





Dr. Taulant Kukaj

 Jena, Germany
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 Born: Kosovo

Education and Work

Kolegji Heimerer

Prishtina, Kosove
07/2024 – Present

Professor Asistant

Institute of Physiology II, University Hospital Jena, Friedrich Schiller University

Jena, Germany
05/2021 – 2024

Postdoctoral Researcher

- *Research Focus:* Pharmacology and biophysics of cell membrane proteins, specifically GPCRs (G-protein coupled receptors) and ion channels (HCN and CNG)
- *Methodologies:* Combination of confocal laser scanning microscope (LSM 710, Carl Zeiss) and patch-clamp fluorometry.
- *Teaching experience:* assisted in practical physiology courses for medical students.

Institute of Physiology II, University Hospital Jena, Friedrich Schiller University

Jena, Germany
11/2015 – 05/2021

Dr. rer. nat (summa cum laude)

- *Thesis:* Molecular Kinetics of Metabotropic Glutamate Receptors
- *Methodologies:* Utilized a combination of confocal laser scanning microscopy (LSM 710, Carl Zeiss) and patch-clamp fluorometry.
- Employed additional techniques such as qPCR, gel electrophoresis, and cRNA in vitro synthesis.
- *Teaching Experience:* assisted in practical physiology courses for medical students.

University of Prishtina/ University of Bologna

Prishtina, Kosovo/
Bologna, Italy
10/2012 – 10/2015

Master of Science in Organic Chemistry

- *Main Modules:* Biochemistry, Chemistry of Natural Products, Pharmaceutical Chemistry
- *Thesis:* Synthesis of Novel Derivatives of Benzylidene Amines and Ylimino-methyl Phenols and their antimicrobial activity.
- *Methodologies:* Chromatography (HPLC, TLC), Spectroscopy (IR, UV-VIS)

University of Prishtina

Prishtina, Kosovo
10/2007 – 10/2012

Master of Pharmacy (MPharm)

- *Main Modules:* Pharmacology, Medicinal Chemistry, Biochemistry, Organic Chemistry, Clinical Pharmacology, Pharmaceutical Chemistry
- *Thesis:* Determination of heavy metals on the medicinal plant: Hypericum Perforatum Extract
- *Methodologies:* Gas chromatography

Internships and trainings

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| <ul style="list-style-type: none">● Parexel Academy/ Paraxel International North Carolina, USA 09/2020 - 04/2021 | Postgraduate Certificate in Clinical Trial Management <i>Modules:</i> Drug Development, Regulatory Affairs, Clinical Trial Monitoring, Data Management, Clinical Trial Management, and Clinical Trial Supplies |
| <ul style="list-style-type: none">● (CMB) Center for Molecular Biomedicine Jena, Germany 08/2015 – 09/2015 | Summer School of Molecular Medicine Lectures and laboratory small projects on different topics: cell and molecular biology, pharmacology, genetics, medical imaging, physiology, and biophysics |
| <ul style="list-style-type: none">● University of Bologna Bologna, Italy 10/2013 – 02/2014 | Erasmus Mundus Scholar (exchange student) Semester exchange during my master's program in Organic Chemistry <i>Methods:</i> NMR Spectroscopy, X-ray absorption spectroscopy, IR spectroscopy |
| <ul style="list-style-type: none">● BesiPharm Pristina, Kosovo 09/2012 – 03/2013 | Apothecary apprenticeship In the six-month apprenticeship, I assisted in dispensing medications to patients, prescription reading, and patient counseling under the pharmacist's supervision |

Awards and Scholarships

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| <ul style="list-style-type: none">● 2021 https://doi.org/10.1021/acsp.tsci.1c00203 | Poster Price Transatlantic GPCR Symposium - Early Career Investigators |
| <ul style="list-style-type: none">● 2015 | DAAD Scholarship to attend Summer School in Molecular Medicine in Jena |
| <ul style="list-style-type: none">● 2013/14 | JoinEU-SEE scholarship for academic exchange between EU and Western Balkan Countries, 6 months of academic exchange at the University of Bologna |
| <ul style="list-style-type: none">● 2009 | University of Prishtina Scholarship for distinct results during my studies in the calendar year: 2008/2009 |

Publications

Commun Biol 6, 104 (2023)

doi.org/10.1038/s42003-023-04468-z

PNAS: Proc. Natl. Acad. Sci. USA, 2019

doi: 116 (20) 10150-10155

JGP: J Gen Physiol, 2020

doi: 152 (5): e201912489

PNAS: Proc. Natl. Acad. Sci. USA, 2021

doi: 118 (30) e210046118

Kinetic fingerprinting of Metabotropic Glutamate Receptors

*Taulant Kukaj**, Christian Sattler, Thomas Zimmer, Ralf Schmauder & Klaus Benndorf

