

THREE PIONEERS OF CD RESEARCH: PART 2. PROF. DOMINIQUE DUCHÊNE

In our series on the pioneers in cyclodextrin research started in the last month by Prof. Tsuneji Nagai, this-month issue is dedicated to Prof. Dominique Duchêne.

In 2008 in the website of the 29th Annual Conference of the Academy of Pharmaceutical Sciences of South Africa, where she was an invited lecturer, the following laudation was published [1]:



Professor Dominique Duchêne has been a professor of Pharmaceutical Technology since 1971 at different universities in France. Her early research focused on tableting and related physical phenomena. Progressively, her research projects have been directed towards bioavailability of drugs

contained in solid oral dosage forms. This brought her to the study of solid dispersions, cyclodextrins, bioadhesion and site specific delivery. Her present research activities are devoted to amphiphilic cyclodextrins and cyclodextrins in nanoparticles. Prof. Duchêne has contributed to 129 research papers, 43 review publications, written 7 books, supervised 36 PhD students and presented 83 invited lectures. She is the Editor-in-Chief of the Journal of Drug Delivery Science and Technology and is on the editorial board of 5 other international journals. She is a past-president of the European Federation of Pharmaceutical Sciences (EUFEPS, 2001-2003) and of the Association de Pharmacie Galénique Industrielle (APGI, 1973-2001). She received Honorary Doctorates from Hacettepe University, Ankara (1992) and the University of Liege (2004). She is a fellow of the American Association of Pharmaceutical Scientists (AAPS, 1999) and of the International Pharmaceutical Federation (FIP, 2005). Prof. Duchêne received the FIP Millennial Pharmaceutical

Scientist Award in 2000 and a distinguished Nagai Lectureship from The Nagai Foundation in Tokyo (1992). She is an officer in "Ordre des Palmes Académiques", 1998, and an honorary member of the Bulgarian Scientific Pharmaceutical Association, 1996.

Being invited by the Nagai Foundation Tokyo she received the Academy of Pharmaceutical Science and Technology, Japan (APSTJ) Nagai International Women Scientist Award in the last month in Nagoya [2].

According to the Cyclodextrin News database her very first publication on cyclodextrins was a review with the title of "Cyclodextrins. Nature, origin, and value in pharmaceutical technology" [3]. The most recent paper is also a review "Cyclodextrins as "smart" components of polymer nanoparticles" [4].

As a member of the international CYCLON initial training Marie Curie project together with Prof. Ruxandra Gref she has helped the young fellows in their development during the collaborative research of teams [5].

Prof. Dominique Duchêne, we wish you further happy and active life!

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The photo is from www.ulg.ac.be



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beta-CD, alpha-CD, DLS, aggregates, hydrogen bonding, viscosity, viscoelastic solid-like behavior, XRD

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alpha-1,4->alpha-1,6 glycosyltransferase, degree of branching

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alpha-, beta-, gamma-cyclodextrins, Gly-Gly-Gly, Gly-Phe-Phe, hydrophobic force, coordinating group, hydrogen bond

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C60, C70, review, host-fullerene complexes

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HPBCD, bioavailability, DLS, SEM, XRD, pregnancy interception, estrogenic potential, apigenin, luteolin, reversible contraceptive potential

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reversal of Rocuronium-induced neuromuscular blockade, newborn patients

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minor adverse events, pharmacokinetic parameters, SBECD

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review, cross-linking, copolymerization, grafting

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TA-met-hemoCD, dioxygen, carbon monoxide

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4. CDs in Cell Biology

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review, contribution of lipids in cell entry and membrane fusion, cholesterol transporters, inhibitor molecules

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polyethylenimine, Antisense oligonucleotide, loading efficiency, nanoemulsion technique, human lung adenocarcinoma cells, apoptosis

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Carboxymethyl-beta-CDs, Mg-Al support, retention capacities, static headspace gas chromatography, multiple headspace extraction, XRD, TG, FT-IR

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colour stability, yogurt with the added complex

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reducing power, bitterness

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complex particles, XRD, DSC

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DIMEB, TRIMEB, NMR, FT-IR, Raman, XRD

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anion-selective electrodes, membrane with beta-cyclodextrin, anion-ionophore

Electrochimica Acta, 2013, 93, 272-278

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Talanta, 2013, 106, 186-191

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FT-IR, voltammetric techniques, photoluminescence enhancement, MS, determination of Hg(II) and Al(III), reduction of p-nitrophenol, catalytic activity

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Supramolecular immobilization of redox enzymes on cyclodextrin-coated magnetic nanoparticles for biosensing applications

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