

Curriculum Vitae

Enis Hidisoglu, PhD

PERSONAL

Date of Birth : 6 July 1990
Place of Birth : Erzurum, TURKEY
Nationality : Turkish
Languages : Turkish, English and Italian
Marital Status : Single
Present Position : Research Fellow



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EDUCATION

04/02/2015 – 21/01/2021 : **Doctorate degree**, *Department of Biophysics, Institute of Health Sciences, Akdeniz University, Turkey*
17/09/2012 – 27/01/2015 : **Master's degree**, *Department of Biophysics, Institute of Health Sciences, Akdeniz University, Turkey*
24/09/2007 – 08/06/2012 : **Bachelor's degree**, *Physics Teacher, Ahmet Kelesoglu Faculty of Education, Necmettin Erbakan University, Turkey*

POSITIONS

01/12/2021 - : **Research Fellow**, *Department of Drug Science and Technology, Turin University, Italy*
15/06/2013 – 21/01/2021 : **Research Assistant**, *Department of Biophysics, Faculty of Medicine, Institute of Health Sciences, Akdeniz University, Turkey*
18/02/2013 – 15/06/2013 : **Research Assistant**, *Department of Biophysics, Faculty of Medicine, Sakarya University, Turkey*

FELLOWSHIPS

- 01/03/2015 – 21/01/2021 : *2228-B National Scholarship Programme for Master Students, TUBITAK, BİDEB, Turkey*
- 12/01/2019 – 12/04/2019 : *Short-term Fellowship (3 months) awarded by the European Molecular Biology Organization (EMBO)*

CERTIFICATES

- 23/03/2013 : *Experimental Animal Usage Certificate (Category B, 23.03.2013)*

TEACHING EXPERIENCE

As a research assistant at the Department of Biophysics in the Akdeniz University, I progressively acquired expertise in teaching activities at different levels (Practical Courses for Phase I and II at the Medical School). I actively took part in all practical lectures mentioned below on behalf of the Professors in the Department of Biophysics.

- Biophysics Practical Lectures, Phase 1, Medical School, Akdeniz University. Between 2013 – 2021, 60 hours per year.
 - 1- Measurement Instruments;
 - 2- Electric Field and Principles of Electrophoresis;
 - 3- OHM's Law, The Cell Membrane as a Resistor;
 - 4- Characteristics of Capacitor, The Cell Membrane as an Electrical Capacitor;
 - 5- Models of Passive Membrane and Cable Theory
- Biophysics Practical Lectures, Phase 2, Medical School, Akdeniz University. Between 2013 – 2021, 72 hours per year.
 - 1- Principles of Electrocardiogram, Heart Dipole and Einthoven's Triangle;
 - 2- Basic Concepts of Circulation Dynamics;
 - 3- Electroencephalography (EEG) Measurement and Analysis;
 - 4- Basic Concepts of Central Nervous System;
 - 5- Auditory Biophysics and Simulation;
 - 6- Biophysics of Vision

THESIS

Ph.D. Thesis	“Effects of synaptic dysfunction induced by amyloid beta peptide on cognitive functions and evaluation via brain oscillations” (2021, this thesis was supported by a grant from Akdeniz University Research Foundation, Turkey (Grant no.: TDK-2018-3170)
M.Sc. Thesis	“The Effects of Electromagnetic Radiations Emitted from 3G Mobile Phones on Visual Evoked Potentials” (2015, this thesis was supported by a grant from Akdeniz University Research Foundation, Turkey (Grant no.: 2014.02.0122.001).

AWARDS

- 1- **Hidisoglu E.**, Kantar Gök D., Özdemir S., Yargıçoğlu Akkiraz P., "Effects of Synaptic Dysfunctions induced by Amyloid Beta 42 on Cognitive Functions and Evaluation via Brain Oscillations", 31. National Congress of Biophysics, Adana, TURKEY, 9-12 October 2019, pp.1-1, **Best Poster Presentation Awards (Second Place)**

FINANCED PROJECTS

- 1- Electrophysiological investigation of the effect and the mechanism of low frequency electric fields on stress response,

Funded by a grant from Akdeniz University Research Foundation, Turkey, Grant no.: TSA-2018-3651, **Collaborator**, 2018-10 to 2021-5.

