

# Burak Ogan Mancarci

Tel: +1 778 995 1591

[ogan.mancarci@msl.ubc.ca](mailto:ogan.mancarci@msl.ubc.ca)

[oganm.com](http://oganm.com)

## Education

- 2013-2022**      **MSc, 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)

## Work Experience

- 2022-Present**      **Bioinformatician** - Pavlidis Lab, University of British Columbia

## Research Experience

- 2014 - 2022**      **MSc 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/PavlidisLab/neuroExpressoAnalysis](https://github.com/PavlidisLab/neuroExpressoAnalysis)).
  - Development of a web application to visualize gene expression in brain cell types ([neuroexpresso.org](https://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

- 2018**      **Teaching Assistant for Statistical Methods for High Dimensional Biology course (STAT 540) at UBC** - Instructors: Sara Mostafavi, Paul Pavlidis

- 2016**                      **Teaching Assistant for Exploratory Data Analysis course (STAT 545) at UBC -**  
Instructor: Dr. Jenny Brian
- 2015**                      **Teaching Assistant for Exploratory Data Analysis course (STAT 545) at UBC -**  
Instructor: Dr. Jenny Brian
- 2015**                      **Instructional Skills Workshop at UBC - [iswnetwork.ca](http://iswnetwork.ca)**

## Publications

Lim, N., Tesar, S., Belmadani, M., Poirier-Morency, G., **Mancarci, B.O.**, Sicherman, J., Jacobson, M., Leong, J., Tan, P. and Pavlidis, P. (2021). Curation of over 10 000 transcriptomic studies to enable data reuse. Database, 2021.

Zhuang, B., **Mancarci, B.O.**, Toker, L. and Pavlidis, P. (2019). Mega-analysis of gene expression in mouse models of Alzheimer's Disease. Eneuro, 6(6).

Tripathy, S.J., Toker, L., Bomkamp, C., **Mancarci, B.O.**, Belmadani, M., and Pavlidis, P. (2018). Assessing Transcriptome Quality in Patch-Seq Datasets. Front. Mol. Neurosci. 11.

Toker, L., **Mancarci, B.O.**, Tripathy, S., and Pavlidis, P. (2018). Transcriptomic evidence for alterations in astrocytes and parvalbumin interneurons in bipolar disorder and schizophrenia subjects. Biological Psychiatry.

**Mancarci, B.O.**, Toker, L., Tripathy, S.J., Li, B., Rocco, B., Sibille, E., and Pavlidis, P. (2017). Cross-Laboratory Analysis of Brain Cell Type Transcriptomes with Applications to Interpretation of Bulk Tissue Data. ENeuro 4.

Tripathy, S.J., Toker, L., Li, B., Crichlow, C.-L., Tebaykin, D., **Mancarci, B.O.**, and Pavlidis, P. (2017). Transcriptomic correlates of neuron electrophysiological diversity. PLOS Computational Biology 13, e1005814.

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](http://neuroexpresso.org).

**markerGeneProfile:** An R package for calculation of marker gene profiles as described in **Mancarci et al. (2017)**. Available at [github.com/PavlidisLab/markerGeneProfile](https://github.com/PavlidisLab/markerGeneProfile).

**VASCO:** A web application for visualization of gene expression data from single cell RNA sequencing experiments. Developed for HackSeq 2016. Available at [hackseq.github.io/vasco](http://hackseq.github.io/vasco).

**Viral Voyager:** A web application for visualization and analysis of metavirome data collected for the Tara Oceans Project. Developed for HackSeq 2018. Available at [oganm.com/shiny/taracyc](http://oganm.com/shiny/taracyc).

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

**eggstractor:** Software to automate extraction of shape and pigmentation related information from quail eggs. Developed for 2012 summer internship under Barbara Tschirren. Available at [github.com/oganm/eggstractor](https://github.com/oganm/eggstractor).

**Misc. Bioinformatics related R packages:** I maintain R packages aimed at making life easier for myself and other bioinformaticians. See [github.com/topics/ogan-bio](https://github.com/topics/ogan-bio) for a full list.

**Misc. D&D related repositories:** I maintain R packages and web applications to be used while playing Dungeon's and Dragons, a popular tabletop roleplaying game. See [github.com/topics/ogan-dnd](https://github.com/topics/ogan-dnd) for a full list.