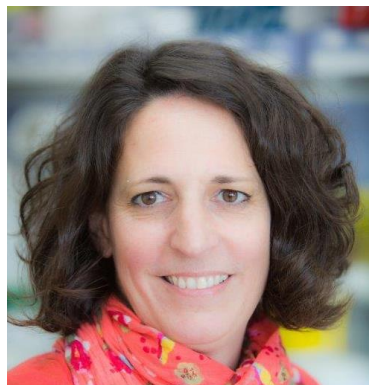


ARBEZ-GINDRE KONSTANTI Cécile

PhD /Research scientist B'
Institute of Chemical Biology (ICB)
Division of Organic and Medicinal Chemistry
Vas. Constantinou 48, 116 35 Athens, Greece

Phone : +30 210 7273879
Fax : +30 210 7273831
E-mail carbezgindre@ie.gr
Website:



Curriculum Vitae – Current Research Interests**Education**

1997: PhD in Organic Chemistry, Université Louis Pasteur (ULP), on topic "Synthesis of double [¹³C] labelled cutaneous metabolites of allergenic corticosteroids. Interaction studies with proteins", Strasbourg I, France,

1994: Master Sc. in Molecular & Supramolecular Organic Chemistry, ULP, Strasbourg I,

1993: Bachelor Sc. in Biochemistry with a major course in Organic Chemistry & Analytical Chemistry, ULP, Strasbourg I, France

1991: Degree Sc. in Biophysicochemistry, ULP, Strasbourg I, France.

1989 : Baccalauréat, Lycée Louis Pasteur, Besançon, France.

Languages

English (fluent), French (native), Greek (fluent), Italian (fluent)

Appointments

2017-present: Research Scientist, Institute of Chemical Biology (ICB) previous Institute of Biology, Medicinal Chemistry and Biotechnology (IBM CB), National Hellenic Research Foundation (NHRF), Athens, Greece.

2008-2016: Special Technical Scientist, Institute of Organic and Pharmaceutical Chemistry (IOPC) later IBM CB, NHRF, Athens, Greece.

2003-2008: Researcher in diagnostic and clinical chemistry, R&D department of MEDICON HELLAS A.E. Company, Gerakas, Greece.

1997-2001: Post-doctoral fellows on topic "Synthesis of novel dyes exhibiting nonlinear optical properties for development of materials for photonic applications by in situ generation of organometallic reagents", TMR program, Laboratory of Organic and Organometallic Chemistry, IOPC, NHRF, Athens, Greece.

1994-1997: PhD thesis, Fellowship from the French Ministry of Education and Research, Dermatochemistry, ULP, Strasbourg I, France.

1997: Short term external collaboration projects for international pharmaceutical companies (PHARMACIA, Hillerød, Denmark & HERMAL, Hamburg, Germany), Dermatochemistry Laboratory, ULP Strasbourg I, France.

Previously Developed Research Skills in Academic and Industrial field

Corticosteroid synthesis

Hemi-synthesis of ^{13}C -labeled corticosteroids as NMR tools for the investigation of hapten-protein interactions in Allergic Contact Dermatitis to topical corticosteroids.

Organometallic chemistry:

In situ generation of organometallic reagents (Fe, Li, Na, Mg) for C-C and C-P, C-S-forming reaction & synthesis of stilbenyl dyes exhibiting nonlinear optical properties for development of materials for photonic applications.

Clinical and diagnostic chemistry: Design & development of clinical and biochemical diagnostic reagents for automate analysers. From the bench to bedside

Recent Research Interest

Dendrimer chemistry

- 1) Synthesis of polyhydroxy-polyester functionalized dendrimers containing aliphatic polyether polyester backbone for formulations of Liposomal-Locked in-Dendrimers.
- 2) Peripheral modifications of hyperbranched Bolton polymers (HBPs) for conjugation to anticancer drug as new polymer components for Advanced Drug Delivery Nano Systems
- 3) Spin labelling of HBPs with TEMPO derivatives as tools for the development of new polymer components for Advanced Drug Delivery Nano Systems
- 4) Design and synthesis of minidendrimers, dendrons or bow-tie dendrimers containing terminal polyhydroxy group or carbohydrate moieties with biological and biomedical applications (tools for investigation of carbohydrate-lectin interactions, nanostructures for proteasome activation, material component for Chimeric/Mixed Nanosystems, fluorescent materials for encapsulation of natural compounds). Use of a strategy based on versatile TRIS geometry for a rapid dendritic growth (AB_3 -monomer) and of microwave assisted azide alkyne Huisgen cycloaddition.

