

Single Cell Genomics @ NGI

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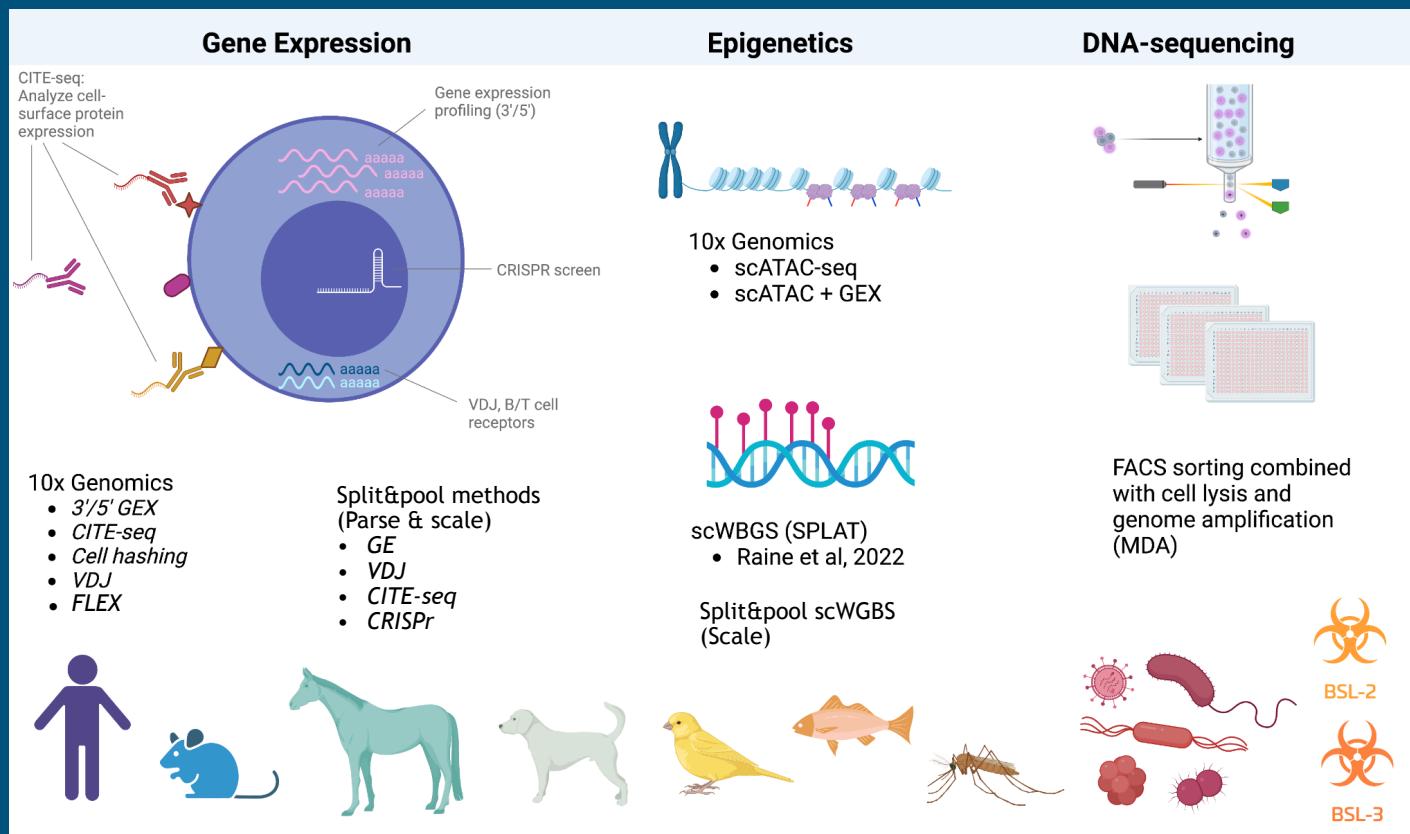
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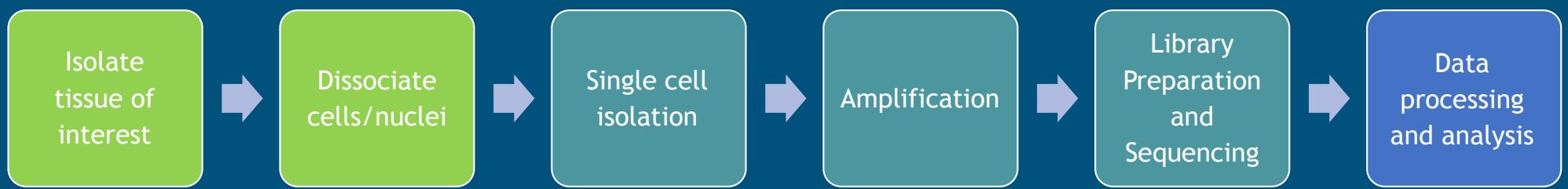
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SciLifeLab

