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EĞİTİM

1980-1984: Lisans, *Firat Üniversitesi*, Biyoloji Bölümü, Elazığ, Turkey
1986-1988: Yüksek Lisans, *İnönü Üniversitesi*, Biyoloji Bölümü, Malatya, Turkey
1989-1990: Dil Eğitimi, American Language Academy, *Baldwin-Wallace College*, Berea, Ohio
1991-1995: Ph.D., Molecular Biology-Biotechnology, *Illinois Teknoloji Enstitüsü*, Chicago, Illinois
1999-2000: Post-doktora, İsrail Yüksek Öğretim Kurulu, *Ben Gurion Üniversitesi*, Yaşam Bilimleri Böl., Beer-Sheva, İsrail

ÖĞRETİM ve ARAŞTIRMA DENEYİMİ

1985-1988: Araştırma Görevlisi, *İnönü Üniversitesi*, Fen Edebiyat Fakültesi, Biyoloji Bölümü.
1992: Yaz okulu sorumlusu, *Illinois Institute of Technology*, Şikago, Illinois, ABD; "Women in Science and Engineering" Lise son sınıfta okuyan bayan öğrencilere üniversite ortamında yapılan bilim ve mühendislik çalışmaları hakkında bilgilendirme.
1992-1994: Öğretim Görevlisi, *Illinois Institute of Technology*, Şikago, Illinois, ABD; *İleri Biyokimya Laboratuvarı* (BIOL 519) Biyo makromoleküller için kullanılan analitik metotlar, enzimatik reaksiyonlar, spektrofotometri, protein purifikasyonu, santrifügasyon, kromatografi, elektroforez teknikleri, pH ve iyon spesifik elektrotlar, radyoizotop belirleme metodolojileri.
1994-1995: Öğretim Görevlisi *Illinois Institute of Technology*, Şikago, Illinois, ABD; *Hücre Biyolojisi* (BIOL 414) Bakteriye kültürler; DNA'dan kromosomal DNA ekstraksiyonu; DNA'nın optik özellikleri; Genetik mühendisliğinde kullanılan araçlar; Bakterilerden plazmid DNA'sı izolasyonu, restriksiyon haritalama ve analizi; Hücre fraksiyonu: organel izolasyonu ve markır enzim tayini; Protein fraksiyonu; Molekül büyüklüğü tayini: poliakrilamid jel elektroforezi; in vitro olarak protein sentezi ve belirlenmesi: *in vitro* translyasyon, elektroblatlar, kimyasal ışınım ve belirlenmesi; Mayalarda kromozom kararlılığı.
1993-1994: Öğretim Görevlisi *Illinois Institute of Technology*, Şikago, Illinois, ABD; *Molecular and Cell Biology Laboratory* (BIOL 446/533) at *Illinois Institute of Technology* (Growth of *Escherichia coli*, Chromosomal DNA extraction from bacteria; optical properties of DNA; Elements of genetic engineering: bacterial plasmid DNA extraction, restriction mapping and analysis; Cell fractionation: organelle isolation and marker enzyme assays; Protein fractionation; Estimation of protein molecular weight: polyacrylamide gel electrophoresis; Protein synthesis and detection in vitro: in vitro translation, electroblotting, chemiluminescence detection; Chromosome stability in yeast.
1996-1999: Öğretim Üyesi (Yrd. Doç. Dr.); *İnönü Üniversitesi*, Fen Edebiyat Fakültesi, Biyoloji Bölümü.
1999-2000: Postdoktora; İsrail Yüksek Öğretim Kurulu araştırma bursu, *Ben Gurion University*, İsrail.
2000-2005: Öğretim Üyesi (Yrd. Doç. Dr.); *İnönü Üniversitesi*, Fen Edebiyat Fakültesi, Biyoloji Bölümü.
2005-----: Öğretim Üyesi (Doç. Dr.); *İnönü Üniversitesi*, Fen Edebiyat Fakültesi, Biyoloji Bölümü.

