

Title (en)
SYSTEM AND METHOD FOR PREDICTION OF DRUG METABOLISM, TOXICITY, MODE OF ACTION, AND SIDE EFFECTS OF NOVEL SMALL MOLECULE COMPOUNDS

Title (de)
SYSTEM UND VERFAHREN ZUR VORHERSAGE DES ARZNEIMITTELMETABOLISMUS, DER TOXIZITÄT, DER WIRKUNGSWEISE UND DER NEBENEFFEKTE NEUER KLEINMOLEKÜLVERBINDUNGEN

Title (fr)
SYSTEME ET PROCEDE POUR PREDIRE LE METABOLISME, LA TOXICITE, LE MODE D'ACTION, ET LES EFFETS SECONDAIRES DE NOUVEAUX COMPOSES CONSTITUES DE PETITES MOLECULES CHEZ L'ETRE HUMAIN

Publication
EP 1866824 A4 20090805 (EN)

Application
EP 06748475 A 20060317

Priority
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Abstract (en)
[origin: WO2006099624A2] A system is provided for the prediction of human drug metabolism and toxicity of novel compounds. The system enables the visualization of pre-clinical and clinical high-throughput data in the context of a complete biological organism. Substructure and similarity structure searches can be performed using the underlying databases of xenobiotics, active ligands, and endobiotics. The system also has an analytical component for the parsing, integration, and network analysis of genomics, proteomics, and metabolomics high-throughput data. From this information, the system further generates networks around proteins, genes and compounds to assess toxicity and drug-drug interactions.

IPC 8 full level
G01N 33/48 (2006.01); **G06F 19/00** (2011.01); **G06G 7/48** (2006.01); **G16B 5/00** (2019.01); **G16B 20/20** (2019.01); **G16B 45/00** (2019.01)

CPC (source: EP GB US)
G16B 5/00 (2019.01 - EP GB US); **G16B 20/20** (2019.01 - EP GB US); **G16B 35/00** (2019.01 - GB); **G16C 20/30** (2019.01 - EP); **G16C 20/60** (2019.01 - GB); **G16B 20/00** (2019.01 - EP); **G16B 45/00** (2019.01 - EP); **G16C 20/80** (2019.01 - EP)

Citation (search report)
• [X] BUGRIM ANDREJ ET AL: "Early prediction of drug metabolism and toxicity: Systems biology approach and modeling.", DRUG DISCOVERY TODAY, vol. 9, no. 3, 1 February 2004 (2004-02-01), pages 127 - 135, XP002532445, ISSN: 1359-6446
• [X] EKINS S ET AL: "Techniques: Application of systems biology to absorption, distribution, metabolism, excretion and toxicity", TRENDS IN PHARMACOLOGICAL SCIENCES, ELSEVIER, HAYWARTH, GB, vol. 26, no. 4, 3 March 2005 (2005-03-03), pages 202 - 209, XP004829254, ISSN: 0165-6147
• [X] EKINS SEAN ET AL: "A novel method for visualizing nuclear hormone receptor networks relevant to drug metabolism.", DRUG METABOLISM AND DISPOSITION: THE BIOLOGICAL FATE OF CHEMICALS MAR 2005, vol. 33, no. 3, March 2005 (2005-03-01), pages 474 - 481, XP002532446, ISSN: 0090-9556
• [A] EKINS S: "In silico approaches to predicting drug metabolism, toxicology and beyond.", BIOCHEMICAL SOCIETY TRANSACTIONS, vol. 31, no. 3, June 2003 (2003-06-01), pages 611 - 614, XP002532447, ISSN: 0300-5127
• [A] SCOTT BOYER ET AL: "New methods in predictive metabolism", JOURNAL OF COMPUTER-AIDED MOLECULAR DESIGN, KLUWER ACADEMIC PUBLISHERS, DO, vol. 16, no. 5-6, 1 May 2002 (2002-05-01), pages 403 - 413, XP019248057, ISSN: 1573-4951
• [PX] EKINS SEAN ET AL: "A combined approach to drug metabolism and toxicity assessment", DRUG METABOLISM AND DISPOSITION, WILLIAMS AND WILKINS, BALTIMORE, MD, US, vol. 34, no. 3, 1 March 2006 (2006-03-01), pages 495 - 503, XP002488587, ISSN: 0090-9556
• [PX] EKINS SEAN ET AL: "Computational prediction of human drug metabolism", EXPERT OPINION ON DRUG METABOLISM & TOXICOLOGY, ASHLEY PUBLICATIONS, LONDON, GB, vol. 1, no. 2, 1 August 2005 (2005-08-01), pages 303 - 324, XP009091066, ISSN: 1742-5255
• [PX] NIKOLSKY Y ET AL: "Biological networks and analysis of experimental data in drug discovery", DRUG DISCOVERY TODAY, ELSEVIER, RAHWAY, NJ, US, vol. 10, no. 9, 1 May 2005 (2005-05-01), pages 653 - 662, XP004890889, ISSN: 1359-6446
• See references of WO 2006099624A2

Designated contracting state (EPC)
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