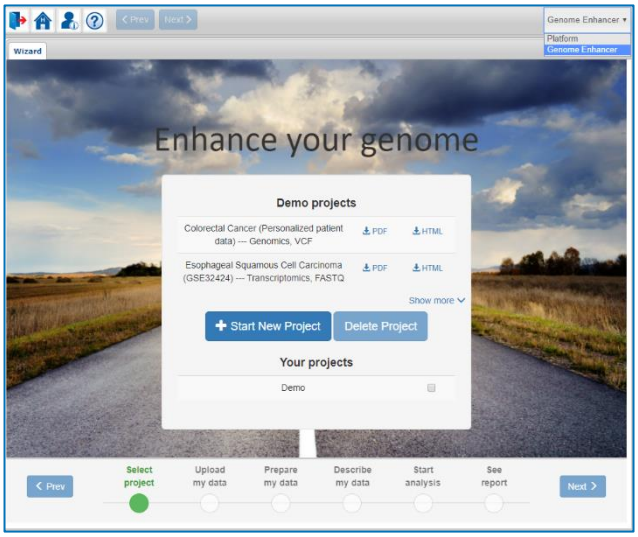
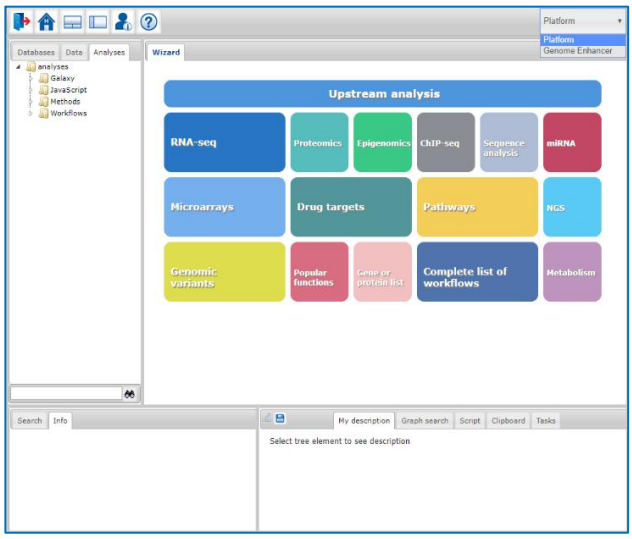
Genome Enhancer release 2.0

Genome Enhancer Expert

The 2.0 release of Genome Enhancer offers to its users a powerful synergism between the automatic pipeline for multi-omics data processing of Genome Enhancer and the comprehensive bioinformatics toolbox of the geneXplain® platform.

Having purchased the Genome Enhancer Expert license, you will start seeing the product selector at the upper right corner of Genome Enhancer window. Depending on your selection, you will be able to switch from Genome Enhancer view to the geneXplain® platform view and back:





