

IUPHAR Receptor Database

Re-launch!

The International Union of Basic and Clinical Pharmacology (IUPHAR) has published authoritative compendia, review articles and online resources for biomedical researchers with an interest in receptor function for over 12 years. Already an established resource tool among scientists, the IUPHAR Receptor Database continues to evolve into a major global knowledge base for students, health-workers, scientists and drug discoverers. An updated version of this extensive receptor database is being launched in December 2005.

IUPHAR is a voluntary, non-profit association of national organisations that represents the interests of pharmacologists around the world. IUPHAR aims to foster international collaborations among pharmacologists, and provide updates on the nomenclature and pharmacology of receptors and ion channels via its publications, including a newsletter, scientific compendia and an online receptor database.

The IUPHAR Committee on Receptor Nomenclature and Drug Classification (NC-IUPHAR) began work on the IUPHAR Receptor Database (IUPHAR-RD) in 2001 and released the database online in 2002. Formed in 1987, NC-IUPHAR is comprised of 17 international experts with established reputations in receptor and ion channel research. Subcommittees have been formed as a result of an expansion of activities; so far, there are over 50 subcommittees specialising in receptor and ion channel nomenclature.

A freely accessible resource, IUPHAR-RD is currently widely used among scientists and drug discoverers alike, and there are plans for additional growth. To date, IUPHAR RD offers detailed information on 150 G protein-coupled receptors (GPCRs) based on research data gathered from over 300 international experts. The goal is to provide information on all GPCRs, voltage- and ligand-gated ion channels and nuclear hormone receptors, on drugs that act on them, on specific targets in the body where they are found, and on diseases in which they may be involved.

Key Benefits

The IUPHAR Receptor Database offers:

- A catalogue of IUPHAR-approved nomenclature, known ligands and gene names for GPCRs (excluding sensory receptors and pseudogenes), with links to sequence and descriptive information in the Entrez Gene database.
- Detailed molecular, genomic and pharmacological properties of GPCRs and related proteins; including information on:
 - Historical and current nomenclature systems;
 - Agonist and antagonist profiles from functional studies;
 - Affinity values from radioligand-binding assays;
 - Signal transduction mechanisms;
 - Physiological functions and tissue distribution;
 - Functionally important splice variants and polymorphisms;
 - Phenotypes caused by mutations in man and in animals;
- An option to search the database via receptor names, gene symbols and receptor families.
- A freely available internet format, suitable for browsing on unsophisticated web browsers without a fast internet connection.
- A continuously evolving resource with frequent updates.

Resources

NC-IUPHAR meets every six months, under the funding of IUPHAR, to discuss a particular theme (e.g. ion channel classification, receptor databases) and to review the progress of each of the subcommittees.

IUPHAR-RD is now hosted by the University of Edinburgh, and is maintained and updated by two Research Associates. Funding for IUPHAR-RD has been provided in part by the International Council for Science (ICSU), through generous financial support from UNESCO; additional funding is provided by corporate sponsors.

To access the updated version of IUPHAR RD, go to:

www.iuphar-db.org