

Newsletter







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PROJECT NEWS

Have a look at eTOX Video

eTOX launches a video presenting the 2nd hackathon event held in Barcelona in March 2016. It gives an insight into the project, and offers more visibility of eTOX results.

Click **here** to watch the video.



14th Consortium Meeting, Barcelona, Spain

The meeting was hosted by IMIM and SYNAPSE, and partly sponsored by ESTEVE in Barcelona on May 3rd and 4th, 2016. Key topics were quality of the data, the preparation of the final release of the eTOX system, the first version of the business plan for the use of the system after the end of the project, and the preparation of an eTOXsys demo version open to the public.

EuroTox 2017 - eTOX Symposium

eTOX will organize a Symposium at EuroTox conference in Bratislawa, Sept 10-13th, 2017.

The symposium entitled "Beyond data towards data transparency, management, mining and application to predictive safety assessment" will not only summarize the achievements of eTOX in data sharing and mining, ontology development and in silico prediction, but will also incorporate the views and experiences of other large safety data endeavors, such as the Japanese HESS and the US ToxCast/Tox21 initiatives.

KEYNOTE

eTOX: The IMI perspective

Message from Colm Carroll, Scientific Project Manager at Innovative Medicines Initiative (IMI)

As the eTOX project enters its final phase, it's a good time to reflect on the achievements of the consortium and think about the future

Launched as a call for "Expert systems for In-silico toxicity prediction" in June 2008, the eTOX consortium was chosen ahead of 10 other consortia. Since then, eTOX has tackled many of the collaboration challenges of an early IMI project, and, in doing so, has paved the way for many subsequent projects.



A key example is that the concept of sharing confidential data from many EFPIA partners was seen as impossible when the project began. However, through a dedicated, persistent effort of many partners, this problem has been solved and the data is now securely available to both the EFPIA partners and the modelling teams.

Now that IMI has matured into IMI2, and the first IMI projects come to an end, much attention has been paid to the impact and sustainability of these projects' results. Looking back at the original objectives of eTOX as laid out in the first version of the description of work, it's clear that most have been ticked off, but there is still the opportunity to make that final push to ensure the results of the project can make their maximum impact on the toxicology world. Currently, another topic has been launched under IMI2 Call 9 which hopes to build on the achievements of eTOX, I invite all interested stakeholders to apply. However, there are also many other avenues available to exploit the results of the project in order to maximise impact. With the time remaining, it might be envisaged imaginatively about how to ensure the eTOX achievements reach as broad an audience as possible. By fully realising this objective, all members of the eTOX project will be able to look back proudly on the years spent on this consortium (2010-2016).

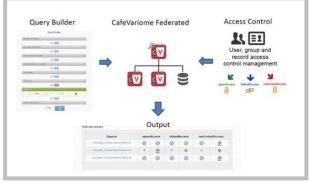


2016.2 Vitic release. It has been launched this month (1,914 substances linked to 7,509 studies) in which the information on pharmacology target and effects has been included. The plan is to incorporate the Pharmacology information in the eTOXsys and the OntoBrowser, so that users of eTOXsys will be able to browse the Mode of Action ontology and take advantage of the amount of synonyms (mostly gathered from ChEMBL) to identify the Preferred term to be used for their queries in eTOXsys. Additionally, in this release Lundbeck has contributed data of 1 Carcinogenicity and 2 Safety Pharmacology studies, and Bayer with 37 LLNA studies.

Top 10 Target annotated

Standardised pharmacological target term	Substances
Metabotropic glutamate receptor 5	15
C-C chemokine receptor type 3	14
MAP kinase p38	14
Potassium-transporting ATPase	14
Cannabinoid CB1 receptor	13
Beta-2 adrenergic receptor	12
Glucocorticoid receptor	12
Histamine H1 receptor	12
Neuronal acetylcholine receptor protein alpha-7 subunit	12
Epidermal growth factor receptor	11

- eTOXsys v2.3 new release. The release of eTOXsys version 2.3 is scheduled for June 30, 2016 to be distributed as a patch to the EFPIA partners. The patch will include changes concerning the prediction system, such as improved stability of the prediction execution and the inclusion of information about the version of a prediction model. Furthermore, updates of the prediction virtual machines from all model providers will be delivered.
- Data Discovery Tool. The data discovery concept is, at its core, about sharing the 'existence' rather than the 'substance' of data. It is a powerful concept, in that it exploits only carefully chosen 'safe' data fields and records, without interfering with a project's main data system, which enables the search and insight into the richness of the gathered data. A first prototype, based on the Café Variome software was presented by the partner University of Leicester during the last Consortium Meeting, and was warmly received by project partners.



Currently, 6733 reports of the 7287 cleared for sharing within the consortium have finished the extraction data process and are available in the Vitic Nexus eTOX database. Cleared Reports submitted to CROs or in-house facilities completed VitiC Reports with data available at Vitic Nexus database

PUBLICATIONS

A full list of publications is available on http://www.etoxproject.eu

- ARTICLE (FIMIM): <u>DisGeNET-RDF</u>: <u>Harnessing the Innovative Power of the Semantic Web to Explore the Genetic Basis of Diseases</u>. Queralt-Rosinach N, Piñero J, Bravo A, Sanz F, Furlong LI. *Bioinformatics 2016; btw214*.
- ARTICLE (FIMIM): <u>Uncovering disease mechanisms through network biology in the era of Next Generation Sequencing</u>. Piñero J, Berenstein A, Gonzalez-Perez A, Chernomoretz A, Furlong LI. *A Scientific Reports2016;6:24570*.
- ARTICLE (FIMIM): <u>A crowdsourcing workflow for extracting chemical-induced disease relations from free text</u>. Tong Shu L, Bravo A, Furlong LI, Good BM, Su AI. *Database 2016:1-11:baw051*.

UPCOMING EVENTS

- 11-15.07.2016 | Practical Application of Toxicology in Drug Development. Course co-hosted by the American College of Toxicology and the British Toxicology Society. Info: http://goo.gl/nZD0Ec
- 4-7.09.2016 | 52nd Congress of the European Societies of Toxicology. Seville, Spain. Info: http://www.eurotox2016.com/
- 4-8.09.2016 | 21st EuroQSAR. Verona, Italy.
 Info: http://www.ldorganisation.com/v2/produits.php?langue=english&cle_menus=1238915962