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Dr. Sotiria Boukouvala is an Associate Professor in Molecular Genetics at the Department of Molecular Biology and Genetics (MBG) of Democritus University of Thrace (DUTH), Greece, where she has been a faculty member since 2006 and also lectured on fixed-term contracts between 2003 and 2005. In the past, her academic modules have included *Molecular Biology* (4 semesters), *Applied Biotechnology* (3 semesters), *Human Genetics* (2 semesters) and *Cell Biology* (1 semester). She is currently teaching two core modules, *Applications of Molecular Biology in Medical Sciences* (since 2007) and *Genomics* (since 2010). She coordinated (2012-17) the elective module *Introduction to Bioscience Enterprise*, initially funded by an institutional programme on Innovation & Entrepreneurship. In 2014-17, she also coordinated a graduate module on *Bio-Entrepreneurship*. For these two modules, she mobilised a network of 11 MBG graduates and 16 experienced professionals from the industry, related regulatory and technology transfer agencies, as well as from the Career Office and Innovation & Entrepreneurship Unit of DUTH, who liaised with students and visited the department for several years. Her postgraduate lectures at DUTH have additionally covered scientific topics relevant to pharmacogenomics, comparative genomics, molecular diagnostics and drug development. In 2011-17, she served as departmental coordinator of the European mobility programmes *Leonardo Da Vinci* and *Erasmus (Studies, Traineeships and International Credit Mobility)*, implementing 45 mobilities involving 26 institutions in 12 countries (including the EU, Australia and USA) that created opportunities for students and graduates.

Dr. Boukouvala is the Director of the Laboratory of Molecular Genetics & Pharmacogenomics-Toxicogenomics. Her research group applies comparative genomic approaches to investigate genes and molecular mechanisms that modulate the effects of xenobiotics (drugs, carcinogens, pollutants and other toxic agents) on living organisms. Her research has been funded by national and international grants (including various bilateral programmes), and is also supported by non-profit organizations and the industry. She has research collaborations with the University of Oxford and Kingston University London (UK), the Eötvös Loránd University of Budapest (Hungary), the US Department of Agriculture (USA), the Universities of Paris-Décartes and Paul Sabatier-Toulouse (France), and the University of Geneva (Switzerland). Her research and educational collaborative network also involves scientists from Koç University (Turkey), the University of Jordan, the University of Louisville (USA), the University of Queensland (Australia) and colleagues from Greek academic institutions and the industry. She participates in pharmacogenomics initiatives coordinated by the US Centers for Disease Control & Prevention and the Stanford University PharmacoGenomics KnowledgeBase. She is Chair of the International Arylamine *N*-acetyltransferase Gene Nomenclature Committee (<http://nat.mbg.duth.gr/>). Many of her collaborators have visited MBG-DUTH and she has been invited to give research seminars at academic institutions in the US and Europe. She has co-organised several scientific conferences and colloquia with international participation, and has served as reviewer for over 30 scientific journals.

Before her appointment at the Democritus University of Thrace in 2006, Dr. Boukouvala was a research scientist with the Genome Biochemistry group of Exelixis Inc. in South San Francisco, CA, USA, where she investigated candidate pharmaceutical targets. She has also worked in the R&D department of the Greek biotechnology company Medicon Hellas S.A., where she developed innovative systems for genetic diagnosis.

Dr. Boukouvala carried out her *D.Phil.* at the University of Oxford, UK, where she worked with Professor Edith Sim at the Department of Pharmacology as a graduate and post-doctoral research scientist between 1998 and 2002. She also holds a *M.Sc.* degree with Distinction (1997) from Imperial College London, UK, and a *B.Sc.* in Biology (1996) from the University of Athens, Greece. She has been a Scholar of the Hellenic Scholarship Foundation, the Bodossaki Foundation and Imperial College London. She received a Fondation Santé Fellowship in 2006, and in 2008 she was awarded the National UNESCO-L'Oréal Prize for Women in Science. In 2012, she was the first Greek scientist to be awarded the Fulbright-Schuman Research Scholarship to work as academic visitor in the USA.