Our Services

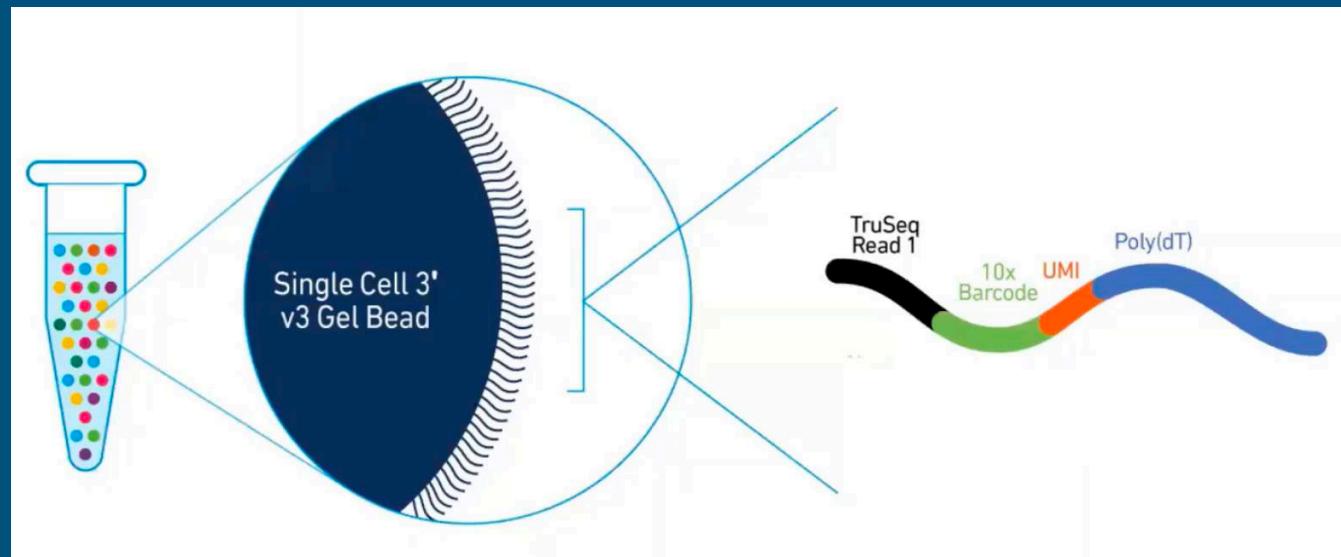


Single cell sequencing workflow



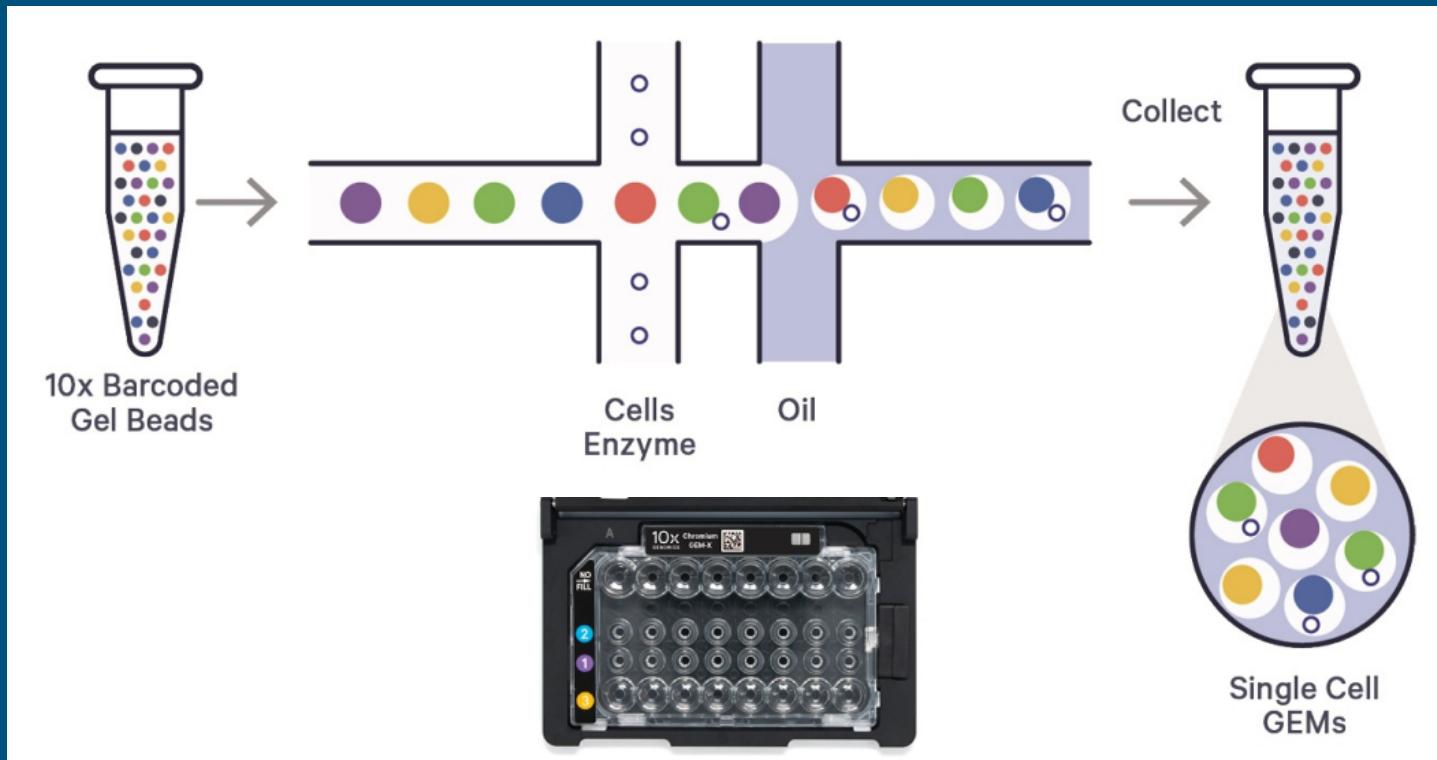
- User Consultations
 - Experimental design
- Quality control of single-cell preparations prior to the experiment
 - Sample submission guidelines for samples/cells/nuclei for different applications
- Initial bioinformatics

