

CURRICULUM VITAE

Last name: **Aligiannis**
First name: **Nektarios**
Date / Place of Birth: 13 March 1972 / Athens
Nationality: Greek
Home Address: Isdrakiou 22-24 Ilissia, 15774, Athens
Postal Address: As Above
Telephone: 003-6973593237
E-Mail: aligiannis@pharm.uoa.gr

Current position: Lecturer, University Of Athens, Faculty of Pharmacy, Department of Pharmacognosy and Natural Products Chemistry, Panepistimioupolis, Athens, 15771, Greece.

EDUCATION

- **11/2004-05/2007:** Post-doctoral research student at the Laboratory of Pharmacognosy and Chemistry of Natural Products of the Department of Pharmacy, University of Athens, Greece.
- **05/2004-10/2004:** Post-doctoral research student at the Laboratory of Pharmacognosy and Chemistry of Natural Products of the Department of Pharmacy, University of 'Besancon' (France).
- **01/2003-12/2003:** Post-doctoral research student at the Laboratory of Pharmacognosy and Chemistry of Natural Products of the Department of Pharmacy, University of Athens, Greece.
- **12/2002:** Ph.D. Degree awarded by the Department of Pharmacy, University of Athens, Greece.
- **10/1997-6/2001:** Ph.D. student at the Laboratory of Pharmacognosy and Chemistry of Natural Products of the Department of Pharmacy, University of Athens, Greece.
- **10/1997:** M.Sc. Degree concerning "Pharmacognosy of biologically active Natural Products" from the Laboratory of Pharmacognosy and Chemistry of Natural Products of the Department of Pharmacy, University of Athens, Greece. Rated: First Class.
- **10/1995-10/1997:** M.Sc. student at the Laboratory of Pharmacognosy and Chemistry of Natural Products of the Department of Pharmacy, University of Athens, Greece.
- **02/1995:** Degree in Pharmacy from the Department of Pharmacy, University of Athens, Greece. Rated: Very Good.
- **1990-1995:** Under-graduate student at the Department of Pharmacy, University of Athens, Greece.

AWARDS

- **1996:** Award for graduate studies in "Pharmacognosy of biologically active natural products". Source: State Scholarships Foundation.
- **2000:** Awarded the "Best Performance" prize for M.Sc. studentship by the Hellenic society of the Pharmaceutical Industry.

RESEARCH EXPERIENCE

- **11/2004-Today:** Laboratory of Pharmacognosy and Chemistry of Natural Products of the Department of Pharmacy, University of Athens, Greece.
- **05/2004-10/2004:** Laboratory of Pharmacognosy and Chemistry of Natural Products of the Department of Pharmacy, University of 'Besancon' (France).

- **03/1993-04/2004:** Laboratory of Pharmacognosy and Chemistry of Natural Products of the Department of Pharmacy, University of Athens, Greece

RESEARCH INTERESTS

- Phytochemical analysis of plants of the Greek, Mediterranean flora as well as plants from Mongolia.
- Synthesis of natural products derivatives (flavonoids, benzofurans, anthracyclines, chalcones, diarylpropanes, stilbenes)
- Applications of modern and/or green technology in plant extractions (Supercritical Fluid Extraction, Accelerated Solvent Extraction, Extraction with microwaves), the separation of natural compounds (Counter Current Chromatography) and synthesis of natural products derivatives (Microwaves)
- Biological evaluation of natural products and semi-synthetic derivatives for their antioxidant, estrogenic, anti- or angiogenic, antimicrobial, cytotoxic, bleaching and antiaging properties.
- Exploitation of bioactive natural products as pharmaceuticals and nutraceuticals.
- Applications of 1D and 2D NMR, HPLC, MPLC, CC and LC-MS in Natural Products Chemistry.
- Recording and assessing folk medicine informations

TEACHING EXPERIENCE

- **05/2007-Today:** Lecturer at the Department of Pharmacy, University of Athens, Greece ('Natural Products Spectroscopy' for undergraduate students & 'Spectroscopy I' for MSc students).
- **12/2002-05/2007:** Special scientist Π.Δ.407/80 as Lecturer at the Department of Pharmacy, University of Athens, Greece (Laboratory of Pharmaceutical Botany).
- **10/2000-05/2001:** Teaching assistant for the isolation and identification methods on natural products research for undergraduate students at the Department of Pharmacy, University of Athens, Greece.
- **11/1997-06/1998** and **11/1999-06/2000:** Assistant in undergraduate laboratory of Pharmacognosy II at the Department of Pharmacy, University of Athens, Greece.

