

Research & Services | The Bioinformatics Unit (Yissum)

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Categories

Bioinformatics, sequence analysis, genomic data analysis, structural biology bioinformatics

Objective/function

- The Bioinformatics Unit provides consultation, education and computational services to the Hebrew University biological and medical research community

Research provided

- [Genomic](#) data analysis
- [Sequence analysis](#)
- Structural biology bioinformatics consultation
- [Seminars](#)
- [Workshops](#)

Advantages

- The Bioinformatics Unit has a highly knowledgeable, skilled staff utilizing state-of-the-art equipment and technologies

Client record

- Hadassah Medical Center
- HUJI researchers

Available equipment

Infrastructure

- New bioinformatics servers: COMBI and OMICS, SGI origin 300, with Irix operating system, connected to a 2 TB storage device

Software

- SRS 8.1, with EMBOSS functions embedded, as well as standalone EMBOSS. In addition to the command line SRS and EMBOSS, SRS may be used with a web interface
- Perl, as well as some modules of BioPerl.
- Other programs/packages: BLAST, ClustalW, Vienna Package, meme, mast

Databases

- Nucleotide: EMBL, REFSEQ nucleotides
- Protein: Niprot: Swissprot and TREMBL; PDB

- Domain: Prosite, PFAM and Prints
- Mutations: OMIM

Genomic Analysis

- Matlab and Perl-based dedicated custom-built server
- Special filters and other built image processing packages
- Statistical analysis, data normalization and clustering are carried out with several software packages: Spotfire, Acuity, Jsota, Genepix, ScanAyze, SAM
- Custom-packages built using Matlab and Perl
- Access to free packages such as Bioconductor or Afymetrix and other gene annotation tools

Structural Analysis

- DS Modeling 1.1 (Accelrys, Inc) molecular modeling programs with modules for
- Structural visualization and manipulation of biological molecules
- Model building using homology modeling (Modeler)
- Molecular dynamics and energy minimization calculations (CHARMm)
- Electrostatic calculations (GRASP)

Staff

- Tamar Kahan, PhD
- Yoav Smith, PhD

Contact

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