Catalysis

Synthesis, qualitative and quantitative purification of reaction products from the Suzuki-Miyaura cross-coupling of aryl bromides with phenyl

Medicinal chemistry

Design and synthesis of non-corticosteroid agonists of the glucocorticosteroid receptor

Teaching and Supervision Experience

Training and guiding of undergraduate students, graduate and master students, post-doctoral fellows in the Laboratory of Organic and Organometallic Chemistry, NHRF
Training and support of production and quality control chemists to new formulation products & Training of R&D researchers to norm ISO 9001/2000 in R&D department of Medicon Hellas, Greece

Training and supervision of an MSc. degree student, Strasbourg, France

Membership of Scientific Societies

Association of Greek Chemists

Association of Greek Colloidal Researchers

Programme participation

Developmental proposals of research institutions – KRIPIS "Targeted therapeutic approaches against degenerative diseases, with emphasis on cancer and aging" STHENOS (2014 – 2016)

Developmental proposals of research institutions – KRIPIS "*STHENOS-b: Targeted therapeutic approaches against degenerative diseases with special focus on cancer and ageing-optimisation of the targeted bioactive molecules*" (2017 – 2020)

Training and Mobility of Researchers Network (1/10/96-30/9/99) Title "*Design, Synthesis and Study of Novel Non-linear Optical Materials*" - The network is being coordinated from the NHRF & comprises 9 groups from UK, Ireland, France, Germany, Sweden and Greece.

PENED 1999 (99ED 173); 2000 - 2001 Title: Monomeric and polymeric chiral micelles as microreactors for the production of technological useful materials. (Collaboration between NRCPS Democritos, NHRF, University of Athens)

Management committee member COST action CA17140 Nano2Clinic (<https://www.nano2clinic.eu/>)- with title "*Cancer nanomedicine—from the bench to bedside*" coordinated by Prof. B. KLAJNERT-MACULEWICZ from the University of Łódź (Poland) and involving participants (business, clinical, institution) from 33 countries European & non-European countries

Presentations

Oral presentations

October 15-17, 2019, I. Theochari, V. Pletsa, D. Papahatjis, C. Arbez-Gindre, V. Papadimitriou, A.Xenakis Oral presentation in First COST Action CA17140 Conference, Riga, Latvia, "Development and applications of nanodispersions as carriers of compounds with pharmaceutical interest"

June, 23-27 June, 2019, 10th International Symposium on Computational Methods in Toxicology and Pharmacology Integrating Internet Resources, Ioannina, Greece, Oral presentation, E. Kritsi, C. Potamitis, D. Siakouli, A. Boulaka, A. C. Tenchiu, C. Nasaj, G. Panagiotou, V. Ganou, K. D. Papavasileiou, O. Kirkilessi, T. Calogeropoulou, M. N. Alexis, P. Zoumpoulakis, C. Arbez-Gindre, I.D. Kostas, D. J. Mitsiou and M. Zervou "New non-steroidal selective glucocorticoid receptor agonists."

October 2016: C. Arbez-Gindre, IBMCB seminar presentation in EIE/NHRF, "Synthesis of polyhydroxy dendrimers and biological applications"

September 2016: E.A. Mourelatou, F.M. Ottaviani, D. Fessas, M. Cangiotti, C. Arbez-Gindre, G. Antonopoulou, S. Hatziantononiou, M. Micha-Screttas, C. Demetzos, Oral presentation in 11th Central European Symposium on Pharmaceutical Technology, Belgrade, Serbia: "Osmotic pressure effect in liposome-hyperbranched polymer advanced drug delivery nanosystems (ADDNSS) as carriers of anticancer drugs"

