Curriculum vitae
Sorin Tunaru, PhD

PERSONAL INFORMATION
Date of birth: 20 April 1976

Citizenship: Romania

Work address: Institute of Biochemistry, Romanian Academy
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SCIENTOMETRY (2021)
h-Index: 20; total number of citations: 3393
Scopus Author ID: 6506822607

PROFESSIONAL EXPERIENCE

2018 - present: Research Scientist (CSII) at the Institute of Biochemistry, Romanian Academy, Bucharest, Romania.

- Implementation of concepts and technologies in the field of molecular pharmacology
- Development of a functional screening platform for drug discovery projects
- Scientific supervision of PhD and Master´s students

2009 - 2018: Project Leader, Max-Planck-Institute for Heart and Lung Research, Bad Nauheim, Germany.

- Design, supervision and execution of projects in the field of molecular pharmacology:
    - data interpretation from biochemical and cell pharmacological studies aimed at the identification of novel ligands at G-protein coupled receptors (GPCRs).
    - cellular assay development and optimization for high-throughput screening of metabolites and compounds from natural sources.
- Training bachelor/Master's/PhD students in biochemical, cellular and molecular biology techniques.
- Managing collaborative work with laboratories from academia and industry.

2007 - 2008: Research Associate, Dorris Neuroscience Center, The Scripps Research Institute, San Diego, California, USA.

- Design and execution of projects aimed at discovering membrane receptors that mediate cellular effects of various biologically active lipids.

2006 - 2007: Postdoctoral Fellow, Emory School of Medicine, Emory University, Atlanta,

Georgia, USA.

EDUCATION

2001 - 2006: PhD Student at the Medical Faculty, University of Heidelberg, Germany (supervisor: Prof. Dr. Stefan Offermanns). Doctoral thesis with the title: "Identification and characterization of the nicotinic acid receptor" was awarded with *summa cum laude*.

1994 - 1999: B.Sc. in Biochemistry at the Faculty of Biology, University of Bucharest, Romania., B.Sc. thesis with the title: "Interaction between respiration and photosynthesis in cyanobacteria" (supervisor: Prof. Dr. Maria-Luiza Flonta and Dr. Ioan I. Ardelean) was defended in June 1999.

ADDITIONAL QUALIFICATIONS

2014: Course on Laboratory Animal Science – FELASA category B.

PATENTS

2004: Method to discover compounds with anti-hyperlipidemic activity based on their interaction with the nicotinic acid receptor. German Patent DE10251244, April 2004.

TEACHING EXPERIENCE

2009 - 2018: Organizer of the workshop: "Analysis of GPCR signaling" – a twice per year event, consisting of three hours lecture and five hours experimental work. Audience: students from different PhD programs affiliated to the Excellence Cluster in Cardiac and Pulmonary Research (University of Heidelberg; Goethe University, Frankfurt am Main; University of Giessen and the Max-Planck Institute for Heart and Lung Research, Bad Nauheim, Germany).

LANGUAGES

- English: fluent (speaking and writing)
- German: intermediate (speaking and writing)

MANAGERIAL EXPERIENCE

- Project Coordinator: „Drug repurposing as a source of novel medication for type-2-diabetes" PN-III-P2-2.1-PED-2019-5179, (2020 - 2022)
- Project Coordinator: „Next Generation of Drug Targets for Schizophrenia", EEA RO-NO, Romania-Norway Collaborative Research Projects (2021 – 2023)
- Project Coordinator: „Identification and Characterization of the CART-Neuropeptide Receptor", PN-III-P4-ID-PCE-2020-2411 (2021 -2023)
- Romanian Representative at the COST program "European Research Network on Signal Transduction", ERNEST, CA18133 (2019 - 2023)
- Member of the Biological Section of the Romanian National Research Council (CNCS)
- Board Member of the Institute of Biochemistry, Romanian Academy, Bucharest, Romania

PUBLICATIONS

1. Trif C, Banica AM, Manolache A, Anghel SA, Huţanu DE, Stratulat T, Badea R, Oprita G, Selescu T, Petrescu SM, Sisignano M, Offermanns S, Babes A, **Tunaru S**.
Inhibition of TRPM8 function by prostacyclin receptor agonists requires coupling to Gq/11 proteins.
Br J Pharmacol. 2023 Dec 3. doi: 10.1111/bph.16295. Online ahead of print.

