BIOMINA

BIOMEDICAL INFORMATICS NETWORK ANTWERP

Core facility UAntwerp
Active in Health & Environment

University of Antwerp

▶ Companies, hospitals and research centers can all come to us to transform their generated data into clear insights.

BIOMINA is the expertise hub for bioinformatics. Core facility manager Andrea Bours explains what makes this interdisciplinary network of data scientists and life scientists so unique and how the expertise that is brought together here helps companies move forward:

"New techniques in biomedical sciences, the shift towards digital healthcare and the rise of AI mean that we are increasingly confronted with ever larger and more complex data sets. But these are only valuable when they can be properly processed and interpreted. This requires specialized computer techniques, but of course not everyone who is active in the life sciences is also at home in the field of bioinformatics.

Whether it concerns data produced from biomedical, clinical or biological research, companies, hospitals and research centers can all come to us to transform their generated data into clear insights.

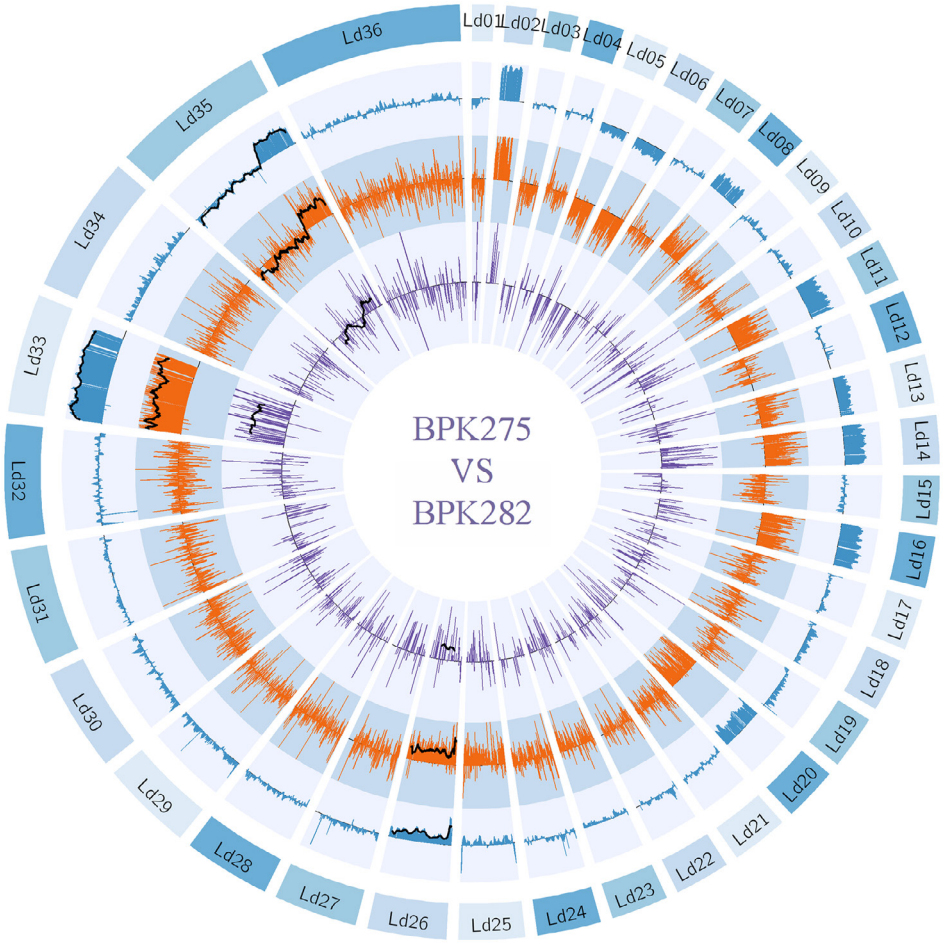
BIOMINA has been active at the interface between data and life sciences for years, resulting in a strong knowledge community of bioinformatics scientists. We can now offer the knowledge and specialized techniques that we have developed during this time as a service to companies. We do this through research collaborations, through training or by providing support in the various phases of a project, ranging from experimental design and analysis to interpretation of results.

