

TUĞBA BAĞCI ÖNDER, Ph.D.

Assistant Professor
Koç University School of Medicine
Rumelifeneri Yolu, Sariyer, Istanbul
Tel: +90 212 338 1077 / Fax: +90 212 338 1168
tuonder@ku.edu.tr

EDUCATION/TRAINING:

- 2008-2012: **Harvard Medical School/Massachusetts General Hospital**
Postdoctoral research fellow
- 2002-2008: **Tufts University Sackler School of Graduate Biomedical Sciences**
Ph. D. in Neuroscience
- 1998-2002: **Bilkent University, Department of Molecular Biology and Genetics**
B.Sc. in Molecular Biology and Genetics

RESEARCH EXPERIENCE:

- 2008-2012: **Massachusetts General Hospital, Harvard Medical School, Charlestown, MA**
Post-doctoral research fellow in the laboratory of Khalid Shah, Ph.D.
“Development of stem cell-based therapies in brain tumor models”
- 2009-2012: **Harvard Medical School, Boston, MA**
Visiting post-doctoral research fellow in the laboratory of Peter Sorger, Ph.D.
“Real-time imaging of glioma response to stem cell-delivered TRAIL”
- 2003-2008: **Tufts University Sackler School of Graduate Biomedical Sciences, Boston, MA**
Graduate student in the laboratory of Daniel G. Jay, Ph.D.
“The role of Neuropilin-1 and Semaphorin3A in Glioblastoma Progression and Dispersal”
- 2001: **Weill Medical College of Cornell University, Department of Neuroscience, Burke Medical Research Institute, White Plains, NY**
Summer research in the laboratory of Arthur Cooper, Ph.D.
- 2000: **Leibniz Institute of Neurobiology, Magdeburg, GERMANY**
Summer research in the laboratory of Dirk Montag, Ph.D.

TEACHING EXPERIENCE:

- Molecular Biology and Genetics-MBGE110, Fall 2013
- Cancer Therapeutics-MBGE430/530, Spring 2014
- Stem Cell-Based Therapies for Cancer-NEOP302, Fall 2012 (one lecture)
- Molecular Basis of Colon Cancer-NUTI205, Spring 2014 (one lecture)

ADMINISTRATIVE DUTIES:

- Koç University Molecular Biology and Genetics Graduate Program Coordinator, 2014-present
- Koç University Biomedical Sciences and Engineering Graduate Program Coordinator, 2013-present
- Koç University Core Curriculum Program Committee Member, 2013-present
- Koç University Faculty Council Member, 2013-present
- Grant review panel member, Turkey Scientific and Technological Institution (TUBITAK), 2012-present

PUBLICATIONS:

Bagci-Onder T*, Du W*, Figueiredo JL, Martinez-Quintanilla J, Shah K. "Targeting metastatic cells with therapeutic stem cells in an imageable breast to brain metastasis tumor model". *equal contribution. *In review*

Bagci-Onder T. "Neural stem cells as therapeutic delivery vehicles for malignant brain tumors". *Stem Cells and Regenerative Medicine: Progress and Challenges*. 2013, Published by Springer Science+Business Media. Pg: 253-277.

Bagci-Onder T. "Stem cell based combination therapies for cancer: Systemic delivery of a PI3K/mTOR inhibitor and stem cell mediated delivery of TRAIL in brain tumors". *Stem Cell Based Therapeutics for Cancer*. 2013, Published by Wiley Blackwell. Pg: 219-234.

Bagci-Onder T, Agarwal AS, Flusberg D, Wanningen S, Sorger P, Shah K. "Real-time imaging of the dynamics of death receptors and combinatorial therapies that overcome TRAIL resistance in tumors". 2013 Jun 6;32(23):2818-27. doi: 10.1038/onc.2012.304. Epub 2012 Jul 23.

Bagci-Onder T, Wakimoto H, Anderegg MC, Cameron C, Shah K. "A dual PI3K/mTOR inhibitor, PI-103, cooperates with stem-cell delivered TRAIL in experimental glioma models". *Cancer Research*. 2011 Jan 1;71(1):154-63.

Van de Water JA, **Bagci-Onder T**, Agarwal AS, Wakimoto H, Roovers RC, Zhu Y, Kasmieh R, Bhare D, Van Bergen En Henegouwen PM, Shah K. "Therapeutic stem cells expressing different variants of EGFR-specific nanobodies have anti-tumor effects". *Proc Natl Acad USA*. 2012 Oct 9;109(41):16642-7.