10X Chromium single cell sequencing



Adapted from <https://cdn.10xgenomics.com>

10X Genomics 3' GE

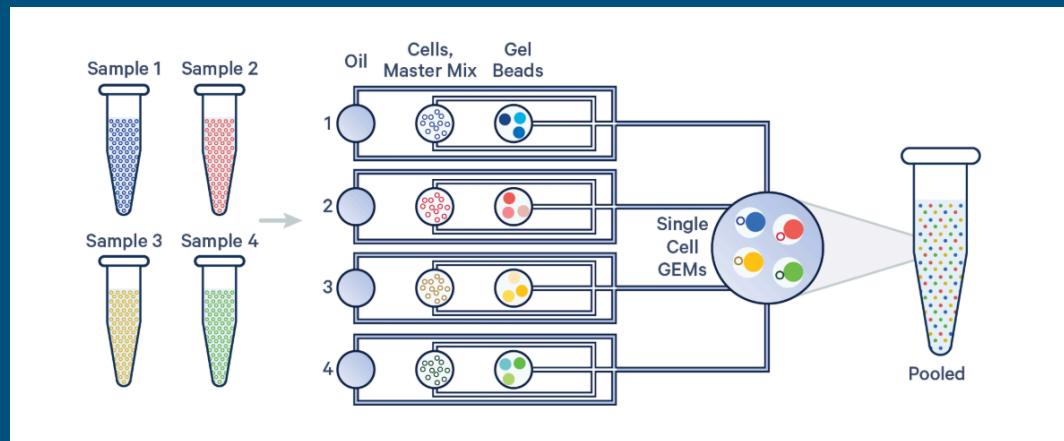


Adapted from <https://cdn.10xgenomics.com>

Easy multiplexing with OCM for 3' and 5' workflows

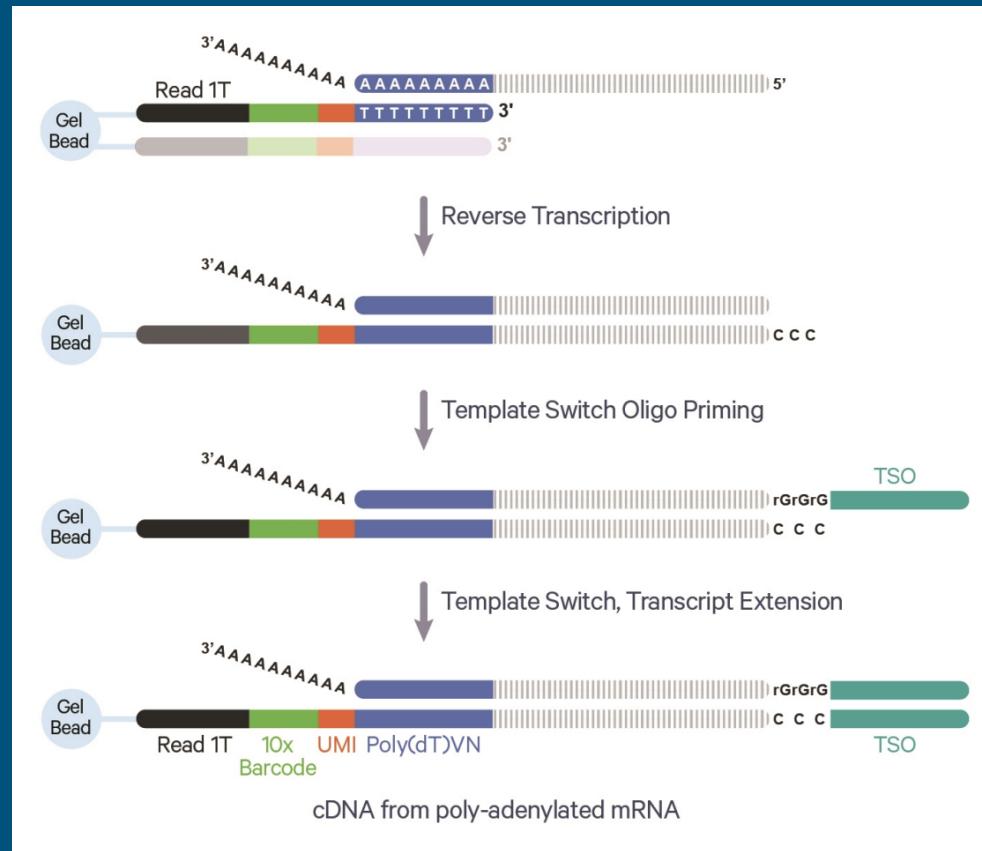
OCM: On Chip Multiplexing

- Combine up to 4 samples per reaction
- Up to 5000 cells per sample
- Cost efficient