September 2012: R. Csonka, M. Sleiman, C. Arbez-Gindre, B.R. Steele, G.A. Heropoulos, T. Calogeropoulou, M. Signorelli, A. Schiraldi, D. Fessas, M. Micha-Screttas, Oral presentation in EIE/NHRF, Arcade project, Athens, Greece "Calorimetric analysis of lectin binding of new glycodendrimeric compounds by DSC and ITC methods"

May 2000: C. Arbez-Gindre, B.R. Steele, G.A. Heropoulos, C.G. Screttas, Oral presentation in EIE/NHRF, Delos Network, Athens, Greece: "Synthesis of stilbene and ferrocenyl-stilbene derivatives expected to present large nonlinear optical properties"

September 1999: C. Arbez-Gindre, B.R. Steele, G.A. Heropoulos, C.G. Screttas, Oral presentation, Delos Network, Manchester, UK: "Synthesis of stilbene and ferrocenyl-stilbene derivatives expected to present large nonlinear optical properties"

December 1998: C. Arbez-Gindre, B.R. Steele, G.A. Heropoulos, C.G. Screttas, Oral communication in EIE/NHRF, Athens, Greece: "Synthesis of some novel stilbene derivatives expected to present large nonlinear optical properties"

October 1998: C. Arbez-Gindre, B.R. Steele, G.A. Heropoulos, C.G. Screttas, Oral communication in the mid-term review, Delos Network, Vougliamenis, Greece "Synthesis of some novel stilbene derivatives expected to present large nonlinear optical properties"

February 1998: C. Arbez-Gindre, B.R. Steele, G.A. Heropoulos, C.G. Screttas, Oral communication in EIE/NHRF, Athens, Greece: "Synthesis of double [13-C] labelled cutaneous metabolites of allergenic corticosteroids. Interaction studies proteins"

March 1997: C. Arbez-Gindre, V. Berl, J-P. Lepoittevin, Young Researcher Seminary, ULP1, Strasbourg, France: "Synthesis of double [13-C] labelled corticosteroids"

Posters

29 November-1 December 2019, 70th HSBMB Conference, Athens, Greece, Poster presentation, D. Siakouli, E. Kritsi, A.-C. Tenchiu, N. Travlos, G. Panagiotou, A. Boulaka, K. Nasaj, C. Potamitis, O. Kirkillessi, A.I Tzani, T. Calogeropoulou, C. Arbez-Gindre, M.N. Alexis, I.D. Kostas, M. Zervou, D. J. Mitsiou, "Development of New Selective Glucocorticoid Receptor Agonists: hit-to-lead optimization"

October 15-17, 2019, C. Arbez-Gindre, T. Fotopoulou, M. Konstantinidou, A. Tenchiu, G. Antonopoulou, G. Heropoulos, B.R. Steele, M. Micha-Screttas, M. Koufaki, N. Papaevgeniou, N. Chondrogianni, M.Chountoulesi, N.Naziris, C.Demetzos, S.Moreno Pinilla, D.Appelhans, Poster presentation in First COST Action CA17140 Conference, Riga, Latvia, "Synthesis and pharmaceutical applications of polyhydroxy-dendrons containing an amino focal group for conjugation to biological active compounds"

September 14-16, 2015, M. Konstantinidou, A.-C. Tenchiu, C. Arbez-Gindre, G. Antonopoulou, G. Heropoulos, B. Steele, C. Potamitis, P. Zoumpoulakis, S. Georgakopoulos, M. Zervou, M. Micha-Screttas, *Frontiers in Medicinal Chemistry*, Antwerp, Belgium: "New glycodendrimers as potential carriers for anticancer drugs"

May 8-10, 2015, I.Δ. Κώστας, A.-C. Tenchiu, C. Arbez-Gindre, B. Ψυχάρης, K. Ραπτοπούλου, 12ο Συνέδριο Χημείας Ελλάδος-Κύπρου, Θεσσαλονίκη: "Γιατί παλλάδιο στην οργανική σύνθεση; Ένας δραστικός καταλύτης για τον σχηματισμό δεσμού C-C"

May 8-10, 2015, M. Konstantinidou, C. Arbez-Gindre, G.A. Heropoulos, Steele Barry R., 12ο Συνέδριο Χημείας Ελλάδος-Κύπρου, Θεσσαλονίκη: "Synthesis of new polyhydroxy dendrimers as iron chelators"

