



FOR IMMEDIATE RELEASE

## New resource for the modelling community

**Leiden, The Netherlands, 31<sup>st</sup> of October 2014 – *The Repository from the Drug Disease Model Resources (DDMoRe) consortium provides a home to a collection of computational models of disease and drug action that have been used in pharmaceutical and/or academic research. This publically available open-access resource will make it easier for researchers to share and reuse a variety of models developed to describe drug action, disease progression and more.***

The Drug Disease Model Resources ([DDMoRe](#)) consortium has launched a [repository](#), which members of the modelling community can now use to store and access an assortment of computational models. These models describe and predict drug exposure-response-relationships in patients across a variety of diseases. Researchers at pharmaceutical companies or academic institutions currently develop computational models for drug and disease effects in order to provide a basis for informed, quantitative decision-making within a model-based drug development (MBDD) paradigm. They do this by implementing their models in one or more of the several software packages which have been developed by independent software companies. Until now, this independence can constrain and complicate end-to-end task completion for users, especially when specific packages may not support all necessary activities. Effective collaboration between research partners, using different “stand alone” software packages, is technically challenging and complicated due to incompatibilities. The DDMoRe Model Repository is compatible with and built on the Pharmacometrics Markup Language ([PharmML](#)), and supports the current Modelling Description Language ([MDL](#)). These new standards for computational models and the Interoperability Framework make it possible to recode a model into a single format which is compatible with a variety of the commonly used software packages.

The Repository currently showcases a range of 'proof of concept' models describing drugs and diseases. Over time, DDMoRe will make available safety models and new models in key therapeutic areas including diabetes, oncology, CNS and infectious diseases.

*“It's open access, so more people will be able to build on the models and cite the original authors' work – that means it's also helping people who make models receive additional credit for their work,”* says DDMoRe repository developer Mihai Glonț at EMBL-EBI. *“But more importantly, the new repository makes it much easier for modellers to collaborate, so people working in different places can pool their talents to create computer-based methods for predicting the effects of drugs in a range of conditions.”*

The first version of the Repository has indexed and searchable content and it is possible to host public and private models, share them and collaboratively improve them, while their full history is recorded. The DDMoRe team will continuously improve the user-interface by adding features such as an improved search engine based on metadata, faceted browsing handling of future versions of the DDMoRe standards, and support for the forthcoming Generic Model Qualification Procedure. By the

end of the year the repository will connect to the first instance of the Interoperability Framework which facilitates the usage of models across many different software packages.

*“What’s exciting about this is that researchers will be able to work on models and exchange them, without being restricted to a single piece of software,”* adds Camille Laibe, who develops BioModels Database at EMBL-EBI. *“The way we see it, you can start working on a model using one piece of software, and send the model along to someone else, who can then use and further develop it within a different tool.”*

*“This launch of DDMoRe’s public repository is a major milestone in the project,”* says Peter Milligan of Pfizer. *“We’ve made the infrastructure behind it freely available under a GPL-compatible license, which makes it easier for organisations to integrate the repository with their own technical environment. What we’re working on now is an enhanced mechanism for capturing even more information about the hosted models, which will make the resource much more comprehensive and the user experience richer.”*

User experiences are very important to the DDMoRe team, therefore to help us further develop our platform of products that we believe will be of interest to the wider modelling community please provide us your experiences and suggestions for enhancements on [ddmore.eu/forums](http://ddmore.eu/forums).

### **About DDMoRe (or standards and tools for modelling and simulation)**

The DDMoRe consortium is a 5-year IMI project ([www.imi.europa.eu](http://www.imi.europa.eu)), involving 27 partners (drawn from the Pharmaceutical Industry, Academia and Small to Medium Enterprises). In 2011, DDMoRe ([www.ddmore.eu](http://www.ddmore.eu)) has been formed to address the current lack of common tools, languages and standards for informed decision making throughout drug discovery and development. DDMoRe aims to facilitate Modelling & Simulation (M&S) by a) establishing a set of standards for both model and workflow encoding, and for storage and transfer of models and their associated metadata, b) developing a fully searchable, public drug and disease model repository that will accommodate model descriptions, algorithms, code, and data, as well as relevant metadata, assumptions, Bayesian priors, and links to references, c) developing an open source interoperability framework which will provide access to existing modelling tools and those of the future, d) developing the Modelling Description Language (MDL). So far, key achievements include the creation and release of MDL, MDL-IDE, PharmML and an encoding of published models in core therapeutic areas: diabetes, oncology, CNS, infectious and inflammatory diseases.

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