



Biodata services for innovation and R&D

Expert support to industry,
academia and hospitals

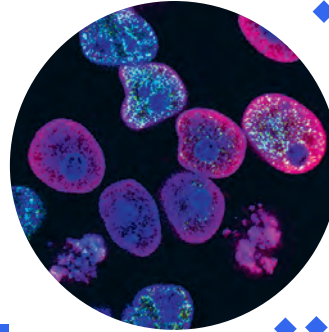


Swiss Institute of
Bioinformatics

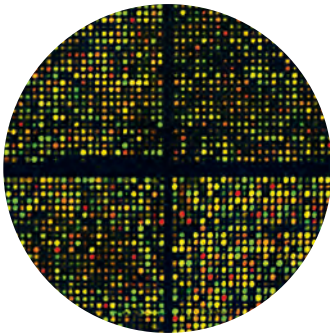
Your data now...



Clinical



Molecular
imaging



Genomics and
other omics



Reports and
documents

Heterogeneous
Specialized context
Ad hoc formats
Low added value

... and after working with SIB

Understandable & reusable
Organized & connected
Ready for AI & other analyses
Maximized value

Barriers to innovation
removed

New discoveries and
societal benefits

Bring **expert data capacity** into any stage of your project – from data capture to AI analyses to product commercialization.

We clear data bottlenecks for:

- large companies;
- start-ups & SMEs;
- public-private partnerships;
- academic groups;
- hospitals;
- government agencies;

working within short- or long-term service contracts, Innosuisse projects, collaboration agreements, and research grants.

“SIB’s leading expertise in bioinformatics made it an ideal partner for our first in-human clinical trial, which resulted in one of the highest-ranked publications to date in *Nature Metabolism*.”

Chris Rinsch
CEO and Co-Founder, Amazentis

Our services are trusted by:



Support across the full biodata value chain

All services are fully customizable, and can include any combination of expertise.



Data curation & harmonization

We turn unstructured public and proprietary data into analysis-ready, FAIR* datasets: quality-controlled, annotated, standardized and traceable.

*FAIR : Findable, Accessible, Interoperable, Reusable



Data & knowledge structuring

We connect multimodal data across sites and public sources into interoperable, queryable resources – ready for advanced mining by your teams and AI.



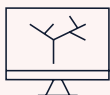
Secure & federated data sharing

We make sensitive data usable for R&D through federated analysis and trusted research environments, fully compliant with GDPR and other regulations.



AI & advanced analyses

We identify biomarkers, drug targets and more, using machine learning, large language models, other AI models, biostatistics and computational biology.



Software development & engineering

We optimize data pipelines and workflows, build commercial and clinical software – and can adapt our open tools to your specific needs.



