

# İbrahim Çağrı Kurt, MSc, PhD

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## Work

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- (May 2024-Now) **CureCraft (London, UK)**  
Co-founder & CSO
- (Dec. 2022-Now) **Boğaziçi University (Istanbul, Türkiye)**  
Assistant Professor at the Department of Molecular Biology & Genetics
- (Jan. 2022 – Oct. 2022) **ELM Genomics Biotechnology (Istanbul, Türkiye)**  
Co-founder & CEO

## Education

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- (2015 – 2022) **Harvard University, MA, USA**  
Ph. D. in Biological Sciences, Harvard Graduate School of Arts and Sciences (3.87/4.00)
- (2013 – 2015) **Koç University, Istanbul, Turkey**  
M. Sc. in Molecular Biology and Genetics, Graduate School of Sciences & Engineering  
Research Assistant and Teaching Assistant (4.00/4.00)
- (2011 – 2012) **University of California Santa Cruz, CA, USA**  
Educational Abroad Program (Exchange) (3.47/4.00)
- (2009 – 2013) **Bilkent University, Ankara, Turkey**  
B. Sc. Molecular Biology and Genetics (3.35/4.00, Honor)

## Research Interests

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CRISPR, genome editing, protein engineering, protein language models (PLM)

## Research Experience

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- (Jan. 2016– Mar. 2022) Harvard University, School of Medicine  
Molecular Pathology Unit, Massachusetts General Hospital  
**Ph.D. Student** in Dr. Keith Joung's Genome and Epigenome Editing Laboratory  
<http://www.jounglab.org/>
  - Engineering novel CRISPR-based base editor technologies
  - Developing more sensitive off-target assays for CRISPR-based genome editing platforms
- (Sep. 2013 – Jun. 2015) Koç University, School of Medicine  
**Research Assistant** in Dr. Tugba Bagci-Onder's Brain Cancer Research & Therapy Laboratory  
<http://bagcionderlab.ku.edu.tr>
  - Interrogating the function of chromatin modifying enzymes in TRAIL response of glioblastoma multiforme cells
- (Sep. 2014) University of Virginia, School of Medicine, Department of Biochemistry and Molecular Genetics  
**Visiting Researcher** in Dr. Mazhar Adli's Chromatin Biology & Epigenomics Laboratory
  - Conducting ChIP experiments on KDM2B
- (Jan. 2012-Sep. 2012) University of California Santa Cruz, Department of Molecular, Cell and Developmental Biology  
**Undergraduate Researcher** in Dr. David Feldheim's Mammalian Brain Development Laboratory
  - Characterization of the role(s) of Brn3a in maintenance of health and function of adult retinal ganglion cells

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(Jun. 2011 – Aug. 2011) Albert Einstein College of Medicine of Yeshiva University, Department of Genetics  
**Researcher** in Dr. Ertugrul Ozbudak's Systems Biology of Stem Cells and Embryonic Development Laboratory  
▪ Characterization of the functional domain and protein interactors of Cited3

## Teaching Experience

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(2022 - Present) Bogazici University  
**BIO102:** Cellular and Molecular Biology II, **BIO106:** Cell Biology Laboratory, **BIO121:** Introduction to Cell Biology, **BIO152:** Introduction to Modern Biology, **BIO353:** Molecular Genetics, **BIO407:** CRISPR Seminar

(Fall 2013) Koç University, School of Medicine  
Teaching Assistant of Cellular and Molecular Biology Lab (**MBGE 110**)

(Summer 2012) University of California Santa Cruz, Department of Molecular, Cell and Developmental Biology  
Teaching Assistant of the Cell Biology (**BIOL 110**)

## Patents

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JK Joung, **IC KURT**, Z Ronghao, J GRUNEWALD. "C-to-G Transversion Dna Base Editors". WO2021042047A1. PCT/US2020/048777.  
(<https://patents.google.com/patent/WO2021042047A1/en>)

## Publications

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Gumustop I, Genel I, **Kurt IC** & Ortakci F (2025) Comparative Genomics of *Lentilactobacillus buchneri* Reveals Strain Level Hyperdiversity and Broad-spectrum CRISPR Immunity Against Human and Livestock Gut Phages. PLOS ONE, *Accepted for publication*.

