PERSONAL INFORMATION

Athina N. Markou



Department of Chemistry, National and Kapodistrian University of Athens, Athens, Greece

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atmarkou@chem.uoa.gr

Sex: Female| Date of birth 30/08/1981| Nationality Greek

INSTRUCTOR IN THE

Joint M.Sc. in Advanced Applied Organic Chemistry: Synthesis and Analysis of Pharmaceutically Relevant Compounds (MAAOC)

WORK EXPERIENCE

07/2026-now

Associate Professor of Analytical Chemistry

National & Kapodistrian University of Athens, Department of Chemistry, Athens, Greece

- Teaching and research in analytical chemistry and related areas
- Supervision of undergraduate, postgraduate and post-doctoral researchers
- Development and coordination of academic and research activities

Business or sector Higher Education and Research

02/2021 – 07/2026

Assistant Professor of Analytical Chemistry

National & Kapodistrian University of Athens, Department of Chemistry, Athens, Greece

- Teaching and research in analytical chemistry and related areas
- Supervision of undergraduate, postgraduate and post-doctoral researchers
- Development and coordination of academic and research activities

Business or sectorHigher Education and Research

01//2009 – 12/2020

Post-doctoral Fellow

National & Kapodistrian University of Athens, Department of Chemistry, Athens, Greece

- Undertook postdoctoral research in the group of Prof. E. Lianidou

Business or sectorHigher Education and Research

EDUCATION AND TRAINING

07/2005 – 12/2008

Ph.D. in Chemistry

National & Kapodistrian University of Athens, Department of Chemistry, Athens, Greece

- Thesis title: Gene expression analysis of circulating tumor cells in peripheral blood of early breast cancer patients by using electronic microarrays.
- Advisor: Prof. E. Lianidou

08/1989 – 04/1991

M.Sc. in Chemistry

National & Kapodistrian University of Athens, Department of Chemistry, Athens, Greece

09/1984 – 07/1988

B.Sc. in Chemistry

National & Kapodistrian University of Athens, Department of Chemistry, Athens, Greece

PERSONAL SKILLS

Mother tongue: Greek

Other language(s)	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	

English	C1	C2	C1	C2	C2

Communication skills

- Excellent scientific communication skills developed through university teaching, invited lectures, conference presentations, peer-reviewed publications, and international collaborations
- Strong mentoring and supervision skills developed through guidance of post-doctoral fellows, Ph.D. students, M.Sc. students, and undergraduate students

Organisational / managerial skills

- Leadership and project-management skills developed as project leader and scientific coordinator in national and international research projects
- Supervisory experience including 1 post-doctoral fellow, 2 Ph.D. students, 10 M.Sc. student, and 2 undergraduate students
- Extensive expertise in Analytical Chemistry and Clinical Chemistry
- Development of molecular PCR based assays
- Long-standing participation in international scientific networks and collaborative research initiatives
- Research interests: Real-time PCR, miRNAs, Circulating Tumor Cells, Liquid biopsy, cfDNA, Mutation detection, DNA methylation, Wastewater epidemiology

Publications

Author or co-author of 67 research articles in peer-reviewed journals.Publications include papers in journals such as *Analytical Chemistry, Clinical Chemistry, Science of the total Enviroment, Cancers and others*

Selected recent examples:

- Zafeiriadou A, Georgakopoulou G, Gerokonstantis TD, Kostakis M, Papamichalis S, Sideris Stiapis C, Tsolaki E, Kokona K, Thomaidis NS, Markou A. Passive wastewater surveillance of viral pathogens on cruise ships as a powerful tool for public health protection. Environ Pollut. 2026 May 15;397:127953.
- 2: Zafeiriadou A, Georgakopoulou G, Pitaouli F, Thomaidis N, Markou A. One Assay, Nine Targets: Advancing Viral Surveillance with Multiplex RT-ddPCR. Anal Chem. 2025 Oct 14;97(40):22229-22237.
- Zafeiriadou A, Kaltsis L, Thomaidis NS, Markou A. Simultaneous detection of influenza A, B and respiratory syncytial virus in wastewater samples by one-step multiplex RT-ddPCR assay. Hum Genomics. 2024 May 20;18(1):48.
- Kourkouli A, Thomaidis N, Dasenaki M, Markou A. Novel and Sensitive Touchdown Polymerase Chain Reaction Assays for the Detection of Goat and Sheep Milk Adulteration with Cow Milk. Molecules. 2024 Apr 17;29(8):1820.
- Stergiopoulou D, Smilkou S, Georgoulias V, Kaklamanis L, Lianidou E, Markou A. Development and Validation of a Novel Dual-Drop-off ddPCR Assay for the Simultaneous Detection of Ten Hotspots PIK3CA Mutations. Anal Chem. 2023 Sep 19;95(37):14068-14076.
- Markou AN, Londra D, Stergiopoulou D, Vamvakaris I, Potaris K, Pateras IS, Kotsakis A, Georgoulias V, Lianidou E. Preoperative Mutational Analysis of Circulating Tumor Cells (CTCs) and Plasma-cfDNA Provides Complementary Information for Early Prediction of Relapse: A Pilot Study in Early-Stage Non-Small Cell Lung Cancer. Cancers (Basel). 2023 Mar 21;15(6):1877.
- Alygizakis N, Markou AN, Rousis NI, Galani A, Avgeris M, Adamopoulos PG, Scorilas A, Lianidou ES, Paraskevis D, Tsiodras S, Tsakris A, Dimopoulos MA, Thomaidis NS. Analytical methodologies for the detection of SARS-CoV-2 in wastewater: Protocols and future perspectives. Trends Analyt Chem. 2021 Jan;134:116125.
- Markou A, Tzanikou E, Ladas I, Makrigiorgos GM, Lianidou E. Nuclease-Assisted Minor Allele Enrichment Using Overlapping Probes-Assisted Amplification-Refractory Mutation System: An Approach for the Improvement of Amplification-Refractory Mutation System-Polymerase Chain Reaction Specificity in Liquid Biopsies. Anal Chem. 2019 Oct 15;91(20):13105-13111.

Patents

Inventor or co-inventor on 2 patents, including 1 international patents and 1 Greek patent.

1. **Athina Markou** (PCT/EP2024/085574) «***Duplex specific pcr assays for the detection of adulteration with cow's milk in goat and sheep dairy products***»
2. Lianidou Evrykleia and **Markou Athina**, Pharmassist Ltd, (PCT Application No. PCT / GR2015 / 000036). «***Method of determining PIK3CA mutational status in a sample***». US Patent No. 62/034,231 (Aug. 7, 2014).

Presentations

Delivered 36 invited lectures at academic institutions, research centres, and international conferences in USA, Europe and Greece.

ADDITIONAL INFORMATION

Projects / Research Grants

- 2026–2030: Horizon Europe – Marie Skłodowska-Curie Actions (MSCA) Staff Exchanges. Project title: "Exploring the Mechanisms of Metastasis: Development of Novel Assays to Facilitate the Clinical Implementation of Circulating Tumor Cells (CTCs)." Partner: National and Kapodistrian University of Athens (NKUA). Principal Investigator (NKUA): Athina Markou.
- 2023–2026: Joint Action under the EU4Health Programme. Project title: "EU-Wastewater Integrated Surveillance for Public Health (EU-WISH)." Partner: National and Kapodistrian University of Athens (NKUA). Principal Investigator: Nikolaos Thomaidis.
- 2023–Present: National Network for Molecular Oncology. Principal Investigator: Evi Lianidou.
- 2019–2021: Hellenic Foundation for Research and Innovation (H.F.R.I.) – Postdoctoral Researchers Support Programme. Project title: "Liquid Biopsy as a Tool for the Early Detection of Clinical Relapse in Patients with Early-Stage Non-Small Cell Lung Cancer and for the Evaluation of Tumor Genetic Heterogeneity." Principal Investigator: Athina Markou.