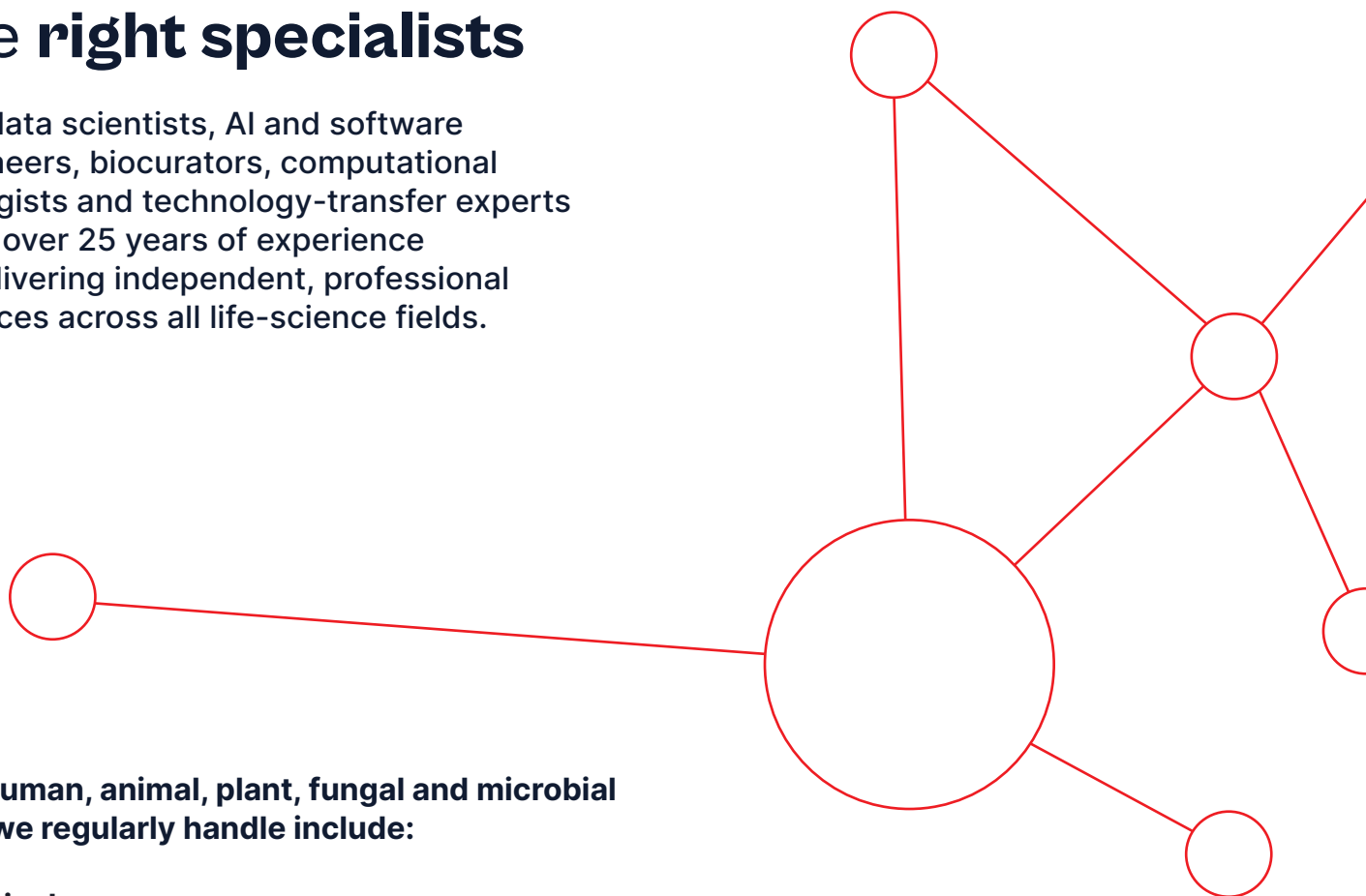
Training & support

We build skills for biodata management and analysis through courses and custom training, and provide extensive customer support.



Your needs matched to the **right specialists**

Our data scientists, AI and software engineers, biocurators, computational biologists and technology-transfer experts have over 25 years of experience in delivering independent, professional services across all life-science fields.



The human, animal, plant, fungal and microbial data we regularly handle include:

- **Clinical**
(routine, clinical trial, cohort);
- **Mass cytometry**
(CyTOF);
- **Mass spectrometry;**
- **Molecular imaging;**
- **Nanostring and protein arrays;**
- **Multi-omics and spatial analyses**
(genomics, metabolomics, lipidomics, proteomics, transcriptomics);
- **Single-cell and bulk sequencing**
(RNAseq, TCRseq, CITEseq, ChIPseq, ATACseq);
- **Text** in documents and reports.

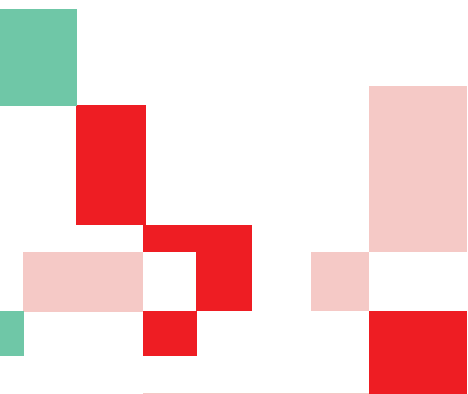




Significant added value

In addition to data science, biological, biomedical and IT expertise, we can support you with everything from quality assurance and regulatory compliance to licensing and intellectual property.

