



I the undersigned asks to participate in the public selection, for qualifications and examinations, for the awarding of a type B fellowship at **Dipartimento di Chimica**

Scientist- in - charge: **Professor Pierfausto Seneci**

**ANTONIA ANTONIOU**

**CURRICULUM VITAE**

## PERSONAL INFORMATION

|               |            |
|---------------|------------|
| Surname       | ANTONIOU   |
| Name          | ANTONIA    |
| Date of birth | 07.03.1989 |

## PRESENT OCCUPATION

| Appointment | Structure |
|-------------|-----------|
| -           | -         |

## EDUCATION AND TRAINING

| Degree                            | Course of studies  | University                           | year of achievement of the degree |
|-----------------------------------|--|--------------------------------------|-----------------------------------|
| Degree                            | Diploma in Chemistry (4-year studies, 240 ECTS-credits) 7.50/10, "VERY GOOD" | University of Patras, Patras, Greece | 2010                              |
| Specialization                    | -  | -                                    | -                                 |
| PhD                               | PhD in Organic/Medicinal Chemistry   | University of Patras, Patras, Greece | 2017                              |
| Master                            | Master in Science in Medicinal Chemistry, "EXCELLENT"                        | University of Patras, Patras, Greece | 2012                              |
| Degree of medical specialization  | -  | -                                    | -                                 |
| Degree of European specialization | -  | -                                    | -                                 |
| Other                             | -  | -                                    | -                                 |



## REGISTRATION IN PROFESSIONAL ASSOCIATIONS

| Date registration | of Association  | City           |
|-------------------|---|----------------|
| 05.04.2014        | European Peptide Society (EPS)<br><a href="https://www.eurpepsoc.com">https://www.eurpepsoc.com</a> | Prato, Italy   |
| 25.11.2010        | Association of Greek Chemists (EEX)<br><a href="https://www.eex.gr">https://www.eex.gr</a>          | Patras, Greece |

## FOREIGN LANGUAGES

| Languages | level of knowledge |
|-----------|--------------------|
| English   | B2                 |
| German    | B2                 |

## AWARDS, ACKNOWLEDGEMENTS, SCHOLARSHIPS

| Year      | Description of award  |
|-----------|---|
| 2014-2015 | 16-month scholarship in a project related to my PhD thesis in the National Centre for Scientific Research "DEMOKRITOS" in Athens. My key role was the design, synthesis and characterization of a series of Taepenin D analogs, suitable for structure activity relationship studies as Hedgehog Inhibitors. Moreover, I contributed to the writing of 2 scientific research articles and participated in international conferences, symposia and training schools. |

## TRAINING OR RESEARCH ACTIVITY

During my 4th year of my undergraduate studies and the obligatory experimental research project for my diploma thesis, I was trained in the use of lab equipment and synthetic experimental procedures and participated in the synthesis of polyamine conjugates, such as spermidine analogs of Kukoamine A and of Chloramphenicol.

Furthermore, I had the opportunity to improve my lab and research skills during my MSc studies. My post-graduate diploma thesis project involved the synthesis of unnatural amino acids, using natural amino acids as chiral templates. This project required several protection and deprotection procedures, as well as solution and solid phase synthesis. This work has been presented in two international symposia and part of it, regarding the chemoselective protection of glutathione and application to the synthesis of trypanothione is published in *The Journal of Organic Chemistry*.

Finally, during my PhD studies, I worked on a project regarding the synthesis of dehydroabietic acid derivatives as anticancer and antibacterial agents, suitable for structure activity relationship studies. At the same period, I worked also in another project of our research group regarding Minoxidil analogues and conjugates. Thus, I gained strong experience in organic synthetic procedures and modifications of natural products and acquired high skills in spectra interpretation and structure elucidation, using modern analytical methods, such as  $^1\text{H-NMR}$ ,  $^{13}\text{C-NMR}$ , 2D-NMR, ESI-MS, GC-MS and FT-IR. The results of this work are presented among my thesis in peer-reviewed journals (*Future Med.Chem.*, *Med.Chem.Comm.*, *Biorg. Med. Chem.*, *Letters and Org.Lett.*) and in four international conferences.



## PROJECT ACTIVITY

| Year      | Project   |
|-----------|---|
| 2014-2015 | "3069 - GliTerIn: Gli-mediated transcription inhibitors based on furanoditerpenoid natural products" of Action Excellence II (16-month scholarship) |

## PATENTS

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| - |
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## CONGRESSES AND SEMINARS

| Date             | Title   | Place   |
|------------------|---|---|
| 25-29.11.2018    | 30 <sup>th</sup> International Symposium on the Chemistry of Natural Products<br>"Abietane diterpenes - high value natural precursors for the development of new antimicrobial agents."                   | Royal Olympic Hotel, Athens, Greece                                 |
| 23-25.11.2015    | Targeting Hedgehog Signaling in Cancer Stem Cells, COST Action CM1106<br>"Taepeenin D Derivatives Targeting The Hedgehog Pathway."  | University of Lisbon, Lisbon, Portugal                              |
| 26-27.03.2015    | 3 <sup>rd</sup> Working Group Meeting, COST Action CM1106   | St. George Lycabettus Boutique Hotel, Athens, Greece                |
| 23-25.01.2015    | 16 <sup>th</sup> Hellenic Symposium on Medicinal Chemistry<br>"Taepeenin D Derivatives Targeting The Hedgehog Pathway."   | Conference and Culture Center, University of Patras, Patras, Greece |
| 19-20.01.2015    | STEMCHEM - Chemical Approaches to Targeting Drug Resistance in Cancer Stem Cells<br>"Taepeenin D Derivatives Targeting The Hedgehog Pathway."   | University of Barcelona, Barcelona, Spain                           |
| 13-15.11.2014    | 1 <sup>st</sup> DDDD International Congress<br>"Exploration of Structure Activity Relationships of Taepeenin D Derivatives Targeting The Hedgehog Pathway."   | Royal Olympic Hotel, Athens, Greece                                 |
| 12-17.05.2014    | 1 <sup>st</sup> Synthetic & Medicinal Chemistry Symposium<br>"Synthesis of unnatural amino acids, using the readily available N-Trityl-L-aspartic acid-beta methyl ester."                                | Department of Pharmacy, University of Patras, Patras, Greece        |
| 31.08-05.09.2014 | 33 <sup>rd</sup> European Peptide Symposium<br>I) "Synthesis of Unnatural Amino Acids, Using the Readily Available N-Trityl-L-Aspartic Acid-Beta Methyl Ester", &<br>II) "Novel Trypanothione and Analogs | National Palace of Culture, Sofia, Bulgaria                         |



