InSyBio Suite - First Steps

July 2024

Insybio Suite v3.3

InSyBio Intelligent Systems Biology

User Manual

www.insybio.com

Welcome to Insybio Suite

InSyBio Suite is an integrated platform providing tools for biological data management, secured storage and analysis based on the Cloud model of Software as a Service (SaaS).

Its present version consists of seven basic modules:

- **Interact**: a module offering prepossessing and analysis options for proteomics and interactomics biological data.
- **ncRNAseq**: a module for the analysis of RNA-Seq data and non-coding RNA molecules.
- **BioNets**: a module which enables the application of data mining techniques on gene expression datasets and biological networks.
- **Biomarkers**: a tool for the identification of biomarkers from single and multi-omics datasets combining statistics and machine learning.
- **DNA-Seq**: a tool which enables the fast and accurate pre-processing and analysis of DNA-sequencing data by non-bioinformatics experts with optimized pipelines.
- **Pipelines**: a tool that takes as input a dataset file and after performing statistical and network analytics, it uses the dataset to train a machine learning model identifying at the same time the optimal biomarkers for the trained model.
- **Data Store**: a set of tools for storing and managing biological datasets.

InSyBio Suite is offered by InSyBio LTD and incorporates in its analysis a variety of novel published computational intelligent techniques plus a new method for the functional characterization of proteins.

We will be thankful if you try out InSyBio Suite and provide us your feedback in <u>support@insybio.com</u>.

In the following, the signing up and the logging in procedures are described, as well as the basic functionalities of InSyBio Suite.

Logging in

In the login page you have to enter your email and your password and press the "Login" button.

| Installigent Systems Biology Image: Systems Image: Systems | | | | | |
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| | InSyBio Suite delivers over Internet high-performance, user-friendly and installation free tools to biology researchers with minimum knowledge of software usage. Learn more about InSyBio > | Want to take the InSyBio Suite for a test-drive? Sign up for a free 30 day evaluation Fully functional Use your own datasets Requires Verification (1-2 business days) | | | |

In case you have forgotten your password, you can click the respective link. In the page you will be redirected to, you have to enter your email and your password will be sent to you.

| Password Reminder |
|---|
| Your e-mail * Submit ← Go to Togin form |
| |

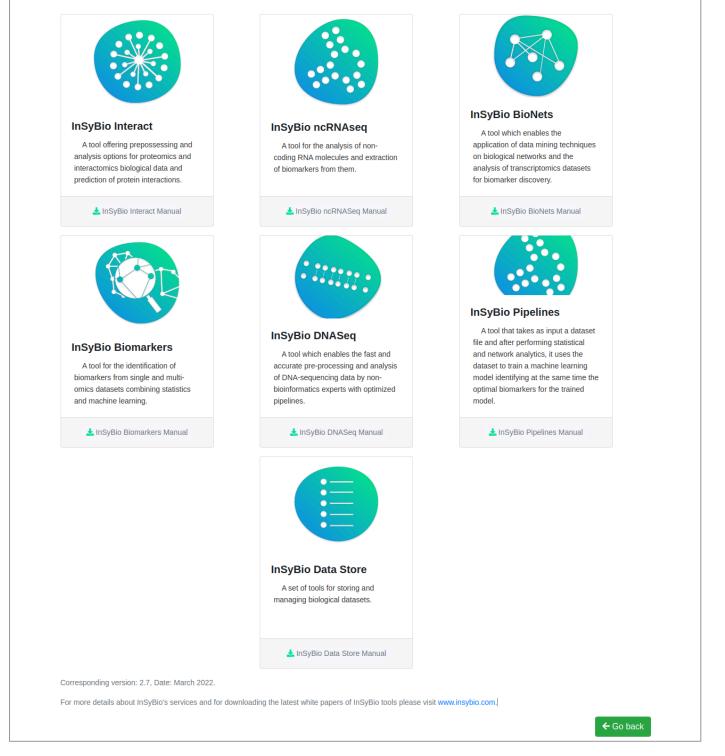
By clicking the "Learn more about InSyBio" there is an overview about the tools that InSyBio Suite delivers and the corresponding manuals.

Welcome to InSyBio Suite

InSyBio Suite delivers over Internet high-performance, user-friendly and installation free tools to biology researchers with minimum knowledge of software usage. It is based on a series of patented or in the process of getting a patent pipelines, algorithms and tools that have been recognized and awarded by the academic community. Using InSyBio Suite, biology researchers can save time and a significant amount of money while reassuring high performance and robustness in their data analysis.

