# N. C. Tolga Emre, PhD

Boğaziçi University | Department of Molecular Biology & Genetics | Laboratory of Genome Regulation (GenReg Lab)

North Campus, Kuzey Park Binasi 303, Rumeli Hisarüstü 34342 Istanbul/Turkey

T: +90.212.3597559 | F: +90.212.2872468 | E: tolga.emre@boun.edu.tr | W: www.genreg.boun.edu.tr | http://mbg.boun.edu.tr | Scopus Author ID: 8108325500 | ResearcherID: A-1787-2016 | ORCID: 0000-0001-8021-5228

Molecular biologist with an interest in gene regulation and epigenetics, particularly in cancers.

### **POSITIONS & TRAINING**

- Associate Professor (2016 ), Assistant Professor (2014 –2016), Research Assistant Prof. (2011- 2014) & Principal Investigator (2011-)
   Department of Molecular Biology & Genetics | Boğaziçi University, Istanbul, Turkey
- Postdoctoral Fellow (2006-2010) | Laboratory of Louis M. Staudt | NCI, National Institutes of Health, Bethesda, MD, USA on identification and characterization of gene regulatory/epigenetic mechanisms & drug targets in mature B-cell-origin cancers
- PhD in Cell and Molecular Biology (1999-2005) | University of Pennsylvania, Philadelphia, PA, USA
   thesis work in the Laboratory of Shelley L. Berger | The Wistar Institute, Philadelphia, PA on histone modifications/epigenetics
   "Reversible Histone Ubiquitylation in Genomic Regulation: The Roles of Ubiquitin Proteases Ubpio And Ubp8 in the Budding Yeast"
- MSc in Molecular Biology (1997-1999) | Department of Molecular Biology and Genetics, Bilkent University, Ankara, Turkey "In vitro Study of p53 p33<sup>INGI</sup> Interactions" (MS Thesis, 1998-1999); thesis supervised by: Rengül Çetin-Atalay
- BSc in Molecular Biology and Genetics (1993-1997) | Boğaziçi University, Istanbul, Turkey
- Middle & High School (1986-1993) | Science Concentration | Kadıköy Anatolian High School (KAL), Istanbul, Turkey