You further benefit from the highest level of efficient project management and coordination – as well as our hands-on expertise in data protection and IT security for your resources.



Enabling discoveries by solving data challenges

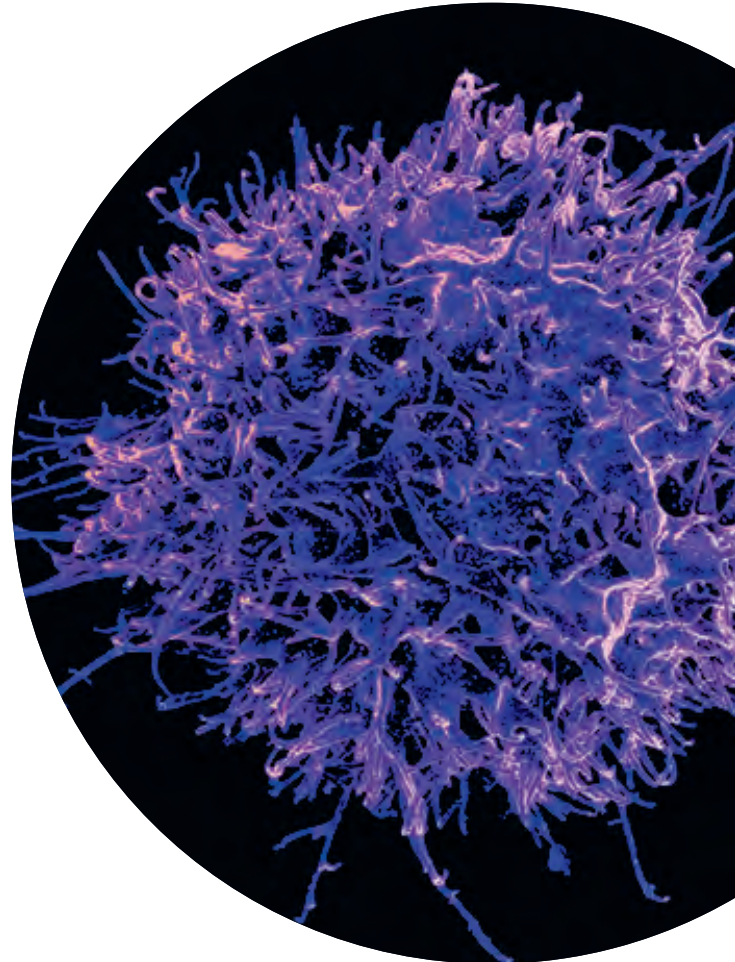
Our services help organizations across fields and sectors, for a wide range of applications.

Cancer drug discovery using public data

Challenge: Datasets in public repositories are often too heterogeneous for direct use in R&D.

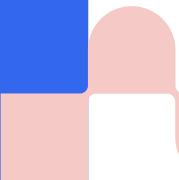
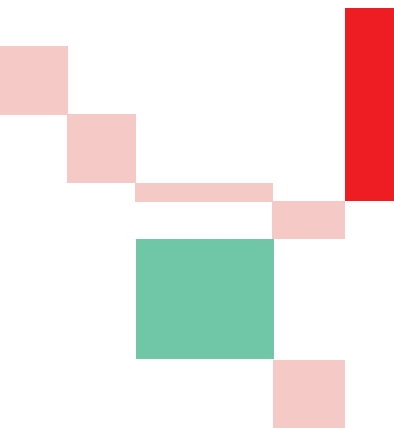
Solution: We reprocessed proteomics datasets for 10 patient cohorts in a single pipeline, curated the data and made them interoperable, and performed quality control.

