B. Ogan Mancarci

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Education

2013-2018 (expected) **PhD, Bioinformatics**; University of British Columbia (Vancouver, Canada)

Thesis title: Identification/validation of cell type marker genes of the brain and their use in estimating cell type proportions in brain samples.

2009-2013 **BSc, Molecular Biology And Genetics;** Bilkent University (Ankara, Turkey)

Research Experience

2014 - present **PhD Student at UBC Micheal Smith Laboratories** - Supervisor: Dr. Paul Pavlidis

- Identification/validation of cell type marker genes of the brain and their use in estimating cell type proportions in brain samples (**github.com/oganm/brain-CellTypeSpecificGenes**).
- Development of a web application to visualize gene expression in brain cell types (**neuroexpresso.org**).

2013 **Rotation at BC Children's Hospital** - Supervisor: Dr. Wyeth Wasserman

- Analysis of CAGE data for detection of microRNA transcription start sites.

2013 **Rotation at Simon Fraser University** - Supervisor: Dr. Fiona Brinkman

- Analysis of antisense transcription in genomic islands.

2012 **Summer internship at University of Zurich** - Supervisor: Dr. Barbara Tschirren

- Selective mating of Japanese quails and computational analysis of various properties of quail and tit eggs.

2011 **Summer internship at Harvard Medical School** - Supervisor: Dr. George Daley

- Reprogramming of murine and human cells via viral vectors.

Teaching Experience

2016 **Teaching Assitant for Exploratory Data Analysis course (STAT 545) at UBC** - Instructor: Dr. Jenny Brian

2015 **Teaching Assitant for Exploratory Data Analysis course (STAT 545) at UBC** - Instructor: Dr. Jenny Brian

2015 **Instructional Skills Workshop at UBC** - **iswnetwork.ca**

Awards and Scholarships

2016 1st place in HackSeq hackaton - **hackseq.com**

2015 3rd place in SportsHack hackaton - **sportshackweekend.org/ca/2015**

2013-2014 Canadian Institutes of Health Research Training Program Scholarship

2009-2013 Bilkent 50% Scholarship

Presentations

Organization of Computational Neurosciences Conference 2015: Tripathy, S.J., Tebaykin, D., Li, B., **Mancarci, O.**, Toker, L., and Pavlidis, P. (2015). Large-scale analysis of brain-wide electrophysiological diversity reveals novel characterization of mammalian neuron types. BMC Neurosci 16, O4.

23rd Annual International Conference on Intelligent Systems for Molecular Biology: Mancarcı O, Toker L, Tripathy S and Pavlidis P. A comprehensive database of cell-type specific marker genes for the mammalian brain [v1; not peer reviewed]. F1000Research 2015, 4(ISCB Comm J):428 (poster) (doi: 10.7490/f1000research.1110181.1)

23rd Annual International Conference on Intelligent Systems for Molecular Biology: Toker L, **Mancarci O**, Tripathy S and Pavlidis P. A transcriptomics approach for revealing cell-type proportion changes in psychiatric disorders

Publications

(Preparing for submission) Mancarci, B.O., Toker, L., Li, B., Rocco, B.R., Tripathy, S.J., Sibille, E.L., and Pavlidis, P. Identification of cell type marker genes of the brain and their use in estimating cell type proportions.

Horvath, G.A., Demos, M., Shyr, C., Matthews, A., Zhang, L., Race, S., Stockler-Ipsiroglu, S., Van Allen, M.I., **Mancarci, O.**, Toker, L., et al. (2016). Secondary neurotransmitter deficiencies in epilepsy caused by voltage-gated sodium channelopathies: A potential treatment target? Mol. Genet. Metab. 117, 42–48.

Onder, T.T., Kara, N., Cherry, A., Sinha, A.U., Zhu, N., Bernt, K.M., Cahan, P., **Mancarci, B.O.**, Unternaehrer, J., Gupta, P.B., et al. (2012). Chromatin-modifying enzymes as modulators of reprogramming. Nature 483, 598–602.

Software

NeuroExpresso: A web application for visualization of gene expression data in brain cell types. Available at **neuroexpresso.org**.

VASCO: A web application for visualization of gene expression data from single cell RNA sequencing experiments. Developed for HackSeq hackaton. Available at **oganm.shinyapps.io/2016_project_7**.

Impact Replays: A web application for visualization play-by-play data from football games. Developed for SportsHack hackaton. Available at **daattali.com/shiny/cfl**