2. Huţanu DE, Oprita G, Domocos D, Selescu T, Manolache A, Stratulat T, Sauer SK, **Tunaru S**, Babes A, Babes RM.
The antimalarial artemisinin is a non-electrophilic agonist of the transient receptor potential ankyrin type 1 receptor-channel.
Eur J Pharmacol. 2023 Jan 15;939:175467. doi: 10.1016/j.ejphar.2022.175467. Epub 2022 Dec 18.

3. Simmons JD, Peterson GJ, Campo M, Lohmiller J, Skerrett SJ, **Tunaru S**, Offermanns S, Sherman DR, Hawn TR.
Nicotinamide Limits Replication of Mycobacterium tuberculosis and Bacille Calmette-Guérin Within Macrophages.
J Infect Dis. 2020 Mar 2;221(6):989-999

4. Helker CSM, Mullapudi ST, Mueller LM, Preussner J, **Tunaru S**, Skog O, Kwon HB, Kreuder F, Lancman JJ, Bonnavion R, Dong PDS, Looso M, Offermanns S, Korsgren O, Spagnoli FM, Stainier DYR.
A whole organism small molecule screen identifies novel regulators of pancreatic endocrine development.
Development. 2019 Jul 24;146(14)

5. **Tunaru S**, Bonnavion R, Brandenburger I, Preussner J, Thomas D, Scholich K, Offermanns S.
20-HETE promotes glucose-stimulated insulin secretion in an autocrine manner through FFAR1.
Nat Commun. 2018 Jan 12;9(1):177

6. Schmitz K, Brunkhorst R, de Bruin N, Mayer CA, Häussler A, Ferreiros N, Schiffmann S, Parnham MJ, **Tunaru S**, Chun J, Offermanns S, Foerch C, Scholich K, Vogt J, Wicker S, Lötsch J, Geisslinger G, Tegeder I.
Dysregulation of lysophosphatidic acids in multiple sclerosis and autoimmune encephalomyelitis.
Acta Neuropathol Commun. 2017 Jun 2;5(1):42

7. Hohmann SW, Angioni C, **Tunaru S**, Lee S, Woolf CJ, Offermanns S, Geisslinger G, Scholich K, Sisignano M.
The G2A receptor (GPR132) contributes to oxaliplatin-induced mechanical pain hypersensitivity.
Sci Rep. 2017 Mar 27;7(1):446.

8. Zinn S, Sisignano M, Kern K, Pierre S, **Tunaru S**, Jordan H, Suo J, Treutlein EM, Angioni C, Ferreiros N, Leffler A, DeBruin N, Offermanns S, Geisslinger G, Scholich K.
The leukotriene B4 receptors BLT1 and BLT2 form an antagonistic sensitizing system in peripheral sensory neurons.
J Biol Chem. 2017 Apr 14;292(15):6123-6134.

9. **Tunaru S**, Chennupati R, Nüsing RM, Offermanns S.
Arachidonic Acid Metabolite 19(S)-HETE Induces Vasorelaxation and Platelet Inhibition by Activating Prostacyclin (IP) Receptor.
PLoS One. 2016 Sep 23;11(9):e0163633.

10. Tang C, Ahmed K, Gille A, Lu S, Gröne HJ, **Tunaru S**, Offermanns S.
Loss of FFA2 and FFA3 increases insulin secretion and improves glucose tolerance in type 2 diabetes.
Nat Med. 2015 Feb;21(2):173-7. doi: 10.1038/nm.3779. Epub 2015 Jan 12.

11. Preuss B, **Tunaru S**, Henes J, Offermanns S, Klein R.
A novel luminescence-based method for the detection of functionally active antibodies to muscarinic acetylcholine receptors of the M3 type (mAchR3) in patients' sera.
Clin Exp Immunol. 2014 Jul;177(1):179-89. doi: 10.1111/cei.12324

12. Conzelmann M, Williams EA, **Tunaru S**, Randel N, Shahidi R, Asadulina A, Berger J, Offermanns S, Jékely G.
Conserved MIP receptor-ligand pair regulates Platynereis larval settlement.
Proc Natl Acad Sci U S A. 2013 May 14;110(20):8224-9. doi: 10.1073/pnas.1220285110.