YAYINLAR

1. **Geckil H***, Stark BC, and Webster DA.
Cell growth and oxygen uptake of *Escherichia coli* and *Pseudomonas aeruginosa* are differently affected by the genetically engineered *Vitreoscilla* hemoglobin gene.
Journal of Biotechnology, (2001); 85(1): 57-66.
2. Munzuroglu O* and **Geckil H**.
Effects of metals on seed germination, root elongation, coleoptile and hypocotyl growth in *Triticum aestivum* and *Cucumis sativus*.
Archives of Environmental Contamination and Toxicology,(2002);43(2): 203-213.
3. Munzuroglu O*, Karatas F and **Geckil H**.
The vitamin and selenium contents of apricot fruit of different varieties cultivated in different geographical regions.
Food Chemistry,(2003);83 (2): 205-212.
4. Geckil H*, Gencer S, Kahraman H, Erenler SO.
Genetic engineering of *Enterobacter aerogenes* with *Vitreoscilla* hemoglobin gene: cell growth, survival, and antioxidant enzyme status under oxidative stress.
Research in Microbiology,(2003);154 (6): 425-431.
5. Munzuroglu O*, Obek E and **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.

6. Yurekli F*, **Geckil H** and 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 (3): 305-309.
7. **Geckil H***, Arman A, Gencer G, Ates B and Yilmaz HR.
Vitreoscilla hemoglobin renders *Enterobacter aerogenes* highly susceptible to heavy metals.
[Biometals](#),(2004); 17 (6): 715-723.
8. **Geckil H***, Barak Z, Chipman DM, Erenler SO, Webster DA and Stark BC.
Enhanced production of acetoin and butanediol in recombinant *Enterobacter aerogenes* carrying *Vitreoscilla* hemoglobin gene.
[Bioprocess and Biosystems Engineering](#),(2004); 26 (5): 325-330.
9. **Geckil H*** and Gencer S.
Production of L-asparaginase in *Enterobacter aerogenes* expressing *Vitreoscilla* hemoglobin for efficient oxygen uptake.
[Applied Microbiology and Biotechnology](#),(2004);63(6):691-697.
10. **Geckil H***, Gencer S, Uckun M.
Vitreoscilla hemoglobin expressing *Enterobacter aerogenes* and *Pseudomonas aeruginosa* respond differently to carbon catabolite and oxygen repression for production of L-asparaginase, an enzyme used in cancer therapy.
[Enzyme and Microbial Technology](#),(2004);35 (2-3): 182-189.
11. 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: 149-152.
12. Erenler SO, Gencer S, **Geckil H***, Stark BC, and Webster DA.
Cloning and expression of the *Vitreoscilla* hemoglobin gene in *Enterobacter aerogenes*: effect on cell growth and oxygen uptake.
[Applied Biochemistry and Microbiology](#),(2004);40(3):241-248.
13. **Geckil H***, Ates B, Gencer S, Uckun M, and Yilmaz I.
Membrane permeabilization of Gram-negative bacteria with a potassium phosphate/hexane aqueous phase system for the release of L-asparaginase: an enzyme used in cancer therapy.
[Process Biochemistry](#),(2005); 40 (2): 573-579.
14. **Geckil H***, Ates B, Durmaz G, Erdogan S, Yilmaz I.
Antioxidant, free radical scavenging and metal chelating characteristics of propolis.
[American Journal of Biochemistry and Biotechnology](#), (2005); 1(1): 27-31.
15. Kahraman H and **Geckil H***.
Degradation of benzene, toluene and xylene by *Pseudomonas aeruginosa* engineered with the *Vitreoscilla* hemoglobin gene.
[Engineering in Life Sciences](#),(2005); 5(4): 363-368.
16. Ates B, Gencer S, Erenler SO, Uckun M, Ozer U, Yilmaz I, and **Geckil H***.
Production of L-asparaginase, a chemotherapeutic enzyme, in bacteria expressing *Vitreoscilla* haemoglobin.
[FEBS Journal](#),(2006); 273: 139-139.
17. Kahraman H, Gencer S, **Geckil H***.
Effect of *Vitreoscilla* hemoglobin on L-lysine alpha-oxidase, a chemotherapeutic enzyme, from *Pseudomonas aeruginosa*.
[FEBS Journal](#),(2006); 273: 139-140.
18. Aydin S*, Ozercan HI, Aydin S, Ozkan Y, Dagli F, Oguzoncul F, **Geckil H**.
Biological rhythm of saliva ghrelin in humans.
[Biological Rhythm Research](#),(2006); 37(2): 169-177.
19. Aydin S*, **Geckil H**, Zengin F, Ozercan HI, Karatas F, Aydin S, Balik DT, Ozkan Y, Dagli F, Celik V.
Ghrelin in plants: What is the function of an appetite hormone in plants?
[Peptides](#),(2006); 27(7): 1597-1602.
20. **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): 203-208.

