

Curriculum Vitae

Ioanna Nikitopoulou

EDUCATION

1999-2003: 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'.

CURRENT POSITION

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.

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: Research protocols, 1st Department of Critical Care Medicine & Pulmonary Services, ‘Marianthi Simou’ Laboratory, Medical School of Athens University, Evangelismos Hospital, Athens, Greece.

LANGUAGES

English: Proficiency Certificate of Cambridge University

French: Diplome d’ Etudes Superieures

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.

PUBLICATIONS

Nikitopoulou I, Kampisiouli E, Jahaj E, Vassiliou AG, Dimopoulou I, Mastora Z, Tsakiris S, Perreas K, Tzanela M, Routsis C, Orfanos SE, Kotanidou A. Ghrelin alterations during experimental and human sepsis.

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Zannikou M, Barbayianni I, Fanidis D, Grigorakaki T, Vlachopoulou E, Konstantopoulos D, Fousteri M, Nikitopoulou I, Kotanidou A, Kaffe E, Aidinis V. MAP3K8 Regulates Cox-2-Mediated Prostaglandin E2 Production in the Lung and Suppresses Pulmonary Inflammation and Fibrosis. J Immunol. 2021 Feb 1;206(3):607-620.

Nikitopoulou I, Manitsopoulos N, Kotanidou A, Tian X, Petrovic A, Magkou C, Ninou I, Aidinis V, Schermuly RT, Kosanovic D, Orfanos SE. Orotracheal treprostinil administration attenuates bleomycin-induced lung injury, vascular remodeling, and fibrosis in mice. *Pulm Circ.* 2019 Nov 15;9(4):2045894019881954

Manitsopoulos N, Nikitopoulou I, Maniatis NA, Magkou C, Kotanidou A, Orfanos SE. Highly Selective Endothelin-1 Receptor A Inhibition Prevents Bleomycin-Induced Pulmonary Inflammation and Fibrosis in Mice. *Respiration.* 2018 95(2):122-136

Nikitopoulou I, Orfanos SE, Kotanidou A, Maltabe V, Manitsopoulos N, Karras P, Kouklis P, Armaganidis A, Maniatis NA. Vascular endothelial-cadherin downregulation as a feature of endothelial transdifferentiation in monocrotaline-induced pulmonary hypertension. *Am J Physiol Lung Cell Mol Physiol.* 2016 311(2):L352-63

Manitsopoulos N, Orfanos SE, Kotanidou A, Nikitopoulou I, Siempos I, Magkou C, Dimopoulou I, Zakynthinos SG, Armaganidis A, Maniatis NA. Inhibition of HMGCoA reductase by simvastatin protects mice from injurious mechanical ventilation. *Respir Res.* 2015 Feb 14;16:24

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

Maniatis NA, Sfika A, Nikitopoulou I, Vassiliou AG, Magkou C, Armaganidis A, Roussos C, Kollias G, Orfanos SE, Kotanidou A. 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.* 2012;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. Autotaxin expression from synovial fibroblasts is essential for the pathogenesis of modeled arthritis. *J Exp Med.* 2012;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. ATX expression and LPA signalling are vital for the development of the nervous system. *Dev Biol.* 2010 339(2):451-64.

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