

Konstantinos Fioravantes Mavreas

Born: March 29th, 1990

Home address: 12, Lysippou str, 11635/ Athens, Greece

Mobile: + 306984802828,

Email: kfmavreas@gmail.com

EDUCATION

- 2016 – 2021 **PhD**, Laboratory of Organic Chemistry, National and Kapodistrian University of Athens, Greece
Doctoral thesis: “*Synthesis and study of C-glucosides with potential pharmaceutical action*”. (10/10)
Supervisor: Athanasios Gimisis, Professor
- 2014 - 2016 **MSc in Organic Synthesis**, National and Kapodistrian University of Athens, Greece
Thesis title: “*Synthesis of C-glucopyranosyl-analogues of natural nucleosides with potential pharmacological action*”
Supervisor: Athanasios Gimisis, Professor
GPA: 9.9 / 10
- 2008 - 2014 **BSc in Chemistry**, National and Kapodistrian University of Athens, Greece
Diploma thesis: “*Synthesis of pyrimidinyl- and purinyl- β -D-glucopyranosylpyrimidines through triazole substitution for the development of new glycogen phosphorylase inhibitors*”
Supervisor: Athanasios Gimisis, Professor
GPA: 7.4 / 10
- 2008 - 2014 **Vinologist Certification**, National and Kapodistrian University of Athens, Greece

AWARDS AND SCHOLARSHIPS

- 2019-present **Research scholarship**, awarded by the General Secretariat for Research and Technology (GEET), Greece
- 2016-2019 **Postgraduate scholarship**, awarded by the National Scholarship Foundation (IKY), Greece
- 2016 **Class Valedictorian** of the Msc Programs of the Department of Chemistry

TEACHING EXPERIENCE

- 2014 - Present **Postgraduate Demonstrator**, National and Kapodistrian University of Athens
▪ Supervision of undergraduate organic chemistry laboratory exercises.

- Supervision, guidance, and training of 4 undergraduate students on their BSc dissertations.
- Guidance and training of MSc students.
- Organisation and presentation of a demonstration in four instances of the “Athens chemistry department’ open days” for high school students.
- Writing of a virtual molecular docking tutorial with the PyRx-Autodock Vina suite which is used by the department in undergraduate courses taught by Mr. professor T. Mavromoustakos.

CONFERENCES

- May 2021 “Glucose-based molecular rotors “shine” at the catalytic site of glycogen phosphorylase fostering the design of new antidiabetic agents”, Neofytos, D. D. ; Minadakis, M. P; Mavreas, K. F.; Paschou, M.; Mamais, M.; Papazafiri, P.; Gimisis, T.; Chrysina, E.D.
Poster at the Symposium for the 50th Anniversary of the Protein Data Bank.
- November 2020 “Molecular Rotors as Fluorescent Inhibitors and Probes of Glycogen Phosphorylase Function”, Mavreas, K.; Mamais, M.; Papazafiri, P.; Gimisis, T. The 24th International Electronic Conference on Synthetic Organic Chemistry; (Online Conference).
- November 2018 “Synthesis of C-glucopyranosyl and carbasugar nucleosides as metabolically stable inhibitors of glycogen phosphorylase with antidiabetic potential”, Konstantinos Mavreas, Thanasis Gimisis.
Oral presentation at the Athens Conference on Advances in Chemistry 2018
- November 2018 “Molecular rotors as fluorescent probes of glycogen phosphorylase” M. P. Minadakis, K. F. Mavreas, E. Emmanouil, M. Paschou, E. D. Chrysina, P. Papazafiri and T. Gimisis.
Poster at the Athens Conference on Advances in Chemistry 2018
- December 2016 “C-Glucopyranosyl analogues of natural nucleosides”
Konstantinos Mavreas, Thanasis Gimisis
Oral presentation at the 22nd Panhellenic Chemistry Conference, Thessaloniki, 2016

PUBLICATIONS

- 2020 Mavreas, K.; Mamais, M.; Papazafiri, P.; Gimisis, T. Glucose-Based Molecular Rotors as Fluorescent Inhibitors and Probes of Glycogen Phosphorylase Function. In *Proceedings of The 24th International Electronic Conference on Synthetic Organic Chemistry*; MDPI: Basel, Switzerland, **2020**; p 8414. <https://doi.org/10.3390/ecsoc-24-08414>.
- 2020 Mavreas, K. F.; Neofytos, D. D.; Chrysina, E. D.; Venturini, A.; Gimisis, T. Synthesis, Kinetic and Conformational Studies of 2-Substituted-5-(β -D-Glucopyranosyl)-Pyrimidin-4-Ones as Potential Inhibitors of Glycogen Phosphorylase. *Molecules* **2020**, 25 (22), 5463. <https://doi.org/10.3390/molecules25225463>.

2019 Maffeis, V.; Mavreas, K.; Monti, F.; Mamais, M.; Gustavsson, T.; Chrysina, E. D.; Markovitsi, D.; Gimisis, T.; Venturini, A. Multiscale Time-Resolved Fluorescence Study of a Glycogen Phosphorylase Inhibitor Combined with Quantum Chemistry Calculations. *Phys. Chem. Chem. Phys.* **2019**, *21* (14), 7685–7696. <https://doi.org/10.1039/C8CP07538G>.

SKILLS

Languages

Greek , German (mother languages)

English (fluent, Cambridge FCE)

IT

Expert user of chemistry related applications (ChemBioDraw, MestRenova etc), Expert user of chemistry databases (Reaxys, SciFinder).

Advanced user of computational chemistry applications (Schrodinger Suite, Pyrx etc).

Competent user of basic bioinformatics techniques (gene and protein expression quantification).

Miscellanea

Advanced skills in NMR spectroscopy.

Competent in basic cellular biology techniques (mammalian cell culture, cytotoxicity assays, basic microscopy).

UV/Vis and fluorescence spectrometry.

Maintenance of the Varian Mercury NMR spectrometer of the Laboratory of Organic Chemistry, University of Athens