

Curriculum Vitae

İsmail Kudret SAĞLAM, PhD

PERSONAL INFO

Name : İsmail Kudret
Surname : Sağlam
Gender : Male
Nationality : Turkish Republic
Place and Date of Birth : Ankara/Turkey – 23.01.1979

CONTACT INFO

Mailing Address : Koç University, College of Science,
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EDUCATION

- 2004 – 2010 : PhD; Hacettepe University; Institute for Graduate Studies in Science and Engineering, Ankara, TURKEY.
- 2001 – 2004 : MSc; Hacettepe University; Institute for Graduate Studies in Science and Engineering, Ankara, TURKEY.
- 1997 – 2001 : BSc; Biology, Hacettepe University; Faculty of Science, Ankara, TURKEY.

EMPLOYMENT

- 2002 – 2010 : Research Assistant; Hacettepe University; Faculty of Science, Department of Biology, Ankara, TURKEY
- 2010 – 2011 : Compulsory Military Service.
- 2012 – 2014 : Senior Researcher; Hacettepe University; Faculty of Science, Department of Biology, Ankara, TURKEY
- 2014 – 2018 : Research Fellow; University of California Davis, Department of Animal Science, Davis, California, USA.
- 2017 – 2018 : Research Affiliate; The University of Utah, Department of Biology, Salt Lake City, Utah, USA.
- 2018 – : Assistant Professor; Koç University, College of Science, Molecular Biology and Genetics, İstanbul, TURKEY

AWARDS, SCHOLARSHIPS & TITLES

- 2006 – 2007 : **Fulbright PhD Research Scholarship**, University of California Riverside, Department of Biology, Roff Lab, Riverside, California, USA.
- 2017 – : **Title of Associate Professor** awarded by The Council of Higher Education of Turkey.

COMPUTER LANGUAGES

Bash and Python

RESEARCH PROJECTS

- Quantifying demographic and genetic structure of sedentary and migratory bears (*Ursus arctos arctos*) within Eastern Anatolia based on genome-wide genetic markers. The Scientific and Technological Council of Turkey, TBAG, Project No: 217Z192. **Principle Investigator. (2018 – Ongoing)**
- Landscape Conservation of Large Carnivores in Turkey. Whitley Fund For Nature. **Researcher. (2015 – Ongoing).**
- Genomics of speciation processes within the genus *Phonochorion*. Hacettepe University Scientific Research Projects Coordination Unit, Project No: 544. **Principle Investigator. (Completed 2017).**
- Construction of RAD-seq genome libraries for the genus *Phonochorion* (Orthoptera: Tettigoniidae). Hacettepe University Scientific Research Projects Coordination Unit, Project No: 013D05601006. **Principle Investigator. (Completed, 2015).**
- DNA Barcoding of the Barbitistini fauna of the East Black Sea Region. Hacettepe University Scientific Research Projects Coordination Unit, Project No: 5885. **Principle Investigator. (Completed, 2012).**
- Phylogeography of the Genus *Phonochorion*, Uvarov 1916 (Orthoptera: Tettigoniidae). Hacettepe University Scientific Research Projects Coordination Unit, Project No: 09D03601003. **Researcher. (Completed, 2010).**
- Research on the ecological mechanisms affecting the evolutionary processes of the species *Isophya redtenbacheri* Adelung, 1907 and the species belonging to the genus *Phonochorion* Uvarov, 1916 (Orthoptera: Tettigoniidae) situated in Northeast Anatolia. Hacettepe University Scientific Research Projects Coordination Unit, Project No: 03.02.601.012. **Researcher. (Completed, 2010).**

- Distribution and Phylogeography of pine processionary moth species, *Thaumetopoea pityocampa* (Dennis&Schiffermüller, 1775) and *Thaumetopoea wilkinsoni* Tams, 1924 (Lepidoptera: Notodontidae), within Turkey. The Scientific and Technological Council of Turkey, T0VAG, Project No: 109O411. **Researcher. (Completed, 2010)**

THESIS

- MSc Thesis :** **Sağlam İK. 2004.** Research on the altitude dependent, ecological distribution and color polymorphism of the bush-cricket *Isophya rizeensis* Sevgili, 2004 (Orthoptera: Tettigoniidae). In Turkish. Department of Biology, Hacettepe University, Institute for Graduate Studies in Science and Engineering. Ankara, Turkey. 123 pp.
- PhD Thesis :** **Sağlam İK. 2010.** Speciation and Phylogeography of the Genus *Phonochorion*, Uvarov 1916 (Orthoptera: Tettigoniidae). In Turkish. Department of Biology, Hacettepe University, Institute for Graduate Studies in Science and Engineering. Ankara, Turkey. 159 pp.