Total funding amount: EUR 11.700

- 2- The effects of amyloid beta peptide-induced synaptic dysfunction on cognitive function, and evaluation via brain oscillations.

Funded by a grant from Akdeniz University Research Foundation, Turkey, Grant no.: TSA-2018-3170, Ph.D. Thesis, **Collaborator**, 2018-2 to 2021-2.

Total funding amount: EUR 7.500

- 3- The modulatory effects of high-frequency electromagnetic radiation application and transcranial alternative current stimulation on brain oscillations.

Funded by a grant from Akdeniz University Research Foundation, Turkey, Grant no.: TSA-2017-2007, **Collaborator**, 2017-2 to 2020-4.

Total funding amount: EUR 14.700

- 4- The detection of synaptic dysfunction observed in early stage of AD via brain oscillations.

Funded by the Scientific and Technological Research Council of Turkey (TUBITAK), Grant no.: SBAG 118S225, **Principal Investigator**, 2018-2 to 2020-4.

Total funding amount: EUR 6.500

- 5- Prilocaine toxicity and protective activity of thymoquinone in methemoglobinemia.

Funded by a grant from Akdeniz University Research Foundation, Turkey, Grant no.: TTU-2017-2551, **Collaborator**, 2017-3 to 2018-11.

Total funding amount: EUR 7.150

- 6- Effects of amyloid beta which has an important role in Alzheimer's Disease on cognitive functions: Brain oscillations as biomarkers.

Funded by the Scientific and Technological Research Council of Turkey (TUBITAK), Grant no.: SBAG 315S054, **Principal Investigator**, 2017-02 to 2018-02.

Total funding amount: EUR 7.550

- 7- The effects of electromagnetic radiations emitted from 3G mobile phones on endoplasmic reticulum stress pathway on testicular interstitial and seminiferous tubule cells.

Funded by a grant from Akdeniz University Research Foundation, Turkey, Grant no.: TSA-2015-790, **Collaborator**, 2016-12 to 2017-12.

Total funding amount: EUR 16.500

- 8- The effects of electromagnetic radiations emitted from 3G mobile phones on visual evoked potentials.

Funded by a grant from Akdeniz University Research Foundation, Turkey, Grant no.: 2014.02.0122.001, **Collaborator**, 2013-12 to 2015-12.

Total funding amount: EUR 8.500

PUBLICATIONS

- 1- Hidisoglu E, Chiantia G, Franchino C, Tomagra G, Giustetto M, Carbone E, et al. The RyR-calstabin interaction stabilizer S107 protects hippocampal neurons from GABAergic synaptic alterations induced by Abeta42 oligomers. J Physiol [Internet]. 2022 Oct 25 [cited 2022 Nov 3]; Available from: <https://onlinelibrary.wiley.com/doi/10.1113/JP283537>
- 2- Marcantoni A, Chiantia G, Tomagra G, Hidisoglu E, Franchino C, Carabelli V, et al. Two firing modes and well-resolved Na⁺, K⁺, and Ca²⁺ currents at the cell-microelectrode junction of spontaneously active rat chromaffin cell on MEAs. Pflugers Arch. 2022
- 3- Hamidova A, İsenlik BS, Hidisoglu E, Dirican EK, Olgan Ş, Kumru S. Investigation of the effects of trophectoderm morphology on obstetric outcomes in fifth day blastocyst transfer in patients undergoing in-vitro-fertilization. J Turk Ger Gynecol Assoc [Internet]. 2022 Jul 5 [cited 2022 Nov 3];23(3):167–76. Available from: <https://europepmc.org/articles/PMC9450918>
- 4- Hidisoglu E, Kantar D, Ozdemir S, Yargicoglu P. Cognitive dysfunctions and spontaneous EEG alterations induced by hippocampal amyloid pathology in rats. Adv Med Sci. 2022 Sep 1;67(2):328–37.
- 5- Akgul, B., Ayca, IO., **Hidisoglu, E.**, Afsar, E., Yıldırım, S., Tanrıover, G., Coskunfirat, N., Sanli, S., & Aslan, M., “Prilocaine induced epileptiform activity and cardiac toxicity is alleviated by thymoquinone treatment”, DARU JOURNAL OF PHARMACEUTICAL SCIENCES, Vol. 29(1), pp. 85-99, 2021.