The current version of InSyBio Suite includes the following tools:

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InSyBio Suite Graphical Environment

Upper toolbar

In the upper toolbar of InSyBio Suite, pressing on your username you can update your profile, change your password, go to the settings page or logout from the account.

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| InSyBio Interact | • | Welcome to InSyBio Suite | L Profile ♣ Settings ★ Log out |
| InSyBio Bionets | ncRNASeq Jobs | 🚔 Interact Jobs | ENg out |
| InSyBio Biomarkers | | | |
| InSyBio DNA-Seq | ID 82 RNA-Seq Differential Expression Pipeline | ID 35 Completed | ID 19 Completed DNA-Seq Pipeline |
| InSyBio Pipelines | ID 85 Running | ID 68 Error | ID 18 Completed |
| InSyBio DataStore | RNA-Seq Differential Expression Pipeline | ID 34 Error | ID 17 Completed |
| | ID 84 Error RNA-Seq Differential Expression Pipeline | ID 67 Error Network Creation | ID 16 Completed DNA-Seq Pipeline |
| | ID 83 RNA-Seq Differential Expression Pipeline | ID 33 Completed Enrichment Analysis | ID 15 Completed DNA-Seq Pipeline |
| | ID 12 miRNA Target Site Features Calculation | Enrichment Analysis | DNA-Seq Pipeline |
| | RNA-Seq Pipeline | | LINSyBio Suite Manuals |
| | | | First Steps Interact OncRNASeq |
| | | ID 59 Error Dataset Preprocessing | 😵 BioNets 🔇 Biomarkers 🕒 DNASeq |
| | ID 48 Completed | ID 55 Pending Training Multi-biomarker Predictive Analytics Model | Pipelines Data Store |

When updating your profile you can change your full name, address, organization and country. You cannot change your email though you can manage your email notifications.

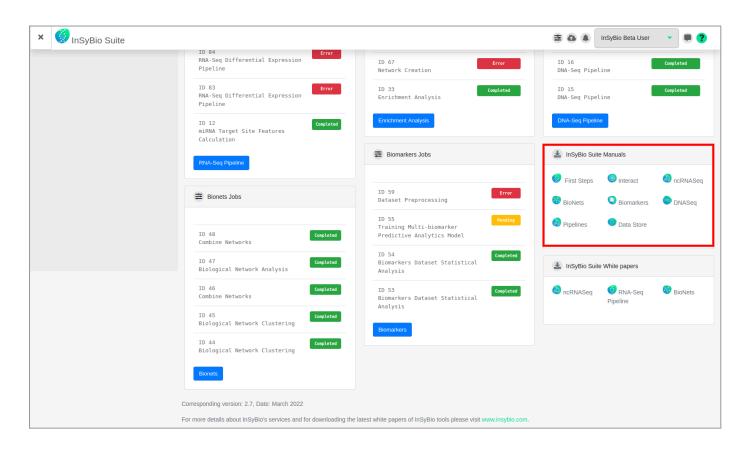
| ≡ | 🗑 InSyBio Suite - User Profile | | | = 0 4 | InSyBio Beta User | • | |
|---|---|---------|---|-------|-------------------|---|--|
| | | | User Profile | | | | |
| | Fields with* * are required. Email* * • Info@Insybio.com | | | | | | |
| | You cannot change your e-mail. Name* * * InSyBio Beta User Please fil your full name. | | | | | | |
| | Address | | | | | | |
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| | Manage your e-mail notifications | | | | | | |
| | | ceive N | eceive InSyBio Suite news by e-mail Notification e-mail when your profile changes btification e-mail when your password changes Submit | | | | |
| | | | | | | | |

When changing your password, you have to provide your old password and type twice your new password.

| ≡ | 🛞 InSyBio Suite - Password change | | ≡ ۵ ≜ | InSyBio Beta User | - 🖷 ? |
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| | | Password change | | | |
| | Old password* * * | Fields with * * are required. Type your password. | | | |
| | New Password* * The | Set new password | | | |
| | Re-type password* * | Suomit | | | |
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Left menu

In the left menu of InSyBio Suite you can select the tool you would like to use. Tools user manuals can be found on the landing page.



For some tools, you can find their subtools pressing the respective arrow.