### **PUBLICATIONS**

- Research Paper Citations: 4600+ (WoS), 7000+ (GS) | All Citations: 4900+ (WoS), 9000+ (GS) | H- Index: 14 (WoS), 16 (GS) (WoS: Clarivate Web of Science; GS: Google Scholar; %: Clarivate InCites Citation Percentile of the publication in subject area)
- 19. T Ergünay, ..., NCT Emre, U Şahin (2022) Sumoylation of Cas9 at Lysine 848 Regulates Protein Stability and DNA Binding. Life Science Alliance 5 (4) e202101078; doi: 10.26508/lsa.202101078 (%: n/a, SCI-E, QI)
- 18. DJ Klionsky et al. (2021) *Guidelines for the use and interpretation of assays for monitoring autophagy (4th edition)*<u>Autophagy</u>, 17(1):1-382. doi: 10.1080/15548627.2020.1797280 (%: 99.95, SCI-E, QI)
- 17. NCT Emre (2018) Epigenetik ve Kanser, book chapter in <u>Kanserin Moleküler Biyolojisi</u> (Ed. Y Baran; Kısayol Yayıncılık)
- 16. A Weilemann, ..., NCT Emre, ..., G Lenz (2015) Essential role of IRF4 and MYC signaling for survival of anaplastic large cell lymphoma. Blood, 125 (1): 124-132. doi: 10.1182/blood-2014-08-594507. (%: 90.75, SCI-E, QI)
- 15. C Praetorius, ..., NCT Emre, ..., E Steingrimsson (2013) *IRF4 affects human pigmentation by regulating expression of Tyrosinase through a MITF/TFAP2A-dependent pathway.* Cell 155: 1022-1033. doi: 10.1016/j.cell.2013.10.022. (%: 96.33, SCI-E, QI)
- 14. L Lamy, VN Ngo, NCT Emre, ..., LM Staudt (2013) Control of Autophagic Cell Death by Caspase-10 in Multiple Myeloma. Cancer Cell, 23:435-449. doi: 10.1016/j.ccr.2013.02.017. (%: 97.71, SCI-E, QI)
- 13. Y Yang\*, AL Shaffer\*, NCT Emre\*, ..., LM Staudt (2012) Exploiting Synthetic Lethality for the Therapy of ABC Diffuse Large B Cell Lymphoma. Cancer Cell., 21:723-37. doi: 10.1016/j.ccr.2012.05.024. (\*: equal contribution) (%: 99.35, SCI-E, QI)
- 12. L Rui, NCT Emre, ..., LM Staudt (2010) *Cooperative epigenetic modulation by cancer amplicon genes.* Cancer Cell, 18:590-605 doi: 10.1016/j.ccr.2010.11.013. (%: 97.12, SCI-E, QI)
- II. AL Shaffer, NCT Emre, PB Romesser, LM Staudt (2008) *IRF4: Immunity. Malignancy! Therapy?* Clin Cancer Res., 15:2954-61 doi: 10.1158/1078-0432.CCR-08-1845. (%: 93.96, SCI-E, QI)
- 10. B Sayan, NCT Emre, MB Irmak, M Öztürk, R Çetin-Atalay (2009) *Nuclear exclusion of p33ING1b tumor suppressor protein:* explored in HCC cells using a new highly specific antibody. <u>Hybridoma</u>, 28:1-6. doi: 10.1089/hyb.2008.0058. (%: 12.80, SCI-E, Q4
- 9. G Lenz, GW Wright, NCT Emre, ..., LM Staudt (2008) *Molecular subtypes of diffuse large B-cell lymphoma arise by distinct genetic pathways.* Proc Natl Acad Sci U S A. 105:13520-5. doi: 10.1073/pnas.0804295105. (%: 99.83, SCI-E, QI)
- 8. AL Shaffer, NCT Emre, ..., LM Staudt (2008) IRF4 addiction in multiple myeloma. Nature, 454: 226-31. (%: 96.57, SCI-E, QI)
- 7. NCT Emre, SL Berger (2006) *Histone post-translational modifications regulate transcription and telomeric silencing in S. cerevisiae.* in *Ernst Schering Research Foundation Workshop Proceedings*, 57:127-53. doi: 10.1007/3-540-37633-x\_8. (%: 93.33)
- 6. NCT Emre, ..., SL Berger (2005) *Maintenance of low histone ubiquitylation by Ubp10 correlates with telomere proximal Sir2 association and gene silencing.* Molecular Cell, 17: 585-594. doi: 10.1016/j.molcel.2005.01.007. (%: 89.48, SCI-E, QI)
- 5. K Ingvarsdottir\*, NJ Krogan\*, NCT Emre\*, ..., SL Berger (2005) *H2B ubiquitin protease Ubp8 and Sgf11 are a discrete functional module within the S. cerevisiae SAGA complex.* Molecular and Cellular Biology, 25:1162-1172. doi:10.1128/MCB.25.3.1162-1172.2005. (\*: equal contribution) (%: 87.93, SCI-E, QI)
- 4. NCT Emre, SL Berger (2004) *Histone H2B Ubiquitylation and Deubiquitylation in Genomic Regulation*. <u>Cold Spring Harbor Symposia on Quantitative Biology</u>, 69: 289-299. doi: 10.1101/sqb.2004.69.289. (%: 35.20, SCI-E, Q3)
- 3. KW Henry, ..., NCT Emre, ..., SL Berger (23003) *Transcriptional activation via sequential histone H2B ubiquitylation and deubiquitylation, mediated by SAGA-associated Ubp8.* Genes & Development, 21:2648-63. doi: 10.1101/gad.1144003. (%: 99.16, SCI-E, Q1)
- 2. H Santos-Rosa, ..., NCT Emre, ..., T Kouzarides (2002). Active genes are tri-methylated at K4 of histone H3. Nature, 419:407-411 doi: 10.1038/nature01080. (%: 99.85, SCI-E, Q1)
- I. WS Lo, L Duggan, NCT Emre, ..., SL Berger (2001) Snfi--a histone kinase that works in concert with the histone acetyltransferase Gcn5 to regulate transcription. Science, 293:II42-6. doi: 10.II26/science.I062322. (%: 96.88, SCI-E, QI)