21. 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*,(2007); 23(11-12): 807-811.
22. Aydin S*, Geckil H, Karaoglu A, and Elkiran EM. Ghrelin: A novel peptide with therapeutic effect in certain cancers? *Medical Hypotheses*,(2007); 69(5): 1157-1158.
23. Aydin S*, Ozercan IH, Geckil H, Dagli F, Aydin S, Kumru S, Kiliç N, Sahin I, Ozercan MR. Ghrelin is present in teeth. *Journal of Biochemistry and Molecular Biology* (2007); 40(2): 368-372.

*Corresponding author.

TÜRKÇE YAYINLAR

- A-01: Aydin S*, Geckil H, Caylak E and Kiliç N (2004). *Mikroorganizmaların kanser tedavisinde kullanımı*. *Firat Medical Journal*, 9(2): 30-34.
- A-02: Kahraman H and Geckil H* (2005). *Benzoik Asit'in Vitreoscilla hemoglobinin genetik aktarılmış Pseudomonas aeruginosa tarafından yıkımı*. *Fen ve Mühendislik Bilimleri Dergisi*, Firat Üniversitesi, 17(2); 342-348.
- A-03: Geckil H (2005). *İki Emekli Bilim Adamının Hikayesi: Genetige Karsi Biyokimya*. *Universite ve Toplum (University and Society)*, 5(3): 1-2.
- A-04: Geckil H (2006). *Molekuler Yasam Bilimlerinde Ph.D. Derecesi İçin Standartlar*" (translated from "Standards for the Ph.D. Degree in the Molecular Biosciences", a study by the International Union of Biochemistry and Molecular Biology, UMBB). This copyright free study has been published or publicized in:
- [Inonu Üniversitesi Tıp Fakültesi Dergisi \(Journal of Inonu University Medical Faculty\)](#), 13(3): 203-219
 - [Inonu University, Faculty of Art and Sciences](#)
 - [Turkish Academy of Sciences](#)
 - [Turkish Biochemical Society](#)
 - [International Union of Biochemistry and Molecular Biology, IUBMB](#)

DİĞER YAYINLAR

- Geckil H. Genomlarla Eğlence: Mikoçiğner DNA Bulmacası, *Science in School*, 2007: 1(5); 28-31. A translation of the original article: "Fun with genomes: the Mycomuncher DNA Puzzle" from "*Science in School*".
- Geckil H. Gözler Ufukta, ayaklar yerde: Tim Hunt'la söyleşi, *Science in School*, 2007: 1(6); 9-13. A translation of the original article "Eyes on the horizon, feet on the ground: interview with Tim Hunt", "*Science in School*".
- Geckil H. Romalıların ait yollar, tren istasyonları ve kontrolörler: RNA araştırmalarında son buluşlar, *Science in School*, 2007: 1(6);20-24. A translation of the original article: "Of Roman roads, train yards and inspectors: recent discoveries in RNA research" from "*Science in School*".