Wanningen S, Nesterenko I, **Bagci-Onder T**, Anderegg MC, Shah K. "Evaluating the effect of therapeutic stem cells on TRAIL resistant and sensitive medulloblastomas". *PLOS One*. 2012;7(11):e49219. doi: 10.1371/journal.pone.0049219

Cain JW, Hauptschein R, **Bagci T**, Stewart J, Sahagian G, Jay DG. "Identification of CD44 as a novel surface biomarker for drug resistance by surface proteome signature technology". *Mol Cancer Res*. 2011 May;9(5):637-47.

Bagci T, Wu JK, Pfannl R, Ilac LL, Jay DG. "Autocrine Sema3A signaling promotes glioblastoma dispersal". *Oncogene* 2009 Oct 8;28(40):3537-50.

PRESENTATIONS:

Bagci-Onder T. "Epigenetic regulation of apoptotic resistance in malignant brain cancers". *International Cell Death Society (ICDS) Meeting*, Cape Town, SOUTH AFRICA, 2014. *Invited talk*

Kurt IC, Kahya Z, Toparlak D, Lack N, Onder T, **Bagci-Onder T.** "Interrogating the function of chromatin modifying enzymes in TRAIL response of GBMs". *International Cell Death Society (ICDS) Meeting*, Cape Town, SOUTH AFRICA, 2014. *Poster presentation*

Cingoz A, Senbabaoglu F, **Bagci-Onder T.** "Isolation of isogenic GBM cell lines with differential TRAIL sensitivity/resistance". *International Cell Death Society (ICDS) Meeting*, Cape Town, SOUTH AFRICA, 2014. *Poster presentation*

Kaya E, Cingoz A, **Bagci-Onder T.** "Characterizing the role and regulation of a pro-apoptotic Bcl-2 family member, Harakiri, in GBM cell apoptosis". *International Cell Death Society (ICDS) Meeting*, Cape Town, SOUTH AFRICA, 2014. *Poster presentation*

Senbabaoglu F, Bildik G, **Bagci-Onder T**, Oktem O, Solaroglu I. "GnRH Signalling: New Insights into the Pathogenesis of High Grade Gliomas". *International Cell Death Society (ICDS) Meeting*, Cape Town, SOUTH AFRICA, 2014. *Poster presentation*

- Bagci-Onder T.** “TRAIL-based approaches for aggressive brain cancers”. *EACR sponsored 2nd Anticancer Agents Congress*, Bodrum, TURKEY, 2014. *Invited talk*
- Bagci-Onder T.** “Neural stem cells as therapy delivery vehicles for brain cancers”. *1st Congress on Stem Cell and Cell Therapies*, Kartepe, TURKEY, 2014. *Invited talk*
- Bagci-Onder T.** “TRAIL-based therapies for brain cancer”. *1st Cell Death Research Congress*, Çeşme, İzmir, TURKEY, 2013. *Invited talk*
- Bagci-Onder T.** “Stem cell based therapies for brain cancer”. *XIII. National Congress of Medical Biology and Genetics*, Kuşadası, Aydın, TURKEY, 2013. *Invited talk*
- Kahya Z, Arpacı HE, Yenidünya BG, Erkent MA, Onder TT, **Bagci-Onder T.** “Identification of chromatin modifiers that affect TRAIL sensitivity in brain tumor cells”. *XIII. National Congress of Medical Biology and Genetics*, Kuşadası, Aydın, TURKEY, 2013. *Poster presentation*
- Bagci-Onder T.** “TRAIL-based therapeutic approaches for malignant brain tumors”. *Kyoto University-Koç University Symposium on New Frontiers in Health Sciences and Technologies*, Kyoto, JAPAN, 2013. *Invited talk*
- Karabörk M, **Bagci-Onder T.** “Addressing the mechanisms of tumor-tropic migration of neural stem cells” . *11th Annual Meeting of International Society for Stem Cell Research (ISSCR)*, Boston, MA, USA, 2013. *Poster presentation*
- Kaymaz K, Yenidünya BG, Arpacı HE, Shah K, **Bagci-Onder T.** “Generation of new reporter systems to monitor TRAIL response and identify novel TRAIL sensitizers in tumor cells”. *International Cell Death Society (ICDS) Meeting*, Fuengirola, SPAIN, 2013. *Poster presentation*
- Bagci-Onder T.** “Beyin tümörlerinde kök hücre bazlı yeni tedavisel yaklaşımlar”. *X. IUGEN Moleküler Biyoloji ve Genetik Öğrenci Kış Okulu*, İstanbul, TURKEY, 2013. *Invited talk*
- Bagci-Onder T.** “Neural stem cells as therapeutic delivery vehicles for malignant brain tumors”. *Tufts University Department of Neuroscience*, Boston, MA, USA, 2013. *Invited talk*
- Bagci-Onder T.** “Beyin tümörü tedavisinde yeni bir yaklaşım: Nöral kök hücrelerinin terapötik taşıyıcı olarak kullanılması”, *Başkent Üniversitesi Kök Hücre Sempozyumu*, Ankara, TURKEY, 2013. *Invited talk*
- Bagci-Onder T,** Agarwal A, Flusberg D, Wannigen S, Sorger P and Shah K. “Real time imaging of cell death induced by therapeutic stem cells in malignant brain tumors”. *International Society for Stem Cell Research (ISSCR) Meeting*, Yokohama, JAPAN, 2012. *Poster presentation*
- Bagci-Onder T.** “Neural stem cells as therapeutic delivery vehicles for malignant brain tumors”. *1st Annual Congress on Stem Cell Research*, Sapanca, TURKEY, 2011. *Invited talk*
- Bagci-Onder T.** “Applications of stem-cell based therapies for cancer”. *Türkiye Bilimler Akademisi (TUBA) V. Kök Hücre Sempozyumu*, Ankara, TURKEY, 2010. *Invited talk*
- Bagci-Onder T** and Shah K. “Inhibition of PI3 Kinase cooperates with neural stem cell-delivered TRAIL to reduce glioma growth”. *American Association for Cancer Research (AACR) Meeting*, Washington, DC, 2010. *Poster presentation*
- Bagci-Onder T.** “Targeting gliomas with PI3K inhibition and TRAIL”. *Translational Grand Rounds*, Massachusetts General Hospital, Boston, MA, 2009. *Invited talk*