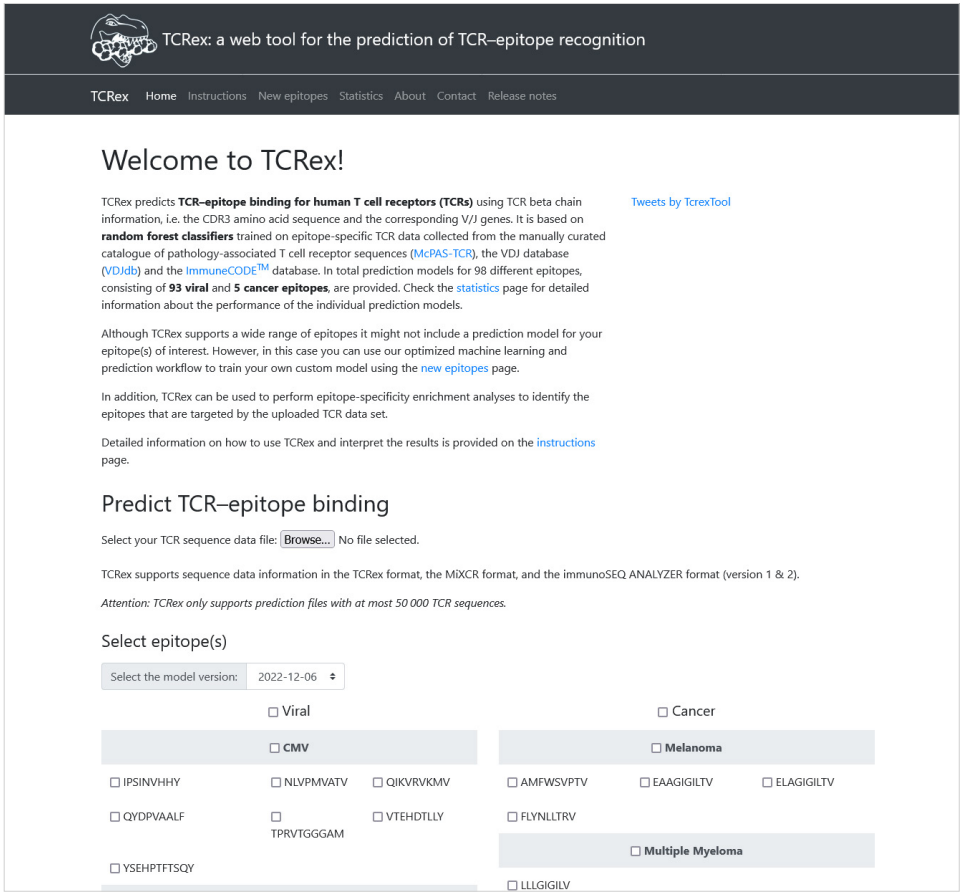
Finally, we are in a position to very closely follow innovations in the data science research field. That allows us to quickly translate them in light of new trends, assess their applications in life sciences topics and always apply the latest techniques."

Curious how BIOMINA can help with the analysis and/or interpretation of your data? Andrea Bours would be happy to discuss it with you.

BIOMINA

Through a multi-omics approach we can combine transcriptomics, proteomics and genomics, resulting in new insights.





TCRex is a web tool that uses machine learning to recognize TCR epitomes, developed in collaboration with BIOMINA.

BIOMINA is ...

Bio-informatica · Biomedical data sciences · Biomedical informatics · AI · Machine learning · Genomics · Transcriptomics · Proteomics · Big data · Digital Health · Software · Interdisciplinary network

Biomina has truly revolutionised my work and reshaped my research activities.

Quote from Prof. dr. Benson Ogunjimi, Antwerp University Hospital and VAXINFECTIO-PO (UAntwerp)

Research groups and expertise

BIOMINA was created by the University of Antwerp and the Antwerp University Hospital.

Within the university we combine expertise from three faculties:

- Faculty of Medicine & Health Sciences
- Faculty of Pharmaceutical, Biomedical and Veterinary Sciences
- Faculty of Sciences

Because BIOMINA was founded as a network, we transcend the boundaries of the faculties, so to speak, thus combatting the fragmentation of expertise between faculties and research groups. This means that for every request that comes to BIOMINA, someone can always be found within the network who has the right expertise and background.

In addition, there is close collaboration with other core facilities and structures within UAntwerp, including, for example, the Centre for Proteomics (processing of data they have generated) and CalcUA / Flemish Supercomputer Center (use of the hardware they have available).

Collaborations have been in place with the UZA for years, which has allowed BIOMINA to build up a wealth of experience with clinical practice. Finally, certain collaborations have also resulted in spin-offs, such as ImmuneWatch.

Collaboration is possible through...

Collaborative research · Contract research · Doctorates / postdoctorates · Use of bioinformatic workflows · Master theses · Customized training · Service contracts · Internships

Contact BIOMINA

Andrea Bours
Campus Middelheim
biomina@uantwerpen.be
www.biomina.be

Unique features of our equipment

BIOMINA develops and has established a range of bioinformatic workflows that allow data to be processed into insights, and has the expertise to use these workflows and interpret the results.

Many of these workflows can be adapted to the needs of a company, or custom workflows can be devised.

BIOMINA currently has workflows for the analysis of genomic, transcriptomic and proteomic data, from bulk to single-cell sequencing. The workflows can integrate different data sets with each other and BIOMINA also uses machine learning and AI to analyze data.

BIOMINA collaborates with all kinds of (external) parties that have equipment to generate specific data.