Galaxy/RSAT integration for advanced ChIP-seq data analysis

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Regulatory Sequence Analysis Tools (RSAT)

→ Detection of cis-regulatory elements in genome sequences
→ Series of modular computer programs
→ Over 50 tools
→ Maintained since 1997

Galaxy

→ Open web platform
→ Easy access to a versatile tool-box
→ Over 30 tools for ChIP-seq data analysis
→ User friendly

Integration of RSAT tools in Galaxy Nebula

RSAT tools available in Galaxy:

→ Peak motifs
→ Convert matrix
→ Matrix scan
→ Dyad analysis

Available at:

→ Nebula (http://nebula.curie.fr/)
→ Virtual machine (VM) on IFB Cloud
→ Docker

Peak motifs results in Galaxy

Convert matrix in Galaxy

Dyad analysis in Galaxy

RSAT integration through SOAP web services

1. Parameters setting in Galaxy interface
2. Construction of command line by Galaxy
3. Sent command line to RSAT by web services
4. Request execution
5. Results recovered to Galaxy
6. Treatment and display of results
7. Downloading results

User

Galaxy

Nebula

Arrow

44 RSAT tools
30 Nebula tools

[References]