Bagci-Onder T. “Novel approaches to understand and target brain cancer progression”. *TUBITAK Marmara Arastirma Merkezi, Istanbul, TURKEY, 2009. Invited talk*

Bagci T and Jay DG. “ A role for a neuronal molecule in cancer cells: Autocrine Semaphorin3A signaling promotes glioblastoma dispersal”. *Turkish American Scientists and Scholars Association (TASSA) Annual Conference, Boston, MA, 2008. Poster presentation*

Bagci T. “Understanding the molecular mechanisms of glioblastoma dispersal: A novel role for Semaphorin3A and Neuropilin-1 in brain tumors”. *2nd Congress of Molecular Medicine, Istanbul, TURKEY, 2006. Invited talk*

Bagci T and Jay DG. “Neuropilin-1 mediates glioblastoma cell migration as a response to Semaphorin3A”. *Society for Neuroscience (SfN) Meeting, Washington D.C., 2005. Poster presentation*

Bagci T. “Functional proteomic screens to identify mediators of cancer cell migration”. *31st National Physiology Conference. Gaziantep, TURKEY, 2005. Invited talk*

Bagci T, Sloan KE, Eustace B, Stewart J, Ilag LL and Jay DG. “A functional proteomic screen to identify proteins involved in glioblastoma dispersal.” *Society for Neuroscience (SfN) Meeting, San Diego, CA, 2004. Poster presentation*

Bagci T. “Functional proteomics to address cellular functions by light-mediated protein inactivation”. *3rd National Neuroscience Conference. Denizli, TURKEY, 2004. Invited talk*

AWARDS AND HONORS:

- The Science Academy Young Scientist Award (BAGEP), 2014
- UNESCO-L'oreal for Women in Science in Turkey Award, 2013
- European Commission Research Executive Agency, Marie Curie Integration Grant, 2013-2017
- Turkey Scientific and Technological Institution (TUBITAK) National Young Researchers Career Development Program Research Grant (3501), 2013-2016
- Barbara Talamo Trainee Award by Tufts University Department of Neuroscience, 2008
- Travel award by Turkish Society of Molecular Medicine, 2006
- 1st place in Charlton Poster Competition, Tufts University Sackler School of Graduate Biomedical Sciences, 2005
- Travel award by Society for Neuroscience, Boston Chapter (BANG), 2004
- Full tuition and salary scholarship by Tufts University, 2002-2008
- Scholarship by Weill Medical College of Cornell University, Burke Medical Research Ins, 2001
- Full tuition scholarship by Bilkent University, 1998-2002
- Science education scholarship by TUBITAK, 1998-2002

MEMBERSHIPS:

- Co-founder of Boston Turkish Biologists' Colloquium (BTBC)
- American Association for Cancer Research (AACR)
- European Association for Cancer Research (EACR)
- International Society for Stem Cell Research (ISSCR)
- Turkish American Scientist and Scholars Association (TASSA)
- Society for Neuroscience (SfN)
- International Cell Death Society (ICDS)