PEER REVIEW PUBLICATIONS

- Sağlam İK, Miller MR, O'Rourke SM and Çağlar SS (2019)** Phylo-comparative analysis reveal the dual role of drift and selection in reproductive character displacement. *Molecular Phylogenetics and Evolution*, **140**, 106597.
- Sağlam İK, Baumsteiger J, Smith MJ, Linares-Casenave J, Nicholas NL, O'Rourke SM, Miller MR (2018).** Best available science *still* supports an ancient common origin of Devils Hole and Devils Hole pupfish. *Molecular Ecology*, **27**, 839-842.
- Benjamin A, **Sağlam İK**, Mahardja B, Hobbs J, Hung TC, Finger AJ (2018) Use of single nucleotide polymorphisms identifies backcrossing and species misidentifications among three San Francisco Estuary osmerids. *Conservation Genetics*, **19**, 701-712
- Prince DJ, O'Rourke SM, Thompson TQ, Ali OA, Arciniega M, Lyman HS, **Sağlam İK**, Hotaling TJ, Spidle AP, Miller MR (2017) The evolutionary basis of premature migration in Pacific salmon highlights the utility of genomics for informing conservation. *Science Advances*, **3**, e1603198.

- Sağlam İK**, Baumsteiger J, Miller MR (2017) Failure to appreciate differences in divergence times of species and their genes can result in severe over-estimation of mutation rates in recently diverged species. *Proceedings of the Royal Society B: Biological Sciences*, **284**, 20170021.
- Sağlam İK**, Prince DJ, Meek M, Ali O, Miller MR, Peacock M, Neville H, Mellison C, Somer W, May B and Finger AJ (2017) Genomic analysis reveals genetic distinctiveness of the Paiute cutthroat. *Transactions of the American Fisheries Society*, **146**, 1291-1302. (<http://dx.doi.org/10.1080/00028487.2017.1356373>).
- Sağlam İK**, Baumsteiger J, Smith MJ, Linares-Casenave J, Nicholas NL, O'Rourke SM, Miller MR (2016) Phylogenetics supports an ancient common origin of two scientific icons: Devils Hole and Devils Hole pupfish. *Molecular Ecology*, **25**, 3962-73.
- Hekimoğlu O, **Sağlam İK**, Özer N, Estrada-Peña A (2016) New molecular data shed light on the global phylogeny and species limits of the *Rhipicephalus sanguineus* complex. *Ticks and tick-borne diseases*, **7**, 798-807.
- Perktaş U, Gür H, **Sağlam İK**, Quintero E (2015) Climate-driven range shifts and demographic events over the history of Kruper's Nuthatch *Sitta krueperi*. *Bird Study*, **62**, 14–28.
- Sağlam İK**, Küçükyıldırım S, Çağlar SS (2014) Diversification of montane species via elevation shifts: The case of the Kaçkar cricket *Phonochorion* (Orthoptera). *Journal of Zoological Systematics and Evolutionary Research*, **52**, 177–189.
- Çağlar SS, Karacaoğlu Ç, Kuyucu AC, **Sağlam İK** (2014) Humidity and seasonality drives body size patterns in males of the bush cricket *Isophya rizeensis* Sevgili, 2003 (Orthoptera: Tettigoniidae: Phaneropterinae). *Insect Science*, **21**, 213–226.
- Şekercioğlu ÇH, Anderson S, Akçay E, Bilgin R, Can ÖE, Semiz G, Tavşanoğlu Ç, Yökeş MB, Soyumert A, İpekdal K, **Sağlam İK**, Yücel M, Dalfes, HN (2011) Turkey's globally important biodiversity in crisis. *Biological Conservation*, **144**, 2752–2769.
- Çağlar SS, **Sağlam İK**, Akiner, MM (2011) The influence of photoperiod on size and development of ovarioles in insecticide resistant and susceptible strains of the house fly *Musca domestica* L. (Diptera: Muscidae). *Turkish Journal of Zoology*, **35**, 325–331.

