

GÓGL, Gergő Zsolt - CV

Education | 2015 – 2018 ELTE Eötvös Loránd University, Budapest – Structural Biology PhD program
2013 – 2015 ELTE Eötvös Loránd University, Budapest – Chemistry MSc
2008 – 2013 ELTE Eötvös Loránd University, Budapest – Chemistry BSc

Work experience | 2024 - iBV, Nice, *group leader*
Research field: Quantitative interactomics
2023 - 2024 IGBMC, Strasbourg, Helgo Schmidt's group
Research field: Quantitative interactomics
2019 - 2023 IGBMC, Strasbourg, Gilles Trave's group
Research field: Characterization of domain-motif interactomes
2017 Aug-Nov UCSD, San Diego, Susan S. Taylor's group
Research field: Structural characterization of multi component RSK1 complexes
2014 – 2019 ELTE, Budapest, Department of Biochem., László Nyitrays' group
Research field: Characterization of RSK1 interactions
2008 – 2014 ELTE, Budapest, Department of Biochem., Attila Reményi's group
Research field: Structural basis of intracellular signaling molecules
2006 – 2008 HAS, Institute of Enzymology, Budapest, Péter Friedrich's group
Research field: Characterization of Ca²⁺ activated proteases

Grants & Achievements | 2024 ATIP-Avenir grant
Project ARC from the Foundation ARC
2023 Inserm CRCN position
2021 1 year fellowship from the IGBMC
2019 3 years fellowship from the Foundation ARC (Post-doctorants en France)
2018 New National Excellence Program of the Hungarian Ministry of Human Capacities
2017 New National Excellence Program of the Hungarian Ministry of Human Capacities
EMBO Short Term Fellowship (at Susan S. Taylor's group)
Joseph Cours Scholarship (*Hungarian prize from the Eötvös Loránd University*)
2016 New National Excellence Program of the Hungarian Ministry of Human Capacities
Bio-Science prize (*Hungarian prize from the Bio-Science company*)
2015 FEBS3+ Meeting, Poster Award 1. place
2013 Scholarship from the Stephen W. Kuffler foundation
Scientific Students' Associations Conference (TDK) 1. place (Biochemistry)
2008 Scientific Students' Associations Conference (TUDOK) 1. place (Biochemistry)

Languages | English (B2), French (B1)
Research interests | Interactomics, motif-mediated interactions, quantitative biology

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ResearchGate Scholar | www.researchgate.net/profile/Gergo-Gogl
scholar.google.com/citations?user=KKVJKqYAAAAJ

Scientific Interest

- Mapping the intrinsic human affinity interactome
- Uncovering new motif-mediated interaction networks
- Understanding the differences between intrinsic and extrinsic cellular parameters

Supervision

- Supervision of MSc students: Viktoria Bilics, Marton Simon
- Unofficial co-supervisor of Katheleen Weimer with Gilles Trave

Publication metrics (*Based on Web of Science, 30/07/2024*)

- Total number of accepted publications: 38 including 3 reviews
- Number of unpublished manuscripts in preprint servers: 1
- Main author in 16 publications (first/co-first/corresponding/co-corresponding author)
- Number of citations: 684 (583 without self-citation); (*904 based on Researchgate*)
- H index: 16; (*18 based on Researchgate*)
- i10 index: 20

Publication list (in chronological order)

† *Corresponding author(s)*

* *Authors contributed equally to the work*

Highlighted if main contributor

#1 Identifying calpain substrates in intact S2 cells of *Drosophila*

Bozoky, Z., Alexa, A., Dancsok, J., **Gogl, G.**, Klement, E., Medzihradzsky, K., Friedrich, P.†; **Arch. of Biochem. And Biophys.** 2009

#2 Regulation of calpain B from *Drosophila melanogaster* by phosphorylation

Kovacs, L., Alexa, A., Klement, E., Kokai, E., Tantos, A., **Gogl, G.**, Sperka, T., Medzihradzsky, K., Toezser, J., Dombradi, V., Friedrich, P.†; **FEBS J.** 2009