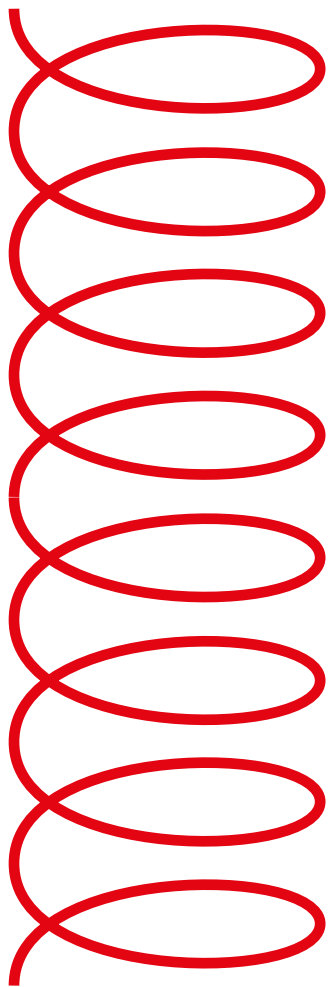
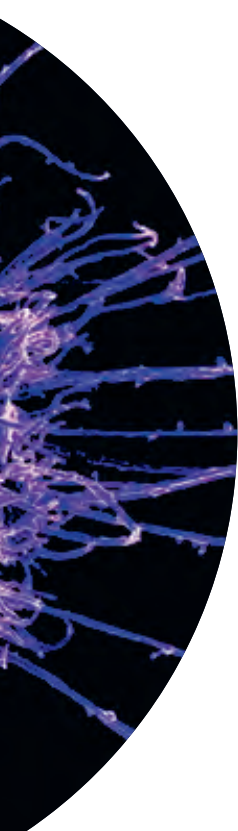
The resulting high-quality, harmonized data were then ready for analysis by a large pharmaceutical company.



“What makes SIB a unique partner is their deep understanding of clinical outcomes, patient data, AI and clinically relevant products.”

Özge Yüzgeç
Senior Lecturer, University of Geneva
Anesthe-Mate Innosuisse project



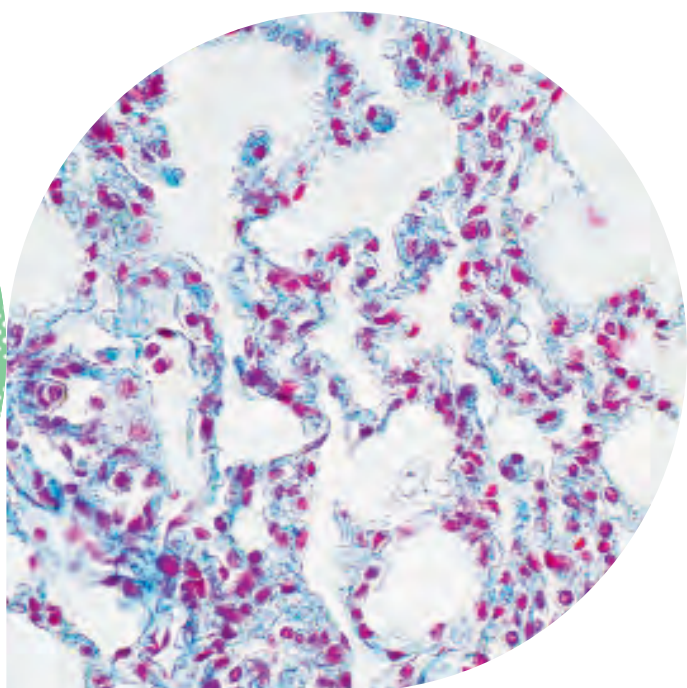
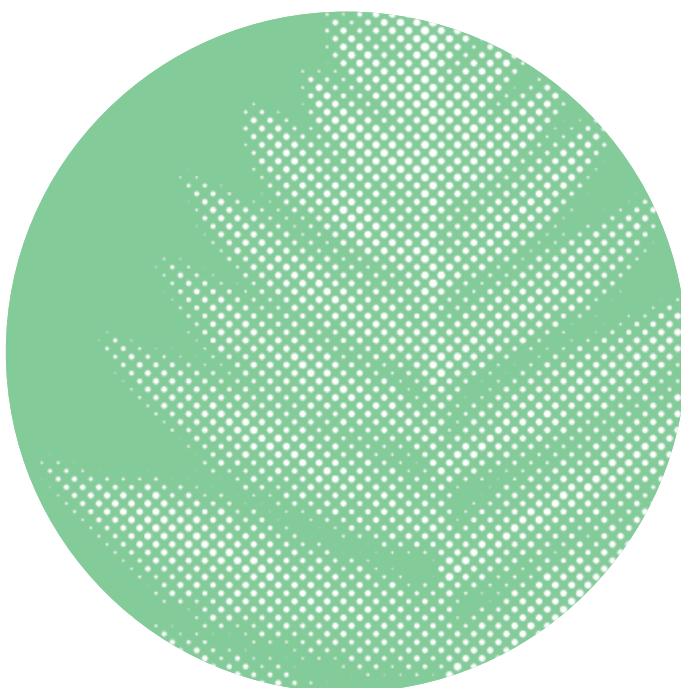


