

BIOGRAPHICAL SKETCH

Provide the following information for the Senior/key personnel and other significant contributors in the order listed on Form Page 2. Follow this format for each person. **DO NOT EXCEED FOUR PAGES.**

NAME Michael S. Goligorsky		POSITION TITLE Professor of Medicine and Physiology	
eRA COMMONS USER NAME (credential, e.g., agency login) Michael S. Goligorsky			
EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable.)			
INSTITUTION AND LOCATION	DEGREE (if applicable)	MM/YY	FIELD OF STUDY
Kiev Medical Institute (former USSR)	MD	1970	Medicine & Surgery
Kiev Medical Institute (former USSR)	PhD	1973	Physiology

EMPLOYMENT

Research and Professional Experience:

1975-1978 Assistant Professor, Kiev Medical Institute, USSR
 1978-1980 Associate Professor, Kiev Medical Institute, USSR
 1983-1984 Lecturer and Sr. Nephrologist, Soroka Medical Center, Ben Gurion University, Israel
 1982-1983 Visiting Scientist, Yale University
 1984-1988 Postdoctoral Fellow, Washington University
 1988-1992 Assistant Professor of Medicine, SUNY at Stony Brook
 1992-1997 Associate Professor of Medicine and Physiology, SUNY Stony Brook
 1997-2002 Professor of Medicine and Physiology, SUNY Stony Brook
 1998-date Honorary Professor, University College London, UK
 2002-date Professor of Medicine, Pharmacology and Physiology, New York Medical College, Valhalla, NY

HONORS: 1991 – elected to the American Society of Clinical Investigations; 2002 – elected to the Association of American Physicians. *Associate Editor:* Am J Pathology, Am J Physiology: Cell; Nephrol Dial Transplant
 Member of the *Editorial Board:* Am J Physiol: Renal; J Am Soc Nephrol, Microvasc Res Kidney Internat.

SELECTED PEER-REVIEWED PUBLICATIONS (from a list of 215 publications)

Gealikman O, SV Brodsky, F Zhang, P Chander, C Friedli, A Nasjletti, MS Goligorsky Angiogenic incompetence and microvasculopathy in the Zucker diabetic fat rat are ameliorated with Ebselen treatment: endothelial dysfunction as a modifier of angiogenic response. *Kidney Int.* 66: 2337-2347, 2004. **PMID15569234**

Chander P, O Gealekman, SV Brodsky, S Elitok, A Tojo, M Crabtree, SS Gross, MS. Goligorsky. Nephropathy in Zucker diabetic fat rat is associated with oxidative and nitrosative stress: prevention by chronic therapy with a peroxynitrite scavenger ebselen. *J Am Soc Nephrol*, 15: 2391-2403, 2004. **PMID15339988**

Elitok S, S Brodsky, D Patschan, K Lerea, MS Goligorsky. Cyclic RGD peptide inhibits macrophage infiltration of the kidney and carotid artery lesions in ApoE-deficient mice. *Am J Physiol: Renal* 290: F159-F166, 2006. **PMID16106036**

Patschan S, H Li, S Brodsky, D De Angelis, MS Goligorsky. Probing endothelial lipid rafts with proximity imaging: effects of pro-atherogenic factors. *Am J Physiol: Heart*, 290: H2210-H2219, 2006. **PMID15321365**

Chen J, J Eskander, D Galicka, Z Darzynkiewicz, MS Goligorsky. Contribution of p16^{INK4a} and p21^{CIP1} pathways to induction of premature senescence of human endothelial cells: permissive role of p53. *Am J Physiol: Heart* 290: H1575-H1586, 2006. **PMID16243918**