- 6- Marcantoni, A., Calorio, C., **Hidisoglu, E.**, Chiantia, G., Carbone E., "Cav1.2 channelopathies causing autism: new hallmarks on Timothy syndrome", PFLUGERS ARCHIV-EUROPEAN JOURNAL OF PHYSIOLOGY, Vol.4727, pp.775-789, 2020.
- 7- **Hidisoglu E.** and Yargicoglu P., "Auditory evoked potentials might have the potential to serve as early indicators related to amyloid beta peptide toxicity", ADVANCES IN MEDICAL SCIENCES, Vol.65-1, pp.223-232, 2020.
- 8- **Hidisoglu E.**, Kantar D., Ozen S., Yargicoglu P., "Short-term 2.1 GHz radiofrequency radiation treatment induces significant changes on the auditory evoked potentials in adult rats." INTERNATIONAL JOURNAL OF RADIATION BIOLOGY, Vol.94-9, pp.858-871, 2018.
- 9- Kantar Gok D., **Hidisoglu E.**, Ocak G.A., Er H., Acun A.D., Yargicoglu P., "Protective role of rosmarinic acid on amyloid beta 42-induced ecoic memory decline: Implication of oxidative stress and cholinergic impairment", NEUROCHEMISTRY INTERNATIONAL, Vol.118, pp.1-13, 2018.
- 10- **Hidisoglu E.**, Kantar Gok D., Er H., Acun A., Yargicoglu P., "Alterations in spontaneous delta- and gamma-activity might provide clues to detect changes induced by amyloid- β administration.", EUROPEAN JOURNAL OF NEUROSCIENCE, Vol.47, Issue:8, pp. 1013-1023, 2018
- 11- Kantar Gok D., **Hidisoglu E.**, Er H., Acun A., Yargicoglu P., "Decrease of Auditory Evoked Delta, Alpha and Beta Oscillatory Responses in d-galactose Induced Aging Model: Effects of Rosmarinic Acid.", INTERNATIONAL JOURNAL OF GERONTOLOGY, Vol.12(3), pp. 255-60, 2018
- 12- Kantar Gok D., **Hidisoglu E.**, Er H., Acun A., Olgar Y., Yargicoglu P., "Changes of auditory event-related potentials in ovariectomized rats injected with D-galactose: Protective role of rosmarinic acid.", NEUROTOXICOLOGY, Vol.-, 2017
- 13- Akpınar D., Kantar Gok D., **Hidisoglu E.**, Aslan M., Ozen S., Agar A., et al., "Effects of pre- and postnatal exposure to extremely low-frequency electric fields on mismatch negativity component of the auditory event-related potentials: Relation to oxidative stress.", ELECTROMAGNETIC BIOLOGY AND MEDICINE, Vol. 35, Issue: 3, pp.245-259, 2016
- 14- **Hidisoglu E.**, Kantar Gok D., Er H., Akpınar D., Uysal F., Akkoyunlu G., et al., "2100-MHz electromagnetic fields have different effects on visual evoked potentials and oxidant/antioxidant status depending on exposure duration", BRAIN RESEARCH, Vol.1365, pp.1-11, 2016
- 15- Kantar Gok D., Akpınar D., **Hidisoglu E.**, Ozen S., Agar A., Yargicoglu P., "The developmental effects of extremely low frequency electric fields on visual and somatosensory evoked potentials in adult rats.", ELECTROMAGNETIC BIOLOGY AND MEDICINE, Vol.35, pp.65-74, 2016
- 16- Olgar Y., **Hidisoglu E.**, Celen M.C., Yamasan B.E., Yargicoglu P., Ozdemir S., "2.1 GHz electromagnetic field does not change contractility and intracellular Ca²⁺

