presentation award.

Conference announcements (posters)

- Ioanna Nikitopoulou, Emmanuel Karouzakis, Vaggelis Harokopos, Nikos Oikonomou, Steffen Gay, George Kollias and Vassilis Aidinis, Investigating the role of Autotaxin and LPA signalling in the pathogenesis of Rheumatoid Arthritis, 1st International MUGEN Conference: "Animal models for human immunological disease", September 10-13, 2006, Athens, Greece.
- Ioanna Nikitopoulou, Emmanuel Karouzakis, Vaggelis Harokopos, Nikos Oikonomou, Steffen Gay, George Kollias and Vassilis Aidinis, Investigating the role of Autotaxin and LPA signalling in the pathogenesis of Rheumatoid Arthritis, 28th European Workshop for Rheumatology Research, February 28-March 1, 2008, Toulouse, France.
- I. Nikitopoulou, V. Mersinias, N. Oikonomou, E. Karouzakis, S. Gay, G. Kollias, V.Aidinis, Investigating the role of Autotaxin and LPA signalling in the pathogenesis of Rheumatoid Arthritis, Summer school in Immunology, July 28-August 1, 2008, Chania, Crete.

- I. Nikitopoulou, V. Mersinias, N. Oikonomou, E. Karouzakis, S. Gay, G. Kollias, V.Aidinis, An essential role of the Lysophosphatidic acid-generating enzyme Autotaxin in synovial fibroblast activation and in the pathogenesis of Rheumatoid Arthritis, 4th ENII-MUGEN Immunology Summer School, May 17-24, 2009, Sardinia, Italy.
- I. Nikitopoulou, N. Oikonomou, E. Karouzakis, V. Mersinias, M. Armaka, Z. Zhao, Y. Xu, G.D. Prestwich, S. Gay, G. Kollias and V.Aidinis, TNF-driven Autotaxin Expression and Lysophosphatidic Acid Signaling Are Essential For Synovial Fibroblast Activation and the Development of Rheumatoid Arthritis, Cell Inflammation and Disease Symposium, September 26-28, 2010, Lisbon, Portugal.
- Nikitopoulou I., Sfika A., Maniatis NA, Kotanidou A., Roussos C, Kouklis P., Orfanos SE, Time-course of Vascular-Endothelial Cadherin expression in rat lungs exposed to monocrotaline, American Heart Association (AHA) 2011, November 12 - 16, Orlando, Florida.
- N. Manitsopoulos, N.A. Maniatis, I. Nikitopoulou, A. Kotanidou, S.E. Orfanos, Sitaxentan attenuates inflammation and maintains lung function in the bleomycin mouse model, 10th Pulmonary Hypertension Association International Conference 2012, June 21-24, Orlando, Florida.
- N. Manitsopoulos, N.A. Maniatis, I. Nikitopoulou, C. Magkou, A. Armaganidis, A. Kotanidou, S.E. Orfanos, Selective Endothelin-A receptor blockade attenuates bleomycin-induced pulmonary inflammation and fibrosis in mice, European Respiratory Society Annual Congress 2013, September 7-11, Barcelona, Spain.

Conference oral presentations

- I. Nikitopoulou, V. Mersinias, N. Oikonomou, E. Karouzakis, S. Gay, G. Kollias, V.Aidinis, Investigating the role of Autotaxin and LPA signalling in the pathogenesis of Rheumatoid Arthritis, Summer school in Immunology, July 28-August 1, 2008, Chania, Crete.
- I. Nikitopoulou, V. Mersinias, N. Oikonomou, E. Karouzakis, S. Gay, G. Kollias, V.Aidinis, An essential role of the Lysophosphatidic acid-generating enzyme Autotaxin in synovial fibroblast activation and in the pathogenesis of Rheumatoid Arthritis, 4th ENII-MUGEN Immunology Summer School, May 17-24, 2009, Sardinia, Italy (invited talk).
- Nikitopoulou, N. Oikonomou, E. Karouzakis, V. Mersinias, M. Armaka, Z. Zhao, Y. Xu, G.D. Prestwich, S. Gay, G. Kollias and V.Aidinis, TNF-driven Autotaxin Expression and Lysophosphatidic Acid Signaling Are Essential For Synovial Fibroblast Activation and the Development of Rheumatoid Arthritis,

2nd International MUGEN Conference on Animal Models for Human Immunological Disease, October 8-10, 2009, Athens, Greece.

- I. Nikitopoulou, V. Mersinias, N. Oikonomou, E. Karouzakis, S. Gay, G. Kollias, V.Aidinis, Investigating the role of Autotaxin in synovial fibroblast activation and the pathogenesis of Rheumatoid Arthritis, 60th Hellenic Society of Biochemistry and Molecular Biology conference, November 20-22, 2009, Athens, Best oral presentation award.