

BIOGRAPHICAL SKETCH

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| NAME Geckil, Hikmet | POSITION TITLE Professor Department of Molecular Biology and Genetics, Inonu University |
| eRA COMMONS USER NAME (agency login) N/A | |

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/YYYY | FIELD OF STUDY |
|--|---------------------------|---------|---|
| Firat University, Elazig | BS | 06/1984 | Biology |
| Inonu University, Malatya | MS | 06/1988 | Molecular Biology |
| Illinois Institute of Technology (IIT), Chicago , Il | PHD | 05/1995 | Biology, Molecular Biology |
| Ben Gurion University (Postdoctoral Fellow), Beer Sheva | OTH | 09/2000 | Biochemistry, Microbiology |
| Harvard University (Fulbright Fellow), Cambridge, MA | OTH | 04/2010 | Tissue Engineering, MEMS in Medicine |
| Massachusetts Institute of Technology, MIT (Fulbright Fellow), Cambridge, MA | OTH | 04/2010 | Tissue Engineering, MEMS in Medicine |

A. PERSONAL STATEMENT

Hikmet Geckil is a Turkish academic who received PhD degree in Molecular Biology (with Benjamin C. Stark) at IIT. His research is in the area of genetic engineering. His current affiliation is with the Department of Molecular Biology and Genetics at Inonu University

Research in Geckil's GE Laboratory is primarily based on the function of Vitreoscilla hemoglobin (VHb), the first prokaryotic hemoglobin. Using VHb, Geckil's group engineered various bacteria for the purpose of producing industrially important products ranging from microbial fuels butanediol, acetoin to drugs used in Alzheimer's and Parkinson disease (e.g., dopa, dopamine) and to asparaginase, an enzyme used in cancer chemotherapy. One of the recent endeavors of his laboratory is to understand the role of mTOR signal complex on the "aerobic glycolysis of cancer cells" also known as Warburg effect, one of the 10 hallmarks of all cancers.

Geckil has published in the areas of biochemistry, biomedicine, and biotechnology, and has over 30 peer-reviewed publications. He is the lead editor of the Moleküler Hücre Biyolojisi, the Turkish version of the highly acclaimed textbook Molecular Cell Biology by Harvey Lodish et al. He is also the editor of Biochemistry, the Turkish translated version of Instant Notes in Biochemistry by David Hames and Nigel Hooper. In 2009-2010, he carried out research at Harvard-MIT Division of Health Sciences and Technology as a Fulbright Senior Research Associate. He has served on the editorial board of several international scientific journals, including the Biotechnology Journal and the Turkish Journal of Biology.

He was the founding director (2010-2012) of the Center for Gifted and Talented at Inonu University and the founding director of Inonu Children's University (2010-2012), the founding member of European Children Universities. Dr. Geckil was also the founding chairman (2010-2013) of the Department of Molecular Biology and Genetics, the only department with fully English curricula at Inonu University. Nominated by TUBITAK (The Scientific and Technical Research Council of Turkey), in 2012 he represented Turkey in COMSTECH (OIC's Committee on Scientific and Technological Cooperation) as Chief Scientific Officer.

B. POSITIONS AND HONORS

Positions and Employment

2010 - Professor, Department of Molecular Biology and Genetics, Inonu University, Malatya

2009 - 2010 Fulbright Research Associate, Harvard University, Cambridge, MA
2009 - 2010 Fulbright Research Associate, Massachusetts Institute of Technology, Cambridge, MA
1999 - 2000 CHA-Israel Postdoctoral Fellow, Ben Gurion University, Beer Sheva

Other Experience and Professional Memberships

2010 - Professor, Inonu University
2005 - 2010 Associate Professor, Inonu University
1996 - 2005 Assistant Professor, Inonu University
1992 - 1995 Teaching Assistant, Illinois Institute of Technology

Honors

2012 Representing Turkey in COMSTECH, The Scientific and Technical Research Council of Turkey
2010 Founder and Director, Inonu Children's University
2010 Founder and Director, Center for Gifted and Talented
2009 Chairing and organizing the Biology Section of Secondary Education Science Project Competitions Program, The Scientific and Technical Research Council of Turkey
2008 Fulbright Fellow, Department of State (USA)
2008 Instructor for Biology Olympiads, The Scientific and Technical Research Council of Turkey,
1999 Post-doctoral Fellow , CHA-Israel
1989 Scholarship for PhD study (Molecular Biology), Turkish Ministry of Education
1989 Second place in Nationwide Exam in Biological Sciences, Turkish Ministry of Education
1988 Scholarship for master study (Molecular Biology), The Scientific and Technical Research Council of Turkey