transients but decreases beta-adrenergic responsiveness through nitric oxide signaling in rat ventricular myocytes", INTERNATIONAL JOURNAL OF RADIATION BIOLOGY, Vol.91, pp.851-857,2015

CONGRESS AND SYMPOSIUM PRESENTATIONS

Oral Communications

- 1- Hidisoglu E., “Hipokampal amiloid patoloji indüklü frontal EEG değişimleri.” 32. National Congress of Biophysics, 17-19 November 2021, Istanbul, Turkey, pp.28-29, **Oral Presentation.**
- 2- **Hidisoglu E.**, Ozdemir S., & Yargicoglu P., “Effects of synaptic dysfunction induced by amyloid-beta 42 on cognitive functions and evaluation via brain oscillations”, Alzheimer’s Association International Conference Neuroscience Next (AAIC-NN) 2020, Virtual Event, 9th to 10th November, 2020, **Video-Oral Presentation.**
- 3- Sendegül Yıldırım, Gamze Tanrıöver, Barış Akgül, İlker Öngüç Aycan, **Enis Hidişoğlu**, Ebru Afsar, Mutay Aslan, “Prilocaine induced epileptiform activity and cardiac toxicity is alleviated by thymoquinone treatment” 17th Turkish Neuroscience Congress, Trabzon, TURKEY, 4-7 April 2019, **Oral Presentation.**
- 4- **Hidisoglu E.**, Kantar Gok D., Acun A.D., Er H., Yargicoglu P., "Dose dependent effects of amyloid beta 1-42 on auditory evoked potentials.", 3rd Annual International Conference on Public Health, 19-22 June 2017, Athens, Greece, pp.32-33, **Oral Presentation.**
- 5- **Hidisoglu E.**, Kantar Gok D., Yargicoglu P., “Effects of amyloid beta which has an important role in Alzheimer's Disease on brain oscillations.” 28-29. National Congress of Biophysics, 6-9 September 2017, Istanbul, Turkey, pp.28-29, **Oral Presentation.**

Poster Presentations

- 1- **Hidisoglu E.**, Chiantia G., Franchino C., Marcantoni A., Carbone E., “Early Alterations of Hippocampal GABAergic Synaptic Properties Induced by Abeta42 Oligomers”, Alzheimer’s Association International Conference (AAIC) 2020, Virtual Conference, 27th to 31th July, 2020, **e-Poster Presentation.**
- 2- C. Calorio, **E. Hidisoglu**, D. Gavello, G. Chiantia, C. Salio, M, Sassoe-Pognetto, P. Defilippi, F. Balzac, E. Turco, G. C. L. Bett, R. L. Rasmusson, A. Marcantoni, E. Carbone, “Altered L-type channel gating, neuronal firing and excitatory/inhibitory synaptic responses in hippocampal neurons of the autistic Timothy syndrome type-2 mouse”, XX. Telethon Scientific Convention, Riva Del Garda, Italy, 28-30-10.2019, ss.1-1, **Poster Presentation**
- 3- M. Aslan, B. Akgul, I.O. Aycan, **E. Hidisoglu**, E. Afsar, S. Yildirim, G. Tanriover, “Prilocaine induced epileptiform activity and cardiac toxicity is alleviated by thymoquinone treatment”, 44th FEBS Congress, Krakow, Poland, 6th to 11th July 2019, FEBS Open Bio 9(Suppl. 1):110-110, doi:10.1002/2211-5463.12675, **Poster Presentation.**

