

**Dr. Angeliki Karagiota**  
**Biologist**

| Item  | Number |
|---|--------|
| Books   | 1      |
| Book Chapters   |        |
| Articles in International Peer-Reviewed Journals Indexed in Bibliographical Databases | 7      |
| Articles not Indexed in Bibliographical Databases                                     |        |
| Refereed International Conference Presentations                                       | 17     |
| Invited Presentations   |        |
|   |        |
| Google Scholar/Scopus Citation Index (including self-citations)                       |        |
| Google Scholar/Scopus h-index   | 4      |
|   |        |
| Involved in Successful Grant Applications   |        |

**1. EDUCATION**

- 2015 – 2019      **Faculty of Medicine, University of Thessaly**  
**Ph.D. (2015-2018) on “Study of the post-translational modification mechanisms of proteins and their role on cellular response to hypoxia and carcinogenesis”**
- Study of the role of HIF-1 $\alpha$  phosphorylation by ERK1/2 kinases in cancer cells adaptation and survival upon hypoxia, as well as HIF-1 $\alpha$  activity regulation by the phosphatase calcineurin.  
Investigation of HIF-1 $\alpha$  inhibition in cancer cells by cell permeable HIF-1 $\alpha$ -derived peptides.
- 2013 – 2014      **Faculty of Medicine, University of Thessaly**  
**MSc in Clinical applications of Molecular Medicine, grade "Excellent" (9.60)**
- Master diploma thesis with title: "Study of the role of phosphorylation in the subcellular localization and activity of hypoxia-inducible factor 1 (HIF-1 $\alpha$ )"
- 2007 – 2012      **Aristotle University of Thessaloniki**  
**Degree of Biology, grade "Very Good" (7.27)**
- Diploma thesis with title: "Determination of bacteriocins of the probiotic bacteria Bacillus subtilis by using HPLC method"

## 2. EMPLOYMENT HISTORY

- 2019 – 2022      **Post-doctoral researcher**, Faculty of Medicine, University of Thessaly  
“Regulation of the carbohydrate and lipid metabolism under hypoxia and its effect on cancer cells’ physiology”
- Investigation of the mechanism through which of the metabolic enzyme PDP1 affects transcriptional regulation of HIF-1 target genes upon hypoxia. Additionally, it was studied of the role of hypoxia and HIF-1 $\alpha$  in the AGPAT enzymes expression and the regulation of lipid metabolism and cancer cells survival.
- 2020              **Participation in research project**  
“Novel HIF-1 $\alpha$  protein interactions and their role in cancer cell adaptation to low oxygen”
- 2019              **Participation in research project**  
“Hypoxia-induced Changes in SUMO Conjugation Affect Transcriptional Regulation Under Low Oxygen”
- 2015              **Participation in the research program "ARISTEIA II", (HYPOXYTARGET 3129)**  
with title: "Targeting Hypoxia-inducible Transcriptional Factors HIF in Inflammation and Cancer"
- 2011              **Practical training** on Assisted Reproduction techniques, in the Advanced Medical Center "IAKENTPO" Thessaloniki Greece

## 3. ACADEMIC AND SCIENTEFIC EXPERIENCE

### 3.1 Undergraduate teaching

- Winter Sem.  
2021 & 2022      **Faculty of Medicine**, University of Thessaly
- Participation in the supervision and training of undergraduate students in the framework of the practical course "Biochemistry of Gene Expression, Human Organs & Functions"
- Spring Sem.  
2017-2019,  
2022              **Faculty of Medicine**, University of Thessaly
- Participation in the supervision and training of undergraduate students in the framework of the practical course "Biochemistry of Enzymes and human Metabolism"

### 3.4 Supervisions/Co-supervision of Master's Theses

## 4. PUBLICATIONS

### 4.1 Books

#### PhD thesis

“The role of protein post-translational modification mechanisms in cellular response to hypoxia and its involvement in carcinogenesis”

