BioAnalytical Cluster of Excellence - BACE

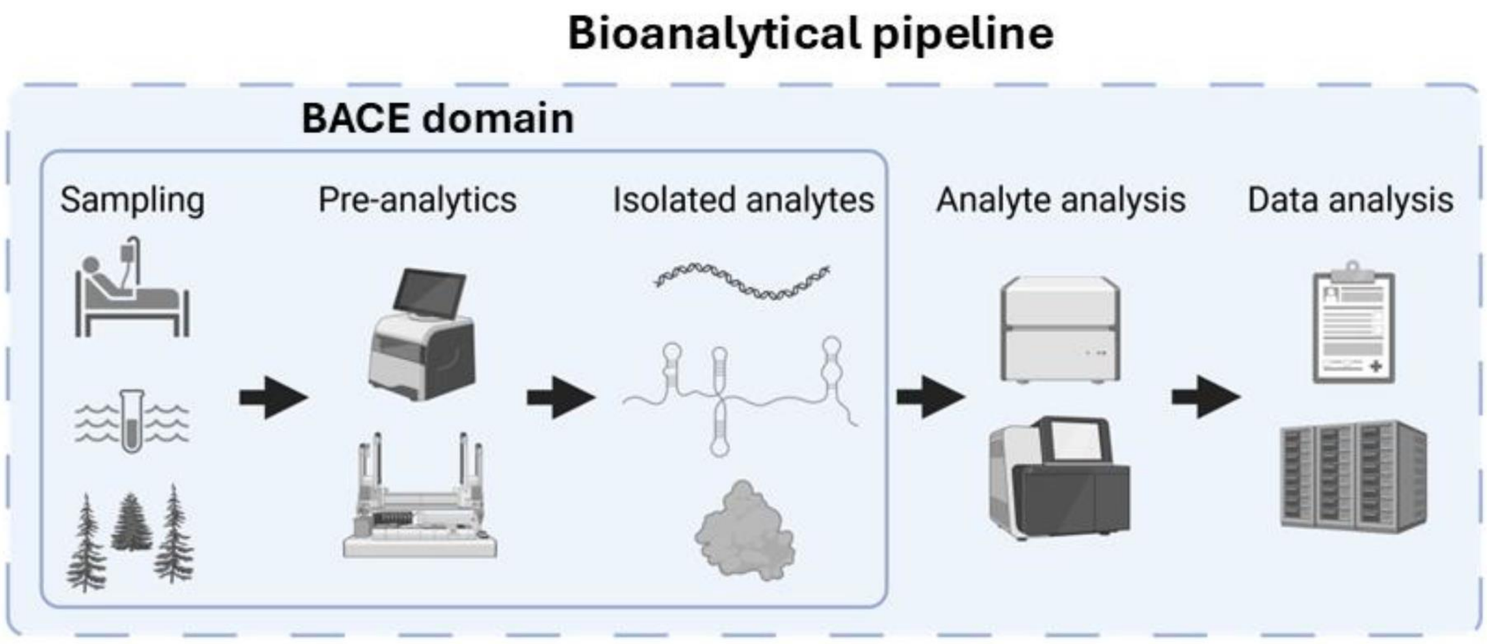
The BioAnalytical Cluster of Excellence (BACE) will establish Sweden as the global leader in bioanalytics and in particular preanalytics: the critical phase from sample collection to readiness for molecular analysis.

Ultra-sensitive molecular technologies can detect single molecules, but without proper preanalytical processes, results risk being misleading or irreproducible. BACE will close this gap by uniting leading expertise from academia, research institutes, industry, healthcare and governmental agencies to develop, validate and standardize end-to-end workflows adaptable across multiple omics fields.

With state-of-the-art laboratories, strong competence in international standardization and a global network, BACE will deliver solutions that ensure sample integrity, reproducibility, scalability and most importantly, biological relevance. Applications span precision medicine, treatment monitoring, public health, pharmaceutical innovation, environmental monitoring, archaeogenetics, food diagnostics, veterinary medicine, forensics and biodefense.

Focus areas

- Precision Bioanalytics/Diagnostics
- Pre-analytics (sample processing from collection to analytics)
- Pre-preanalytics (lifestyle, circadian, environmental factors)
- Near patient sampling
- Multiomics workflows
- Workflow optimization and validation strategies (AI)
- Harmonization (AI)
- Data analysis and modelling (AI)
- Testbed for implementation
- Translation from innovation to implementation of bioanalytical methodologies.
- Vertical knowledge transfer and collaborations (from inventors to biotech and end users)



Interest in collaboration and exchange

- Competence in bioanalytical method development and optimization
- Competences in pre-analytics
- Interest, experience of and competence in pre-preanalytical effects
- Experience in sample management
- Experience of complex sample matrices
- Validation experience of biomolecular workflows
- Data harmonization (AI)
- Multiomics data analysis and modelling (AI)
- Users of bioanalytical methodologies
- Familiarity with biobanking routines and long-term sample storage strategies
- Experience in cross-platform data integration (omics + clinical + metadata)
- Competence in troubleshooting and quality assurance of analytical workflows

Start and end date:
Oct 2025 – March 2026

Total budget:
1 975 714 SEK

Project leaders:
Joakim Håkansson, RISE
Yalda Bogestål, RISE
Mikael Kubista, Precision BioAnalytics
Anders Ståhlberg, Göteborg University

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VINNOVA

Want to learn more? Contact yalda.bogestal@ri.se

Project partners and other