

Αικατερίνη Αργυρίου

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Επίκουρη Καθηγήτρια, Φαρμακευτική Χημεία, Τμήμα Φαρμακευτικής, Πανεπιστήμιο Πατρών

ΣΠΟΥΔΕΣ

Διδακτορικό Δίπλωμα, Φαρμακοχημεία-Φυσικά Προϊόντα: Σχεδιασμός, Σύνθεση και Ανάλυση Βιοδραστικών Ενώσεων, Πανεπιστήμιο Πατρών, Τμήμα Φαρμακευτικής	2019
Πιστοποιητικό Παιδαγωγικής και Διδακτικής Επάρκειας, Ανώτατη Σχολή Παιδαγωγικής και Τεχνολογικής Εκπαίδευσης	2013
Μεταπτυχιακό Δίπλωμα Ειδίκευσης, Φαρμακοχημεία-Φυσικά Προϊόντα: Σχεδιασμός, Σύνθεση και Ανάλυση Βιοδραστικών Ενώσεων, Πανεπιστήμιο Πατρών	2012
Πτυχίο Φαρμακευτικής, Πανεπιστήμιο Πατρών	2009

EXPERIENCE

Επίκουρη Καθηγήτρια, Φαρμακευτική Χημεία, Πανεπιστήμιο Πατρών, Τμήμα Φαρμακευτικής	2025 – Σήμερα
Εντεταλμένη Διδάσκουσα, Μοριακή Προσομοίωση και Δομή Πρωτεϊνών, Πανεπιστήμιο Πατρών, Τμήμα Φαρμακευτικής	2022 – 2025
Μεταδιδάκτωρ Ερευνήτρια, Πανεπιστήμιο Φλωρεντίας (Ιταλία), Κέντρο Φασματοσκοπίας Πυρηνικού και Μαγνητικού Συντονισμού	2020 – 2021
Μεταδιδάκτωρ Ερευνήτρια, Πανεπιστήμιο Πατρών, Τμήμα Φαρμακευτικής	2019 – 2025
Ερευνήτρια – Υποψήφια Διδάκτωρ, Πανεπιστήμιο Πατρών, Τμήμα Φαρμακευτικής	2012 – 2019
Μεταπτυχιακή Ερευνήτρια, Πανεπιστήμιο Πατρών, Τμήμα Φαρμακευτικής	2010 – 2012
Μεταπτυχιακή Ερευνήτρια, ΕΘ Ζυρίχης, Τμήμα Βιολογίας, Ινστιτούτο Μοριακής Βιολογίας & Βιοφυσικής, Εργαστήριο F. Allain	2015

ΔΗΜΟΣΙΕΥΣΕΙΣ

Άρθρα σε διεθνή επιστημονικά περιοδικά με διαδικασία κρίσης

1. Christos T. Chasapis, **Aikaterini I. Argyriou**, PierreJean Corringer, Detlef Bentrop, and Georgios A. Spyroulias. Unravelling the Conformational Plasticity of the Extracellular Domain of a Prokaryotic nAChR Homologue in Solution by NMR. *Biochemistry* (2011), Vol. 50, No. 45, pp. 9681-9683.
2. **Aikaterini I. Argyriou**, Christos T. Chasapis, Maria Apostolidi, Parthena Konstantinidou, Constantinos Stathopoulos, Detlef Bentrop, and Georgios A. Spyroulias. Backbone and side chain NMR assignment, along with the secondary structure prediction of RRM2 domain of La protein from a lower eukaryote exhibiting identical structural organization with its human homolog. *Biomolecular NMR Assignments* (2014), Vol. 9, No 1, pp. 219-222.
3. **Aikaterini I. Argyriou**, Christos T. Chasapis, Maria Apostolidi, Parthena Konstantinidou, Detlef Bentrop, Constantinos Stathopoulos, and Georgios A. Spyroulias. ¹H, ¹³C and ¹⁵N Backbone and side-chain resonance assignment of the LAM-RRM1 N-terminal module of La protein from Dictyostelium discoideum. *Biomolecular NMR Assignments* (2015), Vol. 9, No 2, pp. 303-307.
4. **Aikaterini I. Argyriou**, Ioannis I. Alexandropoulos, Kostas D. Marousis, Stavros Topouzis, Andreas Papapetropoulos, and Georgios A. Spyroulias. ¹H, ¹³C, ¹⁵N backbone and side-chain resonance assignment of Nostoc sp. C139A variant of the heme-nitric oxide/oxygen binding (H-NOX) domain. *Biomolecular NMR Assignments* (2016), Vol. 10, No. 2, pp. 395-400.
5. Garyfalia I. Makrynitsa, **Aikaterini I. Argyriou**, Aikaterini A. Zompra, Georgios A. Spyroulias, and Stavros Topouzis. Therapeutic targeting of the soluble guanylate cyclase. *Current Medicinal Chemistry* (2019), Vol. 26, No. 15, pp. 2730-2747, doi: 10.2174/0929867326666190108095851.