Angeliki Karagiota, University of Thessaly, Larissa, 2019

### 4.2 Articles in International Peer-Reviewed Journals Indexed in Bibliographical Databases

1. **Angeliki Karagiota**, Amalia Kanoura, Efrosyni Paraskeva, George Simos and Georgia Chachami. Pyruvate dehydrogenase phosphatase 1 (PDP1) stimulates HIF activity by supporting histone acetylation under hypoxia. *The FEBS Journal*, under revision
2. **Angeliki Karagiota**, Georgia Chachami and Efrosyni Paraskeva. Lipid metabolism in cancer: the role of acylglycerolphosphate acyltransferases (AGPATs). *Cancers*, 2022, 14(1), 228 Review. DOI:10.3390/cancers14010228
3. Kreon Koukoulas, Antonis Giakountis, **Angeliki Karagiota**, Martina Samiotaki, George Panayotou, George Simos and Ilias Mylonis. ERK signaling controls productive HIF-1 binding to chromatin and cancer cell adaptation to hypoxia through HIF-1a interaction with NPM1. *Molecular Oncology*, 2021, DOI: 10.1002/1878-0261.13080
4. **Angeliki Karagiota**, Hara Tsitsopoulou, Rafail Nikolaos Tasakis, Varvara Zoumpourtikoudi and Maria Touraki. Characterization and Quantitative Determination of a Diverse Group of *Bacillus subtilis* subsp. *subtilis* NCIB 3610 Antibacterial Peptides. *Probiotics and Antimicrobial Proteins*, 2020, 13:555–570. DOI: 10.1007/s12602-020-09706-y
5. Georgia Chachami, Nicolas Stankovic-Valentin, **Angeliki Karagiota**, Angeliki Basagianni, Uwe Plessmann, Henning Urlaub, Frauke Melchior and George Simos. Hypoxia-induced changes in SUMO conjugation affect transcriptional regulation under low oxygen. *Molecular & Cellular Proteomics*, 2019, 18: 1197 – 1209. DOI: 10.1074/mcp.RA119.001401
6. **Angeliki Karagiota**, Ilias Mylonis, George Simos and Georgia Chachami. Protein phosphatase PPP3CA (calcineurin A) down-regulates hypoxia-inducible factor transcriptional activity. *Archives of Biochemistry and Biophysics*, 2019, 664: 174-182. DOI: 10.1016/j.abb.2019.02.007
7. **Angeliki Karagiota**, Maria Kourti, George Simos and Ilias Mylonis. HIF-1 $\alpha$ -derived cell-penetrating peptides inhibit ERK-dependent activation of HIF-1 and trigger apoptosis of cancer cells under hypoxia. *Cellular and Molecular Life Sciences*, 2019, 76:809-825. DOI: 10.1007/s00018-018-2985-7

## 5. REFEREED INTERNATIONAL CONFERENCE PRESENTATIONS

1. **A. Karagiota**, A. Kanoura, G. Simos, E. Paraskeva, G. Chachami (2022). Pyruvate dehydrogenase phosphatase 1 (PDP1) is a regulator of HIF activity via an Acetyl-CoA