March 16-19, 2015, B.R Steele, C. Arbez-Gindre, M. Konstantinidou, C. Potamitis, S. Georgakopoulos, G. Antonopoulou, G. A. Heropoulos, P. Zoumpoulakis, M. Zervou and M. Micha-Screttas, *Anatolian Conference on Synthetic Organic Chemistry*, Antalya, Turkey: "Synthesis of new polyhydroxydendrimers for drug encapsulation and delivery"

March 16-19, 2015, Constantinos G. Screttas, Georgia Antonopoulou, Cécile Arbez-Gindre, Barry R. Steele and Maria Micha-Screttas, *Anatolian Conference on Synthetic Organic Chemistry*, Antalya, Turkey: "An organometallic route to halohydrin carboxylates"

March 16-19, 2015, M. Micha-Screttas, M. Sleiman, R. Csonka, C. Arbez-Gindre, G.A. Heropoulos, T. Calogeropoulou, M. Signorelli, A. Schiraldi, B.R. Steele, D. Fessas, *Anatolian Conference on Synthetic Organic Chemistry*, Antalya, Turkey: "Synthesis of new glycodendritic compounds and their binding and stabilisation effects with lectins"

July 2nd-June 28th, 2014, I.D. Kostas, A.-C. Tenchiu, C. Arbez-Gindre, V. Psycharis, C.P. Raptopoulou, 20th International Conference on Phosphorus Chemistry (ICPC 2014), Dublin, Ireland, Paper No. 301: "N-Phenyldiethanolamine-derived P(N)P-Ligands. A Palladium/Bis(phosphinite) Complex as an Efficient Catalyst for the Room-temperature Suzuki Reaction".

May 25-27, 2012, R. Csonka, M. Sleiman, C. Arbez-Gindre, B. R. Steele, G. A. Heropoulos, T. Calogeropoulou, M. Signorelli, A. Schiraldi, D. Fessas, M. Micha-Screttas, 15th Hellenic Symposium on Medicinal Chemistry, Athens, Greece, "ITC study of lectin binding to novel multifunctional carbohydrate hyperbranched polymers"

May 2011: M. Micha-Screttas, M. Sleiman, C. Arbez-Gindre, G.A. Heropoulos, T. Calogeropoulou, B.R. Steele, 27th Annual Meeting of the Polymer Processing Society, Marrakech, Morocco: P-13-896: "Synthesis and study of novel multifunctional carbohydrate hyperbranched polymers"

July 10-15, 2011, M. Micha-Screttas, M. Sleiman, C. Arbez-Gindre, G.A. Heropoulos, T. Calogeropoulou, B.R. Steele, 17th European Symposium on Organic Chemistry (ESOC 2011), Hersonissos-Crete, Greece: "Synthesis and study of novel multifunctional carbohydrate hyperbranched polymers"

October 2009, K. Gardikis, S. Hatziantoniou, C. G. Screttas, B. R. Steele, C. Arbez-Gindre, M. Ionov, D. Wrobel, M. Bryszewska, M. Signorelli, D. Fessas, M. Micha-Screttas, C. Demetzos, 3rd Hellenic Symposium on Organic Synthesis, Athens: "Liposomal locked in dendrimer technology in biomedical applications"

October 15-17, 2009: K. Gardikis, S. Hatziantoniou, C.G. Screttas, B. Steele, C. Arbez-Gindre, M. Ionov, D. Wrobel, M. Bryszewska, M. Signorelli, D. Fessas, M. Micha-Scretta and C. Demetzos, 3rd Hellenic Symposium on organic synthesis, From Chemistry to Biology, medicine and material sciences, Athens, Greece, "Liposomal locked in dendrimer technology in biomedical applications"

September 5-7, 2003: V. Berl, C. Arbez-Gindre, N. Gagey, J-P Lepoittevin, European Research Group on Experimental Contact Dermatitis, Göteborg, Sweden, "Reaction mechanism of 21-dehydrocorticosteroids toward arginine residues"

September, 2001: C. Arbez-Gindre, B.R Steele, G.A. Heropoulos, C.G. Screttas, J.E. Communal, M. in het Panhuis, W. Blau, I. Ledoux-Rak, 6th FIGIPS Conference, Barcelona, Spain: "An organolithium route to triarylmethyl dyes bearing ferrocenyl or ferrocenylethenyl groups and their NLO properties"