- Chen J, MS Goligorsky. Premature senescence of endothelial cells: Methusaleh's dilemma. Am J Physiol 290: H1729-H1739, 2006. **PMID16603702**
- O'Riordan E, N Mendeleev, S Patschan, P Chander, MS Goligorsky. Chronic NOS inhibition actuates endothelial-mesenchymal transformation. Am J Physiol: 292: H285-H294, 2007. **PMID16963618**
- Patschan S, J Chen, O Gealekman, K Krupincza, M Wang, L Shu, JA. Shayman, MS Goligorsky – Mechanisms of premature cell senescence: lysosomal dysfunction and ganglioside accumulation in endothelial cells. Am J Physiol: Renal, 294: 100-109, 2008. **PMID17928415**
- Patschan S, J Chen, A Polotskaia, N Mendeleev, J Cheng, D Patschan, MS Goligorsky - Lipid mediators of autophagy in stress-induced premature senescence of endothelial cells. Am J Physiol: Heart, 294: H1119-H1129, 2008. **PMID18203850**
- Chen J, Park H-C, Patschan S, Brodsky SV, Gealikman O, Kuo M-C, Li H, Addabbo F, Zhang F, Nasjletti A, Gross SS, Goligorsky MS. Premature vascular senescence in metabolic syndrome: Could it be prevented and reversed by a selenorganic antioxidant and peroxynitrite scavenger ebselen? Drug Discovery Today: Therapeutic strategies – Renal diseases. 2007, 4(1):93-99. **PMID18496595**
- Chen J, Patschan S, Goligorsky MS. Stress-induced premature senescence of endothelial cells. J Nephrol 21: 337-344, 2008. **PMID18587721**
- Chen J, H Li, F Addabbo, F Zhang, E Pelger, D Patschan, HC, MC Kuo, G Gobe, A Nasjletti, MS Goligorsky. Adoptive transfer of syngeneic bone marrow-derived cells in mice with obesity-induced diabetes: selenorganic antioxidant ebselen restores stem cell competence. Am J Pathol, 174: 701-711, 2009. **PMCID2630577**
- Patschan S, MS Goligorsky. Autophagy: The missing link between non-enzymatically glycosylated proteins inducing apoptosis and premature senescence of endothelial cells ? Autophagy, 4:4, 521-3, 2008. **PMID18367870**
- Goligorsky MS, J Chen, S Patschan. Stress-induced premature senescence of endothelial cells – a perilous state between recovery and point of no return. Curr Opin Hematol, issue on Vascular Biology 16: 215-219, 2009. **PMID1931892 PMC Journal in process.**
- Yasuda K, HC Park, B Ratliff, F Addabbo, AK Hatzopoulos, P Chander, MS Goligorsky. Adriamycin nephropathy – a failure of endothelial progenitor cell-induced repair (Am J Pathol, in press, 2010)

US Patent No. US 6,967,219 B2 awarded to SS Gross and MS Goligorsky – **Reversing or preventing premature vascular senescence** (Nov 22, 2005)

RESEARCH SUPPORT

ACTIVE GRANT SUPPORT

RO1 DK45462 (Goligorsky, PI) 01/07/05 – 31/06/10

NIH/NIDDK: **Endothelial Dysfunction, Nitric Oxide and Renal Failure**

The major goal of this project is to investigate the possibility of endothelial-mesenchymal transformation in progression of chronic renal disease.

RO1 DK054602 (Goligorsky, PI) 01/01/99 through 31/12/10

NIH/NIDDK: **Prevention of Vasculopathy and Nephropathy in Metabolic Syndrome**

(Former title: Angiogenesis and vascular permeability in diabetic nephropathy)

This grant application intends to examine the mechanisms of macro- and micro vasculopathy in Zucker diabetic fatty rats and investigate the potential of peroxynitrite scavenging in preventing and reversing these complications.

RO1 DK084394 (Goligorsky, PI) 07/01/09 – 06/30/14

NIH/NIDDK: **Weibel-Palade bodies – sentinels of acute ischemia.**

This project is designed to address the role of exocytosis of Weibel-Palade bodies in mobilization of stemcells and induction of proinflammatory mediators.

COMPLETED GRANT SUPPORT FOR PREVIOUS THREE (3) YEARS:

R01 DK042783 (Goligorsky, PI) 08/01/97 – 11/30/07

NIH/DIDDK: **Endothelial dysfunction in acute renal ischemia**

The major goal of this grant was to detect manifestations of endothelial dysfunction and elucidate its mechanisms in acute renal ischemia.

R21 DK71647 (PI: J Stewart; Co-PI: MS Goligorsky) 04/01/06 – 03/31/09

Non-invasive diagnosis of endothelial cell dysfunction in ESRD patients

The major goal of this project is to continue our exploration of laser Doppler flowmetry as a non-invasive tool to predict and diagnose endothelial dysfunction in patients with chronic kidney disease.

R44 HL074524(PI: L Montgomery; Co-PI: MS Goligorsky) 08/01/06 – 07/31/08

Measuring Intra/Extracellular Volume and Hemodynamics

This project seeks to evaluate the validity and usefulness of a novel technology to measure fluctuations in body electrical impedance during hemodialysis