13. **Tunaru S**, Althoff TF, Nüsing RM, Diener M, Offermanns S.
Castor oil induces laxation and uterus contraction via ricinoleic acid activating prostaglandin EP3 receptors.
Proc Natl Acad Sci U S A. 2012 Jun 5;109(23):9179-84. doi: 10.1073/pnas.1201627109.

14. Lukasova M, Hanson J, **Tunaru S**, Offermanns S.
Nicotinic acid (niacin): new lipid-independent mechanisms of action and therapeutic potentials.
Trends Pharmacol Sci. 2011 Dec;32(12):700-7. doi: 10.1016/j.tips.2011.08.002.

15. Hanson J, Gille A, Zwykiel S, Lukasova M, Clausen BE, Ahmed K, **Tunaru S**, Wirth A, Offermanns S.
Nicotinic acid- and monomethyl fumarate-induced flushing involves GPR109A expressed by keratinocytes and COX-2-dependent prostanoid formation in mice.
J Clin Invest. 2010 Aug;120(8):2910-9. doi: 10.1172/JCI42273.

16. Ahmed K, **Tunaru S**, Tang C, Müller M, Gille A, Sassmann A, Hanson J, Offermanns S.
An autocrine lactate loop mediates insulin-dependent inhibition of lipolysis through GPR81.
Cell Metab. 2010 Apr 7;11(4):311-9. doi: 10.1016/j.cmet.2010.02.012.

17. Ahmed K, **Tunaru S**, Offermanns S.
GPR109A, GPR109B and GPR81, a family of hydroxy-carboxylic acid receptors.
Trends Pharmacol Sci. 2009 Nov;30(11):557-62. doi: 10.1016/j.tips.2009.09.001.

18. Ahmed K, **Tunaru S**, Langhans CD, Hanson J, Michalski CW, Kölker S, Jones PM, Okun JG, Offermanns S.
Deorphanization of GPR109B as a receptor for the beta-oxidation intermediate 3-OH-octanoic acid and its role in the regulation of lipolysis.
J Biol Chem. 2009 Aug 14;284(33):21928-21933. doi: 10.1074/jbc.M109.019455.

19. Kero J, Ahmed K, Wettschureck N, **Tunaru S**, Wintermantel T, Greiner E, Schütz G, Offermanns S.
Thyrocyte-specific Gq/G11 deficiency impairs thyroid function and prevents goiter development.
J Clin Invest. 2007 Sep;117(9):2399-407. doi: 10.1172/JCI30380.

20. **Tunaru S**, Lättig J, Kero J, Krause G, Offermanns S.
Characterization of determinants of ligand binding to the nicotinic acid receptor GPR109A (HM74A/PUMA-G).
Mol Pharmacol. 2005 Nov;68(5):1271-80. doi: 10.1124/mol.105.015750.

21. Niedernberg A, **Tunaru S**, Blaukat A, Harris B, Kostenis E.
Comparative analysis of functional assays for characterization of agonist ligands at G protein-coupled receptors.
J Biomol Screen. 2003 Oct;8(5):500-10. doi: 10.1177/1087057103257555.

22. Niedernberg A, **Tunaru S**, Blaukat A, Ardati A, Kostenis E.
Sphingosine 1-phosphate and dioleoylphosphatidic acid are low affinity agonists for the orphan receptor GPR63.
Cell Signal. 2003 Apr;15(4):435-46. doi: 10.1016/s0898-6568(02)00119-5.

23. **Tunaru S**, Kero J, Schaub A, Wufka C, Blaukat A, Pfeffer K, Offermanns S.
PUMA-G and HM74 are receptors for nicotinic acid and mediate its anti-lipolytic effect.
Nat Med. 2003 Mar;9(3):352-5. doi: 10.1038/nm824.

Dr. Sorin Tunaru