Adapted from <https://cdn.10xgenomics.com>

10X Chromium single cell sequencing



Adapted from <https://cdn.10xgenomics.com>

Long-read sequencing for full-length information

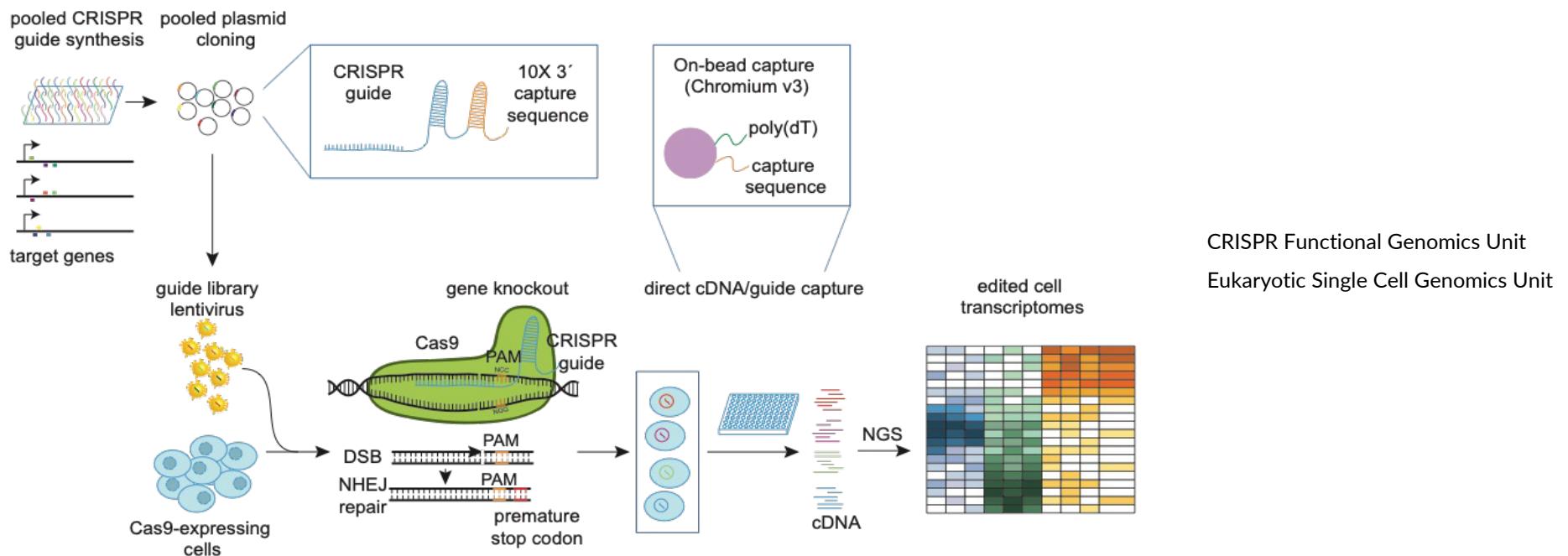


OR

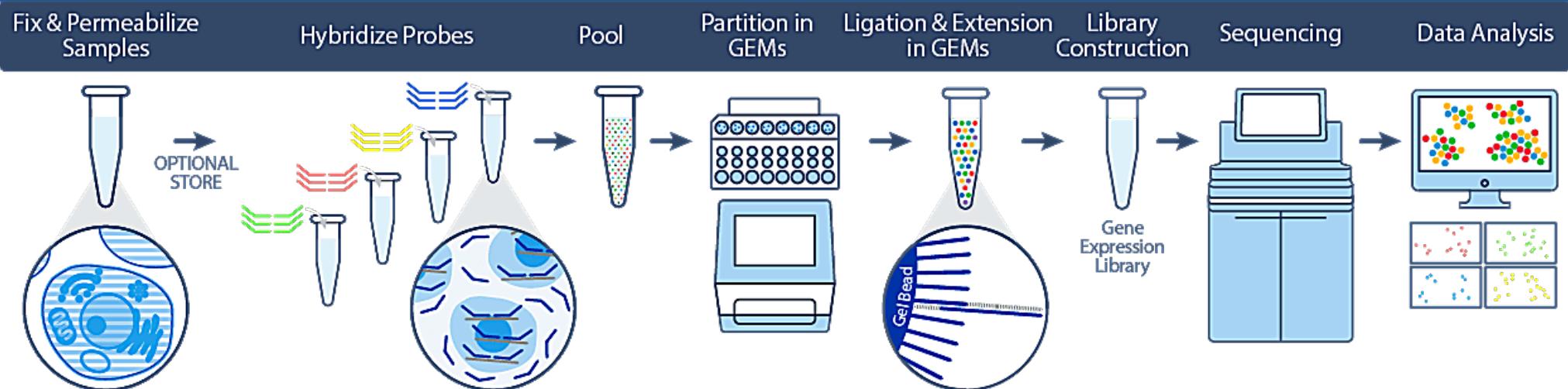


Pooled CRISPR screens with single-cell readout

- Small, custom libraries (currently 100's of guides, number is limited by scRNA-Seq cost)
- Guide libraries include a capture sequence compatible with 10xGenomics kits
- Enables simultaneous capture of mRNA and guide RNA from single cells
- Compatible with CRISPR-KO, CRISPR-activation, CRISPR-inhibition

