



- Associate Professor
- Department of Pediatrics

Conditions Treated:

Research Areas:

- *Eczema (Atopic Dermatitis) Overview*
- *Basic Immunology*
- *Cellular and Molecular Biology*
- *Inflammation*

Research Interests

My studies focus on development of biomarkers that may predict steroid resistance as well as the signaling pathways altering response to corticosteroids. The role of race, gender, lifestyle, infection and allergens in causing steroid resistance is under active investigation. My current research is in the area of steroid resistant asthma. Glucocorticoids (GC) are currently the most effective agents for the treatment of inflammation. Up to 25% of patients demonstrate persistent tissue inflammation despite treatment with high doses of GCs, making GC insensitivity a widely recognized complication in the management of chronic inflammatory diseases. The anti-inflammatory effects of GCs are mediated through GC receptor alpha (GCRa) that acts as a ligand-dependent transcription factor. My work is dealing with identification of the markers of GC insensitivity to be able to minimize side effects from high dose steroid therapy and prospectively provide alternative therapeutic approaches to such patients for better treatment outcomes.

Currently we are examining the functional response of bronchoalveolar lavage (BAL) airway cells to corticosteroids from GC insensitive and GC sensitive asthma patients. Because the initial step in the classical GC signaling pathway is translocation of the GCRa from the cytoplasm to the nucleus, decreased nuclear translocation is a plausible molecular mechanism of GC insensitivity. Our current study is designed to address the hypothesis that GC insensitive asthmatics as compared to GC sensitive asthmatics have reduced GCRa nuclear translocation in response to GCs in BAL cells from sites of airway inflammation. As well, we attempt to define the functional role of GCRb (dominant negative isoform of the steroid receptor) in controlling GCRa nuclear translocation and transactivation at a molecular level. We also are evaluating the role of inflammatory cytokines and environmental factors in this process.

Education

- 1996 The Ukrainian National University (Kiev, Ukraine), MS with Honors, Immunology and Microbiology
- 2000 The Ukrainian National University (Kiev, Ukraine), PhD, Biology

Teaching or Professional Positions

2007-Present: Assistant Professor, Department of Pediatrics, Division of Allergy and Immunology, National Jewish Health

2004-2007: Instructor, Department of Pediatrics, National Jewish Health

2000–2004: Postdoctoral Fellow, Department of Pediatrics, National Jewish Health (Research Mentor: Donald Y. M. Leung, MD, PhD)

1999–2000: Research Scientist, Department of Radiation Biology, Institute of Cell Biology and Genetic engineering Ukrainian National Academy of Sciences

1998–2000: Lecturer, Department of Microbiology, Virology and Immunology, School of Medicine, The Ukrainian Academy of Untraditional Medicine

Professional Memberships

AAAAI, AAI

Awards & Recognition

2006: ST*AR Award, American Academy of Allergy, Asthma, and Immunology

2001: James F. Murray Pediatric Fellowship at National Jewish Health for 2001-2002 academic year.

1997: PhD Research Grant from the International George Soros Foundation

1994: Student Research Grant from the International George Soros Foundation

Publications

Goleva E, Li LB, Eves PT, Strand MJ, Martin RJ, Leung DY. Increased glucocorticoid receptor beta alters steroid response in glucocorticoid-insensitive asthma. *Am J Respir Crit Care Med* 2006; 173:607-16.

Goleva E, Hauk PJ, Boguniewicz J, Martin RJ, Leung DYM. Airway remodeling and lack of bronchodilator response in steroid resistant (SR) asthma. *J Allergy Clin Immunol* 2007; 120:1065-72.

Li L, Leung DYM, Strand MJ, Goleva E. ATF2 impairs glucocorticoid receptor-mediated transactivation in human CD8+ T cells. *Blood*. 2007; 110: 1570-7.

Goleva E, Hauk PJ, Hall CF, Liu AH, Martin RJ, Leung DY. Corticosteroid resistant asthma associated with classical microbial activation of airway macrophages. *J Allergy Clin Immunol* 2008; 122:550-9.

Goleva E, Li L-B, Leung DY. IFN γ reverses IL-2 and IL-4 mediated T cell steroid resistance by inhibiting p38 MAPK phosphorylation *Am J Respir Cell Mol Biol* 2008, Sep 5. [Epub ahead of print].

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