PROFESSIONAL ASSOCIATIONS

- American Society of Pharmacognosy (ASP)
- Society for Medicinal Plant and Natural Product Research (GA)
- Greek Pharmaceutical Association
- Hellenic Society of Ethnopharmacology

PATENTS

- "Evaluation of the antioxidant and cell-protecting properties of the hydroxytyrosol and the extracts derived from olive-fruit, olive oil, oil-press waste, and leaves of the olive trees-applications thereof" GR/US Patent, ICP: A61K31/047 (LAVIPHARM SA)
- "Evaluation of the antioxidant and cytoprotective properties of 5-(ethylidene-2-oxo-tetrahydro-pyran-4) acetic acid and extracts from olives, olive oil, oil mill effluents and olive tree leaves and applications thereof" GR/US Patent, ICP: A61K31/366 (LAVIPHARM SA)
- "Compounds and Composition Derived from Olives and Methods of Use Thereof" U. S. Patent NO: 10/364,305 (LAVIPHARM, 2002)

- “Products from plants of genus *Onobrichis* for the treatment of hormone dependent illnesses ” Chalabalaki M, Fokialakis N., Aligiannis N., Skaltsounis A.L., Mitaku S. O V I , 2004 Greece (Number. 1004825 – International clacisication. CL: A61K 35/78, A23L 1/30).

FUNDED PROJECTS

- **1995-1996:** Participation in the research program ΠΕΝΕΔ K.A 70/2/1559 with subject matter “The synthesis of Natural Product Glycosides with anticancer activity – Testing at several stages of differentiation in natural and cancerous lymphocytes and the development of standard immunology methods for their measurement”.
- **1996:** Participation in the research program ΠΕΝΕΔ K.A 70/4/2413 with subject matter “The synthesis of novel lipophilic anthracyclins”.
- **1996-1997:** Participation in the research program ΠΕΝΕΔ K.A 70/3/2930 with subject matter “The synthesis and pharmacological evaluation of novel anticancer compounds”.
- **1996-1998:** Participation in the research program K.A 70/3/3575 (P.N. GEROLYMATOS) with subject matter “Development of novel drugs with activity in the Central Nervous System”.
- **1997-1999:** Participation in the research program ΠΑΒΕΤ K.A 70/3/3731 with subject matter “The development of novel drugs with Central Nervous System activity”.
- **1999:** Participation in the research program ΠΕΝΕΔ K.A 70/4/4050 with subject matter “The study of antiviral activity of natural compounds and derivatives thereof”.
- **1999:** Participation in the research program ΠΕΝΕΔ K.A 70/3/3731 with subject matter “Development of new drugs with selective action on hormone dependent gynaecological cancers”.
- **2000-2001:** Participation in the research program ΠΕΝΕΔ K.A 70/3/5066 with subject matter “The development of novel compounds and the analysis of the mechanism of their activity at the steroidal hormone receptors”.
- **2004-2006:** Participation in the research program ‘Pithagoras: Reinforcement of Research Groups of the National and Kapodistrian University of Athens’ with subject matter “Synthesis and biological evaluation of anticancer drugs and administration in combination with natural antioxidants”
- **1999-2005:** Participation in the research program K.A 70/3/4362 (SERVIER-ADIR) with subject matter “Biological evaluation of plants from the flora of Crete”.
- **2002-2006:** Participation in the research program K.A 70/3/6733 (JANSSEN) with subject matter “Synthesis of inhibitors of PNP and TNF-a”.
- **2006-2007:** Participation in the research program ΔΣ ΒΕΣΠΙΟ K.A 70/3/9029 (Lavipharm) with subject matter “Estrogenic activity evaluation of natural products and their derivatives. Development of novel pharmaceuticals and cosmetics”.
- **2006-2008:** Participation in the research program Π Ε Π K.A 70/3/9257 (Biohellas) with subject matter “Development of methodology for aromatic and pharmaceutical plants certification. Application in Mountain Tea”.
- **2010-2014:** FP7-KBBE-2009-3-1-04, Seventh Framework Programme of the European Community for Research, Technological Development and Demonstration Activities “From Biodiversity to Chemodiversity: Novel Plant Produced Compounds with Agrochemical and Cosmetic interest - **AgroCos**”.
- **2009-2013:** FP7-PEOPLE-IAPP-2008 230763 Marie Curie Actions, “Bioactive natural compounds extracted and isolated from olive tree using modern technologies: Probing into their therapeutic potential- **OLITEC**”.
- **2008-2012:** FP7-REGPOT-2007-1 CSA 206570 “Reinforcing scientific and technological potential of the Natural Products Laboratory- University of Athens - **NatForce**”.