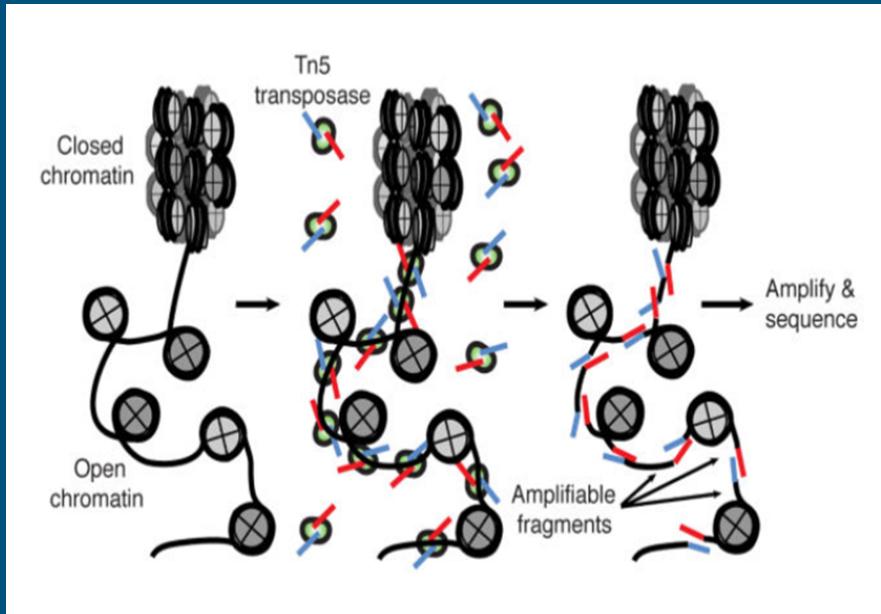


Fixed Single Cell Analysis - 10X Chromium



Adapted from <https://cdn.10xgenomics.com>

Single-cell ATAC-sequencing

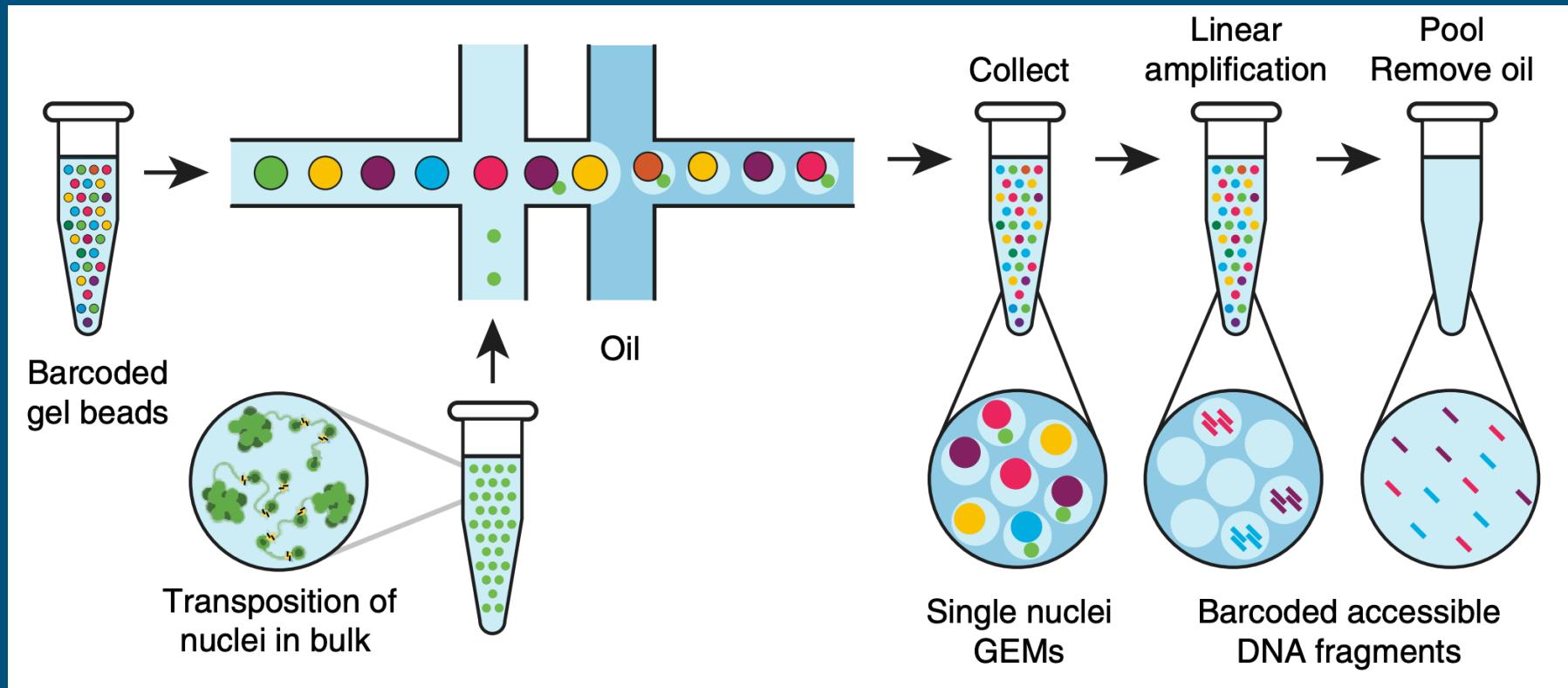


- Subpopulations with different chromatin accessibility profiles
- Increased understanding of gene regulatory networks upstream on gene expression

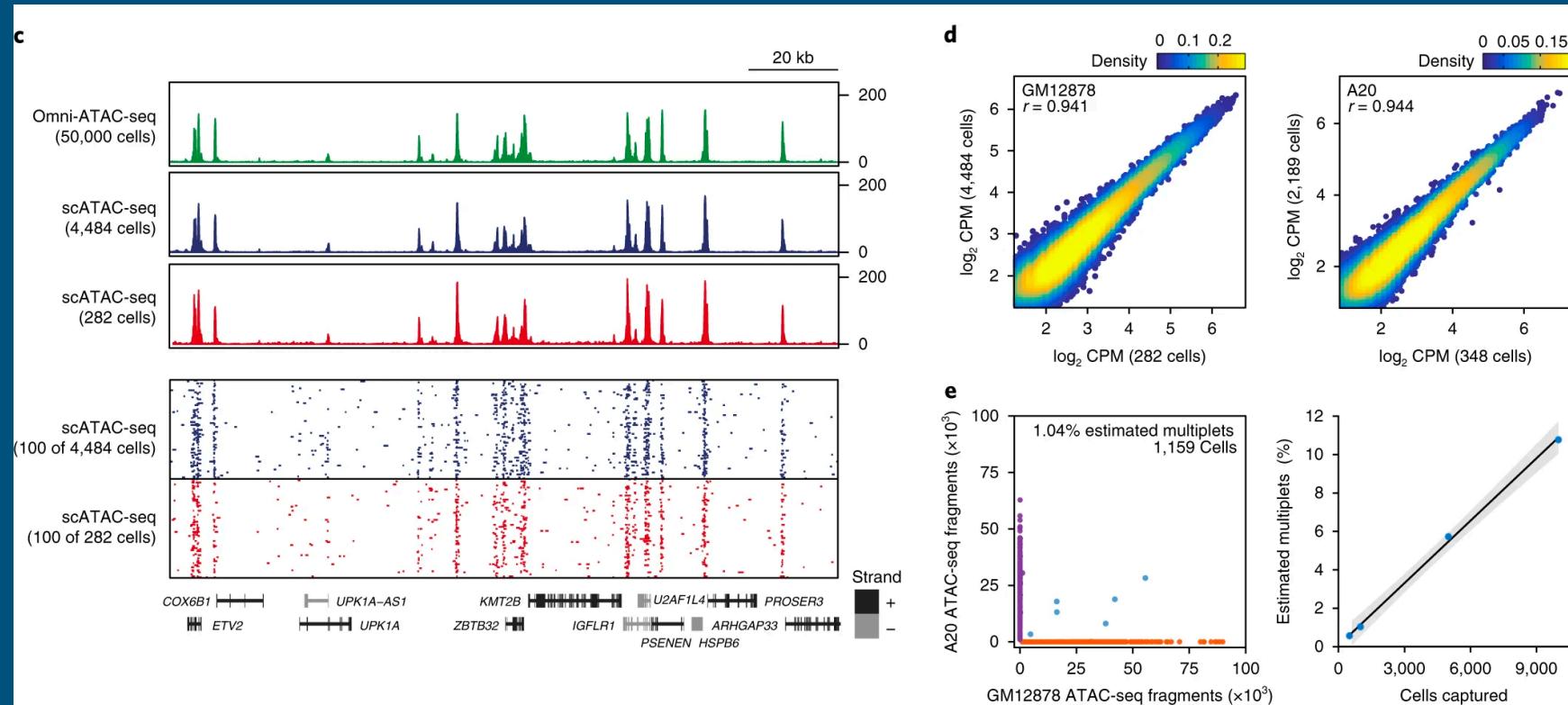
Multiome available: 3' GE + ATAC from the same cell

