Human Drug Metabolism Database

This project will lay the foundation for establishing a relational database coupled with substructure searching capability pertaining to the metabolism of xenobiotics in humans. The database will eventually be made available on the internet via a nonprofit mechanism.

Accounting for all applicable clinical data in an unbiased manner with regard to study protocols, and across all human genotypes and assessed phenotypes, the database's critical mass will allow it to be utilized to develop more accurate and meaningful human structure-metabolism relationships (hSMR). Specific aspects of the overall hSMR, in turn, can then be applied in a proprietary fashion to assist in the selection and development of new drug candidates into and through clinical testing. Equally important at this juncture, the assembly of this type of database may be the only way to assess and potentially validate the actual utility of the numerous biochemical and in vitro methods that are proliferating in this field in order to predict the metabolic fate and metabolism-associated toxicity for a new xenobiotic upon its administration to humans.

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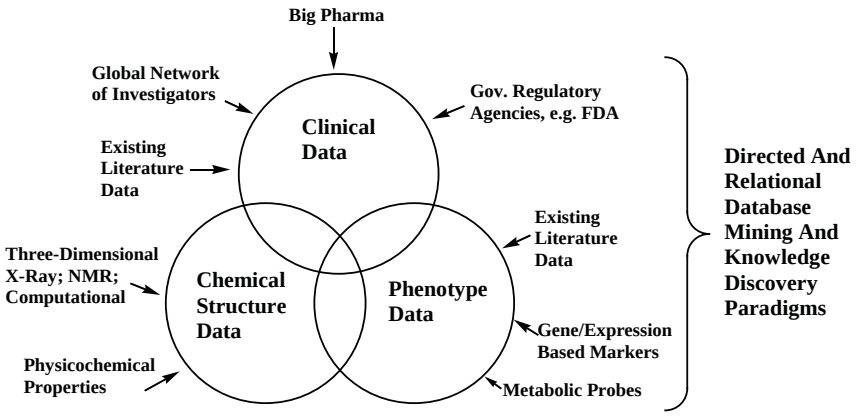
www.iupac.org/web/ins/2011-018-1-700



Informational fields in the proposed human drug metabolism database.

Strategic Planning for a New Network for Heterocyclic Chemistry

While most of the research in heterocyclic chemistry in the Mediterranean Sea region is of very high quality, a careful inspection shows that most of the research is concentrated in European countries. Current research in this area focuses on the synthesis, reactivity, and application of heterocyclic compounds of interest in the fields of medicinal chemistry, new materials, nanotechnologies, and biotechnologies. However, the needed networks among developed and underdeveloped countries are languishing due to a lack of funding. This project seeks to establish such a network in the Mediterranean.

The program is designed to create world-class research hubs in selected fields within the countries of the region. At the same time, the program would foster the next generation of leading researchers by establishing sustainable collaborative relations among research/education institutions in Spain, Portugal, France, Italy, Slovenia, Croatia, Albania, Greece, Bulgaria, Romania, Georgia, Russia, Cyprus, Turkey, Egypt, Giordan, Tunisia, Algeria, and Morocco. Under this program, core institutions would collaborate in cutting-edge fields of research and on research topics deemed to be of high international importance. The core institutions in the various countries would conduct exchanges based on a principle of equal partnership in the form of joint research, scientific meetings, and researchers. It is anticipated that the hubs formed by the core institutions will continue to carry out research activities after the funded project has ended. The scope of the project on heterocyclic chemistry includes, but is not limited to, the core areas of heterocyclic chemistry, organic synthesis methodology, and total synthesis of natural products.

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