PUBLICATIONS IN INTERNATIONAL JOURNALS

- “Synthesis and biological activity of 4'-azido- and 4'-trifluoroacetamido-3'-chloro-3'-deamino-4'-deoxydaunorubicin”
Aligiannis, N.; Pouli, N.; Marakos, P.; Skaltsounis, A.L.; Leonce, S.; Pierre, A.; Atassi, G.
Bioorg. Med. Chem. Lett. 1996, 6, 2473-2479.
- “Verbaspinoside, a New Iridoid Glycoside from *Verbascum spinosum*”
Kalpoutzakis, E.; Aligiannis, N.; Mitakou, S.; Skaltsounis, A.L.
J. Nat. Prod. 1999, 62, 342-344.
- “Three New Arylobenzofurans from *Onobrychis ebenoides* and Evaluation of their Binding Affinity for the Estrogen Receptor”
Halabalaki, M.; Aligiannis, N.; Papoutsis, Z.; Mitakou, S.; Moutsatsou, P.; Sekeris, C.; Skaltsounis, A.L.
J. Nat. Prod. 2000, 63, 1672-1674.
- “Design, Synthesis and Biological Activity of 7-O-(4-O-Acetyl-3-iodo-2,3,6-trideoxy- α -L-arabino-hexopyranosyl)daunomycinone and 7-O-(3-Chloro-2,3,6-trideoxy-4-Opropanoyl- α -L-lyxo-hexopyranosyl)daunomycinone”
Aligiannis, N.; Pouli, N.; Marakos, P.; Mitaku, S.; Skaltsounis, A.L.; Leonce, S.; Pierre, A.; Atassi, G.
Chem. Pharm. Bull. 2000, 48, 150-153.
- “Samioside, a New Phenylethanoid Glycoside with Free-Radical Scavenging and Antimicrobial Activities from *Phlomis samia*”
Kyriakopoulou, I.; Magiatis, P.; Skaltsounis, A.L.; Aligiannis, N.; Harvala, C.
J. Nat. Prod. 2001, 64, 1095-1097.
- “Composition of the Essential Oil of Two *Nepeta* species and *in vitro* Evaluation of their activity Against *Helicobacter pylori*”
Kalpoutzakis, E.; Aligiannis, N.; Mentis, A.; Mitaku, S.; Charvala, C.
Planta Med. 2001, 67, 880-883.
- “Chemistry of plants from Crete: Stachyspinoside, a new flavonoid glycoside and iridoids from *Stachys spinosa*”
Kotsos, M.; Aligiannis, N.; Mitaku, S.; Skaltsounis, A.L.; Charvala, C.
Nat. Prod. Lett. 2001, 15, 377-386.
- “Antileukemic Activity of Synthetic Daunomycinone Derivatives Bearing Modifications in the Glycosidic Moiety”
Perchellet, E.M.; Sperfslage, B.J.; McIlvain, C.J.; Aligiannis, N.; Pouli, N.; Marakos, P.; Skaltsounis, A.L.; Perchellet, J.P.
Anticancer Res. 2001, 21 (6A), 3957-3968.
- “New Semisynthetic Antimicrobial Labdane-Type Diterpenoids Derived from the Resin “Ladano” of *Cistus creticus*”
Kalpoutzakis, E.; Aligiannis, N.; Mitaku, S.; Chinou, I.; Harvala, C.; Skaltsounis, A.L.
Z. Naturforschung sect C 2001, 56c, 49-52.
- “New Hemisynthetic Manoyl Oxide Derivatives with Antimicrobial activity”
Kalpoutzakis, E.; Aligiannis, N.; Mitaku, S.; Chinou, I.; Harvala, C.; Skaltsounis, A.L.
Chem. Pharm. Bull. 2001, 49, 814-817.
- “Composition and Antimicrobial Activity of the Essential oils of Two *Origanum* Species”
Aligiannis, N.; Kalpoutzakis, E.; Mitaku, S.; Chinou, I.B.
J. Agric. Food Chem. 2001, 49, 4168-4170.
- “Furomegistines I and II, two furanopyridine alkaloids from the bark of *Sarcomelicope megistophylla*”
Fokialakis, N.; Magiatis, P.; Aligiannis, N.; Mitaku, S.; Tillequin, F.; Sevenet, T.
Phytochemistry 2001, 57, 593-596.
- “Composition and Antimicrobial Activity of the Essential Oils of Five Taxa of *Sideritis* from Greece”
Aligiannis, N.; Kalpoutzakis, E.; Chinou, I. B.; Mitakou, S.; Gikas, E.; Tsarbopoulos, A.