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| InSyBio Interact Positive/Negative PPIs Find 22 computed features for every interaction. | Intracellular Interactions Analysis | Welcome to InSyBio Suite | |
| Protein Search Explore the properties of your protein of interest. | arcRNASeq Jobs | Interact Jobs | E DNASeq Pipeline Jobs |
| PPI Complexes List of PPI complexes computationally predicted using Evolutionary Enhanced Markov Clustering (EEMC) | ID 82 RNA-Seq Differential Expression Pipeline | ID 35 Completed | ID 19 Completed DNA-Seq Pipeline |
| algorithm. PPI Functions Search Proteins and complexes with a specific function (GO | ID 85 RNA-Seq Differential Expression Pipeline | ID 68 Error Network Creation ID 34 Error Enrichment Analysis | ID 18 Completed DNA-Seq Pipeline ID 17 Completed DNA-Seq Pipeline |
| Term). PPI Datasets Create and save your own dataset from the stored PPIs. | ID 84 Error RNA-Seq Differential Expression Pipeline | ID 67 Error Network Creation | ID 16 Completed DNA-Seq Pipeline |
| Network Creation Creation of biological networks from your set of biomarkers | ID 83 RNA-Seq Differential Expression Pipeline | ID 33 Completed | ID 15 Completed |
| based on the protein-protein interactions of InSyBio Interact. Enrichment Analysis Functionality | ID 12 Completed miRNA Target Site Features Calculation | Enrichment Analysis | DNA-Seq Pipeline |
| Explore the functional terms which are significantly enriched in the given protein list. Functional Annotation Patented Method | RNA-Seq Pipeline | | First Steps OInteract On CRNASeq |
| Explore the functional annotation information of your protein of interest. | 🛱 Bionets Jobs | ID 59 Errer Dataset Preprocessing | BioNets DNASeq DNASeq Pipelines Data Store |
| InSyBio ncRNASeq | ID 48 Completed | Predictive Analytics Model | |

When inside a tool, help is provided through the upper right help button.

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| | InSyBio Interact | | | Help |
| | InSyBio ncRNASeq | Uniprot ID of protein @ Select unitprot | Show Results | |
| 6 | InSyBio Bionets | | | |
| 0 | InSyBio Biomarkers | | | |
| | InSyBio DNA-Seq | | | |
| | InSyBio Pipelines | | | |
| | InSyBio DataStore | | | |

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|---|----------------------------|-----------------------|--|
| | InSyBio Interact | | Quick Introduction |
| | InSyBio ncRNASeq | Uniprot ID of protein | Type two characters/ digits and a list of relative protein's |
| | InSyBio Bionets | | Uniprot ID will appear. |
| | InSyBio Biomarkers | | |
| | InSyBio DNA-Seq | | |
| | InSyBio Pipelines | | |
| | InSyBio DataStore | | |

On the upper right of the toolbar, there is also a feedback button. Clicking on the feedback button, a message asks you to provide your feedback at support@insybio.com.

| × InSyBio Suite | Send us feedback! | × | 🚔 💩 🌲 🛛 InSyBio Beta User 🔹 🗩 🤋 |
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| InSyBio Interact | | platform please provide us your feedback 0 Suite | |
| InSyBio ncRNASeq | using the form below or contact us Type your message here. | at support@insybio.com. | |
| InSyBio Bionets | a ncRNASeq Jobs | | DNASeq Pipeline Jobs |
| InSyBio Biomarkers | | | |
| InSyBio DNA-Seq | ID 82 RNA-Seq Differential | Close Send Completed | ID 19 Completed DNA-Seq Pipeline |
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| InSyBio DataStore | Pipeline | ID 34 Error | ID 17 Completed |
| | ID 84 RNA-Seq Differential Expression Pipeline | ID 67 Error Network Creation | ID 16 Completed DNA-Seq Pipeline |
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| | ID 12 miRNA Target Site Features Calculation | Enrichment Analysis | DNA-Seq Pipeline |
| | RNA-Seq Pipeline | ≢ Biomarkers Jobs | LinSyBio Suite Manuals |
| | Bionets Jobs | ID 59 Dataset Preprocessing | First Steps Interact Interact BioNets Biomarkers DNASeq |
| | ID 48 Completed | ID 55 Training Multi-biomarker Predictive Analytics Model | Pipelines Data Store |

How to get InSyBio Suite

To request a free one month license of InSyBio Suite please email us at <u>info@insybio.com</u>.

To purchase InSyBio Suite commercial version 3.3 please contact us at <u>sales@insybio.com</u>.

About Us

InSyBio Ltd is a bioinformatics pioneer company (www.insybio.com) in personalized healthcare, that focuses on developing computational frameworks and tools for the analysis of complex life-science and biological data in order to develop predictive integrated biomarkers (biomarkers of various categories) with increased prognostic and diagnostic aspects for the personalized Healthcare Industry.

InSyBio Suite consists of tools for providing integrated biological information from various sources, while at the same time it is empowered with robust, user-friendly and installation-free bioinformatics tools based on intelligent algorithms and methods.

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