(Buenrostro et al, Nature Methods, 2013)

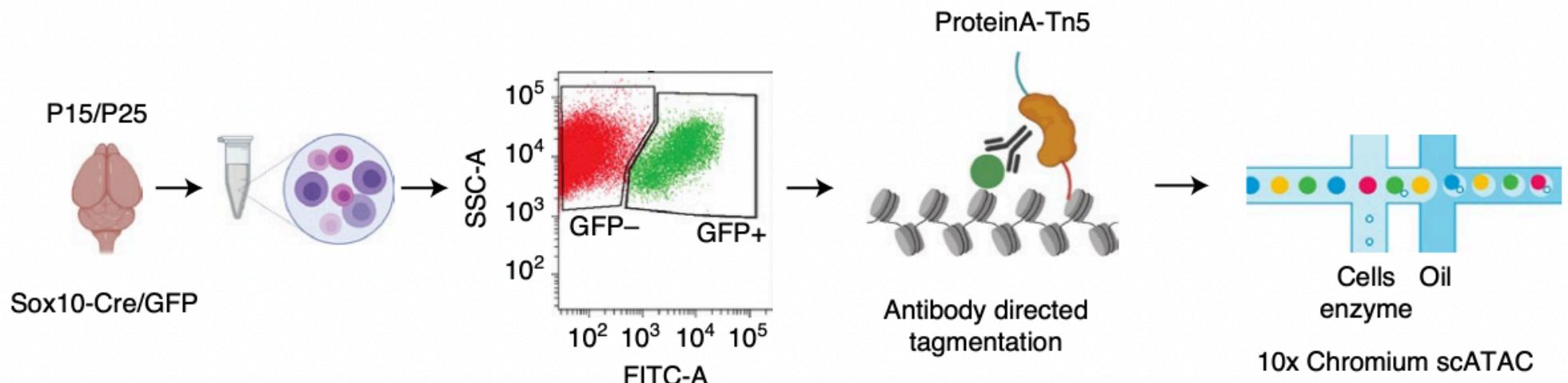
Single-cell ATAC-sequencing



Single-cell ATAC-seq sequencing



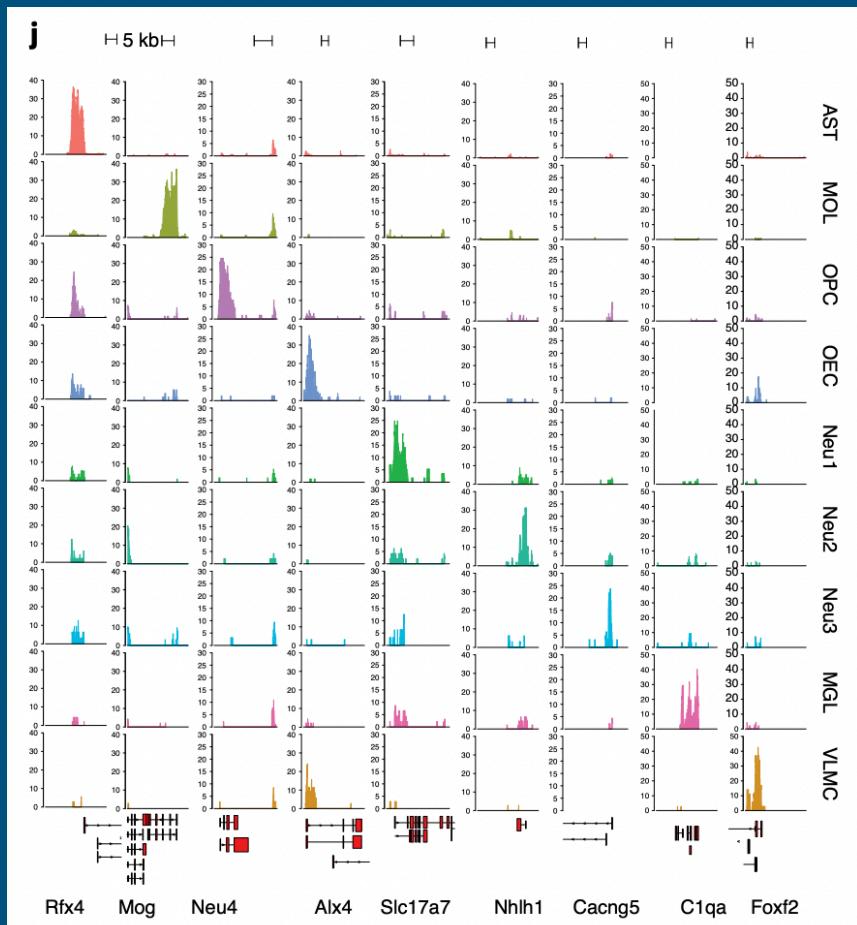
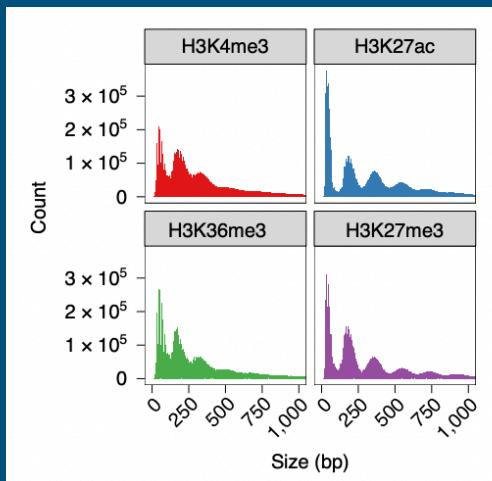
scCUT&Tag



