

Christos G. Gkogkas, PhD

Research Director FORTH-BRI Biomedical Research Institute, Ioannina, Greece

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Google Scholar: https://scholar.google.com/citations?user=5_AGZBAAAAAJ&hl=en

Positions-Training

2023-	Researcher A' (Research Director), FORTH-BRI, Greece Foundation of Research and Technology (FORTH), Biomedical Research Institute (BRI) , Ioannina, Greece
2019-2023	Researcher B' (Principal Investigator), FORTH-BRI, Greece Foundation of Research and Technology (FORTH), Biomedical Research Institute (BRI) , Ioannina, Greece
2013-2019 (6 years)	Chancellor's Fellow, University of Edinburgh, UK Edinburgh Medical School, Centre for Discovery Brain Sciences and The Patrick Wild Centre for Research into Autism, Fragile X Syndrome and Intellectual Disability, Edinburgh, UK
2009-2013 (4 years)	Postdoctoral Fellow in Biochemistry, McGill University, Canada Biochemistry Department and Goodman Cancer Centre, McGill University Montréal, QC, Canada. Laboratory of Prof. Nahum Sonenberg
2006 (2months)	Pre-doctoral training in Molecular Neuroscience, CSHL, USA Advanced Techniques in Molecular Neuroscience, Cold Spring Harbor Laboratory, USA

Education

2009 (4 years)	PhD in Molecular Neuroscience Medical School, University of Edinburgh, UK "Mechanisms of Cell Pathology in an Inherited Form of Motor Neuron Disease" Supervisor Dr. Paul Skehel
2005 (1 year)	MSc by Research in Neuroinformatics, School of Informatics, University of Edinburgh, UK
2004 (4 years)	BSc in Biology Biology Department, National and Kapodistrian University of Athens, Greece Diploma Thesis: Visualization of gene-product functional and structural features in genomic datasets

Awards, Honors and Fellowships

2023	<i>NEURON Ambassador for Greece (Network of European funding for Neuroscience research)</i>
2021-	<i>eLife Community Ambassador (1 of 128 worldwide)</i> https://elifesciences.org/inside-elifesciences/f744fae0/elifesciences-community-ambassadors-welcoming-128-researchers-to-the-programme
2017-2019	<i>NARSAD Young Investigator, Brain and Behavior Research Foundation, USA</i>
2017-2020	<i>Founding Member (1 of 15) of the Simons Initiative for the Developing Brain (SIDB.org) – 20M £GBP</i>
2015-2020	<i>Sir Henry Dale Young Investigator Fellowship, Wellcome Trust and Royal Society, UK</i>
2013-2018	<i>Chancellor's Fellowship, University of Edinburgh, UK</i>
2013	<i>Marilyn Wener Award of Excellence, McGill University, Faculty of Medicine</i>
2013	<i>Medstar Award (Excellence in Research), McGill University, Faculty of Medicine</i>

2010-2011	Conrad F. Harrington Postdoctoral Fellowship, McGill University, Faculty of Medicine
2008	Best Poster Prize, by Organon, UK, Edinburgh Neuroscience Day "Motor Neuron Disease and the Endoplasmic Reticulum"
2006	Cold Spring Harbor Laboratory Award, USA, Advanced Techniques in Molecular Neuroscience
2005-2008	Principal's PhD Scholarship, University of Edinburgh, UK
2004-2005	Principal's Awards for MSc in Neuroinformatics, University of Edinburgh, UK
2004-2005	MRC/EPSRC MSc in Neuroinformatics Fellowship, UK

Publications

Google Scholar: **h-index=30; 4233 citations; 54 peer-reviewed**

Full list:

<https://pubmed.ncbi.nlm.nih.gov/?term=gkogkas+c&sort=pubdate>

https://scholar.google.com/citations?user=5_AGZBAAAAAJ&hl=en

<https://loop.frontiersin.org/people/1246999/overview>

Key Publications

- Chalkiadaki, K., Statoulla, E., Zafeiri, M., Voudouri, G., Amvrosiadis, T., Typou, A., Theodoridou, N., Moschovas, D., Avgeropoulos, A., Samiotaki, M., Mason, J. O. & Gkogkas, C. G. GABA/Glutamate Neuron Differentiation Imbalance and Increased AKT/mTOR Signaling in CNTNAP2(-/-) Cerebral Organoids. *Biol Psychiatry Glob Open Sci* **5**, 100413 (2025). <https://doi.org/10.1016/j.bpsgos.2024.100413>
- Liu, D., Nanclares, C., Simbriger, K., Fang, K., Lorsung, E., Le, N., Amorim, I. S., Chalkiadaki, K., Pathak, S. S., Li, J., Gewirtz, J. C., Jin, V. X., Kofuji, P., Araque, A., Orr, H. T., Gkogkas, C. G. & Cao, R. Autistic-like behavior and cerebellar dysfunction in Bmal1 mutant mice ameliorated by mTORC1 inhibition. *Mol Psychiatry* **28**, 3727-3738 (2023). <https://doi.org/10.1038/s41380-022-01499-6>
- Hooshmandi, M., Sharma, V., Thorn Perez, C., Sood, R., Krimbacher, K., Wong, C., Lister, K. C., Urena Guzman, A., Bartley, T. D., Rocha, C., Maussion, G., Nadler, E., Roque, P. M., Gantois, I., Popic, J., Levesque, M., Kaufman, R. J., Avoli, M., Sanz, E., Nader, K., Hagerman, R. J., Durcan, T. M., Costa-Mattoli, M., Prager-Khoutorsky, M., Lacaille, J. C., Martinez-Cerdeno, V., Gibson, J. R., Huber, K. M., Sonenberg, N., Gkogkas, C. G. & Khoutorsky, A. Excitatory neuron-specific suppression of the integrated stress response contributes to autism-related phenotypes in fragile X syndrome. *Neuron* **111**, 3028-3040 e3026 (2023). <https://doi.org/10.1016/j.neuron.2023.06.017>
- Chalkiadaki, K., Statoulla, E., Zafeiri, M., Haji, N., Lacaille, J. C., Powell, C. M., Jafarnejad, S. M., Khoutorsky, A. & Gkogkas, C. G. Reversal of memory and autism-related phenotypes in Tsc2(+/-) mice via inhibition of INgn1. *Front Cell Dev Biol* **11**, 1205112 (2023). <https://doi.org/10.3389/fcell.2023.1205112>
- Chalkiadaki, K., Hooshmandi, M., Lach, G., Statoulla, E., Simbriger, K., Amorim, I. S., Kouloulia, S., Zafeiri, M., Pothos, P., Bonnell, E., Gantois, I., Popic, J., Kim, S. H., Wong, C., Cao, R., Komiyama, N. H., Atlasi, Y., Jafarnejad, S. M., Khoutorsky, A. & Gkogkas, C. G. Mnk1/2 kinases regulate memory and autism-related behaviours via Syngap1. *Brain* **146**, 2175-2190 (2023). <https://doi.org/10.1093/brain/awac398>
- Simbriger, K., Amorim, I. S., Lach, G., Chalkiadaki, K., Kouloulia, S., Jafarnejad, S. M., Khoutorsky, A. & Gkogkas, C. G. Uncovering memory-related gene expression in contextual fear conditioning using ribosome profiling. *Prog Neurobiol* **197**, 101903 (2021). <https://doi.org/10.1016/j.pneurobio.2020.101903>
- Hooshmandi, M., Truong, V. T., Fields, E., Thomas, R. E., Wong, C., Sharma, V., Gantois, I., Soriano Roque, P., Chalkiadaki, K., Wu, N., Chakraborty, A., Tahmasebi, S., Prager-Khoutorsky, M., Sonenberg, N., Suvrathan, A., Watt, A. J., Gkogkas, C. G. & Khoutorsky, A. 4E-BP2-dependent translation in cerebellar Purkinje cells controls spatial memory but not autism-like behaviors. *Cell Rep* **35**, 109036 (2021). <https://doi.org/10.1016/j.celrep.2021.109036>
- Simbriger, K., Amorim, I. S., Chalkiadaki, K., Lach, G., Jafarnejad, S. M., Khoutorsky, A. & Gkogkas, C. G. Monitoring translation in synaptic fractions using a ribosome profiling strategy. *J Neurosci Methods* **329**, 108456 (2020). <https://doi.org/10.1016/j.jneumeth.2019.108456>
- Kouloulia, S., Hallin, E. I., Simbriger, K., Amorim, I. S., Lach, G., Amvrosiadis, T., Chalkiadaki, K., Kampaite, A., Truong, V. T., Hooshmandi, M., Jafarnejad, S. M., Skehel, P., Kursula, P., Khoutorsky, A. & Gkogkas, C. G. Raptor-Mediated Proteasomal Degradation of Deamidated 4E-BP2 Regulates Postnatal Neuronal Translation and NF-kappaB Activity. *Cell Rep* **29**, 3620-3635 e3627 (2019). <https://doi.org/10.1016/j.celrep.2019.11.023>
- Amorim, I. S., Kedia, S., Kouloulia, S., Simbriger, K., Gantois, I., Jafarnejad, S. M., Li, Y., Kampaite, A., Pooters, T., Romano, N. & Gkogkas, C. G. Loss of eIF4E Phosphorylation Engenders Depression-like Behaviors via Selective mRNA Translation. *J Neurosci* **38**, 2118-2133 (2018). <https://doi.org/10.1523/JNEUROSCI.2673-17.2018>