- Sevgili H, Çağlar SS, **Sağlam İK** (2010) Re-evaluation of the genus *Phonochorion* (Orthoptera: Tettigoniidae: Phaneropterinae). *European Journal of Entomology*, **107**, 631–645.
- Sağlam İK**, Roff DA., Fairbairn DJ (2008) Male sand crickets trade-off flight capability for reproductive potential. *Journal of Evolutionary Biology*, **21**, 997–1004.
- Sağlam İK**, Çağlar SS (2007) Local Population Size and Dynamics of the Color Polymorphic Bush Cricket, *Isophya rizeensis* Sevgili, 2003 (Orthoptera: Tettigoniidae) within the Firtina Valley. *Turkish Journal of Zoology*, **31**, 1–8.
- Sağlam İK**, Çağlar SS (2005) Distribution and habitat characteristics of the color polymorphic bush-cricket *Isophya rizeensis* Sevgili (Orthoptera: Tettigoniidae: Phaneropterinae) in Turkey. *Entomological News*, **116**, 309–324.
- Çağlar SS, **Sağlam İK** (2005) Effects of photoperiod on testis development of insecticide resistant and susceptible populations of the house fly, *Musca domestica* L. (Diptera: Muscidae). *Hacettepe Journal of Biology and Chemistry*, **34**, 45–50.

WORKSHOPS & TEACHING

- 2019 - : **MBGE 309 Genome Analysis and Bioinformatics**. Undergraduate course at Koç University, Spring Semester.
- 2019 - : **MBGE 301 Genetics I**. Undergraduate course at Koç University, Fall Semester.
- 2019 - : **MBGE 343 Fundamentals of Evolutionary Biology**. Undergraduate course at Koç University, Fall Semester.
- 2016 : **Quantitative Ecology and Evolution Workshop, Nesin Mathematics Village, 18 – 24 September, Şirince, Turkey. (Organizing Committee)**
- Lecture:** The site frequency spectrum for summarizing genome-wide variation and detecting selective and demographic change.
- Practical:** Demographic modeling and parameter estimation using the SFS.

2016 : Population and Adaptation Genomics Workshop, Hacettepe University Department of Biology, 5 – 7 September, Ankara, Turkey. (Organizing Committee)

Lecture: Introduction to next generation sequencing and data.

Practical: Unix environment and shell scripting. De-multiplexing, mapping and filtering.

2013 : Workshop on Mathematical Evolution, Nesin Mathematics Village, 9 – 15 September, Şirince, İzmir, Turkey.

Lecture: Coalescent models in molecular evolution and phylogeography

Practical: Phylogeographic estimates under full coalescent models.

SELECTED PRESENTATIONS

2017 : 4th Ecology and Evolutionary Biology Symposium, Turkey, 11– 13 July, Istanbul, Turkey.

Sağlam İK, Concatenation methods in phylogenomics can lead to severe overestimates of evolutionary parameters.

2017 : 42nd Western Division of the American Fisheries Society Meeting, 22– 25 May, Missoula, Montana, USA.

Finger AJ, Benjamin A, **Sağlam İK,** Using genomic data for conservation: range-wide demographic and genetic structure of longfin smelt.

2017 : One Health 9th Tick and Tick-borne Pathogen Conference & 1st Asia Pacific Rickettsia Conference, 27 August – 1 September, Cairns, Australia

Hekimoğlu O, **Sağlam İK,** Özer N, Estrada-Peña A, Molecular phylogeny and biogeographic history of the *Rhipicephalus sanguineus* complex

2016 : 12th International Congress of Orthopterology 30 October – 3 November, Ilheus, Bahia, Brazil

Sağlam İK, The importance of capturing unbiased species histories for testing phylogeographic hypothesis and the promise of next generation sequencing data.

2016 : XXV International Congress of Entomology, 25 – 30 September, Orlando, Florida, USA.

Sağlam İK, Miller MR, O'Rourke SM, Çağlar SS. Determining the role of selection and drift in reproductive character displacement causing rapid diversification of montane crickets.

2016 : 41st Western Division of the American Fisheries Society Meeting, 21– 24 March, Reno, Nevada, USA.

Baumsteiger J, Smith MJ, Linares-Casenave J, Nicholas NL, O'Rourke SM, Miller MR, **Sağlam İK**. Phylogenetics supports an ancient common origin of two scientific icons: Devils Hole and Devils Hole pupfish

2016 : 35th International Society for Animal Genetics Conference, 23 – 27 July Salt Lake City, Utah, US.