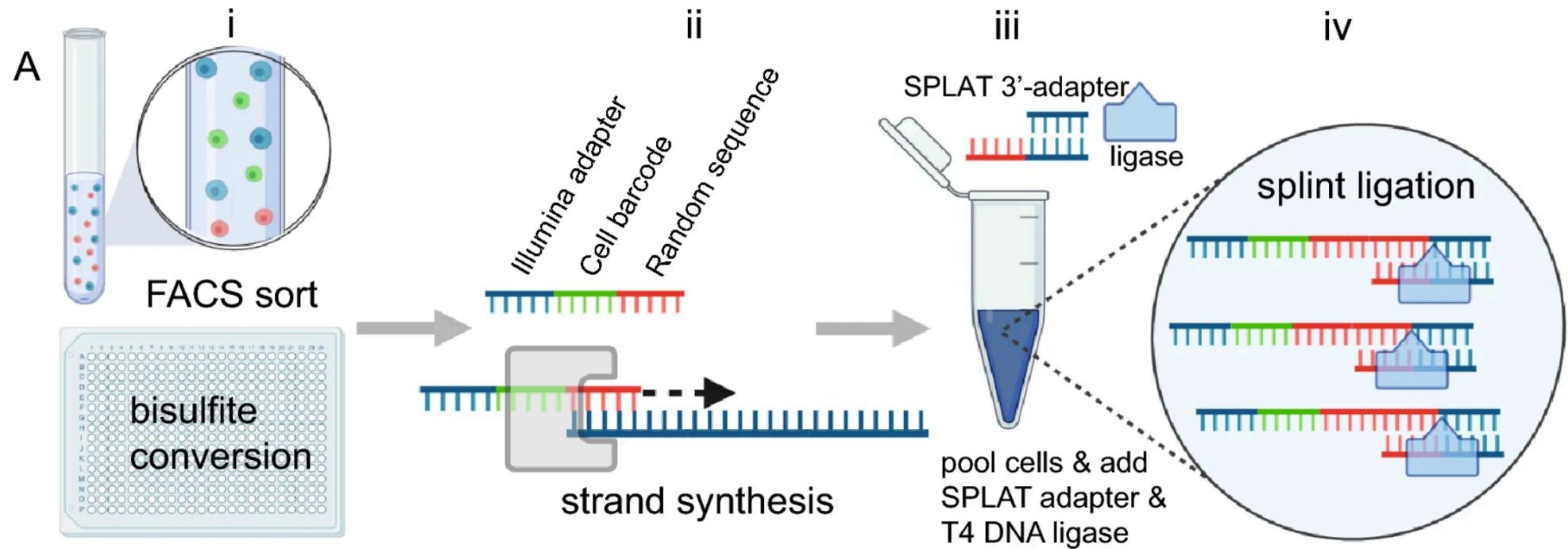
scCUT&Tag

Tn5-H3K4me3

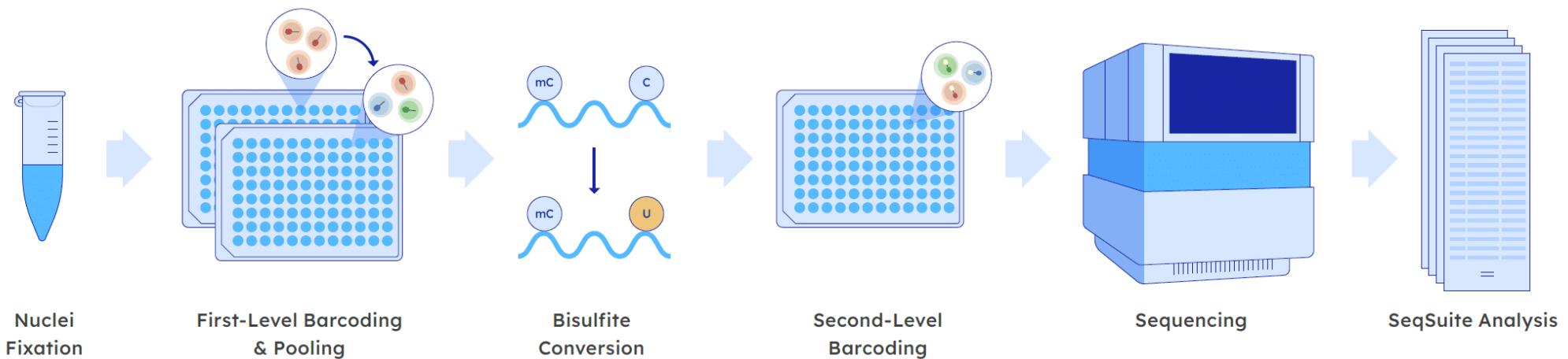
→ Mapping active promoters



sc Splinted Ligation Adapter Tagging for WGBS



Scale Biosciences - Single cell methylation



10X Genomics workflow at NGI

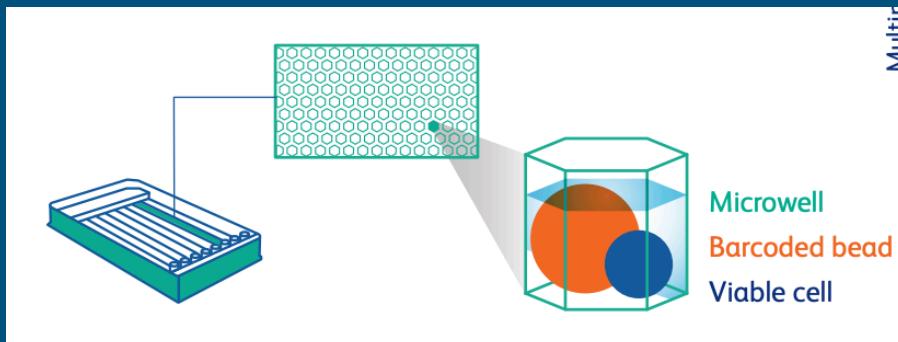
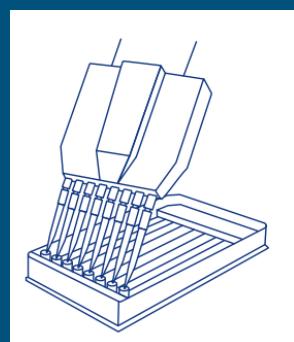
Provided by the user:

- Single cell suspension
 - High viability (preferably above 90%)/intact nuclei
 - Free of debris
 - Counted
 - Ab staining (if desired)