Precision medicine using multimodal data

Challenge: Very different types of scattered data – from omics and assays to images and chemical structures – need integrating for advanced diagnostics and data mining.

Solution: We built a database for a research project involving pharmaceutical company Pierre Fabre, which integrates mass spectrometry, biological results, taxonomy and other data from 1,600 plant extracts.

The bespoke resource supported the search for drug candidates for tuberculosis and obesity.



Crop improvement using tailored open resources

Challenge: Proprietary data cannot be included in public biodata resources.

Solution: We customized the OMA database (part of SwissOrthology, an SIB Biodata Resource) for chemical company BASF.

This enabled the development of new crop traits using homology analyses of company and public genomic sequences.



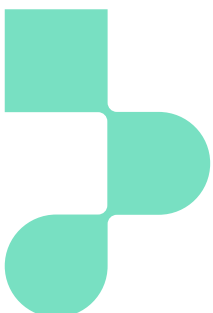
“The combination of QCMD’s expertise and global network with SIB’s bioinformatics know-how will help shape quality assessment schemes in this rapidly developing area of molecular diagnostics.”

Elaine McCulloch
Technical Project Manager, QCMD

Strengthened teams through expert training

Challenge: Teams need to be quickly proficient in biodata techniques or resources.

Solution: We created custom training paths for academic institutions and companies that met both individual team member needs and internal timing requirements.