Dr. Boukouvala has a long-lasting interest in classical music, holding degrees in piano, opera-lied-oratorio and advanced music theory.

SCIENTIFIC PUBLICATIONS

Academic dissertations

D.Phil. Thesis: “Expression of the genes for arylamine *N*-acetyltransferases in mice” (University of Oxford, 2002).

M.Sc. Thesis: “Analysis of the critical region for the mouse neural tube defect mutant *looptail* by representational difference analysis” (Imperial College, University of London, 1997).

B.Sc. Thesis: “Detection of structural mutations in the alpha-globin chain by direct sequencing of the alpha 2 (*HBBA2*) globin gene” (University of Athens, 1996).

Scientific Publications

Klein, D.J.; Boukouvala, S.; McDonagh, E.M.; Shuldiner, S.R.; Laurieri, N.; Thorn, C.F.; Altman, R.B.; Klein, T.E. (2016). PharmGKB Summary: Isoniazid pathway, pharmacokinetics. *Pharmacogenetics & Genomics* 26(9):436-444.

Kalman, L.V.; Agúndez, J.A.G.; Appell, M.L.; Black, J.L.; Bell, G.; Boukouvala, S. *et al.* (2015). Pharmacogenetic Allele Nomenclature: International Workgroup Recommendations for Test Result Reporting. *Clinical Pharmacology and Therapeutics* 99(2):172-185.

Karagianni, E.P.; Kontomina, E.; Davis, B.; Kotseli, B.; Tsirka, T.; Garefalaki, V.; Sim, E.; Glenn, A.E.; Boukouvala, S. (2015). Homologues of xenobiotic metabolizing *N*-acetyltransferases in plant-associated fungi: Novel functions for an old enzyme family. *Scientific Reports* 5:12900.

Patillon, B.; Luisi, P.; Poloni, E.S.; Boukouvala, S.; Darlu, P.; Génin, E.; Sabbagh, A. (2014). A homogenizing process of selection has maintained an ‘ultra-slow’ acetylation *NAT2* variant in humans. *Human Biology* 86(3):185-214.

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Tsirka, T.#; Boukouvala, S.#; Agianian, B.; Fakis, G. (2014). Polymorphism p.Val231Ile alters substrate selectivity of drug-metabolizing arylamine *N*-acetyltransferase 2 (*NAT2*) isoenzyme of rhesus macaque and human. *Gene* 536(1):65-73. (#*Equal contribution of authors*).

Sabbagh, A.; Marin, J.; Veyssière, C.; Lecompte, E.; Boukouvala, S.; Poloni, E.S.; Darlu, P.; Crouau-Roy, B. (2013). Rapid birth-and-death evolution of the xenobiotic metabolizing *NAT* gene family in vertebrates with evidence of adaptive selection. *BMC Evolutionary Biology*, 13:62.

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Boukouvala, S.; Patrinos, G. (2010). Applications of Pharmacogenomics in Clinical Practice and Drug Development. *Pharmaceutical Chronicles* (the official journal of the Hellenic Association of Pharmacists), 31:10-16 (in Greek).

Co-Editor (with Dr. G. Patrinos) of the Greek edition of book *Pharmacogenomics & Proteomics* (S.H. Wong, ed.) for Parisianos Publications (2010).

Glenn, A.E.; Karagianni, E.P.; Ulndreaj, A.; Boukouvala, S. (2010). Comparative genomic and phylogenetic investigation of the xenobiotic metabolizing arylamine *N*-acetyltransferase enzyme family. *FEBS Letters*, 584:3158-64.

Wakefield, L.; Boukouvala, S.; Sim, E. (2010). Characterisation of CpG methylation in the upstream control region of mouse *Nat2*: evidence for a gene-environment interaction in a polymorphic gene implicated in folate metabolism. *Gene*, 452:16-21.

Vagena, E.; Fakis, G.; Boukouvala, S. (2008). Arylamine *N*-acetyltransferase in prokaryotic and eukaryotic genomes: A survey of public databases. *Current Drug Metabolism* 9:628-660.

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