6. Aggeliki Roumana, **Aikaterini I. Argyriou**, Garyfallia I. Makrynitsa, Styliani Chasapi, Minos-Timotheos Matsoukas and Stavros Topouzis. Rational design of soluble guanylate cyclase (sGC) activators and modified synthesis of HMR-1766 (Ataciguat). *Review of Clinical Pharmacology and Pharmacokinetics, International Edition* (2020), Vol. 34, No 1, pp. 9-15.
7. Eleni G. Kaliatsi, **Aikaterini I. Argyriou**, Georgios Bouras, Maria Apostolidi, Parthena, Konstantinidou, Athanasios-Nasir Shaukat, Georgios A. Spyroulias and Constantinos Stathopoulos. Functional and Structural Aspects of La Protein Overexpression in Lung Cancer. *Journal of Molecular Biology* (2020), Vol. 432, No 24, doi: 10.1016/j.jmb.2020.11.011.
8. Garyfallia I. Makrynitsa, **Aikaterini I. Argyriou**, Georgios Dalkas, Dimitra A. Georgopoulou, Marina Bantzi, Athanassios Giannis, Andreas Papapetropoulos and Georgios A. Spyroulias. Backbone and side chain NMR assignments of the H-NOX domain from *Nostoc* sp. in complex with BAY58-2667 (cinaciguat). *Biomolecular NMR Assignments* (2021), Vol. 15, No. 1, pp. 53-57, doi: 10.1007/s12104-020-09982-3.
9. **Aikaterini I. Argyriou**, Garyfallia I. Makrynitsa, Georgios Dalkas, Dimitra A. Georgopoulou, Konstantinos Salagiannis, Vasiliki Vazoura, Andreas Papapetropoulos, Stavros Topouzis and Georgios A. Spyroulias. Replacement of heme by soluble guanylate cyclase (sGC) activators abolishes heme-nitric oxide/oxygen (H-NOX) domain structural plasticity. *Current Research in Structural Biology* (2021), Vol. 3, pp. 324-336, doi: 10.1016/j.crstbi.2021.11.003.
10. Aikaterini C. Tsika, Angelo Gallo, Nikolaos K. Fourkiotis, **Aikaterini I. Argyriou**, Sridhar Sreeramulu, Frank Löhr, Vladimir Rogov, Christian Richter, Verena Linhard, Santosh L. Gande, Nadide Altincekic, Robin Krishnathas, Isam Elamri, Harald Schwalbe, Jan Wollenhaupt, Manfred S. Weiss and Georgios A. Spyroulias. Binding Adaptation of GS-441524 Diversifies Macro Domains and Downregulates SARS-CoV-2 de-MARylation Capacity. *Journal of Molecular Biology* (2022), Vol. 434, No. 16, doi: 10.1016/j.jmb.2022.167720