- 11 Tuttle, A. H., Tansley, S., Dossett, K., Tohyama, S., Khoutorsky, A., Maldonado-Bouchard, S., Stein, L., Gerstein, L., Crawhall-Duk, H., Pearl, R., Sukosd, M., Leger, P., Hardt, O. M., Yachnin, D., Austin, J. S., Chan, C. M., Pooters, T., Groves, I., Martin, L. J., Sonenberg, N., Gkogkas, C. G. & Mogil, J. S. Social propinquity in rodents as measured by tube cooccupancy differs between inbred and outbred genotypes. *Proc Natl Acad Sci U S A* **114**, 5515-5520 (2017). <https://doi.org/10.1073/pnas.1703477114>
- 12 Gantois, I., Khoutorsky, A., Popic, J., Aguilar-Valles, A., Freemantle, E., Cao, R., Sharma, V., Pooters, T., Nagpal, A., Skalecka, A., Truong, V. T., Wiebe, S., Groves, I. A., Jafarnejad, S. M., Chapat, C., McCullagh, E. A., Gamache, K., Nader, K., Lacaille, J. C., Gkogkas, C. G. & Sonenberg, N. Metformin ameliorates core deficits in a mouse model of fragile X syndrome. *Nat Med* **23**, 674-677 (2017). <https://doi.org/10.1038/nm.4335>
- 13 Gkogkas, C. G., Khoutorsky, A., Cao, R., Jafarnejad, S. M., Prager-Khoutorsky, M., Giannakas, N., Kaminari, A., Fragkouli, A., Nader, K., Price, T. J., Konicek, B. W., Graff, J. R., Tzinia, A. K., Lacaille, J. C. & Sonenberg, N. Pharmacogenetic inhibition of eIF4E-dependent Mmp9 mRNA translation reverses fragile X syndrome-like phenotypes. *Cell Rep* **9**, 1742-1755 (2014). <https://doi.org/10.1016/j.celrep.2014.10.064>
- 14 Gkogkas, C. G., Khoutorsky, A., Ran, I., Rampakakis, E., Nevarko, T., Weatherill, D. B., Vasuta, C., Yee, S., Truitt, M., Dallaire, P., Major, F., Lasko, P., Ruggero, D., Nader, K., Lacaille, J. C. & Sonenberg, N. Autism-related deficits via dysregulated eIF4E-dependent translational control. *Nature* **493**, 371-377 (2013). <https://doi.org/10.1038/nature11628>