Stepwise activation of a class C GPCR begins with millisecond dimer rearrangement

Eugene O. Grushevskiy*, *Taulant Kukaj**, Ralf Schmauder*, Andreas Bock, Ulrike Zabel, Tina Schwabe, Klaus Benndorf, and Martin Lohse

Action potentials in *Xenopus* oocytes triggered by blue light

Florian Walther*, Dominic Feind*, Christian vom Dahl*, *Taulant Kukaj*, Christian Sattler, Georg Nagel, Shiqiang Gao, and Thomas Zimmer

Thermodynamic profile of mutual subunit control in a heteromeric receptor

Jana Schirmeyer*, Sabine Hummert, Thomas Eick, Eckhard Schulz, Tina Schwabe, Gunter Ehrlich, *Taulant Kukaj*, Melanie Wiegand, Christian Sattler, Ralf Schmauder, Thomas Zimmer, Nisa Kosmalla, Jan Munch, Michele Bonus, Holger Gohlke, and Klaus Benndorf

Presentations

Workshop

University of Prishtina

Prishtina, Kosova
June 27th, 2024

67th Biophysical

Society Meeting,

San Diego, California, USA
Feb 18th – 22nd, 2023

100th Annual Meeting

of the German Physiological Society

Frankfurt, Germany

Sep 30th- Oct 2nd, 2021

Transatlantic GPCR

Symposium (remote)

July 8th, 2021

64th Biophysical Society Meeting,

San Diego, California, USA
Feb 15th – 19th, 2020

Introduction to Fluorescent Microscopy

*Taulant Kukaj**

mGluR7 influences activation kinetics when forming heterodimers with members of group II mGluRs

*Taulant Kukaj**, Ralf Schmauder, Christian Sattler, Thomas Zimmer & Klaus Benndorf

Dimerization and kinetics within groups of Metabotropic Glutamate Receptors

*Taulant Kukaj**, Ralf Schmauder, Christian Sattler, Thomas Zimmer & Klaus Benndorf

Kinetic differences between homomeric and heteromeric mGluRs

*Taulant Kukaj**, Ralf Schmauder, Christian Sattler, Thomas Zimmer & Klaus Benndorf

GPCR activation and deactivation kinetics by rapid solution exchange in excised membrane patches

*Taulant Kukaj**, Ralf Schmauder, Christian Sattler, Thomas Zimmer & Klaus Benndorf

- **98th Meeting of the German Physiological Society,**
Ulm, Germany
Sep 30th -Oct 2nd .2019

Activation and deactivation kinetics of class C GPCRs studied with confocal patch-clamp fluorometry
Taulant Kukaj*, Ralf Schmauder, Christian Sattler, Thomas Zimmer & Klaus Benndorf
- **Gordon Research Conference Molecular Pharmacology**
Ventura, California, USA
Feb 10th – 15th , 2019

Kinetics of Metabotropic Glutamate Receptor 1 investigated by piezo-controlled concentration jumps
Taulant Kukaj*, Ralf Schmauder, Tina Schwabe, Ulrike Zabel, Martin Lohse & Klaus Benndorf
- **7th Focused Meeting on Cells Signalling**
Nottingham, United Kingdom
Apr 16th – 18th , 2018

Kinetics of Metabotropic Glutamate Receptor 1 investigated by piezo-controlled concentration jumps
Taulant Kukaj*, Ralf Schmauder, Tina Schwabe, Ulrike Zabel, Martin Lohse & Klaus Benndorf
- **62nd Biophysical Society Meeting,**
San Francisco, California, USA
Feb 17th – 21th , 2018

Kinetics of Metabotropic Glutamate Receptor 1 investigated by piezo-controlled concentration jumps (18-L-5599-BPS)
Taulant Kukaj*, Ralf Schmauder, Tina Schwabe, Ulrike Zabel, Martin Lohse & Klaus Benndorf
- **Young Physiologist Meeting**
Julich, Germany
Feb 17th – 21th , 2018

Kinetics of Metabotropic Glutamate Receptor 1 investigated by piezo-controlled concentration jumps
Taulant Kukaj*, Ralf Schmauder, Christian Sattler, Thomas Zimmer & Klaus Benndorf

Skills and hobbies

- **Languages**
Albanian (native), English (C1), German (B2), Italian (A2)
- **Technology**
Ms Office, Python (intermediate)
- **Hobbies**
Reading, Traveling and Hiking

Date: 26.07.2024

Dr. Taulant Kukaj