YAYIMLANMIŞ PROTOKOL

- Geckil, H., Gencer, S., Ates, B., and Uckun, M., "Permeabilization of gram-negative bacteria with KPi/hexane for the release of L-asparaginase", *ProtocolOnline: Molecular Biology-Recombinant Proteins*, <http://www.protocol-online.org/prot/Detailled/2923.html>

LABORATUARIMIZDA ARAŞTIRMA

Vitreoscilla hemoglobininin genetik mühendisliği

- *Vitreoscilla* hemoglobininin çeşitli endüstriyel mikroorganizmalara klonlanması, izolasyonu ve ekspresyonu
- *Vitreoscilla* hemoglobininin genetik mühendisliği ve klonlanmış bakterilerin oksidatif stres ve antioksidan özellikleri©
- *Vitreoscilla* hemoglobininin biyoremediasyonda kullanım potansiyeli
- *Vitreoscilla* hemoglobini kullanarak endüstriyel önemi olan çeşitli fermentatif solventlerin üretimi
- *Vitreoscilla* hemoglobini kullanarak bakteriyel orijinli antilösemik L-asparaginazın üretimini artırılması©

Doğal ve sentetik (yapay) antioksidant ve oksidantlar

- Bakteri ve yüksek yapılı hayvanlarda melatoninin etkisi
- Propolis ve CAPE (kafeik asit fenil ester)'nin antioksidan ve metal şelatlama karakteristikleri
- Ghrelin

Biyolojik proses mühendisliği

- Endüstriyel değeri büyük ürünlerin biyoprosesi için metot geliştirme (ör. kanser kemoterapisinde kullanılan enzimler)©

EDİTORLÜK

- **Editor**, *Biotechnology Journal* (A Wiley-VCH Publication, Weinheim, Germany)
- **Associate Editor**, *American Journal of Biochemistry and Biotechnology* (Science Publications, New York, USA)
- **Editor**, *Journal of Applied Biological Sciences*, A journal by Nobel Publishing and Nobel Science Research Center, Ankara, Turkey



EN SON VERDİĞİ KONFERANSLAR

- İnsan Genomu: hepimiz birer kopyamız? (04/2003), İnönü Üniversitesi-Fen Edebiyat Fakültesi
- İnsan Genom Projesi: genlerimiz bizi ele mi veriyor? (11/2003), İnönü Üniversitesi-Fen Edebiyat Fakültesi
- RNAi: RNA için yeni fonksiyonlar ve yeni ufuklar (03/2005), İnönü Üniversitesi-Fen Edebiyat Fakültesi
- Post-genomik dönemde ortaya çıkan yeni bir alan: FARMAKOGENOMİK (05/2005), İnönü Üniversitesi-Eczacılık Fakültesi

DESTEKLENEN PROJELER (Proje yürütücü)

- **Oct 1 2007- Oct 1 2009:** Production of L-DOPA and dopamine in bacteria expressing *Vitreoscilla* hemoglobin, A project supported by The Scientific and Technical Research Council of Turkey, TUBITAK (No: 107T478), Project budget: 100,000 USD plus 1,000 USD/month PhD scholarship for two years.
- **2005-2006:** Cloning, isolation and expression of L-asparaginase, an antileukemic enzyme, gene (*ansB*) gene in various Gram-negative bacteria, The State Planning Organization of Turkish Prime Ministry, Project budget: 50,000 USD
- **2003-2004:** The use of *Vitreoscilla* hemoglobin in *Enterobacter aerogenes*: some industrial applications. A project supported by The Scientific and Technical Research Council of Turkey, TUBITAK (TBAG2267(102T197)), Project budget: 40,000 USD
- **2003-2004:** The degradation/removal of textile dyes from industrial effluents through the use of biotechnological methods. A collective project supported by The State Planning Organization of Turkish Prime Ministry, (DPT:2003K 120610), Project budget: 150,000 USD
- **2002-2003:** The industrial use of *Pseudomonas aeruginosa* engineered with the *Vitreoscilla* hemoglobin gene. A project supported by the Research Fund Unit of Inonu University, APYB 2002/05, Project budget: 12,000 USD
- **2001:** Effect of organic solvents on metabolic and physiological activities of *Enterobacter aerogenes* engineered with *Vitreoscilla* hemoglobin gene. A project supported by the Research Fund Unit of Inonu University, APYB 2001/16, Project budget: 5000 USD