Honours and Awards / Distinctions

- 2025 – Third Poster Award, 7th Advances in Circulating Tumor Cells (ACTC) Meeting: "Liquid Biopsy: From Bench to Bedside", Thessaloniki, Greece. Poster: "Decoding Waldenström's Macroglobulinemia (WM): High-Precision Mutation Profiling with Multiplex Digital PCR." Authors: E. Thanou, I. Kollias, N. Mavrianou-Koutsoukou, C. Liacos, K. Taouxi, A. Papadimou, K. Chrisostomidou, E. Terpos, E. Lianidou, M.A. Dimopoulos, E. Kastritis, T. Bagratuni, A. Markou.
- 2024 – First Poster Award, 4th Athens Conference on Advances in Chemistry, Athens, Greece. Poster: "NALCN Promoter Methylation as a Biomarker for Metastatic Risk in a Cohort of Patients with Non-Small Cell Lung Cancer." Authors: E. Thanou, D. Londra, I. Balgkouranidou, E. Efthimiadou, A. Delipetrou, E. Tsaroucha, M. Theodosiou, V. Georgoulias, A. Kotsakis, E. Lianidou, A. Markou.
- 2023 – Second Award for Oral Presentation, 21st Hellenic Congress of Clinical Chemistry, Athens, Greece. Presentation: "Plasma Exosome Metabolites and miRNAs: An Unexplored Field for Predicting Relapse in Patients with Early-Stage Non-Small Cell Lung Cancer." Authors: E. Thanou, V. Bafiti, S. Ouzounis, A. Kotsakis, V. Georgoulias, E. Lianidou, T. Katsila, A. Markou.
- 2020 – State Scholarships Foundation (IKY) Scholarship for the research project: "Liquid Biopsy in Breast Cancer: Treatment Response-Associated Mutations in the Primary Tumor, Circulating Tumor Cells (CTCs), and Circulating Tumor DNA (ctDNA)."
- 2019 – First Poster Award, 4th Advances in Circulating Tumour Cells (ACTC) Meeting, Corfu, Greece. Poster: "Detection of PIK3CA Hotspot Mutations in Single Circulating Tumor Cells Using a Combination of NAPA (NaME-Pro-Assisted ARMS) and Droplet Digital PCR." Authors: D. Stergiopoulou, A. Markou, E. Tzanikou, L. Oomen, J. Broekmaat, A. Tibbe, V. Georgoulias, E. Lianidou.
- 2019 – First Award for Oral Presentation, 17th Hellenic Conference of Clinical Chemistry, Athens, Greece. Presentation: "NaME-Pro-Assisted ARMS-PCR (NAPA): A Novel Approach to Improve the Specificity of ARMS-PCR in Liquid Biopsy." Authors: A. Markou, E. Tzanikou, I. Ladas, G.M. Makrigiorgos, E. Lianidou.
- 2016 – Award for Highly Cited Research Published in Lung Cancer (Elsevier, based on Scopus citation data). Publication: "Clinical Evaluation of microRNA Expression Profiling in Non-Small Cell Lung Cancer."
- 2011 – AACR Susan G. Komen Scholar-in-Training Award, 102nd Annual Meeting of the American Association for Cancer Research (AACR), Orlando, Florida, USA. Presentation: "Molecular Characterization of Circulating Tumor Cells in Breast Cancer by Liquid Bead Array Hybridization Assay." Authors: A.N. Markou, A. Strati, N. Malamos, V. Georgoulias, E. Lianidou.

Bibliometric Indicators

- h-index: 30; total citations: 3150 (Google Scholar).
- h-index: 28; total citations: 4493, ((Scopus).