Cytobank

CYTOBANK SCIENTIFIC SERVICES
MAXIMIZE YOUR INSIGHTS

VISUALIZE
the possibilities.

BECKMAN COULTER
Life Sciences

# INCREASE YOUR BANDWIDTH AND REDUCE TIME SPENT ON ANALYSIS WITH OUR EXPERTS

Cytobank Scientific Services provide fast, expert analysis of high-parameter, single-cell, bulk and integrated datasets.

Our team can offer:

- Novel discoveries with expert machine learning analysis of

  - Single cell data (e.g. flow or mass cytometry)

  - Cross-data type integration

  - Non-cytometry data (e.g., single-cell RNA-seq or CITE-seq data)

- Tailored analysis strategies for your specific experimental considerations

- Customized analysis pipelines and training that you can continue to use in future analysis projects

With a Cytobank Scientific Services project you get access to:

- Ph.D.-level expertise in bioinformatics, statistics, immunology, and biology

- Experience analyzing data in several translational research areas

- Secure and scalable cloud-computing resources or automated integration with other databases via our Application Programming Interface (API)

- A team with experience in working with big pharma companies, academic institutions, and clinical research centers
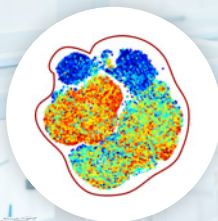
TAILORED ANALYSIS STRATEGIES AND CUSTOMIZED PIPELINES FOR YOUR SPECIFIC EXPERIMENT

We can support you with:

Discovery and exploration
- Identify all possible populations from your panel
- Discover significant biomarkers between groups of samples

Guided analysis using prior knowledge
- High-throughput analysis for large scale/ longitudinal studies using templates
- Report defined population abundance/ marker intensity endpoints for clinical studies

Cytobank → Upload data → Quality control Pre-gating viSNE → Population Identification Method → Visualization (Biaxial plots, histograms, heatmaps, viSNE) → Data reporting, sharing, management

Assisted by Cytobank Scientific Services

What we help you address:

Project Hurdle	Cytobank Solution
Large panel with hundreds of reportable cell populations	Automated cell identification and phenotyping pipeline
Large project with chaotic data (e.g, CyTOF data)	Systematic & automated QC plan
Biology nested in batch effects	Data normalization & analysis plan to mitigate and assess batch effects
Heterogeneity in cell populations across samples	Selection & implementation of appropriate statistical analysis method
Presence of previously undefined cell populations	Unsupervised machine learning method that doesn't rely on prior knowledge
Repeated analysis using traditional, manual methods	Automate templated analysis and reporting

MAKE OUR TEAM AN EXTENSION OF YOUR TEAM

Consultation

Proposal

We'll start by scheduling a consultation to learn about your data, experiment setup, overall project goals, and the discoveries you'd like to make.

- Scientific questions and/or clinical research context
- Overall analysis goals
- Experimental and data details
- Special considerations

Our team will outline proposed project phases for the analyses to be performed and deliverables.

- Outline of overall project goals
- Project deliverables and budget
- Approximate timeline for completion

Work Together with Experts to Achieve the Best Results

Iterative Phased Work

Results Delivery

Our experts will conduct analyses, interpret data, generate figures and reports and will meet with your team to discuss results and insights and update future steps. We leverage iterative phased work to be able to closely align with our customers.

All project materials and custom deliverables can be accessible online on your secure Cytobank cloud*. These can include:
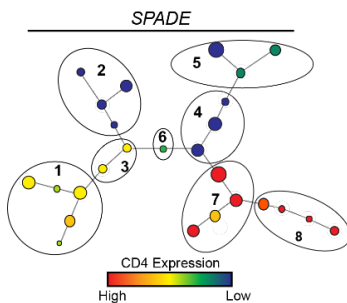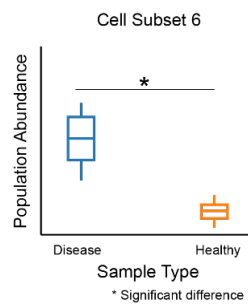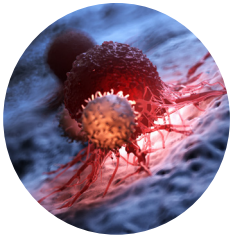
- Data organized in the Cytobank cloud with a guide to easily navigate the steps of the analysis that empowers you to reproduce the results