ORTAK ÇALIŞILAN LABORATUARLAR

- **Benjamin C. Stark** (Prof., Molecular Biology) and **Dale A. Webster** (Prof., Biochemistry), Department of Life Sciences, Illinois Institute of Technology, Chicago II, USA.
- **Ze'ev Barak** (Prof., Microbiology) and **David M. Chipman** (Prof., Biochemistry). Department of Life Sciences, Ben Gurion University of the Negev, Beer Sheva, Israel.
- **Ahmet Arman** (Assist. Prof., Molecular Biology and Genetics), Molecular Biology and Genetics Laboratory, Department of Engineering, Marmara University, Goztepe Campus, Istanbul, Turkey
- **Suleyman Aydin** (Assist. Prof., Biochemistry), Department of Biochemistry, Firat Medical Center, School of Medicine, Firat University, Elazig, Turkey.
- **Dursun Ozer** (Prof., Bioprocess Engineering), Department of Chemical Engineering, Firat University.
- **Ismet Yilmaz** (Assoc. Prof., Biochemistry), Department of Chemistry, Inonu University, Malatya, Turkey.

BURLAR, DERECERLER ve ONURLAR

- **1986-1987:** Scholarship for master study (Molecular Biology) from "[The Scientific and Technical Research Council of Turkey](#), (TUBITAK)"
- **1987-1988:** Honor member (A Graduate Student Recognition), [TUBITAK](#)
- **1988:** Second place in National Exam in Biological Sciences carried out by the "[Turkish Ministry of Education](#)" for postgraduate studies abroad.
- **1988:** Scholarship award from "[Turkish Ministry of Education](#)" for graduate (Ph.D.) study (Biotechnology/Genetic Engineering) in the United States of America.
- **1995:** Ph.D. degree from [Illinois Institute of Technology](#) (Chicago), USA (GPA: 3.625/4.0).
- **1999-2000:** Post-doctoral fellow of "[The Council for Higher Education of Israel](#)" (Ben-Gurion University, Israel)
- The list of the 7th edition of "Who's Who in Science and Engineering", 2002
- The list of the "2000 Outstanding Scientists of the 21st Century" published by the International Biographical Center (IBC), 2004.
- The list of the Laureate of the "Living Science Award" given by the International Biographical Center (IBC), 2004.

BİLİMSEL TOPLULUKLARA ÜYELİKLER

- American Society for Microbiology, ASM, <http://www.asm.org/>
- European Federation of Biotechnology www.efbweb.org
- Turkish Biochemical Society (A branch of "Federation of European Biochemical Societies", FEBS), <http://www.biyokimya.org/>
- Turkish Biotechnological Society (A branch of "European Federation of Biotechnology"), <http://www.biyotekder.hacettepe.edu.tr>

VERDİĞİM DERSLER

Undergraduate Level

- BIOL 301/BIOL 302 Biochemistry I and II
- BIOL 351/BIOL 352 Biochemistry Lab I and II
- BIOL 411 Introduction to Biotechnology

Graduate Level

- BIOL 581 Analytical Methods in Biological Sciences
- BIOL 582 Applications in Genetic Engineering
- BIOL 668 Genetic Engineering
- BIOL 695 Practical Applications in Molecular Biology and Biochemistry

Elective Courses (Undergraduates)

- BIOL 412 English Language for Biology Profession
- BIOL 469 Biochemical Techniques