#### RESEARCH GRANTS, AWARDS & FELLOWSHIPS

- Multiple Grants: "1001 Scientific and Technological Research Projects Funding" & "2247/b ERC Projects Support" Programs from Scientific & Technological Council of Turkey ("TÜBİTAK") (2013–Present; 2 completed, 2 on-going)
- Multiple "Scientific Research Projects BAP" Grants (2011 Present) from Boğaziçi University (5 completed, 2 on-going)
- Academic Incentive Awards (2017 present, each year) by the Council of Higher Education of Turkey ("YÖK")
- Installation Grant (EMBO-IG) (2011–2017) from European Molecular Biology Organisation (EMBO)
- "Above Threshold" Award (2017) by the Scientific & Technological Council of Turkey ("TÜBİTAK")
  for qualifying to the final round of the European Research Council Consolidator Grant (EC-H2020-ERC-CoG)
- Marie Curie Career Installation Grant (EC-FP7-MC-CIG) (2011–2015) from the European Commission (EC)
- Academic Incentive Awards (2015, 2016) by Boğaziçi University, Istanbul
- Young Scientist Award ("BAGEP") (2013) by Science Academy of Turkey
- Best Poster Award (2010) at 5th International Conference on Gene Regulation in Lymphocyte Development, Crete, Greece
- Visiting Fellow (2006 2010) fellowship by the National Cancer Institute, National Institutes of Health, Bethesda, MD, USA
- Graduate Internship Award (2005) by Greater Philadelphia Bioinformatics Alliance (GPBA)
- Merit-based Full Scholarship (1997 1999) for MSc Degree from Bilkent University, Ankara, Turkey
- Honors Degree (1997) upon graduation from BSc at Boğaziçi University, Istanbul, Turkey

## **TEACHING & MENTORING**

- Research Mentor for MSc/PhD/project students (2011-present) | Boğaziçi University, Istanbul, Turkey

  Current Trainees: 2 PhD Students, 1 Postdoc, 4 interns | Past Trainees: 8 MSc students, > 30 Project students, interns, rotation students
- Instructor for undergraduate and graduate courses (2011-present) | Boğaziçi University, Istanbul, Turkey BIO583: Cancer Genomics & Epigenomics (m), BIO501: Advanced Molecular Biology (m), BIO483: Mechanisms in Gene Regulation & Epigenetics (m), BIO407: Seminar II (m), BIO308: Seminar I, BIO310: Cellular & Molecular Biology III (coi; m), BIO301: Biochemistry I, BIO241: Cell Biology (m), BIO104: General Biology II (coi; m), BIO152: Introduction to Modern Biology, BIO106: Cell Biology Laboratory (m), BIO102: Cell & Molecular Biology II (m) (m: offered multiple semesters; coi: as co-instructor)
- Research co-mentor for graduate student rotation projects (2003-2005) | The Wistar Institute, Philadelphia, PA, USA
- Teaching Assistant to Introductory Biology, Microbiology, Biochemistry, Molecular Biology Courses
   Dept. of Biology, U of Pennsylvania (1999-2001); Dept. of Molecular Biology & Genetics, Bilkent University (1997-1999)
- Private Tutor in Science, Math, English courses for middle- and high-school students (1994-1997) | Istanbul, Turkey

