

BIOGRAPHICAL SKETCH

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NAME Ahmed Abdel-Latif, M.D., Ph.D.	POSITION TITLE Staff Cardiologist, Lexington VAMC Assistant Professor, Department of Medicine, University of Kentucky		
eRA COMMONS USER NAME (credential, e.g., agency login) ahmed.abdel-latif			
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY
Ain Shams University, Cairo, Egypt	M.D.	1990-1997	Medicine
Cleveland Clinic Foundation, Cleveland, OH, USA		2001-2004	Medicine
University of Louisville, Louisville, KY, USA		2004-2007	Cardiology
University of Louisville, Louisville, KY, USA	M.S.	2005-2007	Public Health
University of Kentucky, Lexington, KY, USA		2007-2009	Interventional Cardiology
University of Kentucky, Lexington, KY, USA	Ph.D.	2008-2012	Immunology and Molecular Biology

A. Personal Statement (Principal Investigator):

I have diverse clinical and basic research training. I am engaged in both basic and translational research related to myocardial regeneration particularly utilizing stem cells. I am particularly interested in understanding the mechanisms responsible for the protective role of obesity in patients with myocardial infarction. In translational studies, my colleagues (Dr. Ratajczak and Dr. Morris, both are well known figures in stem cell and bioactive lipid research) and I examine the underlying mechanisms of mobilization of bone-marrow derived stem and progenitor cells in the setting of acute myocardial injury. The dynamic changes in this mobilization and its clinical consequences are examined in both animal and human models. Moreover, the role of different mobilizing agents in augmenting this mobilization is examined in vitro and in vivo in an attempt to harness the beneficial effects of this innate reparatory mechanism. We are currently testing multiple clinically approved agents in potentiating this mobilization and homing process.

B. Positions and Honors.

Academic appointments and postgraduate training:

1997 - 1998 Intern, Ain Shams University Hospitals, Cairo, Egypt
 1997 Clinical Clerkship, Heidelberg University Hospitals, Heidelberg, Germany
 1998 - 1999 Resident, Internal Medicine, Ministry of Health Hospitals, Cairo, Egypt
 2001 - 2004 Resident, Internal Medicine, Cleveland Clinic Foundation, Cleveland, OH, USA
 2004 Research Fellow, Vascular Medicine, Cleveland Clinic Foundation, Cleveland, OH, USA
 2004 - 2007 Chief Cardiology Fellow, University of Louisville, Louisville, KY, USA
 2007 - 2009 Interventional Cardiology Fellow, University of Kentucky, Lexington, KY, USA
 2009- Assistant Professor, Department of Medicine, Division of Cardiology, University of Kentucky, Lexington, KY
 Attending Physician, Cardiology, Medical Services, Lexington VA Medical Center

Other Experience and Professional Memberships:

1998 - Member, Egyptian Medical Syndicate
 2001 - Member, American College of Physicians
 2004 - Member, American Heart Association, Council on Basic Cardiovascular Sciences
 2004 - Member, American College of Cardiology

Honors and Awards:

2004 Cash Memorial Award, Cleveland Clinic Foundation
 2007 American College of Cardiology Travel Award
 2007 Graduate Dean Citation Award, University of Louisville
 2007 Fellow of the year, University of Louisville

C. Selected peer-reviewed publications (in chronological order).**Peer-reviewed publications:** (selected from a total of 41 peer-reviewed publications)