HAKEMLİK YAPTIĞIM DERGİLER

- [Biotechnology Journal](#) (A publication of Wiley-VCH, Weinheim, Germany)
- [Journal of Biotechnology](#) (A publication of Elsevier Science, New York)
- [Microbiology](#) (A publication of The Society of General Microbiology, SGM, UK)
- [Applied Microbiology and Biotechnology](#) (A Springer-Verlag Publication, Münster, Germany)
- [Biotechnology and Applied Biochemistry](#) (A Portland Press publication on behalf of International Union of Biochemistry and Molecular Biology)
- [Archives of Environmental Contamination and Toxicology](#) (A publication of Springer-Verlag, New York)
- [Biotechnology Progress](#) (A joint publication of The American Chemical Society and The American Institute of Chemical Engineers)
- [Process Biochemistry](#) (A publication of Elsevier Science, Oxford)
- [Peptides](#) (A publication of Elsevier Science, New York)
- [Chemosphere](#) (A publication of Elsevier Science, Oxford)
- [Journal of Applied Microbiology](#) (The Official Journal of the Society for Applied Microbiology, Blackwell Publishing)
- [Letters in Applied Microbiology](#) (The Official Journal of the Society for Applied Microbiology, Blackwell Publishing)
- [Enzyme and Microbial Technology](#) (A publication of Elsevier Science, Oxford)
- [World Journal of Gastroenterology](#) (A joint publication of Elsevier Science and The WJG Press)
- [Arabian Journal for Science and Engineering](#) (A publication of King Fahd University of Petroleum and Minerals)
- [Fen ve Mühendislik Bilimleri Dergisi](#), A publication of Firat University, Elazığ, Turkey

- [Current Pharmaceutical Biotechnology](#), Invited Guest Editor for a theme issue (2003) (A Publication of Bentham Press)
- [Journal of Basic Microbiology](#), (A publication of Wiley-VCH, Weinheim, Germany)
- [Journal of Agricultural and Food Chemistry](#), (A publication of The American Chemical Society)

LİSANSÜSTÜ ÇALIŞMA DANIŞMANLIĞI

- **M.S., Sebnem O. Erenler.** Effect of the bacterial hemoglobin gene on physiological and metabolic activities of *Enterobacter aerogenes*. Dep. Biol., Inonu Univ., 1999-2002.
- **Ph.D., Huseyin Kahraman.** Potential use of *Pseudomonas aeruginosa* in bioremediation using a genetically engineered *Vitreoscilla* hemoglobin gene. Dep. Biol., Inonu Univ., 1999-2004.
- **M.S., Nafia C. Ates.** Production of fermentative products and solvent tolerance by *Enterobacter aerogenes* carrying the *Vitreoscilla* hemoglobin gene. Dep. Biol., Inonu Univ., 2001-2003.
- **M.S., Salih Gencer.** Use of the *Vitreoscilla* hemoglobin for bacterial production of L-asparaginase: an enzyme used in cancer therapy. Dep. Biol., Inonu Univ., 2003-2004.
- **Ph.D., Burhan Ates.** (Co-advisor) Production, chemical characterization and some clinical applications of anti-carcinogenic L-asparaginase from various Gram-negative bacteria. Dep. Chem., Inonu Univ., (09-03-2007).
- **M.S., Mirac Uckun.** Screening of random mutagenised Gram-negative bacterial strains for high level L-asparaginase production. Dep. Biol., Inonu Univ., (20-07-2006).
- **M.S., Ufuk Ozer.** Synthesis of dopamine in bacteria (10-07-2006).
- **Ph.D., Sebnem O. Erenler.** Cloning, isolation and expression of L-asparaginase gene (*ansB*) in Gram-negative bacteria (10-07-2007).

DİĞER

- 1993-1994: President of Turkish Student Association (96 members) at Illinois Institute of Technology, Chicago.
- 2003-2007: Institutional Coordinator, Socrates/Erasmus Programs.

Anahtar kelimeler

- *Vitreoscilla* hemoglobin
- Bacterial hemoglobin
- L-asparaginase
- Chemotherapeutic enzymes
- Ghrelin
- Acetoin,
- Butanediol
- L-DOPA production
- Dopamine production
- Melatonin