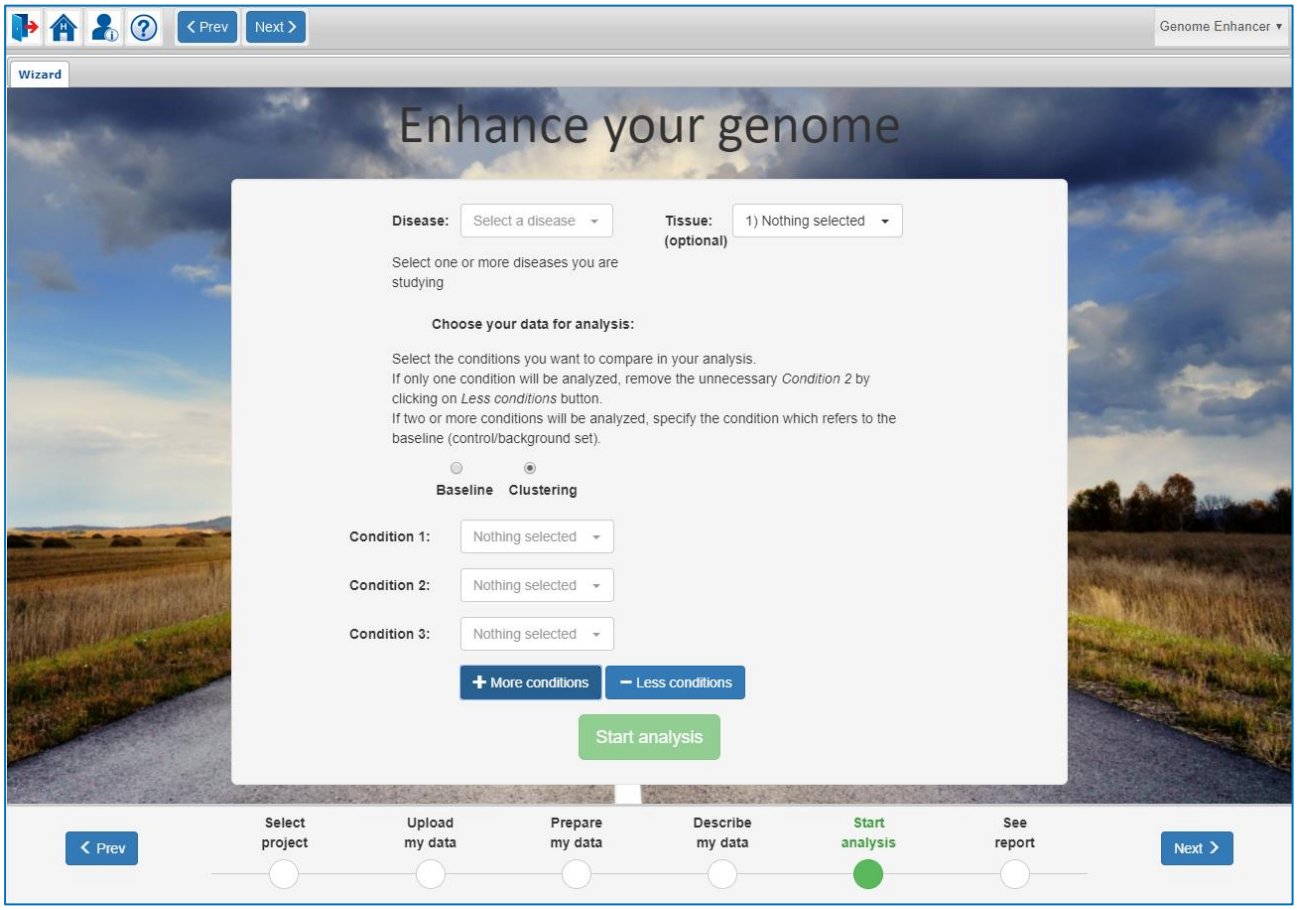
Genome Enhancer Expert will open you the full functionality of the geneXplain® platform with TRANSFAC®, TRANSPATH® and HumanPSD™ databases connected. In the platform view you will be able to perform further processing of your analysis results, received from Genome Enhancer, create, modify and use already pre-defined workflows for your multi-omics data analysis and work with data coming from other model organisms. For more info on geneXplain® platform functionality please refer to the platform product page on our web site.

Got interested in Genome Enhancer Expert? Feel free to contact our sales team via info@genexplain.com for licensing policy details and any further info.

Other new features of Genome Enhancer release 2.0

The 2.0 release of Genome Enhancer contains the following new features:

- TRANSFAC®, TRANSPATH® and HumanPSD™ databases update to release 2020.2
- Ensembl version update to release 99
- Gene Ontology update to version 2020-03-25
- New analysis launch interface with an intuitive selector of baseline or clustering option for launches with three and more studied conditions:

