CURRICULUM VITAE

Khadijah (Gigi) Makky
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Education

Medical College of Wisconsin (Milwaukee, Wisconsin)	Ph.D. (Biochemistry)	**2004**
Northeastern University (Boston, Massachusetts)	M.S. (Biomedical Sciences)	**1994**
King Abdul-Aziz University (Jeddah, Saudi Arabia)	B.S. (Biochemistry)	**1988**

Professional Experience

Marquette University, Department of Biomedical Sciences **2011- Present**
Clinical Assistant Professor,
Director of BISC Molecular and Cellular Research Core

Marquette University, Department of Biomedical Sciences **2010- 2011**
Research Assistant Professor,
Director of BISC Molecular and Cellular Research Core

Carroll University, Natural and Health Sciences/ Biology Program
Adjunct Lecturer **2008- 2009**

Medical college of Wisconsin, Department of Pediatrics, Gastroenterology Division
Postdoctoral fellow with Dr. Alan Mayer **2004- 2008**
Work focused on regulation of intestinal development via TOR signaling

Medical College of Wisconsin, ***Department of Biochemistry*** **1999- 2004**
Doctoral student with Dr. Arthur L. Haas
Dissertation Title: *Functional Characterization of a Novel Ubiquitin Conjugating Enzyme E2$_{epf}$*

Northeastern University, Bouve College of Pharmacy and Health Sciences **1992-1994**
Masters student with Dr. Edward W. Schroder
Thesis Title: Effect of Isoretinoin and Minocycline on Inflammatory Mediators Produced by Normal Human Keratinocytes

Teaching Experience

Marquette University, Milwaukee, WI

- Human and Applied Medical Genetics (BISC3340), 3 credits, fall semester
  Course director 2010- present
- Human Embryology (BISC 2173), 3 credits, spring semester
  Course director 2011- present

Guest lecturer
For 2011

- Molecular Pathology (BISC4160)
- Neurocranial Anatomy (for Dental students).
- Applied and Rehabilitative Systems Physiology (CTRH 6001), for graduate students

Carroll University, Waukesha, WI

Fall of 2009
Course: General Chemistry 101
Course Director, teaching lecture
Course: Immunology 471
Course director, teaching lecture and lab
Spring of 2009
Course: General Biology 160
Teaching lab
Fall 2008.
Course: Developmental Biology 321
Course director, teaching lecture and lab
Spring 2008.
Course: Biology 250
Teaching the lab.

Technical Proficiencies

I was privileged to be exposed to several experimental techniques throughout my education. I believe that conducting experiments and troubleshooting in the lab helps one develop a deep understanding of scientific concepts. Having worked with these techniques has helped me introduce them to the students at the undergraduate levels in a teaching setting as well as at the graduate levels helping the students with their thesis projects. To me the most exciting experience was learning and working with zebrafish during my postdoctoral training. Zebrafish as a vertebrate model is a great tool to have in any educational/research institute but particularly undergraduate programs. It is a teaching tool that can be used in classes from several fields of Biology such as molecular and developmental Biology. I am hoping to bring this tool to Marquette University in the future. My training covered numerous techniques in Molecular and Cell Biology, Developmental Biology, Immunology and Biochemistry. Some of the techniques that I currently supervising in the Molecular and Cellular Core facility are listed below:

Virology

Currently (2011-presents), in progress at the core facility is a virology project to optimize an in vivo protocol for gene manipulation. The project focuses on using the insect cells and baculovirus system to knockdown or over express different genes in the rat brain.

Molecular Biology

1. DNA cloning and related protocols (DNA purification, DNAdigestion, DNA amplification, *etc*.)
2. Real-time PCR and PCR
3. Mammalian cells DNA transfection

Cell Biology

1. Establishing Cell culture protocols
2. Western blot

Awards

Keystone Symposia scholarship award **2008**
"A high-throughput microassay to measure whole body metabolic rate using zebrafish larvae."
K. Makky, P. Duvnjak, and A.N. Mayer
Molecular Control of Adipogenesis and Obesity meeting. February 19-24,2008 Fairmont Banff Springs, Banff, Alberta

Poster of distinction award **2005**
"Target of Rapamycin (TOR) Mediates the Endoderm-Intestine Transition in Zebrafish"
Khadijah Makky and Alan N. Mayer
The annual meeting of the North American Society for Pediatric Gastroenterology, Hepatology and Nutrition (NASPGHAN), November of 2005.

Poster of distinction award **2005**
"Translational Control of Intestinal Development in Zebrafish"
Khadijah Makky, Adam Amsterdam, Nancy Hopkins, and Alan N. Mayer
Digestive Disease Week, Chicago, IL. May 2005

Publications

Abstracts
A Molecular Laboratory Exercise to Test the Effect of Rapamycin Treatment on Zebrafish Intestinal Differentiation.
K.Makky and C. Horst
Division of Natural and Health Sciences, Biology program, Carroll University, Waukesha Wisconsin.
The 53rd Annual ACUBE Meeting, Rockhurst University, Kansas City, Missouri, October 2009

Papers

- Hill JE, **Makky K**, Shrestha L, Hillard CJ, Gasser PJ. Natural and Synthetic Corticosteroids inhibit Uptake 2-mediated transport in CNS Neurons. (2011) *Physiol. Behav*. **104**(2): 306-11
- Marshall KE, Tomasini AJ, **Makky K**, N Kumar S, Mayer AN. Dynamic Lkb1-TORC1 signaling as a possible mechanism for regulating the endoderm-intestine transition. (2010) *Dev Dyn.* **239** (11): 3000-12
- **Khadijah Makky**, Alan N. Mayer. A whole-animal assay for metabolic rate in zebrafish using a microplate format. (2008) *Journal of Biomolecular Screening*. **13** (10): 960-7
- **Khadijah Makky**, Alan N. Mayer. Zebrafish Offers New Perspective on Developmental Role of TOR Signaling. (2007) *Organogenesis*. **3** (2): 67-69
- **Khadijah Makky**, Jackie Tekiela, Alan N. Mayer. Target of rapamycin (TOR) signaling controls epithelial morphogenesis in the vertebrate intestine. (2007) *Developmental Biology*. **303** (2): 501-13
- Ren, L. Chang, E. **Makky**, K. Haas, A.L. Kaboord, B., and Qoronfleh, M.W. Glutathione S-transferase Pull-Down Assays Using Dehydrated Immobilized Glutathione resin. (2003) *Analyt. Biochem.* **322:** 164-169