- 4- **Hidisoglu E.**, Franchino C., Carbone E., Marcantoni A., "Early alterations of hippocampal GABAergic synaptic properties induced by Abeta42 oligomers ", National Congress of Biophysics, Adana, TURKEY, 9-12 October 2019, pp.1-1, **Poster Presentation.**
- 5- **Hidisoglu E.**, Kantar Gok D., Özdemir S., Yargıçoğlu Akkiraz P., "Effects of Synaptic Dysfunctions induced by Amyloid Beta 42 on Cognitive Functions and Evaluation via Brain Oscillations", 31. National Congress of Biophysics, Adana, TURKEY, 9-12 October 2019, pp.1-1, **Poster Presentation.**
- 6- Yargicoglu P., Kantar D., **Hidisoglu E.**, Er H., Acun A.D., "Protective role of rosmarinic acid in ovariectomized rats injected with d galactose" 14th Asia-Pacific Federation for Clinical Biochemistry and Laboratory Medicine Congress, 26-29 November 2016, Taipei, Taiwan ss.180-180, **Poster Presentation.**
- 7- Er H., Kantar Gok D., **Hidisoglu E.**, Yargicoglu P., "Emerging Biochemical and Histological Changes in Brain in Experimental Model of Alzheimer Disease." 27. National Congress of Biophysics, 29 September-3 October 2015, Malatya, Turkey, pp. 218-218, **Poster Presentation.**
- 8- Kantar Gok D., Er H., **Hidisoglu E.**, Yargicoglu P., "Mismatch Negativity and Lipid Peroxidation Alterations in Ovariectomized D-Galactose Injected Rats" 27. National Congress of Biophysics, 29 September-3 October 2015, Malatya, Turkey, pp. 216-216, **Poster Presentation.**
- 9- Okan A., Kırımlıoğlu Konuk E., **Hidisoglu E.**, Yargicoglu Akkiraz P., Demir N., "The effects of electromagnetic radiations emitted from 3G mobile phones on endoplasmic reticulum stress pathway on testicular interstitial and seminiferous tubule cells ", 22nd Electron Microscopy Congress (EMC2015), Istanbul, Turkey, 2-4 September 2015, pp.82-82, **Poster Presentation.**
- 10- **Hidisoglu E.**, Olgar Y., Celen M.C., Yamasan B.E., Yargicoglu P., Ozdemir S., "Effects of 2.1 GHz Electromagnetic Radiation on Rat Cardiac Functions ", 3rd Symposium on electromagnetic fields and effects, Mersin, Turkey, 13-15 November 2015, **Poster Presentation.**
- 11- Yargicoglu P., **Hidisoglu E.**, Kantar Gok D., Akpınar D., Ozen S., "The effect of chronic application of 2100 MHz electromagnetic radiation on visual evoked potentials." 3rd Symposium on electromagnetic fields and effects, Mersin, Turkey, 13-15 November 2015, **Poster Presentation.**
- 12- Yamasan B.E., Olgar Y., **Hidisoglu E.**, Ozdemir S., Celen M.C., Yargicoglu P., "Effects of the long-term exposure to 2.1 GHz electromagnetic fields on contractility and intracellular Ca²⁺ homeostasis in rat ventricular myocytes", 33rd Annual Meeting of the European Section of the ISHR, Bordeaux, France, 1-4 July 2015, vol.86, pp.49-49, **Poster Presentation.**
- 13- **Hidisoglu E.**, Yargicoglu P., Kantar Gok D., Akpınar D., Ozen S., "The effects of very low frequency electric fields on somatosensory evoked potentials." 25. National Congress of Biophysics, 23-27 September 2015, Trabzon, Turkey, pp. 216-216, **Poster Presentation.**