Perez-Pardal L, **Sağlam İK**, Costa V, Chen S, MillerMR, Beja-Pereira A. Comparison of high-density SNP chip versus Rad sequencing in cattle and related species.

2016 : Coastwide Salmonid Genetics Meeting, 7 – 9 June Astoria, Oregon, US.

Prince DJ, O'Rourke SM, Thompson TQ, Ali OA, Lyman HS, **Sağlam İK**, Michael R. Miller. The evolutionary basis of premature migration in Pacific salmon highlights the utility of genomics in conservation.

2015 : 13th Congress on the Zoogeography and Ecology of Greece and Adjacent Regions, 7 – 11 October, Crete, Greece.

Sağlam İK, Miller MR, O'Rourke SM, Çağlar SS. Phylogenomics and the Comparative Method Reveals Evidence of Strong Selection in Reproductive Character Displacement

2015 : Annual meeting of the Society for Molecular Biology and Evolution, 12 – 16 July, Vienna, Austria.

Castilho RA, **Sağlam İK**, Miller MR, Beja-pereira A. Next-generation RAD sequencing: a tool for evaluation the phylogeographic patterns of *Amanita ponderosa* (MalenHon & R. Heim) in Iberian Peninsula.

- 2015 : 2nd Ecology and Evolutionary Biology Symposium, Turkey, 6 – 7 August, Ankara, Turkey.**
- Sağlam İK, Baumsteiger J, Smith MJ, Linares-Casenave J, Nicholas NL, O'Rourke SM, Miller MR. Phylogenetics supports an ancient common origin of two scientific icons: Devils Hole and Devils Hole pupfish.
- 2013 : 6th International Conference of Biogeography, 9 – 13 January, Miami, USA.**
- Sağlam İK, Küçükyıldırım S, Mergen H and Çağlar SS. Do elevation shifts promote diversification of montane species within Anatolian mountains: The case of the Caucasus endemic bush-cricket *Phonochorion*.
- 2012 : 12th International Congress on the Zoogeography and Ecology of Southeastern Greece and Adjacent Regions, 18 – 22 June, Athens, Greece.**
- Sağlam İK, Küçükyıldırım S, Mergen H, Ünal H and Çağlar SS. Testing diversification processes within Anatolia via statistical phylogeography.
- Kuyucu AC, Çağlar SS, Karacaoğlu Ç and Sağlam İK. Can humidity and seasonality explain body size variation in males of the color polymorphic bush cricket *Isophya rizeensis*? An information theoretic approach.
- 2009 : 10th International Congress of Orthopteroology, 21 – 25 June, Antalya, Turkey.**
- Sevgili H, Sağlam SS and Sağlam İK. Bioacoustics, Systematics and Distribution of the Phonochorion Genus (Orthoptera: Tettigoniidae: Phaneropterinae).
- 2009 : Darwin Anniversary Symposium, 22-25 April, İstanbul, Turkey.**
- Sağlam İK. Speciation and Phylogeography of the Genus *Phonochorion*, Uvarov 1916 (Orthoptera: Tettigoniidae).
- 2008 : 20th International Congress of Genetics, 12 – 17 July, Berlin, Germany.**
- Önder BŞ, Erisoz Kasap Ö, Emecen Özsoy G and Sağlam İK. Phenotypic variation of wing morphology between parental and interspecific hybrids of *Drosophila simulans* and *Drosophila melanogaster* from different populations within Turkey.
- 2007 : CEHA, 56th Annual Educational Symposium. 23 – 27 April, Sacramento, California, USA.**

Çağlar SS and **Sağlam İK**. Integrated Management Programs for Vector and Nuisance Species: New Directions in Turkey.

2005 : 10th European Ecology Congress, 8 – 13 November, Kuşadası, Turkey.

Sağlam İK, Distribution of the color polymorphic bush cricket *Isophya rizeensis* Sevgili, 2003 (Orthoptera: Tettigoniidae: Phaneropterinae) within the Firtına Valley.

2001 : 3rd International SOVE Congress, 16 – 21 September, Barcelona, Spain.

The effect of Photoperiod on Testis Development of Sensitive and Resistant Populations of the House fly *Musca domestica* L. (Diptera: Muscidae)