1. Bolli R, **Abdel-Latif A**. "No pain, no gain. The useful function of angina". **Circulation**. 2005; 112: 3541-3543. PMID: 16330693
2. Dawn B, Zuba-Surma EK, **Abdel-Latif A**, Tiwari S, Bolli R. "Cardiac stem cell therapy for myocardial regeneration. A clinical perspective". **Minerva Cardioangiol**. 2005; 53 (6): 549-564. PMID: 16333238
3. Zuba-Surma EK, **Abdel-Latif A**, Case J, Tiwari S, Hunt G, Vincent RJ, Ranjan S, Srouf EF, Bolli R, Dawn B. Sca-1 expression is associated with decreased cardiomyogenic differentiation potential of adult primitive cells. **J Mol Cell Cardiol**. 2006; 41 (4): 650-660. PMID: 16938308
4. **Abdel-Latif A**, Bolli R, Tleyjeh IM, Montori VM, Perin EC, Hornung CA, Zuba-Surma EK, Al-Mallah M, Dawn B. "Adult Bone Marrow-Derived Cells for Cardiac Repair: A Systematic Review and Meta-Analysis". **Arch Intern Med**. 2007; 167 (10): 989-997. PMID: 17533201
5. Zuba-Surma E, Kucia M, **Abdel-Latif A**, Lillard JW, Jr., Ratajczak MZ. "The ImageStream System: A Key Step to a New Era in Imaging". **Folia Histochem Cytobiol**. 2007; 45 (4): 279-290. PMID: 18165167
6. Zuba-Surma E, Kucia M, **Abdel-Latif A**, Dawn B, Brian Hall, Singh R, Lillard JW, Jr., Ratajczak MZ. "Morphological characterization of very small embryonic- like stem cells (VSELs) by image stream system analysis". **J Cell Mol Med**. 2008; 12 (1): 292-303. PMID: 18031297
7. Flaherty MP, **Abdel-Latif A**, Li Q, Hunt G, Ranjan S, Ou Q, Tang X, Johnson RK, Bolli R, Dawn B. "Noncanonical wnt11 signaling is sufficient to induce cardiomyogenic differentiation in unfractionated bone marrow mononuclear cells". **Circulation**, 2008; 117 (17); 2241-2252. PMID: 18427129
8. Dawn B, Tiwari S, Kucia M, Zuba-Surma EK, Guo Y, SanganalMath SK, **Abdel-Latif A**, Hunt G, Vincent RJ, Taher H, Reed NJ, Ratajczak MZ, Bolli R. "Transplantation of bone marrow-derived very small embryonic-like stem cells (VSELs) attenuates left ventricular dysfunction and remodeling after myocardial infarction". **Stem Cells**, 2008; 26 (6):1646-1655. PMID: 18420834
9. **Abdel-Latif A**, Bolli R, Zuba-Surma EK, Tleyjeh IM, Hornung CA, Dawn B. "G-CSF therapy in acute myocardial infarction: a systematic review and meta-analysis of the randomized controlled studies". **Am Heart J**. 2008; 156 (2): 216-226. PMID: 18657649
10. **Abdel-Latif A**, Zuba-Surma E, Case J, Tiwari S, Hunt G, Ranjan S, Vincent R, Srouf E, Bolli R, Dawn B. "TGF- β 1 enhances cardiomyogenic differentiation potential of skeletal muscle derived adult primitive cells". **Basic Res Cardiol**, 2008; 103 (6): 514-524. PMID: 103 (6): 514-524. PMID: 18500484
11. Dawn B, **Abdel-Latif A**, SanganalMath SK. "Cardiac repair with adult bone marrow-derived cells: the clinical evidence". **Antioxid Redox Signal**. 2009; 11 (8): 1865-1882. PMID: 19203221
12. Zuba-Surma EK, Guo Y, Taher H, SanganalMath SK, Hunt G, Vincent RJ, Kucia M, **Abdel-Latif A**, Ratajczak MZ, Dawn B, Bolli R. "Transplantation of expanded bone marrow-derived very small embryonic-like stem cells (VSEL-SCs) improves left ventricular function and remodeling after myocardial infarction". **J Cell Mol Med**, 2010; 15 (6): 1319-1328. PMID: 20629987
13. **Abdel-Latif A**, Zuba-Surma E, Kucia M, Ziada KM, Cohn D, Kaplan A, Van Zant G, Selim S, Smyth SS, Ratajczak MZ. "Evidence of mobilization of pluripotent and very small embryonic-like (VSEL) stem cells in patients with myocardial ischemia". **Experiment Hematol**. 2010; 38 (12), 1131-1142. PMID: 20800644