CONFERENCES

- 1- Alzheimer's Association International Conference Neuroscience Next, AAIC-NN 2020, Virtual, November 2020
- 2- Alzheimer's Association International Conference, AAIC2020, Virtual, July 2020
- 3- 31. National Congress of Biophysics, Adana, Turkey, October 2019
- 4- 3rd Annual International Conference on Public Health, Athens, Greece, June 2017
- 5- 28-29. National Congress of Biophysics, Istanbul, Turkey, September 2017
- 6- 3rd Symposium on Electromagnetic Fields and Effects, Mersin, Turkey, November 2015
- 7- 25. National Congress of Biophysics, Trabzon, Turkey, September 2015

EDITORIAL ROLES

- 1- **Review Editor** for Cellular Neurophysiology, *Frontiers in Cellular Neuroscience*, (*Web of Science* Core Collection: Science Citation Index Expanded), May 2021-Ongoing.

MEMBERSHIPS

- 1- Turkish Biophysics Association
- 2- EBSA – European Biophysical Societies' Association
- 3- Turkish Biochemical Society
- 4- IFCC – The International Federation of Clinical Chemistry and Laboratory Medicine

Enis Hidisoglu, Ph.D.

Born in Erzurum/Turkey in 1990, Enis Hidisoglu graduated as Physics Teacher at Ahmet Kelesoglu Faculty of Education, Necmettin Erbakan University in 2012. Later, EH obtained a research assistant position at the Akdeniz University, Department of Biophysics, and progressively acquired expertise in teaching activities at different levels (Practical Courses for Phase I and II at the Medical School) and actively took part in all practical lectures during 8 years. In 2015, EH obtained his MSc degree in Biophysics under the supervision of Prof. Piraye Yargicoglu (Institute of Health Science, Akdeniz University), with a thesis on the effects of high-frequency electromagnetic fields on brain activity. After obtaining the MSc degree and having solid experience in electrophysiology, EH decided to work on the early diagnosis of specific pathology induced by intrahippocampal and/or intraventricular injection of amyloid-beta oligomer observed in Alzheimer's disease by means of EEG. At the same department, EH obtained a Ph.D. degree, carrying out a thesis on the effects of synaptic dysfunction induced by amyloid beta-peptide on cognitive functions and evaluation via brain oscillations. During his doctorate, EH managed a project on the early alterations of hippocampal GABAergic synaptic properties induced by Abeta42 oligomers (funded by EMBO short-term fellowship grant) as a visiting researcher in 2019 (for 3 months) under the supervision of Prof. Andrea Marcantoni at Turin University in Italy. Until 2021, EH worked as a Principal Investigator (PI) in two projects funded by the Scientific and Technological Research Council of Turkey (TUBITAK) and one project funded by the European Molecular Biology Organization (EMBO). In addition, EH took part as a collaborator in 7 scientific research projects funded by Akdeniz University Research Foundation. Since May 2021, EH has taken an active role as a Review Editor for Cellular Neurophysiology, Frontiers in Cellular Neuroscience. EH is the author of 12 full papers on international journals (6 first-author and 2 corresponding author) with h-index 7 and 130 citations (taken from Google Scholar). EH has participated in several national and international congresses as a presenter and invited speaker. Since December 2021, EH has obtained a research fellow position at the Department of Drug Science and Technology, Turin University, where he works with a research group with solid experience in the physiology and biophysics of neuronal excitability and synaptic activity of central neurons. Nowadays, his research topics mainly involve in vivo and in vitro electrophysiologic studies focusing on the role of neuronal ion channels in governing excitable and synaptic functions in neurodegenerative diseases, specifically Alzheimer's disease.

Memberships

- 1- Turkish Biophysics Association
- 2- EBSA – European Biophysical Societies Association
- 3- Turkish Biochemical Society
- 4- IFCC – The International Federation of Clinical Chemistry and Laboratory Medicine