#3 Protein-peptide complex crystallization: a case study on the ERK2 mitogen-activated protein kinase

Gogl, G., Toero, I., Remenyi, A.†; **Acta Cryst D**, 2013

#4 Structural Mechanism for the Specific Assembly and Activation of the Extracellular Signal Regulated Kinase 5 (ERK5) Module

Glatz, G., **Gogl, G.**, Alexa, A., Remenyi, A.†; **J. Biol. Chem.** 2013

#5 Specificity of Linear Motifs That Bind to a Common Mitogen-Activated Protein Kinase Docking Groove

Garai, A.*, Zeke, A.*, **Gogl, G.***, Toero, I., Foerdos, F., Blankenburg, H., Barkai, T., Varga, J., Alexa, A., Emig, D., Albrecht, M., Remenyi, A.†; **Science Sign.** 2012

#6 Structural assembly of the signaling competent ERK2-RSK1 heterodimeric protein kinase complex

Alexa, A.*, **Gogl, G.***, Glatz, G., Garai, A., Zeke, A., Varga, J., Dudas, E., Jeszenoei, N., Bodor, A., Hetenyi, C., Remenyi, A.†; **PNAS** 2015

#7 The Structure of an NDR/LATS Kinase-Mob Complex Reveals a Novel Kinase-Coactivator System and Substrate Docking Mechanism

Gogl, G.*, Schneider, K. D.*, Yeh, B. J., Alam, N., Ba, A. N. N., Moses, A. M., Hetenyi, C., Remenyi, A.†, Weiss, E. L.†; **PLOS Biol.** 2015

#8 Structural Basis of Ribosomal S6 Kinase 1 (RSK1) Inhibition by S100B Protein

Gogl, G., Alexa, A., Kiss, B., Katona, G. Kovacs, M., Bodor, A., Remenyi, A.†, Nyitray, L.†; **J. Biol. Chem.** 2016

#9 Ezrin interacts with S100A4 via both its N- and C-terminal domains

Biri-Kovacs, B., Kiss, B., Vadaszi, H., **Gogl, G.**, Palfy, Gy., Torok, Gy., Homolya, L., Bodor, A., Nyitray, L.†; **PLOS One** 2017

#10 Regulation of the Equilibrium between Closed and Open Conformations of Annexin A2 by N-Terminal Phosphorylation and S100A4-Binding

Ecsedi, P., Kiss, B., **Gogl, G.**, Radnai, L., Buday, L., Koprivanacz, K., Liliom, K., Leveles, I., Vertessy, B., Jeszenoi, N., Hetenyi, Cs., Schlosser, G., Katona, G., Nyitray, L.†; **Structure** 2017

#11 Multiple S100 protein isoforms and C-terminal phosphorylation contribute to the paralog-selective regulation of nonmuscle myosin 2 filaments

Ecsedi, P., Billington, N., Palfy, Gy., **Gogl, G.**, Kiss, B., Bulyaki, E., Bodor, A., Sellers, J.†, Nyitray, L.†; **J. Biol. Chem.** 2018

#12 Dynamic control of RSK complexes by phosphoswitch-based regulation

Gogl, G., Biri-Kovacs, B., Poti, A., Vadaszi, H., Szeder, B., Bodor, A., Schlosser, G., Acs, A., Turiak, L., Buday, L., Alexa, A., Nyitray, L.†, Remenyi, A.†; **FEBS J.** 2018

#13 Disordered Protein Kinase Regions in Regulation of Kinase Domain Cores

Gogl, G., Kornev, A. P., Remenyi, A.†, Taylor, S. S.†; **Trends in Bioch. Sci.** 2019

#14 Structural insights into the tyrosine phosphorylation-mediated inhibition of SH3 domain-ligand interactions

Mero, B., Radnai, L., **Gogl, G.**, Toke, O., Leveles, I., Koprivanacz, K., Szeder, B., Dulk, M., Kudlik, Gy., Vas, V., Cserkaszky, A., Sipéki, Sz., Nyitray, L., Vertessy, B., Buday, L.†; **J. Biol. Chem.** 2019