- J. Agric. Food Chem.** 2001, 49, 811-815.
- “Flavonoids as Cycline-Dependent Kinase Inhibitors: Inhibition of cdc 25 Phosphatase Activity by Flavonoids Belonging to the Quercetin and Kaempferol Series”
Aligiannis, N.; Mitaku, S.; Mitrocotsa, D.; Leclerc, S.
- Planta Med.** 2001, 67, 468-470.
- “Preparation and Cytotoxic Activity of Some New Rhodomycin Derivatives Bearing Modifications in the Sugar Moiety”
Aligiannis, N.; Pouli, N.; Marakos, P.; Skaltsounis, A.L.; Florent, J.C.; Perchellet, E.M.; Sperfslage, B.J.; McIlvain, C.J.; Perchellet, J.P.
- J. Antib.** 2002, 55, 181-190.
- “Synthesis and Cytotoxic Activity of a New Potent Daunomycinone Derivative”
Aligiannis, N.; Pouli, N.; Marakos, P.; Skaltsounis, A.L.; Pratsinis, H.
- Bioorg. Med. Chem. Lett.** 2002, 12, 3505-3507.
- “Cytotoxic Germacranolides of *Inula verbascifolia* subsp. *methanea*”
Harvala, E.; Aligiannis, N.; Skaltsounis, A.L.; Pratsinis, H.; Lambrinidis, G.; Harvala, C.; Chinou, I.
- J. Nat. Prod.** 2002, 65, 1045-1048.
- “A new lignan glycoside and other constituents from *Cephalaria ambrosioides*”
Pasi, S.; Aligiannis, N.; Skaltsounis, A.L.; Chinou, I.B.
- Nat. Prod. Lett.** 2002, 16, 365-370.
- “Cantleyoside-dimethyl-acetal and other Iridoid Glucosides from *Pterocephalus perennis* – Antimicrobial activities”
Graikou, K.; Aligiannis, N.; Chinou, I.B.; Harvala, C.
- Z. Naturforsch. sect C** 2002, 57, 95-99.
- “*cis*-Clerodane Type Diterpenes from *Cistus monspeliensis*”
Kalpoutzakis, E.; Aligiannis, N.; Skaltsounis, A.L.; Mitakou, S.
- J. Nat. Prod.** 2003, 66, 316-319.
- “Simultaneous determination of oleuropein and its metabolites in plasma by highperformance liquid chromatography”
Tsarbopoulos, A.; Gikas, E.; Papadopoulos, N.; Aligiannis, N.; Kafatos, A.
- J. Chromatography B** 2003, 785, 157-164.
- “Methanolic Extract of *Verbascum macrurum* as a Source of Natural Preservatives against Oxidative Rancidity”
Aligiannis, N.; Mitaku, S.; Tsitsa-Tsardis, E.; Harvala, C.; Tsaknis, I.; Lalas, S.; Haroutounian, S.
- J. Agric. Food Chem.** 2003, 51, 7308-7312.
- “Pyrrolizidine Alkaloids from *Onosma leptantha*”
Kretsi, O.; Aligiannis, N.; Skaltsounis, A.L.; Chinou, I.B.
- Helvetica Chimica Acta** 2003, 86, 3136-3140.
- “Essential oils of *Phlomis* species growing in Greece: chemical composition and antimicrobial activity”
Aligiannis, N.; Kalpoutzakis, E.; Kyriakopoulou, I.; Mitaku, S.; Chinou, I.
- Flavour and Fragrance Journal** 2004, 19, 320-324.
- “New Diterpenes from *Croton insularis*”
Graikou, K.; Aligiannis, N.; Skaltsounis, A.L.; Chinou, I.; Michel, S.; Tillequin, F.; Litaudon, M.
- J. Nat. Prod.** 2004, 67, 685-688.
- “A New Class of Phytoestrogens: Evaluation of the Estrogenic Activity of deoxybenzoin”
Fokialakis, N.; Lambrinidis, G.; Mitsiou, D.J.; Aligiannis, N.; Mitakou, S.; Skaltsounis, A. L.; Pratsinis, H.; Mikros, E.; Alexis, M.N.
- Chemistry & Biology** 2004, 11, 397-406.
- “Essential Oils of *Satureja*, *Origanum*, and *Thymus* Species: Chemical Composition and Antibacterial Activities Against Foodborne Pathogens”

