Dr. Bilgenur Baloglu
Molecular biologist, bioinformatics scientist
Pasadena, CA
✉ bilgenurb@gmail.com
🏠 bbaloglu.github.io
💼 bilgenur-baloglu
○ BBaloglu

PROFESSIONAL APPOINTMENTS
2021-Present	Lead bioinformatician, Sequential Skin, Singapore (remote)
2020-2021	Freelance science writer, Asian Scientist, Singapore
2020-2018	Postdoctoral Fellow, Centre for Biodiversity Genomics, University of Guelph, Canada
2018-2013	Graduate Research Assistant, Department of Biological Sciences, NUS, Singapore
2017-2014	Graduate Teaching Assistant, Department of Biological Sciences, NUS, Singapore

EMPLOYMENT HISTORY
2012	Field research assistant, KuzeyDoga Society, Turkey
2012	Intern, EMBL Structural and Computational Biology Department, Germany
2012	Project assistant and translator, Phenology Network of Turkey, Turkey
2011	Intern, HelmholtzZentrum muenchen, AGV Research Unit Gene Vectors, Germany
2011-2010	Research assistant, Bavarian State Institute for Agriculture (LfL), Germany
2011-2010	Intern, TUM School of Life Sciences Biopolymer Chemistry Department, Germany
2010	Intern, Koc University, Molecular Biology and Genetics Department, Turkey
2010-2008	Student assistant, ITU Erasmus Office

EDUCATION
National University of Singapore (NUS), Singapore — Ph.D. in Biological Sciences, 2018
      Advisor: Dr. Rudolf Meier
      Thesis: Biological assessment & monitoring of Singapore aquatic environments with NGS
Istanbul Technical University (ITU), Turkey — BSc. in Molecular Biology and Genetics, 2012
      Advisor: Dr. Asli Kumbasar
      Thesis: Characterization of Nuclear Factor I Protein Expression in Human Neural Stem Cells
Munich Technical University (TUM), Germany — Exchange studies in Molecular Biology and Genetics, 2010-11

GRANTS & AWARDS (Total to date: $170,546 USD)
2020	Insight Health Data Science Fellowship (*rejected*)
2020	TEDx talk invitation (*cancelled due to Covid19 pandemic*)
2020-2018	Centre for Biodiversity Genomics Postdoctoral Fellowship
2019	Northern Research Fund and Food From Thought Grants for Sub-Arctic Research
2019	Centre for Biodiversity Genomics travel grant (2X)
2019	AllGenetics award for industrial applications using DNA barcoding and DNA metabarcoding
2018-2017	National University of Singapore travel grant (3X)
2018-2013	TEV-SINGA PhD scholarship
2011	European Molecular Biology Laboratory (EMBL) internship travel grant
2011	1st International Conference on Stem Cell Research and Applications Youth travel fellowship
2011-2010	Scholarship from Turkish National Agency for Erasmus Exchange Program
2010	BEST, Board of European Students of Technology Summer School travel grant

PUBLICATIONS

[1]   **Baloglu, B.**, Chen. Z., Elbrecht, V., Braukmann, T., MacDonald, S., Steinke, D. 2021. *A workflow for accurate metabarcoding using Nanopore MinION sequencing*. Accepted in Methods in Ecology and Evolution. DOI: 10.1111/2041-210X.13561

[2]   Shepherd, B. A., Tanjil, M. R. E., Jeong, Y., **Baloglu, B.**, Liao, J., Wang, M. C. 2020. *Ångström- and Nano-scale Pore-Based Nucleic Acid Sequencing of Current and Emergent Pathogens*. MRS Advances. pp. 1-18.

[3]   **Baloglu, B.**, Clews E., Meier R., 2018. *NGS barcoding reveals high resistance of a hyperdiverse chironomid (Diptera) swamp fauna against invasion from adjacent freshwater reservoirs*. Frontiers in Zoology, 15(1):31.

[4]   Srivathsan, A.*, **Baloglu, B.***, Wang, W., Tan, W.X., Bertrand, D., Ng, A.H.Q., Boey, E.J.H., Koh, J.J.Y., Nagarajan, N. and Meier, R., 2018. *A MinION™-based pipeline for fast and cost-effective DNA barcoding*. Molecular ecology resources, 18(5), 1035-1049. *Equal contribution.

[5]   **Baloglu, B.** 2018. *Biological assessment and monitoring of Singapore aquatic environments* (Doctoral dissertation).