#15 Rewiring of RSK PDZ Interactome by Linear Motif Phosphorylation

Gogl, G., Biri-Kovacs, B., Durbesson, F., Jane, P., Nomine, Y., Kostmann, C., Bilics, V., Simon, M., Remenyi, A., Vincentelli, R., Trave, G.†, Nyitray, L.†; **J. Mol. Biol.** 2019

#16 High throughput competitive fluorescence polarization assay reveals functional redundancy in the S100 protein family

Simon, M., Ecsedi, P., Poti, A., Remenyi, A., Kardos, J., **Gogl, G.**†, Nyitray, L.†; **FEBS J.** 2020

#17 Benchtop holdup assay for quantitative affinity-based analysis of sequence determinants of protein-motif interactions

Bonhoure, A., Forster, A., Babah, K.O., **Gógl, G.**, Eberling, P., Kostmann, C., Volkmer, R., Mancilla, V.T., Travé, G.†, Nominé, Y.†; **Analytical Biochemistry** 2020

- #18 Conformational editing of intrinsically disordered protein by α -methylation
Bauer, V., Schmidtgall, B., **Gogl, G.**, Dolenc, J., Osz, J., Nominé, Y., Kostmann, C., Cousido-Siah, A., Mitschler, A., Rochel, N., Travé, G., Kieffer, B., Torbeev, V.†; **Chemical Science**, 2020
- #19 Structure of high-risk papillomavirus type 31 E6 oncogenic protein and characterization of E6/E6AP/p53 complex formation
Conrady, M., Suarez, I., **Gogl, G.**, Frecot, D.I., Bonhoure, A., Kostmann, C., Cousido-Siah, A., Mitschler, A., Lim, J., Masson, M., Iftner, T., Stubenrauch, F., Trave, G., Simon, C.†; **Journal of Virology**, 2020
- #20 Ndr/Lats Kinases Bind Specific Mob-Family Coactivators through a Conserved and Modular
Parker, B.W., **Gogl, G.**, Bálint, M., Hetényi, Cs., Reményi, A., Weiss, EL.†; **Biochemistry**, 2020
- #21 MAP Kinase-Mediated Activation of RSK1 and MK2 Substrate Kinases
Sok, P., **Gogl, G.**, Kumar, G.S., Alexa, A., Singh, N., Kirsch, K., Sebő, A., Drahos, L., Gáspári, Z., Peti, W., Reményi, A.†; **Structure** 2020
- #22 Structure Determination of the Transactivation Domain of p53 in Complex with S100A4 Using Annexin A2 as a Crystallization Chaperone
Ecsédi, P., **Gogl, G.**, Hóf, H., Kiss, B., Harmat, V., Nyitray, L.†; **Structure** 2020
- #23 Dual Specificity PDZ- and 14-3-3-Binding Motifs: A Structural and Interactomics Study
Gogl, G.†*, Jane, P.*, Caillet-Saguy, C., Kostmann, C., Bich, G., Cousido-Siah, A., Nyitray, L., Vincentelli, R., Wolff, N., Nominé, Y., Sluchanko, N.N.†, Trave, G.†; **Structure** 2020
- #24 Interactomic affinity profiling by holdup assay: acetylation and distal residues impact the PDZome-binding specificity of PTEN phosphatase
Jané, P., **Gógl, G.**, Kostmann, C., Bich, G., Girault, V., Caillet-Saguy, C., Eberling, P., Vincentelli, R., Wolff, N., Travé, G.†, Nominé, Y.†; **Plos ONE** 2020
- #25 Host PDZ-containing proteins targeted by SARS-CoV-2
Caillet-Saguy, C., Durbesson, F., Rezelj, V.V., **Gogl, G.**, Tran, Q.D., Twizere, J., Vignuzzi, M., Vincentelli, R., Wolff, N.†; **FEBS J.** 2021
- #26 Hierarchized phosphotarget binding by the seven human 14-3-3 isoforms
Gogl, G.†*, Tugaeva, K.T.*, Eberling, P., Kostmann, C., Trave, G.†, Sluchanko, N.N.†; **Nature Communications** 2021