Chorianopoulos N., Kalpoutzakis E., Aligiannis N., Mitaku S., Nychas G.-J., Haroutounian S.A.

J. Agric. Food Chem. 2004, 52, 8261-8267.

- “DNA protecting and genotoxic effects of olive oil related components in cells exposed to hydrogen peroxide”

Nousis, L.; Doulias, P.T.; Aligiannis, N.; Bazios, D.; Agalias, A.; Galaris, D.; Mitakou, S.
Free Rad. Res. 2005, 39, 787-795.

- “Chemical constituents from *Croton insularis*”

Graikou, K.; Aligiannis, N.; Chinou, I.B.; Skaltsounis, A.L.; Tillequin, F.; Litaudon, M.
Helvetica Chimica Acta 2005, 88, 2654-2660.

- “Estrogenic activity of isoflavonoids from *Onobrychis ebenoides*”

Halabalaki, M.; Alexis, X.; Aligiannis, N.; Lambrinidis, G.; Pratsinis, H.; Florentin, I.; Mitaku, S.; Mikros, E.; Skaltsounis, A.-L.; Alexis, M. N.

Planta Medica 2006, 72, 484-487.

- “Acretoside, a new sucrose ester from *Aristolochia cretica*”

Georgopoulou, C.; Aligiannis, N.; Fokialakis, N.; Mitaku, S.

Nat. Prod. Res. 2005, in Press.

- “Acteoside and Martynoside exhibit estrogenic / antiestrogenic properties”

Papoutsi, Z.; Kassi, E.; Mitakou, S.; Aligiannis, N.; Tsiapara, A.; Chrousos, G. P.; Moutsatsou, P.

J. Steroid Biochem. Mol. Biol. 2006, 98, 63-71.

- “Chemical constituents from *Pteroccephalus perrenis* subsp. *perennis* (Dipsacaceae)”

Graikou, K.; Aligiannis, N.; Chinou, I.B.

Biochemical Systematics and Ecology 2006, 34, 438-441.

- “A new flavonoid diglycoside and triterpenoids from *Stachys spinosa* L. (Lamiaceae)”

Kotsos M.P.; Aligiannis, N.; Mitakou S.

Biochemical Systematics and Ecology 2007, 35, 381-385.

- “Acute doxorubicin cardiotoxicity is successfully treated with the phytochemical oleuropein through suppression of oxidative and nitrosative stress”

Andreadou I.; Sigala F.; Iliodromitis E.K.; Papaefthimiou M.; Sigalas K.; Aligiannis N.; Savvari P.; Gorgoulis V.; Papalabros E.; Kremastinos D.T.