[6]   Lim, N.K., Tay, Y.C., Srivathsan, A., Tan, J.W., Kwik, J.T., **Baloglu, B.**, Meier, R. and Yeo, D.C., 2016. *Next-generation freshwater bioassessment: eDNA metabarcoding with a conserved metazoan primer reveals species-rich and reservoir-specific communities*. Royal Society Open Science, 3(11), p.160635.

MANUSCRIPTS IN PREPARATION

[1]   **Baloglu, B.**, Hempel, C., Adamowicz, S., Steinke, D. *A phylogenetic perspective on the distribution of aquatic midges (Chironomide) in sub-arctic ponds as revealed by PacBio Sequel sequencing of COI gene*.

[2]   **Baloglu, B.**, MacDonald, S., Braukmann, T., Steinke, D. 2020. *Does size sorting matter? Validation of COI metabarcoding primers for aquatic invertebrates.*

[3]   Deiner, K., Marshall, C., Simonin, P., Burlakova, L., Karatayev, A., **Baloglu, B.**, Coggins, B., Daniel, S., Frankiewicz, A., Whitmore, E., Connolly, J., DeWalt, E., Andres, K., Andres. J., Rogalskyj, G., Pilgrim, E., Westergaard, S., Watkins, J., Rudstam, L., Pfrender, M., Lodge, D., *A new reference database for Great Lakes benthic invertebrate diversity based on DNA based identification.*

[4]   Marshall, C., Connolly, J., Daniel, S., Whitmore, E., **Baloglu, B.**, Dewalt, E., Simonin, P., Deiner, K., Rudstam, L., Watkins, J. *Barcoding Sheds Light on the Natural History of Various Aquatic Invertebrate Taxa in the Great Lakes.*

OTHER PRODUCTS

[1] **Baloglu, B.**, Chen, Z. Python-based bioinformatics algorithm for analyzing metabarcoding data obtained with Nanopore sequencing. [Github site](#)

[2] Srivathsan, A.*, **Baloglu, B.***, Wang, W., Tan, W.X., Bertrand, D., Ng, A.H.Q., Boey, E.J.H., Koh, J.J.Y., Nagarajan, N. and Meier, R. Python-based bioinformatics algorithm for analyzing DNA barcoding data obtained with Nanopore sequencing. [Github site](#)

SEMINARS & INVITED TALKS

[1]   *International Society for Computational Biology Seminar*, Regional Student Group Turkey, Virtual event, 2020.

[2]   *Ecology and Evolutionary Biology Society of Turkey Seminar*, Virtual event, 2020.

[3]   *Pattern Ag Seminar*, Virtual event, 2020.

[4]   *50th Ontario Ecology, Ethology, and Evolution Colloquium*, Virtual event, 2020.

[5]   *Great Lakes Restoration Initiative Meeting*, Cornell University Biological Station, USA, 2020.

[6]   *Food From Thought, Research Integration Symposium*, Guelph, Canada, 2020.

[7]   *Biodiversity Institute of Ontario Seminar*, Guelph, Canada, 2018.

CONFERENCE PRESENTATIONS

[8]   *13th International Symposium on Health Informatics and Bioinformatics (HIBIT),* Virtual event, 2020.

[9]   *London Calling 2020*, Virtual event, 2020.

[10] *8th International Barcode of Life Conference*, Trondheim, Norway, 2019.

[11] *Society for Freshwater Science Annual Meeting*, Salt Lake City, USA, 2019.

[12] *5th Ecology and Evolutionary Biology Symposium*, Izmir, Turkey, 2018.

[13] *3rd Southeast Asian Gateway Evolution Meeting*, Bogor, Indonesia, 2017.
[14] *21st Biological Sciences Graduate Congress*, University of Malaya, Malaysia, 2016.
[15] *25th International Congress of Entomology*, Orlando, Florida, USA, 2016.
[16] *International ITU 6th Molecular Biology and Genetics Student Congress*, Istanbul, Turkey, 2012.