- #27 Studying the Structures of Relaxed and Fuzzy Interactions: The Diverse World of S100 Complexes
Ecsedi, P., **Gogl, G.**, Nyitray, L.†; **Frontiers in Molecular Biosciences** 2021
- #28 Characterization of the Intramolecular Interactions and Regulatory Mechanisms of the Scaffold Protein Tks4
Mero, B., Koprivanacz, K., Cserkaszky, A., Radnai, L., Vas, V., Kudlik, Gy., **Gogl, G.**, Sok, P., Poti L., A., Szeder, B., Nyitray, L., Remenyi, A.t, Geiszt, M., Buday, L.†; **International journal of molecular sciences** 2021
- #29 A non-catalytic herpesviral protein reconfigures ERK-RSK signaling by targeting kinase docking systems in the host
Alexa, A., Sok, P., Gross, F., Albert, K., Kobori, E., Poti, A. L., **Gogl, G.**, Bento, I., Kuang, E., Taylor, S. S., Zhu, F., Ciliberto, A., Remenyi, A.†; **Nature Communications** 2022
- #30 A scalable strategy to solve structures of PDZ-domains and their complexes
Cousido-Siah, A., Carneiro, L., Kostmann, C., Ecsedi, P., Nyitray, L., Trave, G., **Gogl, G.**†; **Acta Cryst D** 2022
- #31 Binding Profile Mapping of the S100 Protein Family Using a High-throughput Local Surface Mimetic Holdup Assay
Simon, M., Bartus, E., Mag, B., Boros, E., Roszjár, L., **Gogl, G.**, Travé, G., Martinek, T.A., Nyitray, L.†; **Scientific Reports** 2022
- #32 Quantitative fragmentomics allow affinity mapping of interactomes
Gogl, G.†, Zambo, B., Kostmann, C., Cousido-Siah, A., Morlet, B., Durbesson, F., Negroni, L., Eberling, P., Jane, P., Nominé, Y., Zeke, A., Ostergaard, S., Monsellier, E., Vincentelli, R., Trave, G.†; **Nature Communications** 2022
- #33 Native holdup (nHU) to measure binding affinities from cell extracts
Zambo, B., Morlet, B, Negroni, L., Trave, G., **Gogl, G.**†; **Science Advances** 2022
- #34 Molecules interact. But how strong and how much?
Weimer, K., Zambo, B. **Gogl, G.**, **BioEssays** 2023
- #35 The Rogdi knockout mouse is a model for Kohlschütter–Tönz syndrome
Jimenez-Armijo, A., Morkmued, S., Ahumada, J.T., Kharouf, N., Feraudy, Y.d., **Gogl, G.**, Riet, F., Niederreither, K., Laporte, J., Birling, M.C., Selloum, M., Herault, Y., Hernandez, M., Bloch-Zupan, E.; **Scientific Reports**. 2024

#36 Comparative analysis of PDZ-binding motifs in the diacylglycerol kinase family
Zambo, B.†, **Gogl, G.**, Morlet, B., Eberling, P., Negroni, L., Moine, H.†, Travé, G.†; **FEBS J.** 2024

#37 PDZome-wide and structural characterization of the PDZ-binding motif of VANGL2
Montserrat-Gomez, M., **Gogl, G.**, Carrasco, K., Betzi, S., Durbesson, F., Cousido-Siah, A., Kostmann, C., Essig, D.J., Strømgaard, K., Østergaard, S., Morelli, X., Trave, G., Vincentelli, R., Bailly, E., Borg, J-P. **BBA-Proteins and Proteomics.** 2024

#38 Uncovering the BIN1-SH3 interactome underpinning centronuclear myopathy
Zambo, B., Edelweiss, E., Morlet, B., Negroni, L., Pajkos, M., Dosztányi, Z., Ostergaard, S., Trave, G.†, Laporte, J.†, **Gogl, G.†; eLife,** 2024