December 18-19, 2000: C. Arbez-Gindre, C.G. Screttas, B. Paci, C. Schmidt, C. Fiorini, J-M. Nunzi, 40 Years Anniversary of the Institute of Organic and Pharmaceutical Chemistry of National Hellenic Research Foundation, Athens, Greece: "Synthesis and Characterization of Nonlinear Optical (NLO) Dyes. Push-pull Stilbenes Based on a Strong Carbocation Acceptor Moiety"

March 12-16, 2000: B. Paci, C. Schmidt, C. Fiorini C., J-M. Nunzi, C. Arbez-Gindre, C.G. Screttas C.G., 5th International Conference on Organic Nonlinear Optics, Davos, Switzerland: "Nonlinear Optical Properties of Push-pull Stilbenes Based on a Strong Carbocation Acceptor Moiety"

August 30-September 4, 1998: B.R Steele, C. Arbez-Gindre, G.A. Heropoulos, C.G. Screttas, M. Micha-Screttas, 3rd International Conference on Coordination Chemistry,

The Chemistry of Metal Ions in Everyday Life, Florence, Italy”, "Organolithium and organomagnesium reagents in nonlinear optical material synthesis”

August 16-21,1998: C.G. Screttas, C. Arbez-Gindre, G.A. Heropoulos, B.R. Steele, M. Micha-Screttas, 18th International Conference on Organometallic Chemistry, Munich, Germany "Synthesis and applications of organolithium and organomagnesium reagents bearing non-linear chromophores”

December 1996: C. Arbez-Gindre, G. Goetz, F. Bertrand, V. Berl, J.P. Lepoittevin, French-Chinese Symposium of Organic Chemistry and Organometallic Chemistry, Strasbourg, France: "Investigation of hapten-protein interactions in contact allergic dermatitis (ACD). Synthesis of [13-C] labelled molecules as tools for this study”

November 1996: C. Arbez-Gindre, G. Goetz, F. Bertrand V. Berl, J-P. Lepoittevin A Rhine Gold Meeting, Strasbourg, France: "Synthesis of [13-C] labelled molecules: tools for hapten-proteins interaction studies”.

October 1996: C. Arbez-Gindre, G. Goetz, F. Bertrand, V. Berl, J-P. Lepoittevin –JP, Scientific committee of the URA-31, Strasbourg, France: "Synthesis of [13-C] labelled molecules: tools for hapten-proteins interaction studies”.

Former and Recent collaborations

At NHRF: Dr. N Chrondogianni (Molecular & Cellular Ageing laboratory, ICB), Dr. A Xenakis & Dr. M. Zoubanioti (Biomimetics & Nanobiotechnology laboratory, ICB, Dr. D. Mitsou (Molecular Endocrinology laboratory, ICB), Dr. S. Pispas & Dr. A. Papagianopoulos (Materials Synthesis and Physical Chemistry laboratory, Theoretical & Physical Chemistry Institute, TPCI)

At National level: Prof. K. DEMETZOS (Laboratory of Pharmaceutical Nanotechnology, Department of Pharmacy, School of Health Sciences, National and Kapodistrian University of Athens)

At International National level: Prof. D. Appelhans (Leibniz Institute of Polymer Research, Dresden, Germany); Prof. D. Fessas (Department of Food, Environmental and Nutritional Sciences, Milan, Italy). Prof. R. Acharya (Department of Biology & Biochemistry)

Publications

- 1) M. Khemakhem, V. Papadimitriou, G.T. Sotiroudis, P. Zoumpoulakis, C. Arbez-Gindre, N. Bouzouita, T. G. Sotiroudis "Melanin and humic acid-like polymer complex from olive mill waste waters. Part I. Isolation and characterization", *Food chem.*, 2016, 203, 540-547 <http://dx.doi.org/10.1016/j.foodchem.2016.01.110>
- 2) M.H. Sleiman, R. Csonka, C. Arbez-Gindre, G. A. Heropoulos, T. Calogeropoulou, M. Signorelli, A. Schiraldi, B. R. Steele, D. Fessas, M. Micha-Screttas, "Binding and stabilisation effects of glycodendritic compounds with peanut agglutinin", *International*