CERTIFICATIONS
2020   "Deep Learning with PyTorch: Zero to GANs", Jovian.ml
2020   "Machine learning with Python", Udemy
2020   "Python: Python Programming for Artificial Intelligence and Data Science", Udemy
2019   SCUBA PADI open water diver
2019   Wilderness first responder

TEACHING & MENTORING EXPERIENCE
Mentoring Experience
Britney Shepherd, Undergraduate Student – 2020-Present, University of South Florida
        Project: Nanopore sequencing of current and emergent pathogens
Shanna MacDonald, Undergraduate Student – 2018-2020, Centre for Biodiversity Genomics, University of Guelph
        Project: Metabarcoding of aquatic habitats with DNA sequencing tools
Jake Gonzales, Wan Ting Lee, Koa Jia Tong, Singapore Polytech Students – 2014-2016, Department of Biological Sciences, National University of Singapore
        Project: NGS barcoding of aquatic midges of Singapore

Lecturer, Bioinformatics and programming with Python, StarDust Squad — 2021-Present
I teach StarDust Squad, a community of high school, undergraduate, and graduate students from Turkey. I give lectures and practical classes about coding with Python in Jupyter notebook environment, bioinformatics tools, and data visualization. I designed the module myself.

Teaching Assistant, National University of Singapore; Singapore — 2014-17
I assisted in undergraduate biodiversity, animal behavior, and comparative genomics and evolution courses, where I was responsible for grading essays, homework assignments, and laboratory courses.

Teaching Practicum for Bioinformatics, Istanbul Technical University; Istanbul, Turkey — 2012
I structured teaching experience where bioinformatics lectures were planned and delivered for molecular biology and genetics majors for one semester.

ACADEMIC SERVICE
2020-2018   Reviewer: Molecular Ecology Resources, Ecology and Evolution, Scientific Reports
2020-2018   Member: Ecology and Evolutionary Biology Society of Turkey, Society for Freshwater Science
2020-2018   Project coordinator and consultant for Great Lakes research, US EPA
2016-2014   Consultant, PUB, Singapore's National Water Agency
2014-2012   Graduate Student Council Representative, Department of Biological Sciences,
             National University of Singapore
2012   Organizer, Bioinformatics workshop, Istanbul Technical University, Turkey
2012-2011   Young Scholar, Global Relations Forum, Istanbul, Turkey
2010   Organizer, ITU 4th National Molecular Biology and Genetics Congress, Turkey

EQUITY & INCLUSION
2020-Present   Youth Mentor for high school and undergraduate students, StarDust Squad, Turkey
2019-2018   Mentor for one undergraduate student, University of Guelph, Canada
2016-2014   Mentor for three Singapore Polytech students, Singapore

PUBLIC OUTREACH

2020	Public feature, Canada based Turkish language newspaper CanadaTurk:
	"Awarded molecular biologist Bilgenur Baloglu's journey from the tropics to the Arctic"
2020	Public feature, Turkish newspaper Bianet:
	"Biologist Baloglu: Don't be afraid of being bold"
2020	Speaker, TEDx IKU Istanbul. TEDx talk:
	"How will insects save the world?"[1]
2020	Author, Barcode Bulletin (featured on the official US. EPA government website):
	"What can't be measured won't be managed: Scientists and U.S. Environmental Protection Agency work together to conserve the Great Lakes"
	Author, Towards Data Science, Medium:
	"Predicting ocean water temperature with machine learning"
	Author, Turkey's largest science website, Tree of Evolution:
	"If we want to prevent the next pandemic, we have to value evolutionary biology"
	Author, Global Relations Forum & Turkish Society of Ecology and Evolutionary Biology:
	"Ecological and evolutionary perspective on the novel coronavirus"
2020	Speaker, Discord event with high school students from Turkey on biology and genetics
2020	Public feature, Bilim Kadinlari (Eng: Women Scientists):
	A Twitter thread: *"Woman scientist of the week, Dr. Bilgenur Baloglu"*
2019	Author, Barcode Bulletin:
	"Discovering a resilient and hyperdiverse midge fly fauna in a Singaporean swamp forest"
2019	Research coverage, Science Magazine:
	"$180 million DNA 'barcode' project aims to discover 2 million new species"
2019	Award announcement, AllGenetics postdoc award:
	"Dr. Bilgenur Baloglu wins the «AllGenetics award for industrial applications using DNA barcoding and DNA metabarcoding» for environmental DNA study"
2018	Public feature, Woman Doing Science Instagram, Facebook, and Twitter pages
2018	Local newspaper coverage, Antalya Gundem Gazetesi, on my one day at a Montessouri Kindergarten educating kids on ecology
2017	Speaker, Noroblog Podcast:
	"Insects and Humans"
2017 -2012	Author and editor, Turkish science website Bilim.org