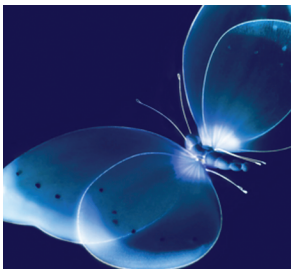
RESTful BioCurations - RBiC

FLEXIBLE ENVIRONMENT FOR DEVELOPMENT
OF SCIENTIFIC WEB-RESOURCES



WHAT IT DELIVERS

- Template for your future Web-site representing main features of research items of molecular biology (genes, proteins, small molecules, bio-samples, and others)
- Data browser in view of a heat-map navigator, with special features of selecting and sorting items of interest
- Application program interface (API) to develop subprograms (Web-services) to upload and process data on research items properties
- Multi-user data access mode
- Customized registry of automated regular updates on items properties
- Data integrity expert system: Crowd sourcing feature to assign the usability scores to the items
- Data import for analytical processing in a tabular form
- Data integrity expert system: Crowd sourcing feature to assign the usability scores to the items
- Simple Web-content manager for momentary design of “brand” Web-site

WHAT YOU CAN DO

- Create the database by uploading items in XML format
- Specify links to the external databanks
- Develop the proprietary Web-services to process data
- Plug-in the Web-services to the database
- Design the welcome site and publish your resource on the Web

APPLICATIONS

- Laboratory information dissemination for high-throughput applications in the field of transcriptomics, proteomics and metabolomics
- Sample management and tracking across the series of biological experiments
- Easy access to the results of large-scale bioinformatics experiments, e.g. genome-wide predictions of 3D protein structure, localization and post-translational modifications
- Running the problem oriented databases for a selected classes of salient proteins, like G-protein coupled receptors

WHY USE RESTFUL ARCHITECHTURE?

Instead of day-long available and then perished “PhD” sites you obtain the stable scaffold to deliver your findings on Web, thus increasing the citations.

AN INTUITIVE AND EFFICIENT WEB-DEVELOPMENT

RESTful BioCurations (RBiC) is a perfect tool for creation of Web resources integrating diverse information, accumulated in the field of molecular biomedicine. By means of the platform environment of development you can create your own databases, post them on the Internet, connect to various sources of information and manage the content.

RBiC supplies the programming method you need to easily integrate the targeted vision of the scientific achievements. You can monitor the efficacy of multi-lab research by mapping the updates on the consolidated color-coded matrix.

The BioCurations platform enables to develop knowledge-based resource to answer the questions such as:

- what is the current scope of the problem ahead?
- how much is known about the research items under investigation?
- if there were valuable contributions from your research into the field?
- which steps should be taken to have an impact?

Biosyntelligence

RESTFUL BIOCURATIONS

PROVIDING THE CONTENT. CUSTOMIZABLE. DURABLE.

RESTful Service

RESTful is an Internet programming convention, which provides transparent means for communication between Web-applications. RESTful-architecture links the services to a general data management platform by sending the HTTP-requests and getting the HTTP-responses. RESTful services are a simple applications that can be developed by post-graduate or PhD students, while preparing a thesis in bioinformatics. Following the protocols makes it possible to obtain the high level of data integration.

BioCuration Analytics

Any type of molecular biology data dramatically increase in its value after being verified by an expert. The information automatically generated by RESTful services can be manually checked and modified. Use this intrinsic feature of RBiC to be sure, that users of your Web-resource will obtain curable data, not the garbage. Through specially designed mechanisms, you involve several experts into the validation pipeline, with automatically checking of contradictions in the evaluation of the research items.

RESTFUL WEB-SERVICES ARE USED TO PROVIDE THE UNEXPECTED AND EXCITING VIEW TO THE DATA

Integration

Make scientific ideas of your concern accessible to everyone through the Web by heat-mapping the experimental vs. predicted evidences

User Profiles

RBiC provides a multi-user content management system, where everyone can customize own preferences in data browsing

Data comprehensiveness

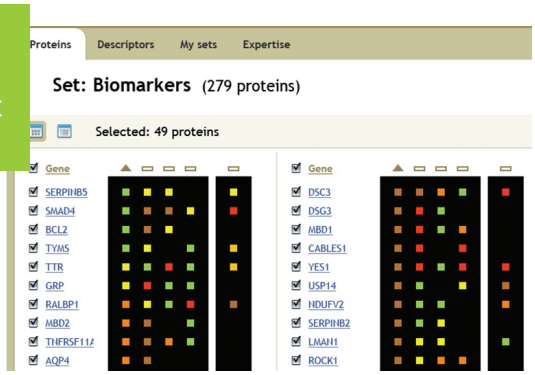
Consolidation of multiple data sources enables your lab to be aware of the cutting edge in the field

Cloud deployment

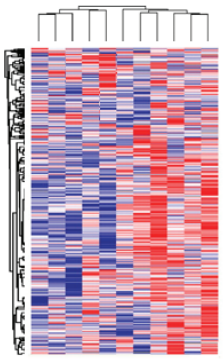
RBiC is a cloud application. You can subscribe to it for a certain period or purchase the license for installation on a localized virtual machine.

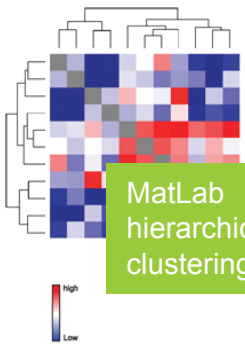
HEAT-MATRIX NAVIGATOR OVERVIEWS ALL THE DATA

Structure your collection of biomarkers just in few hours



PROCESS THE DATA WITH EXTERNAL MODULES





MatLab hierarchical clustering

COGNITIVE BIOINFORMATICS: UNDERSTAND WITHOUT READING

Intelligent information retrieval and dissemination technologies enable your research to be precise, transparent, and thus valuable

ProContent Research

Cognitive-Bio
plug-ins for cognitive bioinformatics research

Neosemantic Soft
automated creation of knowledgebases

Biosyntelligence
dynamic management of biological content on Web

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