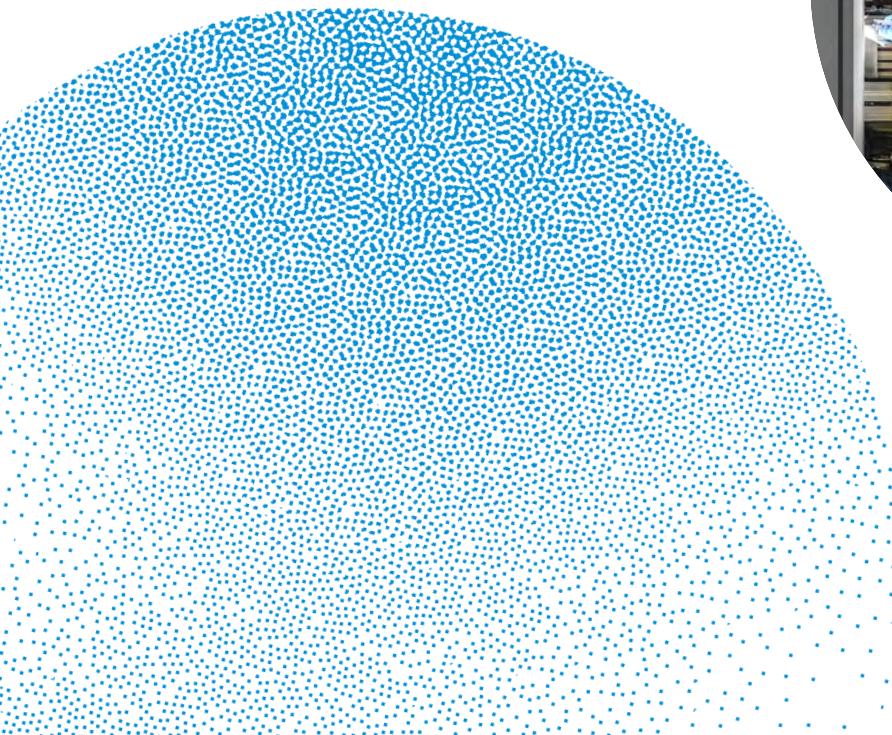
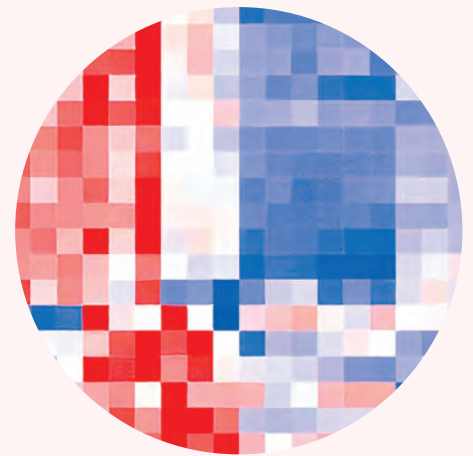
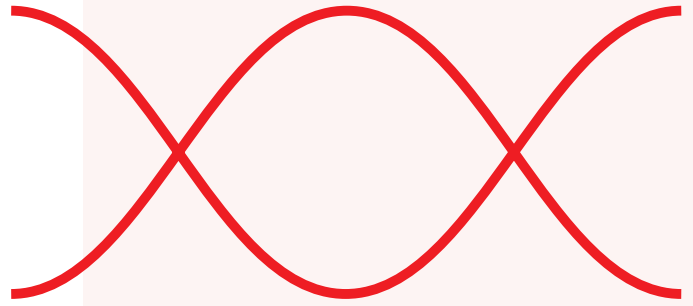


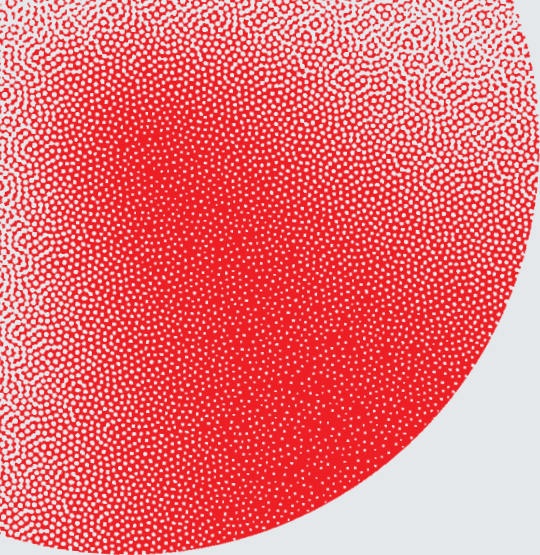
Personalized oncology through clinical software

Challenge: Building software solutions for collecting, processing, analysing and/or visualizing data is outside the core business.

Solution: We co-develop and maintain OncoBench® for routine genetic analysis of patient tumours, with Geneva University Hospitals.

The automated platform enables more accurate diagnoses and treatments tailored to each patient, with sensitive health data remaining securely within the hospital.





Why **work with SIB**

- End-to-end expertise – every biodata type, every step of the data value chain.
- Neutral, independent support – over 900 experts from a Swiss-wide network.
- Bespoke solutions – no off-the-shelf or proprietary platforms.



The Swiss Institute of Bioinformatics (SIB) is the national organization for biological and biomedical data science in Switzerland.

Contact us with your data challenge



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