- dependent mechanism. The 46th FEBS Congress - THE BIOCHEMISTRY GLOBAL, 9-14 July 2022 Lisbon, Portugal, FEBS open BIO 12 (Suppl. 1), Abstract P-04.5-031, p297 (Poster).
2. **Angeliki Karagiota**, Kreon Koukoulas, Georgia Chachami, Ilias Mylonis, Efrosyni Paraskeva, Martina Samiotaki, George Panayotou, George Simos (2022). Regulation of the cellular response to hypoxia by reversible phosphorylation. EMBO Workshop 2022: Reversible phosphorylation, signal integration and drug discovery, 22–26 May 2022, Vouliagmeni, Greece, Abstract T73, p71 (Oral presentation).
  3. **Angeliki Karagiota**, Amalia Kanoura, Efrosyni Paraskeva, George Simos, Georgia Chachami (2022). The Pyruvate dehydrogenase (PDH) phosphatase PDP1 coordinates acetyl-coA production and the transcription of HIF target genes under hypoxia. EMBO Workshop 2022: Reversible phosphorylation, signal integration and drug discovery, 22–26 May 2022, Vouliagmeni, Greece, Abstract P30, p128 (Poster).
  4. **Angeliki Karagiota**, Amalia Kanoura, George Simos, Efrosyni Paraskeva and Georgia Chachami (2021). The metabolic enzyme pyruvate dehydrogenase phosphatase 1 (PDP1) enhances HIF activity under hypoxia by an acetylation-dependent mechanism. 71ο συνέδριο της Ελληνικής Εταιρίας Βιοχημείας και Μοριακής Βιολογίας (EEBMB), 26– 28/11/2021, Αθήνα. Abstracts ST36, p.49 (Oral presentation).
  5. **Angeliki Karagiota**, Konstantina Paraskeva, Christina Arseni, Ilias Mylonis, George Simos, Georgia Chachami, and Efrosyni Paraskeva (2021). Expression of the glycerophospholipid and triacylglyceride synthesis enzyme AGPAT4 is upregulated in cancer cells under hypoxic conditions. 71ο συνέδριο της Ελληνικής Εταιρίας Βιοχημείας και Μοριακής Βιολογίας (EEBMB), 26–28/11/2021, Αθήνα. Abstracts P76, p.134 (Poster).
  6. **Angeliki Karagiota**, Amalia Kanoura, George Simos, Efrosyni Paraskeva and Georgia Chachami (2021). The metabolic enzyme pyruvate dehydrogenase phosphatase 1 (PDP1) is a positive regulator of HIF activity during the hypoxic response. 7th International Conference on Tumor Microenvironment and Cellular Stress: Signaling, Metabolism, Imaging and Therapeutic Targets, Aegean Conferences, Kos, Greece September 20-25, 2021, Abstract P16, p36 (Oral presentation).
  7. **Angeliki Karagiota**, Ilias Mylonis, George Simos and Georgia Chachami (2018). Protein phosphatase PDP1 regulates HIF activity. Abstracts Book of the 69th Congress of the Hellenic Society of Biochemistry and Molecular Biology Larissa, November 23-25, 2018, Abstract 172 (Poster).
  8. **A. Karagiota**, M. Kourti, G. Simos, I. Mylonis (2018). Cell-penetrating peptides inhibiting ERK-dependent activation of HIF1 $\alpha$  reduce survival and induce apoptosis of cancer cells under hypoxia. The 43rd FEBS Congress BIOCHEMISTRY FOREVER Prague 2018, FEBS open BIO Supplement 1, July 2018, Abstract 211 (Poster).
  9. **A. Karagiota**, M. Kourti, G. Simos, I. Mylonis (2018). Cell-penetrating peptides inhibiting ERK-dependent activation of HIF1 $\alpha$  reduce survival and induce apoptosis of cancer cells under hypoxia. Abstract book of the 18th FEBS Young Scientists' Forum, Prague – Czech Republic, July 4-7, 2018, Abstract 52 (Poster).
  10. **Angeliki Karagiota**, Ilias Mylonis, George Simos and Georgia Chachami (2017). The role of de-phosphorylation in the regulation of HIF-1 $\alpha$  expression and activity. Book of abstracts of the 68th Congress of the Hellenic Society of Biochemistry and Molecular Biology Athens, November 10-12, 2017, Abstract P38 (Poster).
  11. **A. Karagiota**, M. Kourti, G. Simos, I. Mylonis (2017). Inhibition of HIF-1 $\alpha$  phosphorylation by cell-penetrating peptides impairs metabolic adaptation and triggers apoptosis of cancer cells under hypoxia. Book of abstracts of the 68th