- Summary figures and reports provided in PowerPoint and/or PDF format

- R scripts to run automated analysis or data integration pipelines

- Written Standard Operating Procedures (SOPs) for running analysis pipelines
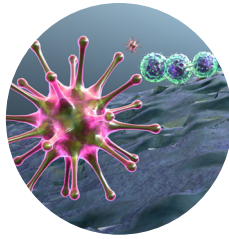
- User training

1 Data Quality Control & Preprocessing

All Cells

SSC-A / FSC-A — 88.70%
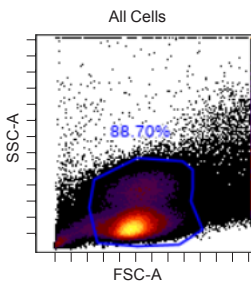
2 Dimensionality Reduction & Data Visualization

tSNE2 / tSNE1 — 10.42%
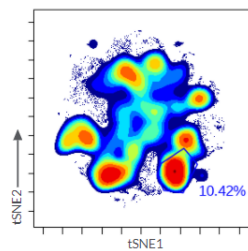
3 Cell Subset Identification i.e. Clustering

SPADE

CD4 Expression
High — Low

4 Statistical Analysis

Cell Subset 6

Population Abundance

Disease / Healthy
Sample Type
*
* Significant difference

5 Biological Interpretation

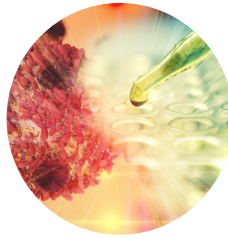# YOU CAN ACCESS A BROAD SPECTRUM OF EXPERTISE

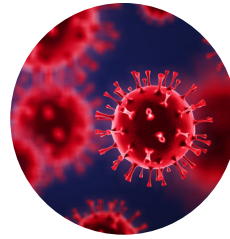## Research Areas

Oncology

Immunology

Immunotherapy

Infectious disease

Neurodegenerative disease

Data Types

- High parameter mass or fluorescence
- Single-cell RNA data
- CITE-Seq data
- Solid tumor, blood tumor, cell lines
- Multiple panels
- Large, cross-site experiments

Analysis Methods

- Automated cell population identification
- Unbiased rare / novel population identification
- Sample heterogeneity analysis
- Statistical analyses
- Next generation sequencing data read alignment
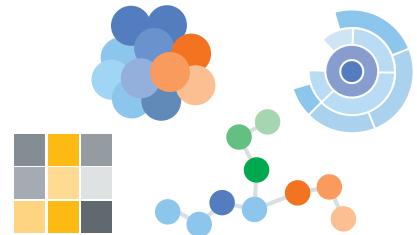
THE CONFIDENTIALITY AND SECURITY OF YOUR DATA IS OUR PRIORITY

Beckman Coulter Life Sciences is committed to protecting the confidentiality, integrity and availability of our customers' information. The Cytobank platform includes multiple layers of security to mitigate security threats and to meet the expectations, regulatory, and trust requirements of our customers.

Your Cytobank cloud uses current security technology and practices to protect your data.

Cytobank Scientific Services project plans address key areas:

Confidentiality & need-to-know basis

Data sharing & de-identification
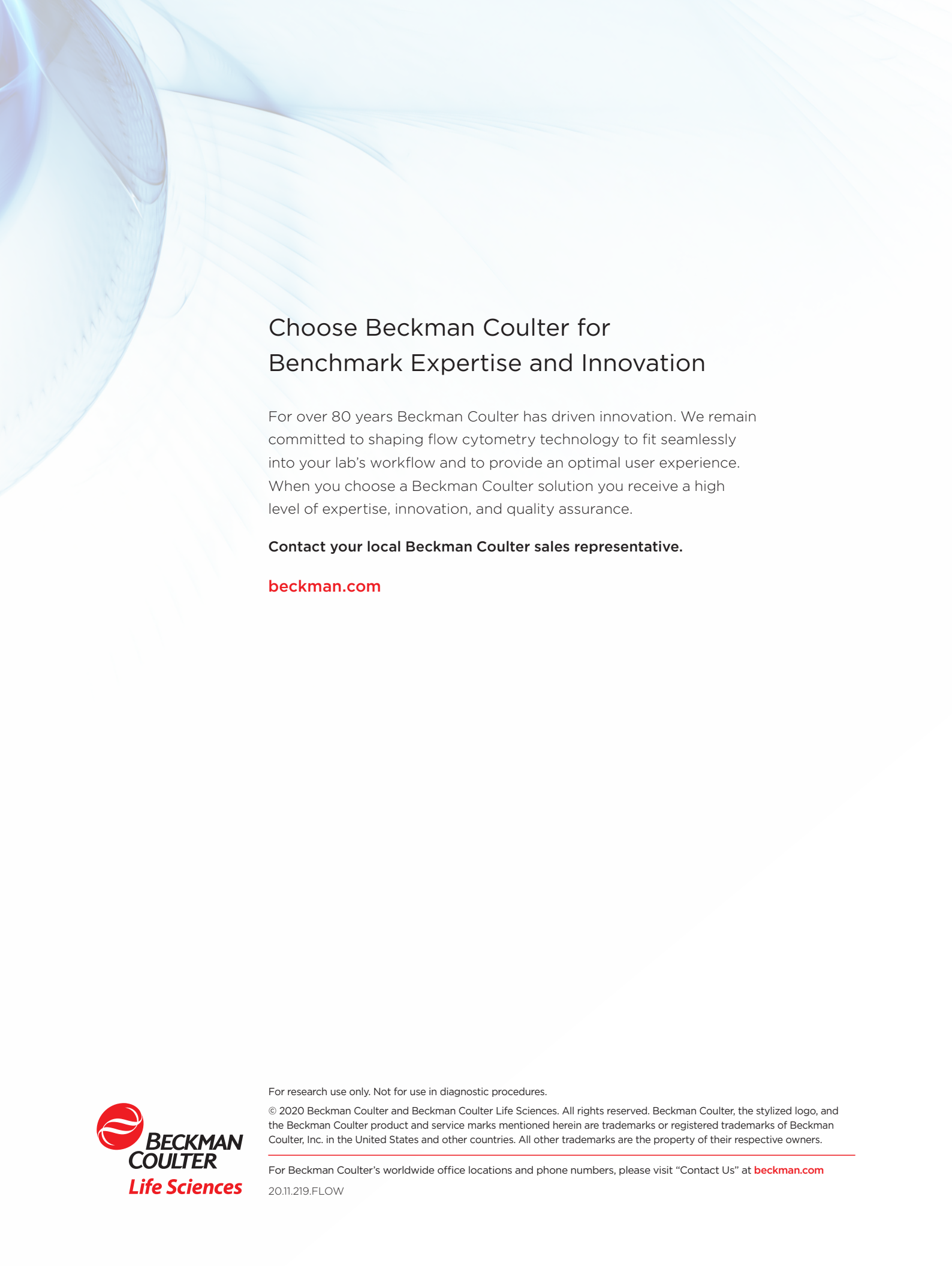
Data storage

Cytobank

Want to get in touch with us to see what we can do for you?

Please fill out your Cytobank Scientific Services request here:
beckman.com/flow-cytometry/software/cytobank-premium/scientific-services

Choose Beckman Coulter for Benchmark Expertise and Innovation

For over 80 years Beckman Coulter has driven innovation. We remain committed to shaping flow cytometry technology to fit seamlessly into your lab's workflow and to provide an optimal user experience. When you choose a Beckman Coulter solution you receive a high level of expertise, innovation, and quality assurance.

Contact your local Beckman Coulter sales representative.

beckman.com

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