P228. IMGT/mAb-DB: the IMGT® database for therapeutic monoclonal antibodies

Claire POIRON, Yan WU, Chantal GINESTOUX, François EHRENMANN, Patrice DUROUX and <u>Marie-Paule LEFRANC</u>

IMGT®, the international ImMunoGenetics information system®, Université Montpellier 2, Laboratoire d'ImmunoGénétique Moléculaire LIGM, Institut de Génétique Humaine IGH, UPR CNRS 1142, Montpellier, France

IMGT/mAb-DB is the monoclonal antibodies database of IMGT*, the international ImMunoGeneTics information system® (http://www.imgt.org) that is the global reference in immunogenetics and immunoinformatics. IMGT/mAb-DB provides a unique expertised resource on immunoglobulins (IG) or monoclonal antibodies (mAb) developed for diagnostic or therapeutic purpose, and on fusion proteins for immune applications (FPIA). The IMGT/ mAb-DB Query page allows requests on: (i) IMGT/mAb-D8 ID, International Nonproprietary Name (INN) and number from the World Health Organization (WHO) /INN Programme, INN proposed and recommended list, common and proprietary name (for instance, query can be made on IMGT/mAb-DB ID: 156, infliximab, 7602, L77 (1997), R39 (1998), cA2 or REMICADE®), (ii) receptor type (IG or FPIA), the origin species (murine, rat, human, chimeric, humanized), isotype or fusion protein format (for IG and FPIA, respectively), radiolabelled and/or conjugated forms, IMGT/mAb-DB entries with links to IMGT/2Dstructure-DB (protein sequences) and IMGT/3Dstructure-DB (three-dimensional structures), (iii) specificity including target (antigen, ligand) and its origin (clone species and clone name), (iv) pharmaceutical company, clinical indication and development status, organization that approved the drug such as Food and Drugs Administration (FDA), European Medicines Agency (EMA) (for instance, query can be made on Rheumatoid arthritis (RA), Phase M, FDA or 1999), and (v) application (diagnostic and/or therapeutic) and clinical domain. IMGT/mAb-DB entries correspond to about two hundred clinical indications covering ten clinical domains with essentially oncology and immunology. There is a choice of twenty-six fields that the user can select for the results display. By providing links to IMGT/2Dstructure-DB (amino acid sequences and IMGT Colliers de Perles) and IMGT/3Dstructure-DB (3D structures) for entries available in these databases, IMGT/mAb-DB facilitates comparative studies of antigen receptors and FPIA, and of their constitutive chains, even if 3D structures are not yet available. Since 2008, amino acid sequences of mAb (suffix -mab) and of FPIA (suffix -cept) from the WHO/INN Programme have been entered in IMGT®. In June 2010, IMGT/ mAb-DB contains 343 entries (175 -mab, 15 -cept), 213 have an INN and, among them, 81 have sequences in IMGT/2Dstructure-DB. IMGT/mAb-DB is upgraded regularly. IMGT/ mAb-DB is freely available for academics at http://www.imgt.org.