# SCIENTIFIC & ACADEMIC COMMUNITY FUNCTIONS AND MEMBERSHIPS

- Member, Research Policy Advisory Board | Boğaziçi University (2016 present)
- Academic Advisor to cohorts of undergraduate students | Boğaziçi University Dept. of MBG (2015 present)
- Member, Graduate Student Selection Committee | Boğaziçi University Dept. of MBG (Multiple, 2015 )
- Member, PhD & MSc Thesis Juries/PhD Steering Committees/PhD Qualification Exam Juries | Boğaziçi U., İstanbul Technical U., Sabancı U., Koç U., Gebze Technical U. (Multiple, 2013 )
- Member, BAGEP Young Scientist Award Jury | Science Academy of Turkey (Multiple, 2016 )
- Reviewer/Panelist/Panel Chair for Grants | Scientific & Technological Council of Turkey (TÜBİTAK)(Multiple, 2013 )
- Reviewer for Manuscripts | Functional & Integrative Genomics; Turkish J of Biol; Autophagy; Helion; FEBS J; CRC Press; Gene
- Vice Director, Institute of Graduate Studies in Science & Engineering | Boğaziçi University (2018 2020)
- Member ex officio, Academic Regulations Committee ('AKK') | Boğaziçi University (2018 2020)
- Co-Vice Chair, Department of Molecular Biology & Genetics | Boğaziçi University (2017 2020)
- Member, Executive Board, Institute of Graduate Studies in Science & Engineering | Boğaziçi University (2017–2020)
- Member, Faculty Search Committee Boğaziçi U. Dept. of MBG (2015 2017; 2019 2020)
- Grant Reviewer, FET-OPEN Programme | European Commission, EU (2019)
- Member, Executive Board | MBD (Molecular Biology Association of Turkey) (2014 2017)
- Associate Member, EpiGeneSys Network of Excellence | European Commission (2013 2016)
- Organizer of Departmental Seminars | Boğaziçi University Department of MBG (2014 2016)
- Co-organizer of Epigenetics Journal Club | Boğaziçi University Departments of MBG & Psychology (2014 2016)
- Co-Chair, EMBO Young Investigators Cancer Sectorial Meeting (2013, Antalya, Turkey)
- Co-Chair, Molecular Biology Association of Turkey (MBD) 1st International Congress (2012, Istanbul, Turkey)
- Consultant to Cira Discovery Sciences, Inc. (Philadelphia) | Penn Biotechnology Group (PBG) Consulting Team (2004)
- Member, Academic Advising Committee for Incoming Graduate Students | Dept. of Biology, U of Pennsylvania (2003-2004)
- Representative to University Council, Graduate Student Associations Council (GSAC) U of Pennsylvania (2002-2003)
- Representative to Graduate Student Associations Council, Biology Grad. Group | U of Pennsylvania (2000-2001 & 2002-2003)

## **INVITED TALKS & OUTREACH ACTIVITIES**

MOKAD2021 Virtual Congress | University of California, San Diego (2018) | European Molecular Biology Organisation (EMBO) Young Investigator Programme Meetings & Forums (İstanbul, 2018; Vienna, 2018; Barcelona, 2015; Heidelberg, 2013 & 2012; Lisbon, 2012 | Koç University (2017 & 2011) | EARC – MOKAD 3<sup>rd</sup> Anticancer Agent Development Congress (İzmir, 2015) | İstanbul University DTAE (İstanbul, 2014) | Middle East Technical University (ODTÜ) (2014) | Evolution Symposium (Boğaziçi University, 2013) | Turkish Cell Death Society (HÖAD) 1<sup>st</sup> International Congress (İzmir, 2013) | Methylome Workshop (İstanbul, 2013) | Molecular Biology & Genetics Weekend (Boğaziçi University, 2013) | Sabancı University (2012) | Yeditepe University (2012) | Bilkent University (2012 & 2008) | American Association for Cancer Research (AACR) Annual Meeting (Orlando, FL, 2011) | İstanbul Technical University (İTÜ) (2011) | Turkish Medical Biology and Genetics Organization (TBGD) XII. Annual Congress (Antalya, 2011) | İzmir Institute of Technology (İYTE) (2011) | NIH Immunology Interest Group Retreat (Gettysburg, PA, 2009) | Boğaziçi University (2009 & 2006) | Fox Chase Cancer Center (Philadelphia, PA, 2004) | The Wistar Institute (Philadelphia, PA, 2004)

Instructor, "Biotechnology for Diagnosis & Therapy" Module for high school students at "BOUNioi" Seasonal Schools (İstanbul, 2020-21, multiple) | Moderator, MBG Career Panel, Boğaziçi University (2020) | Co-supervisor, Biology Open Lab, Technofest (İstanbul, 2019) | Panelist, Understanding Cancer Symposium, Doğa High School (İstanbul, 2019) | Seminar Speaker, ALKEV High School (İstanbul, 2018) | Visits and Seminars to introduce the Department of Molecular Biology & Genetics to High School students (İstanbul, 2012 - 2017, multiple)