Can O, Gumustop I, Genel I, Unver H, Dertli E, **Kurt IC**, & Ortakci F (2025). Comparative Genomics of *Bifidobacterium animalis* subsp. *lactis* Reveals Strain-Level Hyperdiversity, Carbohydrate Metabolism Adaptations, and CRISPR-Mediated Phage Immunity. *Fermentation*, 11(4), 179. <https://doi.org/10.3390/fermentation11040179>

Karl P, Zhang W, Ma J, Schmidts A, Lee H, Horng JE, Kim DY, **Kurt IC**, Clement K, Hsu JY, Pinello L, Maus MV, Joung JK, Yeh JR. "CRISPR prime editing with ribonucleoprotein complexes in zebrafish and primary human cells". *Nature Biotechnology*, 2022 Apr 29, [doi: 10.1038/s41587-021-00901-y](https://doi.org/10.1038/s41587-021-00901-y)

**Kurt IC**, Zhou R, Iyer S, Garcia SP, Miller BR, Langner LM, Grünewald J, Joung JK. "CRISPR C-to-G Base Editors for Inducing Targeted DNA Transversions in Human Cells". *Nature Biotechnology*, 2021 Jul 20, [doi: 10.1038/s41587-020-0609-x](https://doi.org/10.1038/s41587-020-0609-x)

**Kurt IC**, Sur I, Kaya E, Cingoz A, Kazancioglu S, Kahya Z, Toparlak OD, Senbabaoglu F, Kaya Z, Ozyerli E, Karahuseyinoglu S, Lack NA, Gumus ZH, Onder T, and Bagci-Onder T. "KDM2B/JHDM1B, an H3K36-specific demethylase, regulates apoptotic response of GBM cells to TRAIL". *Cell Death and Disease*, 2017 Jun 29;8(6):e2897. [doi: 10.1038/cddis.2017.288](https://doi.org/10.1038/cddis.2017.288)

## Conferences

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**Oral Presenter: Kurt IC.** Slush 2022 Biotech Showcase: ELM Genomics ([https://youtu.be/Q\\_amWySBBR4?si=ykSXOcqvjAlnxj72](https://youtu.be/Q_amWySBBR4?si=ykSXOcqvjAlnxj72))

**Oral Presenter: Kurt IC.** "CRISPR base editors for installing targeted DNA transversions in human cells". Washington University School of Medicine in St. Louis (STL Genome Editing 2021 Virtual Conference), 2021. (<https://youtu.be/mLTRmociaGo?t=3645>)

**Oral Presenter: Kurt IC.** "Programmable C-to-G Transversions in Human Cells with Engineered CRISPR Base Editors". American Society of Gene & Cell Therapy (ASGCT) Annual Meeting, Boston, USA, 2020.

**Poster Presenter: Kurt IC.** Authors: Kurt IC, Kahya Z, Cingoz A, Kaya Z, Lack N, Gumus ZH, Onder T, Bagci-Onder T. "KDM2B, an H3K36-specific demethylase, regulates apoptotic response of GBM cells to TRAIL". International Cell Death Society (ICDS) Meeting, Prague, Czech Republic, Poster presentation, 2015.

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**Poster Presenter: Kurt IC.** Authors: 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) "Cell Death and Diseases" Meeting, Cape Town, South Africa*, Poster presentation, 2014.

## Editorship and Peer Review

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Peer Review Activity for Nature Communications Biology (2025)

Richard Weikart, *Darwin'den Hitler'e: Evrimsel Ahlak, Irk Arıtımı ve Almanya'da Irkçılık*, Boğaziçi Üniversitesi Yayınevi, 2024 (Richard Weikart, *From Darwin to Hitler: Evolutionary Ethics, Eugenics and Racism in Germany*, Palgrave Macmillan, 2004) (<https://www.bounyayinevi.com/urun/darwinden-hitlere>)

## Laboratory Skills

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- Biosafety Level 2+ viral cell culture; lentivirus/retrovirus production
- Protein engineering, rational protein design, and protein purification
- Large-scale complex library cloning (>100k diversity)
- CRISPR-based genome and epigenome editing tools (nucleases, base editors, prime editor, CRISPRi, CRISPRa)
- ChIP-seq, RNA-seq, GUIDE-seq, CIRCLE-seq
- Genome-wide CRISPR knockout and shRNA knockdown screening
- In vivo imaging (IVIS) of bioluminescence and fluorescence in mice
- Immunohistochemistry
- Germline NGS analysis per GATK best practices
- Variant filtering & annotation per ACMG/AMP guideline
- Python, Cromwell, WDL, Arvados, GCP Compute Engine, HPC

## Languages

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Turkish - *Native*

German - *Basic*

Arabic - *Intermediate*

## Honors, Scholarships, Awards and Memberships:

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- (15 Nov 2022) Slush 2022, Newborn DNA Screening Product Showcase, Helsinki ([https://youtu.be/Q\\_amWySBBR4](https://youtu.be/Q_amWySBBR4))
- (12 May 2020) ASGCT Excellence in Research Award Recipient (<https://annualmeeting.asgct.org/am20/abstracts/award-recipients>)
- (2020-2022) Associate Member of American Society of Gene & Cell Therapy (ASGCT)
- (10 May 2014) 1<sup>st</sup> place in poster prize, "Interrogating the function of chromatin modifying enzymes in TRAIL response of GBMs". International Cell Death Society, "Cell Death and Diseases" meeting, Cape Town, South Africa
- (Jan. 2014 - 2016) Member of the European Association for Cancer Research (EACR)
- (Jan. 2014 - 2016) Member of the International Cell Death Society (ICDS)