- Congress of the Hellenic Society of Biochemistry and Molecular Biology Athens, November 10-12, 2017, Abstract A10 (Oral presentation).
12. **Angeliki Karagiota**, Maria Kourti, George Simos, Ilias Mylonis (2016). Cell permeable peptides that inhibit activation of HIF-1 $\alpha$  by ERK block cancer cell growth under hypoxia. Book of abstracts of the 67th Congress of the Hellenic Society of Biochemistry and Molecular Biology Ioannina, November 25-27, 2016, Abstract 129 (Poster).
  13. **Angeliki Karagiota**, Maria Kourti, George Simos, Ilias Mylonis (2016). Cell permeable peptides that inhibit activation of HIF-1 $\alpha$  by ERK block cancer cell growth under hypoxia. Book of abstracts, 4ο Πανελλήνιο Forum Νέων Επιστημών, Ιωάννινα, Νοέμβριος 24, 2016, Abstract 77 (Poster).
  14. Mylonis I., Kourti M., **Karagiota A.**, Simos G (2015) Development of peptide inhibitors that target the ERK-dependent function of HIF-1 $\alpha$ . The FEBS Journal Supplement 1 of the 40th Congress of the Federation of the European Biochemical Societies Berlin - Germany, July 4-9, 2015, Abstract 287 (Poster).
  15. **Angeliki Karagiota**, George Simos, Ilias Mylonis (2014). Functional analysis of Flag-tagged HIF-1 $\alpha$  forms carrying mutations inside their ERK-targeted domain. Book of Abstracts of the 65th Congress of the Hellenic Society of Biochemistry and Molecular Biology Thessaloniki, November 28-30, 2014, Abstract 134 (Poster).
  16. **Angeliki Karagiota**, George Simos, Ilias Mylonis (2014). Functional analysis of Flag-tagged HIF-1 $\alpha$  forms carrying mutations inside their ERK-targeted domain. Abstract book, 2ο Πανελλήνιο Forum Νέων Επιστημόνων Θεσσαλονίκη, Νοέμβριος 27, 2014, Abstract 47 (Poster).
  17. **Karagiota A.**, Touraki M. (2013). Quantitative determination of the bacteriocins produced by the potential probiotic *Bacillus subtilis* NCIMB 3610 using turbidometric analysis and HPLC. Proceedings of the 35th Scientific Conference of Hellenic Association for Biological Sciences Nafplio, May 23-25, 2013, Abstract 137 (Poster).

## 6. ADMINISTRATIVE EXPERIENCE

- 2014 - today: Member of the Hellenic Society for Biochemistry and Molecular Biology (HSBMB, the FEBS constituent society in Greece)
- 2018: President of the Organizing Committee of the 6th Pan-Hellenic Young Scientists' Forum November 22, held in the context of the 69th Congress of the Hellenic Society of Biochemistry and Molecular Biology (HSBMB), Larissa, Greece
- 2016: Member of the Organizing Committee of the 4th Pan-Hellenic Young Scientists' Forum, November 24, held in the context of the 67th Congress of the Hellenic Society of Biochemistry and Molecular Biology (HSBMB), Ioannina, Greece

## 7. MISCELLANEOUS

### FELLOWSHIPS

- 2019 – 2021 Fellowship for Post-Doctoral Research from Greek States scholarship foundation (IKY), MIS-5033021
- 2018 Travel fellowship from FEBS for participation at the 18th FEBS Young Scientist Forum and 43rd FEBS Congress, Prague – Czech Republic
- 2015 – 2018 Fellowship for Doctoral Studies from Greek States scholarship foundation (IKY), MIS 5000432

ENGLISH

Certificate of Competency in English, University of Michigan, 2004

COMPUTER  
SKILLS

Very Good level, Computer Assurance Certificate from the University of Cambridge - International Examinations, IT Skills Standard and ECDL Certificate