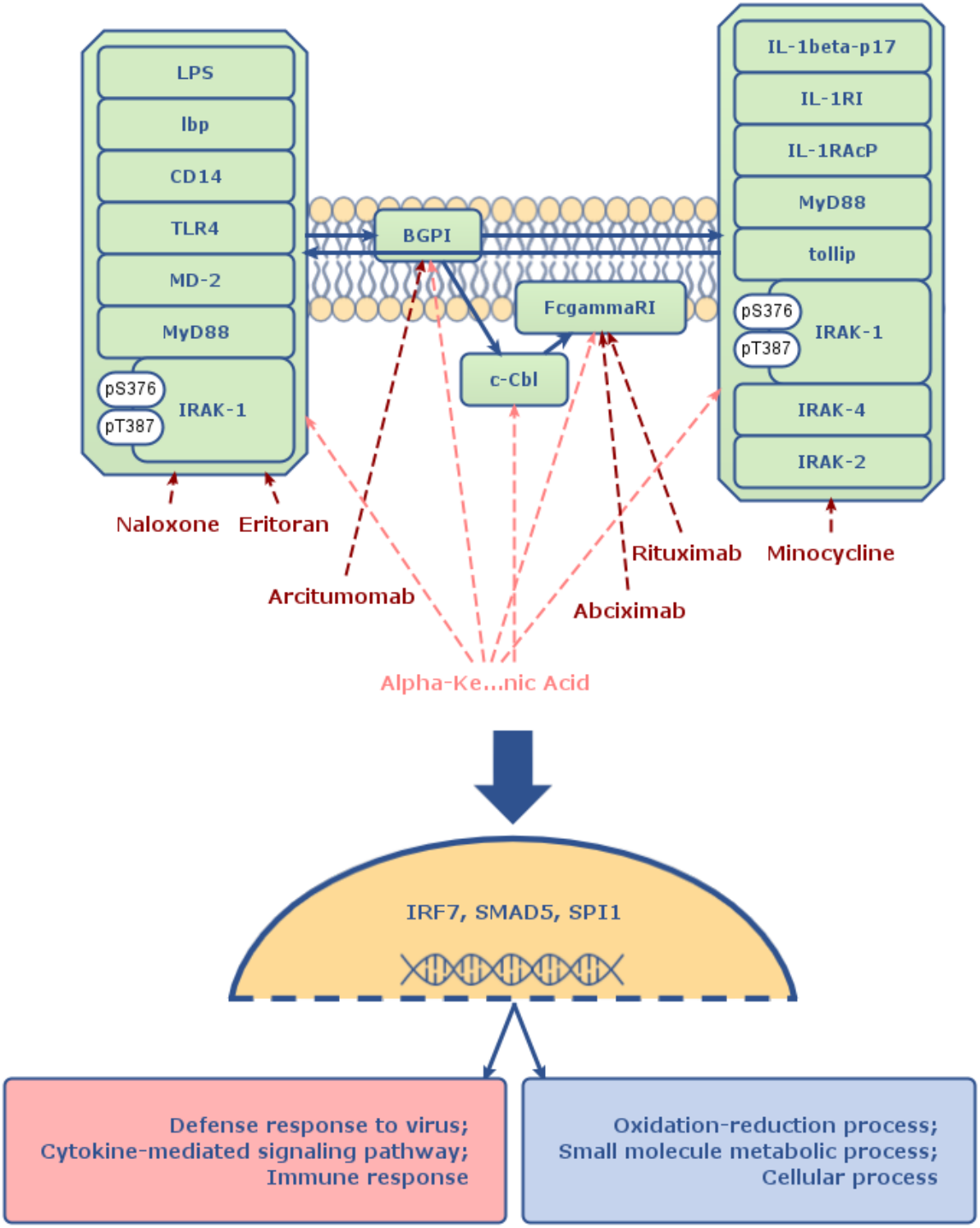


- Intuitive visualization of identified promising drug targets with classification by two categories: targets with clinically proven druggability and targets with cheminformatically predicted druggability:

Prospective drug targets selected from full list of identified master regulators filtered by druggability score from HumanPSD™ database.

Prospective drug targets selected from full list of identified master regulators filtered by druggability score predicted by PASS software

- New diagram, providing an intuitive visualization of the identified molecular mechanism of the studied pathology:



- Intuitive visualization of suggested treatments with classification by four categories:

FDA approved drugs or drugs used in clinical trials for the studied pathology (most promising treatment candidates selected for the identified drug targets on the basis of literature curation in HumanPSD™ database)

Repurposed drugs used in clinical trials for other pathologies (prospective drugs against the identified drug targets on the basis of literature curation in HumanPSD™ database)

Prospective drugs, predicted by PASS software to be active against the identified drug targets with predicted activity against the studied disease(s) (drug candidates predicted with the chemoinformatics tool PASS)

Prospective drugs, predicted by PASS software to be active against the identified drug targets, though without cheminformatically predicted activity against the studied disease(s) (drug candidates predicted with the chemoinformatics tool PASS)

- Clear conclusion, containing the suggested prospective treatments and key targets, underlying the identified molecular mechanism of the studied pathology:

We propose the following drugs as most promising candidates for treating the pathology under study:

Pazopanib, Vitamin E, Paclitaxel and 9-Aminophenanthrene

These drugs were selected for acting on the following targets: PDGFRA, PPP2CB and PRKDC, which were predicted to be involved in the molecular mechanism of the pathology under study.

The identified molecular mechanism of the studied pathology was predicted to be mainly based on the following key drug targets:

PP1-gamma1, PDGFRalpha, MKP-2 and Chk2

These potential drug targets should be considered as a prospective research initiative for further drug repurposing and drug development purposes.

Full conclusion example, as well as examples of full Genome Enhancer analysis reports, are freely accessible at https://ge.genexplain.com or at Genome Enhancer product page on our web site.