The IUPHAR/BPS Guide to Pharmacology (GtoPdb): An expert-driven knowledgebase of drug targets and their ligands

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The IUPHAR/BPS Guide to Pharmacology (GtoPdb; http://www.guidetopharmacology.org) is an open access resource providing pharmacological, chemical, genetic, functional and pathophysiological data on the targets of approved drugs and experimental compounds. Created under the auspices of the International Union of Basic and Clinical Pharmacology (IUPHAR) and the British Pharmacological Society (BPS), GtoPdb provides concise, peer-reviewed overviews of the key properties of a wide range of established and potential drug targets, with in-depth information for a subset of important targets. GtoPdb is the result of curation and integration of data from two well-established resources: (1) the IUPHAR Database [the original database of the IUPHAR Committee on Receptor Nomenclature and Drug Classification (NC-IUPHAR) which oversees the development of GtoPdb] and (2) the BPS ‘Guide to Receptors and Channels’ compendium. All the data are derived from a global network of expert contributors, and the information is extensively linked to external databases, including ChEMBL, DrugBank, PubChem, UniProt and PubMed. Each of the >7400 small molecule and peptide ligands is annotated with manually curated 2D chemical structures or amino acid sequences, nomenclature, external database links and selected clinical information for approved drugs. Future expansion of GtoPdb will complete the coverage of all the targets of currently approved drugs and future candidate targets, alongside educational resources focussed on pharmacological principles and techniques.