11. Garyfallia I. Makrynitsa, **Aikaterini I. Argyriou**, Aikaterini A. Zompra, Konstantinos Salagiannis, Vassiliki Vazoura, Andreas Papapetropoulos, Stavros Topouzis and Georgios A. Spyroulias. Mapping of the sGC Stimulator BAY 41-2272 Binding Site on H-NOX Domain and Its Regulation by the Redox State of the Heme. *Frontiers in Cell and Developmental Biology* (2022), Vol 10, Article 925457, doi: 10.3389/fcell.2022.925457.
12. Styliani A. Chasapi, **Aikaterini I. Argyriou** and Georgios A. Spyroulias. Backbone and side chain NMR assignment of the heme-nitric oxide/oxygen binding (H-NOX) domain from *Nostoc punctiforme*. *Biomolecular NMR Assignments* (2022), Vol. 16, pp. 379-384, doi: 10.1007/s12104-022-10107-1.
13. Aikaterini I. Argyriou, Georgios A. Machaliotis, Garyfallia I. Makrynitsa, Eleni G. Kaliatsi, Constantinos Stathopoulos and Georgios A. Spyroulias. NMR Analysis Suggests Synergy between the RRM2 and the Carboxy-Terminal Segment of Human La Protein in the Recognition and Interaction with HCV IRES. *International Journal of Molecular Sciences* (2023), Vol. 24, No. 3, Article 2572, doi: 10.3390/ijms24032572.
14. Aikaterini Diseri, George Stravodimos, **Aikaterini Argyriou**, Georgios A. Spyroulias, Demetres D. Leonidas and Panagiotis Liakos. Expression, purification, and biophysical analysis of a part of the C-terminal domain of human hypoxia inducible factor-2 α (HIF-2 α). *Biochemical and biophysical research communications* (2024), Vol. 739, Article 150965, doi:10.1016/j.bbrc.2024.150965.
15. Ruairidh Edwards, Afroditi Chatzi, Ross Eaglesfield, Alexandre Kriznik, Erik Lacko, Maria-Eirini Terzinidou, Keke Liu, Ling Fu, Jing Yang, Sophie Rahuel-Clermont, Kostas Tokatlidis, **Aikaterini I. Argyriou**, Francesca Cantini and Simone Ciofi-Baffoni. Electron transfer between MIA40 and GPX3-3 (in preparation).
16. **Aikaterini I. Argyriou**, Georgios Bouras, Eleni Kaliatsi, Maria Apostolidi, Detlef Bentrop, Constantinos Stathopoulos and Georgios A. Spyroulias. NMR & Biochemical assays reveal unexpected RNA binding properties of the La motif of *D. discoideum* Lupus Antigen protein. (in preparation).