C. SELECTED PEER-REVIEWED PUBLICATIONS

- o Gurkan UA, Moon S, Geckil H, Xu F, Wang S, Lu TJ, Demirci U. Miniaturized lensless imaging systems for cell and microorganism visualization in point-of-care testing. *Biotechnology journal*. 2011; 6(2):138-49.
- o Demirci U, Geckil H. Editorial: Micro and nanofluidics - applications in biotechnology. *Biotechnology journal*. 2011; 6(2):131.
- o Geckil H, Xu F, Zhang X, Moon S, Demirci U. Engineering hydrogels as extracellular matrix mimics. *Nanomedicine (London, England)*. 2010; 5(3):469-84.
- o Geçkil H, Calik P. Editorial: Biotech in Turkey. *Biotechnology journal*. 2009; 4(7):951.
- o Kurt AG, Aytan E, Ozer U, Ates B, Geckil H. Production of L-DOPA and dopamine in recombinant bacteria bearing the *Vitreoscilla* hemoglobin gene. *Biotechnology journal*. 2009; 4(7):1077-88.
- o Aydin S, Karatas F, Geckil H. Simultaneous quantification of acylated and desacylated ghrelin in biological fluids. *Biomedical chromatography : BMC*. 2008; 22(12):1354-9.
- o Aydin S, Geckil H, Karatas F, Donder E, Kumru S, Kavak EC, Colak R, Ozkan Y, Sahin I. Milk and blood ghrelin level in diabetics. *Nutrition (Burbank, Los Angeles County, Calif.)*. 2007; 23(11-12):807-11.
- o Aydin S, Ozercan IH, Geckil H, Dagli F, Aydin S, Kumru S, Kilic N, Sahin I, Ozercan MR. Ghrelin is present in teeth. *Journal of biochemistry and molecular biology*. 2007; 40(3):368-72.
- o Aydin S, Geckil H, Karaoglu A, Elkiran ET. Ghrelin: a novel peptide with therapeutic effect in certain cancers?. *Medical hypotheses*. 2007; 69(5):1157-8.
- o Aydin S, Geckil H, Zengin F, Ibrahim Ozercan H, Karatas F, Aydin S, Turgut-Balik D, Ozkan Y, Dagli F, Celik V. Ghrelin in plants: what is the function of an appetite hormone in plants?. *Peptides*. 2006; 27(7):1597-602.
- o Geckil H, Gencer S, Ates B, Ozer U, Uckun M, Yilmaz I. Effect of *Vitreoscilla* hemoglobin on production of a chemotherapeutic enzyme, L-asparaginase, by *Pseudomonas aeruginosa*. *Biotechnology journal*. 2006;

1(2):203-8.

- Geckil H, Arman A, Gencer S, Ates B, Yilmaz HR. Vitreoscilla hemoglobin renders *Enterobacter aerogenes* highly susceptible to heavy metals. *Biometals : an international journal on the role of metal ions in biology, biochemistry, and medicine*. 2004; 17(6):715-23.
- Ates B, Yilmaz I, Geckil H, Iraz M, Birincioglu M, Fiskin K. Protective role of melatonin given either before ischemia or prior to reperfusion on intestinal ischemia-reperfusion damage. *Journal of pineal research*. 2004; 37(3):149-52.
- Geckil H, Barak Z, Chipman DM, Erenler SO, Webster DA, Stark BC. Enhanced production of acetoin and butanediol in recombinant *Enterobacter aerogenes* carrying *Vitreoscilla hemoglobin* gene. *Bioprocess and biosystems engineering*. 2004; 26(5):325-30.
- Geckil H, Gencer S. Production of L-asparaginase in *Enterobacter aerogenes* expressing *Vitreoscilla hemoglobin* for efficient oxygen uptake. *Applied microbiology and biotechnology*. 2004; 63(6):691-7.
- Geckil H, Gencer S, Kahraman H, Erenler SO. Genetic engineering of *Enterobacter aerogenes* with the *Vitreoscilla hemoglobin* gene: cell growth, survival, and antioxidant enzyme status under oxidative stress. *Research in microbiology*. 2003; 154(6):425-31.
- Yurekli F, Geckil H, Topcuoglu F. The synthesis of indole-3-acetic acid by the industrially important white-rot fungus *Lentinus sajor-caju* under different culture conditions. *Mycological research*. 2003; 107(Pt 3):305-9.
- Munzuroglu O, Obek E, Geckil H. Effects of simulated acid rain on the pollen germination and pollen tube growth of apple (*Malus sylvestris* Miller cv. Golden). *Acta biologica Hungarica*. 2003; 54(1):95-103.
- Munzuroglu O, Geckil H. Effects of metals on seed germination, root elongation, and coleoptile and hypocotyl growth in *Triticum aestivum* and *Cucumis sativus*. *Archives of environmental contamination and toxicology*. 2002; 43(2):203-13.
- Geckil H, Stark BC, Webster DA. Cell growth and oxygen uptake of *Escherichia coli* and *Pseudomonas aeruginosa* are differently effected by the genetically engineered *Vitreoscilla hemoglobin* gene. *Journal of biotechnology*. 2001; 85(1):57-66.

D. RESEARCH SUPPORT

Completed Research Support

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| 107T478, TUBITAK Geckil, Hikmet (PI) Production of L-DOPA and dopamine in bacteria expressing <i>Vitreoscilla hemoglobin</i> Role: PI | 2007/10/01-2009/10/01 |
| 105T126, TUBITAK Geckil, Hikmet (PI) Some taxonomical studies on genus <i>Erysimum</i> in Turkey Role: KP | 2006/09/01-2008/09/01 |
| K120610, DPT Geckil, Hikmet (PI) Cloning, isolation and expression of L-asparaginase, an antileukemic enzyme, gene (<i>ansB</i>) gene in various Gram-negative bacteria Role: PI | 2005/06/01-2006/06/01 |
| 102T197, TUBITAK Geckil, Hikmet (PI) The use of <i>Vitreoscilla hemoglobin</i> in <i>Enterobacter aerogenes</i> : some industrial applications Role: PI | 2003/09/01-2004/09/01 |