14. Sangalanamath SK, **Abdel-Latif A**, Bolli R, Xuan YT, Dawn B. "Hematopoietic cytokines for cardiac repair: mobilization of bone marrow cells and beyond". **Basic Res Cardiol**. 2011; 106 (5): 709-733. PMID: 21541807
15. Ratajczak MZ, Kim CH, **Abdel-Latif A**, Schneider G, Kucia M, Morris AJ, Laughlin MJ, Ratajczak J. "A novel perspective on stem cell homing and mobilization: review on bioactive lipids as potent chemoattractants and cationic peptides as underappreciated modulators of responsiveness to SDF-1 gradients". **Leukemia**. 2012; 26 (1): 63-72. PMID: 21886175
16. Kim CH, Wu W, Wysoczynski M, **Abdel-Latif A**, Sunkara M, Morris AJ, Kucia M, Ratajczak J, Ratajczak MZ. "Conditioning of hematopoietic transplantation activates the complement cascade and induces a proteolytic environment in bone marrow: a novel role for bioactive lipids and soluble C5b-C9 as homing factors". **Leukemia**. 2011; 26 (1): 106-116. PMID: 21769103
17. Yang F, Dong A, Mueller P, Caicedo J, Sutton AM, Odetunde J, Barrick CJ, Klyachkin YM, **Abdel-Latif A**, Smyth SS. "Coronary artery remodeling in model of left ventricular pressure overload is influenced by platelets and inflammatory cells". **PLoS One**, 2012; 7 (8), e40196. PMID: 22916095
18. Jeevanantham V, Butler M, Saad A, **Abdel-Latif A**, Zuba-Surma EK, Dawn B. "Impact of Bone Marrow Cell Therapy on Left Ventricular Function, Structure, and Clinical Outcomes in Patients with Ischemic Heart Disease: A Meta-Analysis". **Circulation**, 2012: 126 (5): 551-560. PMID: 22730444
19. Kim CH, Schneider G, **Abdel-Latif A**, Sunkara M, Morris AJ, Kucia M, Ratajczak J, Ratajczak MZ. "Ceramide-1-phosphate regulates migration of multipotent stromal cells (MSCs) and endothelial progenitor cells (EPCs) – implications for tissue regeneration". **Stem Cells**, 2012: 31 (3): 500-510. PMID: 23193025
20. Karapetyan AK, Klyachkin Y, Zuba-Surma E, Kucia M, Ziada KM, Smyth SS, Ratajczak MZ, Morris AJ, **Abdel-Latif A**. "Bioactive lipids and cationic antimicrobial peptides as new potential regulators for trafficking of bone marrow derived stem cells in patients with acute myocardial infarction". **Stem Cells Dev**, 2013: 22 (11): 1645-1656. PMID: 23282236
21. Schneider G, Bryndza E, **Abdel-Latif A**, Ratajczak J, Morris AJ, Ratajczak MZ. "Bioactive lipids sphingosine 1 phosphate and ceramide 1 phosphate are pro-metastatic factors in human rhabdomyosarcoma and their tissue levels increase in response to radiation and chemotherapy". **Molecular Cancer Research**, 2013 (Epub ahead of print). PMID: 23615526.
22. Bolli R, Tang XL, Sanganalmath SK, Rimoldi O, Mosna F, Loredi M, Gatti A, **Abdel-Latif A**, Jneid H, Dawn B, Bearzi C, Kajstura J, Leri A, Anversa P. "Intracoronary delivery of autologous cardiac stem cells improves cardiac function in a porcine model of chronic ischemic cardiomyopathy". Submitted to **Circulation**, 2012.

D. Research Support.

Ongoing Research Support:

Microarray Pilot Project (Abdel-Latif)

06/01/2009-06/30/2010

"Gene Expression of Mobilized Bone Marrow-Derived Stem Cells"

The objective of this project is to understand the gene expression profile of circulating bone marrow-derived stem cells following myocardial ischemia.

ROLE: Principal Investigator

Center for Clinical and Translational Science Pilot Project (Ziada)

07/01/2009-06/30/2011

"Mobilization of Bone Marrow-Derived Very Small Embryonic Like Stem Cells in Myocardial Ischemia"

The objective of this project is to understand the mobilization pattern of very small embryonic like stem cells (VSELs) in different myocardial ischemic scenarios.

ROLE: Co-PI

Physician Scientist Award (Abdel-Latif)

07/01/2011-06/30/2014

"The clinical significance of the mobilization of BM-derived stem cells in acute myocardial ischemia"

The objective of this project is to understand the clinical significance of the mobilization of BM-derived stem cells in myocardial infarction the potential correlation between this mobilization and myocardial recovery as assessed by various echocardiographic, cardiac MRI and clinical parameters.

ROLE: Principal Investigator