Funding

2024-2028	HORIZON Project ID:101168624 Call: HORIZON-MSCA-2023-DN-01 Co-PI: Gkogkas <i>"MENTOR: Metabolic control of cell growth by mTOR in health and disease: a multi-disciplinary training"</i> 217922€EUR for Gkogkas
2023-2026	General Secretariat For Research and Innovation – Flagship Action- TAEDR-0535850 Co-PI: Gkogkas <i>"National research network to elucidate the genetic basis of Alzheimer's and Parkinson's neurodegenerative diseases, detect reliable biomarkers, and develop innovative computational technologies and therapeutic strategies underpinning precision medicine"</i> 100,000€EUR for Gkogkas
2022-2025	Hellenic Foundation for Research and Innovation Researcher grants PI: Gkogkas (PI) – Operating grant <i>"Translational Control of Neuronal Metabolism in Neurodevelopmental Disorders"</i> 200.000€EUR for Gkogkas
2020-2024	NEURON-ERANET Sensory Disorders Transnational Call coordinator PI:Gkogkas - Research Grant <i>"The role of translational dysregulation in sensory neurons in mediating tactile hypersensitivity in neurodevelopmental disorders"</i> 750K total (3 PIs)- 250.000€EUR for Gkogkas
2020-2023	Research, Create, Innovate - NSRF (ΕΣΠΑ) Co-PI: Gkogkas – Research Grant <i>"Development of novel therapeutic strategies against Parkinson's disease"</i> 1M total (4 PIs, 1 company)- 222.324€EUR for Gkogkas
2020-2022	FORTH Synergy Grants Coordinator PI: Gkogkas – research Grant <i>"Modelling neurological disorders using graphene-based neurovascular organoids derived from pluripotent human cells"</i> 80K total-55.500€EUR for Gkogkas
2020-2022	Fondation Santé, Greece PI: Gkogkas – research Grant <i>"Modelling neurological disorders using human forebrain organoids"</i> 50.000€EUR for Gkogkas
2017-2019	Simons Initiative for the Developing Brain (SIDB) PI: Gkogkas – Operating grant <i>"Analysis of social behaviour in rodent models of ASD"</i> 150.000£GBP for Gkogkas

2017-2019	Brain and Behavior Research Foundation (NARSAD), USA PI: Gkogkas-NARSAD Young Investigator grant <i>"Using targeted genome editing to generate novel preclinical rodent models of autism"</i> 70.000\$USD for Gkogkas
2016-2019	Canadian Institutes for Health Research, Canada Co-PI: Gkogkas-Operating grant to Sonenberg <i>"Investigating mRNA translational control in the quest to cure human disease."</i> 3,301,975\$CAD total for Sonenberg and Gkogkas (50%)
2015-2020	Wellcome Trust and Royal Society, UK PI: Gkogkas-Sir Henry Dale Wellcome Trust young investigator grant <i>"Translational control of neuronal mRNAs in Autism Spectrum Disorders"</i> 1,272,819£GBP for Gkogkas
2015-2016	Royal Society, UK PI: Gkogkas-Seed Corn grant <i>"A novel technique to monitor local protein synthesis in vivo in rodent models of neuropsychiatric diseases"</i> 15.000£GBP for Gkogkas
2014	Wellcome Trust Institutional Strategic Support Fund PI: Gkogkas <i>"The role of dysregulated translational control in ASD"</i> 75.000£GBP for Gkogkas
2014-2019	Canadian Institutes for Health Research, Canada Co-PI: Gkogkas-Operating grant to Sonenberg Ranked 1st <i>"The role of mTOR pathway in translational regulation of synaptic plasticity, memory formation and disease"</i> 948.111\$CAD total for Sonenberg and Gkogkas (50%)
2010-2011	Autism Speaks Agency, USA Co-PI: Gkogkas-Pilot Grant to Sonenberg <i>"Regulation of neuronal translation in Autism Spectrum Disorders"</i> 120.000\$USD for Gkogkas

Peer Review

eLife, Early-Career Reviewer
The Journal of Neuroscience
The Journal of Biological Chemistry
Nature, Nature Neuroscience, Nature Medicine
Scientific Reports, Nature Communications, Molecular Psychiatry
Neuron

Memberships

Society for Neuroscience, FENS, eLife Community
Alumni Associations University of Edinburgh and McGill University
Hellenic Society of Neuroscience
Hellenic Society of Biochemistry and Molecular Biology
International Society for Stem Cell Research (ISSCR)

Languages

English (near native/fluent), French (near native/fluent), Greek (native), Italian (working knowledge)