Παρουσιάσεις σε συνέδρια

1. Aggeliki Roumana, Dionisis-Panagiotis Kintos, Maroulla Petri, **Aikaterini I. Argyriou**, Garyfallia Makrynitsa, Dimitra Georgopoulou, Minos-Timotheos Matsoukas, Georgios A. Spyroulias, Stauros Topouzis, Sotiris Nikolaropoulos and Manolis Fouteris. Design and Synthesis of new oxadiazolidinone derivatives as potential activators of soluble Guanylate Cyclase (sGC). *cGMP: Generators, Effectors and Therapeutic Implications*, Mainz, Germany, June 14-16, 2019.
2. **Aikaterini I. Argyriou**, NMR studies of La protein from Dictyostelium discoideum. 2nd Synthetic & Medicinal Chemistry Symposium, Patras, Greece, May 21-23, 2018.
3. **Aikaterini I. Argyriou**, Using biotechnological tools to provide the expression and isolation of proteins of pharmaceutical interest for the structural study by NMR spectroscopy, 2nd National Scientific Pharmaceutical Conference, Thessaloniki, Greece, December 2-3, 2017.
4. **Aikaterini I. Argyriou**, Garyfallia Makrynitsa, Ioannis I. Alexandropoulos, Andriana Stamopoulou, Marina Bantzi, Athanassios Giannis, Stavros Topouzis, Andreas Papapetropoulos, Georgios A. Spyroulias. Conformational, dynamical and oxidation state variations monitored through gas HNOX infiltration and heme replacement by agonists. *BMC Pharmacology and Toxicology* (2017), Vol. 18, pp. 30-31.
5. **Aikaterini I. Argyriou**, Aikaterini Zompra, Maria Apostolidi, Christos T. Chasapis, Dionysios Vourtsis, Parthena Konstantinidou, Denis Drinas, Detlef Bentrop, Constantinos Stathopoulos, Georgios A. Spyroulias. NMR Study of LaM, RRM1 and RRM2 Domains of La Protein. 22th National Chemistry Conference, Thessaloniki, Greece, December 2-4, 2016.
6. **Aikaterini I. Argyriou**, Maria Apostolidi, Christos T. Chasapis, Dionysios Vourtsis, Parthena Konstantinidou, Denis Drinas, Detlef Bentrop, Constantinos Stathopoulos, Georgios A. Spyroulias. NMR Conformational Dynamics of LaM, RRM1 and RRM2 Domains of La Protein. 16th Hellenic Symposium on Medicinal Chemistry, Patras, Greece, January 23-25, 2015.
7. Christos T. Chasapis, **Aikaterini Argyriou**, Detlef Bentrop, Georgios A. Spyroulias. Selective amino acid isotope labeling strategies for solution NMR studies of high-molecular-weight protein drug-targets. *Journal of Peptide Science* (2012), Vol. 18, p. S38.

Καταθέσεις σε βάσεις δεδομένων

Έτος	Περιγραφή	Βάση δεδομένων (Κωδικός)
2023	Solution NMR assignment of RRM2 Cterminal of human La protein.	BMRB (51713)
2022	Backbone and side chain NMR assignment of the heme-nitric oxide/oxygen binding (H-NOX) domain from Nostoc punctiforme	BMRB (51495)
2021	¹ H, ¹³ C, ¹⁵ N backbone and side-chain resonance assignment of Nostoc sp. C139A variant of the heme nitric oxide/oxygen binding (H-NOX) domain in complex with cinaciguat	BMRB (28118)
2016	¹ H, ¹³ C, ¹⁵ N backbone and side-chain resonance assignment of Nostoc sp. C139A variant of the heme-nitric oxide/oxygen binding (H-NOX) domain	BMRB (26048)
2014	NMR Chemical Shift Assignments of LAM-RRM1 of La protein from Dictyostelium Discoedium	BMRB (25239)
2014	NMR Chemical Shift Assignments of C terminal RRM domain of La protein from Dictyostelium Discoedium	BMRB (19967)
2013	NMR Solution structure of the La motif of Dictyostelium discoideum La protein	PDB (2M5W)
2011	Backbone Chemical Shift Assignments of the Extracellular domain of GLIC, a prokaryotic nAChR homologue	BMRB (17695)

ΔΙΔΑΣΚΑΛΙΑ

Προπτυχιακό Πρόγραμμα

- Πληροφορική [PHA-A15-NEW]
- Οργανική Χημεία [PHA-A24-NEW]

- Φαρμακοχημεία III [PHA-D25 -NEW]
- Φαρμακευτική Φροντίδα [PHA-E22 -NEW]
- Βιοανόργανη Χημεία – Μοριακή Προσομοίωση [PHA-C11-NEW] (2022 – 2025)

Μεταπτυχιακό Πρόγραμμα “Ανακάλυψη και Ανάπτυξη Φαρμάκων”

- Σχεδιασμός και ανακάλυψη βιοδραστικών ενώσεων [DPHA-1]
- Σύγχρονες μέθοδοι στη σύνθεση φαρμάκων [DPHA-A02]

ΔΙΑΚΡΙΣΕΙΣ

- Υποτροφία Ιδρύματος Κρατικών Υποτροφιών, 2020 – 2022:
- Short-Term Fellowship, Federation of European Biochemistry, 2015