|               |   |   |
|---------------|---|---|
|               | Synthesis Based on Chemical Modification of Glutathione"  |   |
| 26-28.09.2013 | 5 <sup>th</sup> BBBB International Conference<br>"Synthesis of Artemisinin Dimers And Their Biological Avaluation Against MCF7 Breast Cancer Cells"   | Metropolitan Hotel, Athens, Greece                                  |
| 05.2013       | 2-Day Seminar Health and Safety in the Laboratory Area  | Conference and Culture Center, University of Patras, Patras, Greece |
| 09-10.05.2012 | 13 <sup>th</sup> International Conference on Medicinal Chemistry &<br>1 <sup>st</sup> FP-7-SEE-DRUG Workshop on "From Chemical to Systems Biology: Peptide Synthesis and Protein Production"<br>"Synthetic Studies Towards Methodologies Leading to Novel Unnatural Amino Acids." | Conference and Culture Center, University of Patras, Patras, Greece |

## PUBLICATIONS

|       |
|-------|
| Books |
| -     |

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|---|
| Articles in reviews (peer-review journals)  |
| 1) "Synthesis and structure-activity relationships of novel abietane diterpenoids with activity against <i>Staphylococcus aureus</i> ", <i>Future Med.Chem.</i> , 11(24), 3109-3124, Future Science, 2019 |
| 2) "Identification of Gli-mediated transcription inhibitors through synthesis and evaluation of taepeenin D analogues", <i>Med.Chem.Comm.</i> , 7, 2328-2331, Royal Society of Chemistry, 2016            |
| 3) "Chemoselective Protection of Glutathione in the Preparation of Bioconjugates: The Case of Trypanothione Disulfide", <i>J.Org.Chem.</i> , 81, 4353-4358, ACS Publications, 2016                        |
| 4) "Synthesis of minoxidil conjugates and their evaluation as HL-60 differentiation agents", <i>Bioorg.Med.Chem.Lett.</i> , 26, 1145-1150, Science Direct, 2016   |
| 5) "A fast entry to funanoditerpenoid-based hedgehog signaling inhibitors: Identifying essential structural features", <i>Org.Lett.</i> , 16, 3344-3347, ACS Publications, 2014                           |

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| Congress proceedings   |
| 1) 30 <sup>th</sup> International Symposium on the Chemistry of Natural Products, International Union of Pure and Applied Chemistry, Royal Olympic Hotel, Athens, Greece, 2018   |
| 2) Targeting Hedgehog Signaling in Cancer Stem Cells, European Cooperation in Science and Technology (COST Action CM1106), University of Lisbon, Lisbon, Portugal, 2015  |
| 3) 3 <sup>rd</sup> Working Group Meeting, Chemical Approaches to Targeting Drug Resistance in Cancer Stem Cells, European Cooperation in Science and Technology (COST Action CM1106), St. George Lycabettus Boutique Hotel, Athens, Greece, 2015 |
| 4) 16 <sup>th</sup> Hellenic Symposium on Medicinal Chemistry, European Federation for Medicinal Chemistry (EFMC), Conference and Culture Center, University of Patras, Patras, Greece, 2015   |
| 5) Chemical Approaches to Targeting Drug Resistance in Cancer Stem Cells, European Cooperation in Science and Technology (COST Action CM1106), University of Barcelona, Barcelona, Spain, 2015   |



6) 1<sup>st</sup> DDDD International Congress, European Federation for Medicinal Chemistry (EFMC) & European Federation for Pharmaceutical Science (EUFEPS), Royal Olympic Hotel, Athens, Greece, 2014

7) 1<sup>st</sup> Synthetic & Medicinal Chemistry Symposium, University of Patras, Patras, Greece, 2014

8) 33<sup>rd</sup> European Peptide Symposium, European Peptide Society (EPS), National Palace of Culture, Sofia, Bulgaria, 2014

9) 5<sup>th</sup> BBBB International Conference, European Federation for Pharmaceutical Science (EUFEPS), Metropolitan Hotel, Athens, Greece, 2013

10) 13<sup>th</sup> International Conference on Medicinal Chemistry, University of Patras, Conference and Culture Center, University of Patras, Patras, Greece, 2013

OTHER INFORMATION

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Declarations given in the present curriculum must be considered released according to art. 46 and 47 of DPR n. 445/2000.

The present curriculum does not contain confidential and legal information according to art. 4, paragraph 1, points d) and e) of D.Lgs. 30.06.2003 n. 196.

Place and date: Friedrichshafen, 18.12.2019

SIGNATURE