Journal of Biological Macromolecules, 2015, 80, 692–701
<http://dx.doi.org/10.1016/j.ijbiomac.2015.07.036>

3) S. Ramaswamy, M.H. Sleiman, G. Masuyer, C. Arbez-Gindre, M. Micha-Screttas, T. Calogeropoulou, B.R. Steele and K. R. Acharya, "Structural basis of multivalent galactose-based dendrimer recognition by human galectin-7", *FEBS Journal*, 2015, 282, 372–387, <https://dx.doi.org/10.1111/febs.13140>

4) I.D. Kostas, A.-C. Tenchiu, C. Arbez-Gindre, V. Psycharis, C.P. Raptopoulou, "Room-temperature Suzuki-Miyaura coupling of aryl bromides with phenylboronic acid catalyzed by a palladium complex with an inexpensive nitrogen-containing bis(phosphinite) ligand" *Catal. Commun.*, 2014, 51, 15-18, <http://dx.doi.org/10.1016/j.catcom.2014.03.014>

5) E. Claudel, C. Arbez-Gindre, V. Berl and J.-P. Lepoittevin, "An efficient Hemi-synthesis of 20- and 21-[13-C] labelled Cortisol: A model for the Study of Skin Sensitization to Corticosteroids", *Synthesis* 2009, 20, pp 3391-3398, DOI:10.1055/s-0029-1216986

6) C. Arbez-Gindre; B.R. Steele; G.A. Heropoulos; C.G. Screttas; J.E. Communal; W.J. Blau; I. Ledoux-Rak, "A facile organolithium route to ferrocene-based triarylmethyl dyes with substantial near IR and NLO properties", *J. Organomet. Chem.* 2005, 690, pp 1620-1626, <http://dx.doi.org/10.1016/j.jorganchem.2005.01.008>

7) C. Arbez-Gindre, V. Berl and J.-P. Lepoittevin, "Air oxidation of 17-hydroxycorticosteroids catalyzed by cupric acetate: formation of hemiacetal dimers", *Steroids* 2003, 68, pp 361-365, [http://dx.doi.org/10.1016/S0039-128X\(03\)00033-3](http://dx.doi.org/10.1016/S0039-128X(03)00033-3)

8) P. Calaminici, P., K. Jug, A.M. Koster, C. Arbez-Gindre and C.G. Screttas, CG. "Mechanism for large first hyperpolarisabilities of phosphonic acid stilbene derivatives", *J. Comput. Chem.* 2002, 23, pp 291-297, <http://dx.doi.org/10.1002/jcc.10006>

9) B. Paci B; C. Schmidt, C. Fiorini, J.M. Nunzi, C. Arbez-Gindre and C.G. Screttas, "Nonlinear optical properties of push-pull stilbenes based on a strong carbocation acceptor moiety", *J. Chem. Physics* 1999, 111, pp 7486-7492, <http://dx.doi.org/10.1063/1.480073>

10) C. Arbez-Gindre, V. Berl and J.-P. Lepoittevin, "Methyl exchange on silicon during the addition of methyl magnesium iodide to cyanohydrin-O-silyl ether", *J. Chem. Soc., Chem. Comm.*, 1999, pp 431-432, <http://dx.doi.org/10.1016/j.catcom.2014.03.014>

11) C. Arbez-Gindre, C.G. Screttas; C. Fiorini, Schmidt and J.M. Nunzi, "Organolithium reagents bearing nonlinear optical chromophores. Synthesis of triarylmethane dyes", *Tetrahedron Lett.* 1999, Vol. 40, pp 7413-7416, [http://dx.doi.org/10.1016/S0040-4039\(99\)01446-X](http://dx.doi.org/10.1016/S0040-4039(99)01446-X)

12) M. Matura, J.-P. Lepoittevin, C. Arbez-Gindre, A. Goossens, "Testing with corticosteroid aldehydes in corticosteroid sensitive subjects (preliminary results)", *Contact Derm.*, 1998, 38, 106-108, DOI: 10.1111/j.1600-0536.1998.tb05663.x