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Relevance of personalized medicine for developing countries

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Pharmacogenomics holds promise of personalized treatment for patients suffering from many common diseases, particularly those with multiple treatment modalities. Due to recent advances in the deciphering of the human genome sequence, high throughput genotyping technology has led to the reduction of the overall costs of genetic testing and allowed the inclusion of genotype-related dosing recommendations into drug package inserts, hence enabling the integration of pharmacogenomics into clinical practice. Although, pharmacogenomics gradually assumes an important part in routine clinical practice in developed countries, many countries, particularly from the developing world, still do not have access either to the knowledge or the resources to individualize drug therapy. The PharmacoGenetics for Every Nation Initiative (PGENI) aims to fill in this gap, by making pharmacogenomics globally applicable, not only by defining population-specific pharmacogenomic marker frequency profiles but also by formulating country-specific recommendations for drug efficacy and safety. The Golden Helix Institute of Biomedical Research is the European regional coordinating center of this worldwide project and since 2010 it is coordinating the recruitment of cases from various European developing countries. So far, 24 European countries, including Czech Republic, Greece, Malta, Poland, Serbia, Slovenia and Turkey have joined this initiative in Europe, while in early 2012 Croatia, Hungary, Lithuania, Slovakia and Ukraine have agreed to join this initiative and more countries have been invited to participate and are expected to join soon. These activities aim to make pharmacogenomics readily applicable in the European healthcare systems, particularly those in developing countries.

Biography

George P. Patrinos received his Ph.D. from the University of Athens, Greece in 1998. He currently serves as assistant Professor of Pharmacogenomics at the University of Patras (Greece), and in 2010, he was appointed as national representative at the CHMP Pharmacogenomics Working Party of the European Medicines Agency (London, UK). Dr. Patrinos has more than 110 publications in peer-reviewed scientific journals and textbooks, he is the editor of the textbook "Molecular Diagnostics", published by Academic Press, and the editor-in-chief of the international peer-reviewed journal "Human Genomics and Proteomics", while serving as communicating editor for the prestigious peer-reviewed journal "Human Mutation". He is also the co-organizer of the international meeting series "Golden Helix Symposia" and "Golden Helix Pharmacogenomics Days".

Anticarcinogenic potential of *Euphorbia neriifolia* leaves and isolated flavonoid against N-nitrosodiethylamine induced renal-cancer in mice

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Present study was aimed to scrutinize the curative efficacy of *Euphorbia neriifolia* (EN) leaves and its isolated flavonoid against n-nitrosodiethylamine (DENA)-induced renal cancer. Experimental mice were pretreated with 150 and 400 mg/kg body wt. of EN, 0.5% & 1% mg/kg body wt. of butylated hydroxyl anisole (BHA) and 50 mg/kg body wt. of *Euphorbia neriifolia* flavonoid (ENF) for 21 days prior to the administration of a single dose of 50 mg/kg body wt. of DENA. Levels of renal markers (urea and creatinine), xenobiotic metabolic enzymes (Cyt P450 and Cyt b5), lipid peroxidation, activity of antioxidants and biochemical parameters were measured to determine the renal cancer caused by DENA. Renal markers were decreased significantly ($p<0.001$) after DENA administration. The levels of Cyt P450, Cyt b5 and LPO were significantly ($p<0.001$) enhanced whereas the levels of SOD, CAT, GST and GSH content after DENA administration were retarded. The activities of AST, ALT and ALP were also significantly dropped off ($p<0.001$). Mechanistic studies revealed that pre-supplementation of EN and ENF exerted its chemo-preventive effects by enhancing the levels of antioxidants, biochemical enzymes & renal markers along with retarding the xenobiotic enzymes and malondialdehyde.