J. Molecular Cellular Cardiology 2007, 42, 549-558.

- “Ursolic acid, a naturally occurring triterpenoid, demonstrates anticancer activity on human prostate cancer cells”

Kassi E.; Papoutsi Z.; Pratsinis H.; Aligiannis N.; Manoussakis M. ; Moutsatsou P.

J Cancer Res Clin Oncol 2007, 133, 493–500.

- “Assessment of antioxidant activity of extracts from unique Greek varieties of Leguminosae plants using in vitro assays”

Spanou C.; Stagos D.; Tousias L.; Angelis A.; Aligiannis N.; Skaltsounis A.L.; Kouretas D.

Anticancer Res. 2007, 27(5A), 3403-10.

- “Cytotoxic effects of 2-arylbenzofuran phytoestrogens on human cancer cells: Modulation by adrenal and gonadal steroids”

Katsanou E. S.; Halabalaki M.; Aligiannis N.; Mitakou S.; Skaltsounis A.-L.; Alexi X.; Pratsinis H.; Alexis M.N.

J Steroid Bioch & Mol Biol 2007, 104, 228–236

- “Sesquiterpene lactones from *Staecheleina fruticosa* L”

Kotsos M.P.; Aligiannis, N.; Myrianthopoulos V.; Mitakou S.; Skaltsounis A.L.

J. Nat. Prod. 2008, 71, 847-851.

- “Biologically active triterpenoids from *Cephalaria ambrosioides*”

Pasi S.; Aligiannis, N.; Pratsinis H., Skaltsounis A.L.; Chinou I.

Planta Med. 2008, in Press.

- “Triterpenoids from *Eucalyptus camaldulensis* Dehnh. Tissue Cultures”

TsiriD., Aligiannis N., Graikou K., Spyropoulos C., Chinou I.

Helvetica Chimica Acta 2008, in Press.

- “Antioxidant and chemopreventive properties of polyphenolic compounds derived from Greek legume plant extracts”

Spanou C., Bourou G., Dervishi A., Aligiannis N., Angelis A., Komiotis D., Skaltsounis A.L., Kouretas D.

J. Agric. Food Chem. 2008, 56, 6967-8276.

- “Ebenfurans IV-VIII from *Onobrychis ebenoides*: evidence that C-prenylation is the key determinant of the cytotoxicity of 3-formyl-2-arylbenzofurans”

Halabalaki M., Alexi X., Aligiannis N., Alexis M.N., Skaltsounis A.-L.

J. Nat. Prod. 2008, 71, 1934-1937.

- “Ursolic acid triggers apoptosis and Bcl-2 downregulation in MCF-7 breast cancer cells”.

Kassi E., Sourlingas T.G., Spiliotaki M., Papoutsi Z., Pratsinis H., Aligiannis N., Moutsatsou P.

Cancer Investigation 2009, 27, 723-733.

- “Chemical composition and antimicrobial activity of the essential oils of four *Ocimum* species growing in Tanzania”.

Runyoro D., Ngassapa O., Vagionas K., Aligiannis N., Graikou K., Chinou I.

Food Chemistry 2010, 119, 311-316.

- “Hydrostatic countercurrent chromatography and ultra high pressure LC: Two fast complementary separation methods for the preparative isolation and the analysis of the fragrant massoia lactones”

Urbain A., Corbeiller P., Aligiannis N., Halabalaki M., Skaltsounis A.-L.

J. Separation Science 2010, 33 (9), 1198-1203

- “Influence of potent antioxidant leguminosae family plant extracts on growth and antioxidant defense system of Hep2 cancer cell line”

Spanou C., Stagos D., Aligiannis N., Kouretas D.

J. Medicinal Food 2010, 13 (1), 149-155

- “The raputindoles: Novel cyclopentyl bisindole alkaloids from *raputia simulans*”

Vougogiannopoulou K., Fokialakis N., Aligiannis N., Cantrell C., Skaltsounis A.-L.
Organic Letters 2010, 12, 1908-1911.