Research Resident/Fellow Highlight:
Michael Schivo, M.D., MS
T32 Research Fellowship, Pulmonary Critical Care
Graduate of UC Davis Internal Medicine Residency and MCRTP

Dr. Michael Schivo completed his internal medicine residency and chief residency at UC Davis. He started his research career during his residency. Upon graduation, he joined the Mentored Clinical Research Training Program (MCRTP), which offers training in basic science. He became a T32 Research Fellow in the Pulmonary Division, and has earned a Masters of Advanced Studies (MAS) in Clinical Research. He now works at UC Davis as a clinician-scientist whose research focuses on volatile compounds (VOCs) released from human cells to assist in disease detection.

Dr. Schivo's current work focuses on VOCs released from cultured human airway cells after viral infection. By understanding the VOC release from infected cells, he aims to facilitate early detection of viral respiratory infections, a major cause of exacerbations in asthma and COPD. Early detection will enable prompt and aggressive therapy, reduce inappropriate antibiotic use, and potentially reduce morbidity and mortality in patients. Furthermore, Dr. Schizo aims to establish a platform for the rapid diagnosis of many viral infections.

Dr. Schivo is currently funded by the UC Davis Clinical and Translational Science Center (CTSC) K12 NIH-sponsored grant. He uses several core facilities at the CTSC including the airway repository and bioinformatics cores. Dr. Schivo's next step is to translate the findings from his cell culture model to human clinical trials. In the future, he plans to become a national expert in COPD diagnosis and treatment and to help build UC Davis into a center of excellence for the management of obstructive airways diseases with a focus on building the center's research mission.

Selected Publications:

Kenyon NJ, Morrissey BM, **Schivo M**, Albertson TE. Occupational asthma. *Clin Rev Allergy Immunol*. May 15, 2011. [epub ahead of print].

Zeki AA, **Schivo M**, Chan A, Albertson TE, Louie SY. The asthma-COPD overlap syndrome: a common clinical problem in the elderly. *J Allergy* (Cairo). 30 Oct 2011. [epub ahead of print]

Zeki AA, **Schivo M**, Chan AL, Hardin KA, Albertson TE, Rosenquist GL, and Louie S. Geoepidemiology of COPD idiopathic pulmonary fibrosis. *J Autoimmun*. 2010;34(3):J327-38.

Strand N, Bhushan A, **Schivo M**, Kenyon NJ, Davis CE. Chemically polymerized polypyrrole for on-chip concentration of volatile breath metabolites. *Sens Actuators B Chem*. 2010;143(2):516-23.

Davis CE, Bogan MJ, Sankaran S, Molina MA, Loyola BR, Zhao W, Benner WH, **Schivo M**, Farquar GR, Kenyon NJ, Frank M. Volatile and non-volatile analysis of biomarkers in human breath using differential mobility spectrometry. *IEEE Sensors J*, special issue Sensors for Breath Analysis. 10(1): 114-122.

Strand N, Bhushan A, **Schivo M**, Kenyon NJ, Davis CE. Chemically polymerized polypyrrole for on-chip concentration of volatile breath metabolites. *Sens Actuators B Chem*. 2010;143(2):516-23.

Loyola B, Bhushan A, **Schivo M**, Kenyon NJ, Davis CE. Temperature changes in exhaled breath condensate collection devices affects observed acetone concentrations. *Journal of Breath Research*. 2008;2: 1-7.

Molina M, Sankaran S, Zhao W, **Schivo M**, Kenyon NJ, Davis CE. Design-of-experiment optimization of exhaled breath condensate analysis using a miniature differential mobility spectrometer (DMS). *Analytica Chimica Acta*. 3 Nov 2008;628(2):155-61.