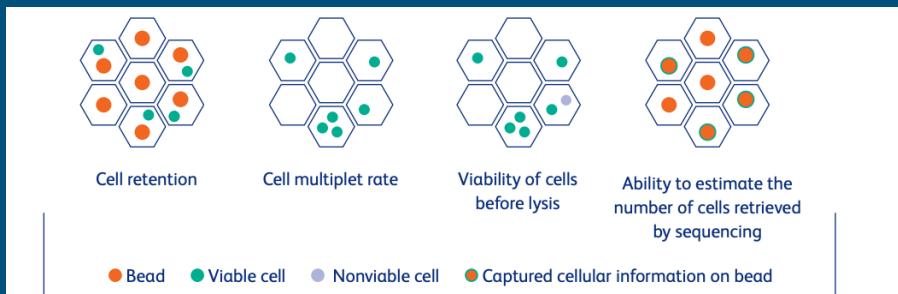
Done at NGI:

- QC of provided samples
- GEM generation & Library generation
- Sequencing & upstream data analysis

BD Rhapsody HT Express - coming soon....

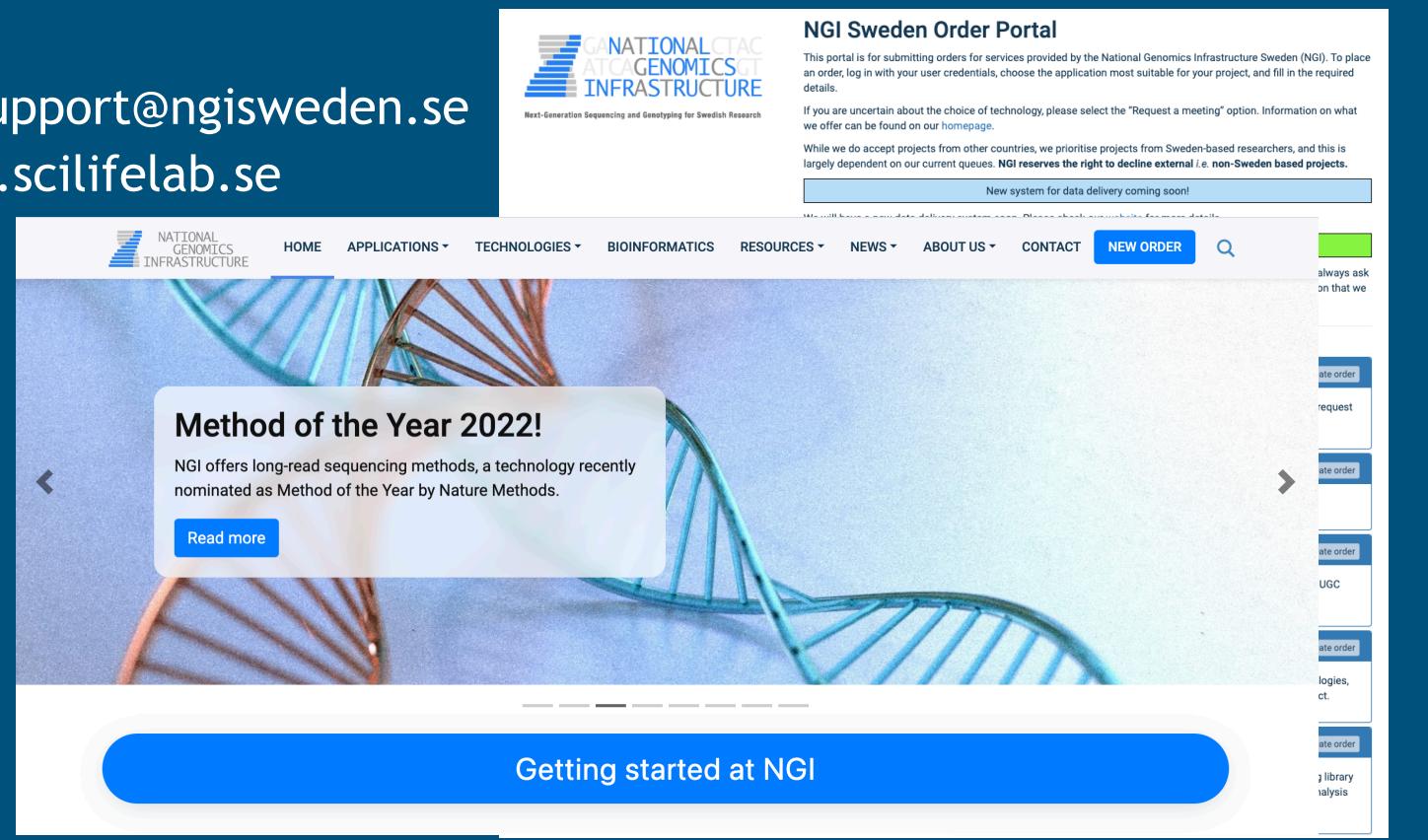


GE (WT or targeted)
ATAC
Multiome (GE+ATAC)
Ab-staining
BCR/TCR



How to get in touch?

- Contact us at support@ngisweden.se
- Visit ngisweden.scilifelab.se
- Place an order



NGI Sweden Order Portal

This portal is for submitting orders for services provided by the National Genomics Infrastructure Sweden (NGI). To place an order, log in with your user credentials, choose the application most suitable for your project, and fill in the required details.

If you are uncertain about the choice of technology, please select the "Request a meeting" option. Information on what we offer can be found on our [homepage](#).

While we do accept projects from other countries, we prioritise projects from Sweden-based researchers, and this is largely dependent on our current queues. NGI reserves the right to decline external (i.e. non-Sweden based) projects.

New system for data delivery coming soon!

Method of the Year 2022!

NGI offers long-read sequencing methods, a technology recently nominated as Method of the Year by Nature Methods.

Read more

Getting started at NGI

HOME APPLICATIONS TECHNOLOGIES BIOINFORMATICS RESOURCES NEWS ABOUT US CONTACT NEW ORDER

always ask on that we

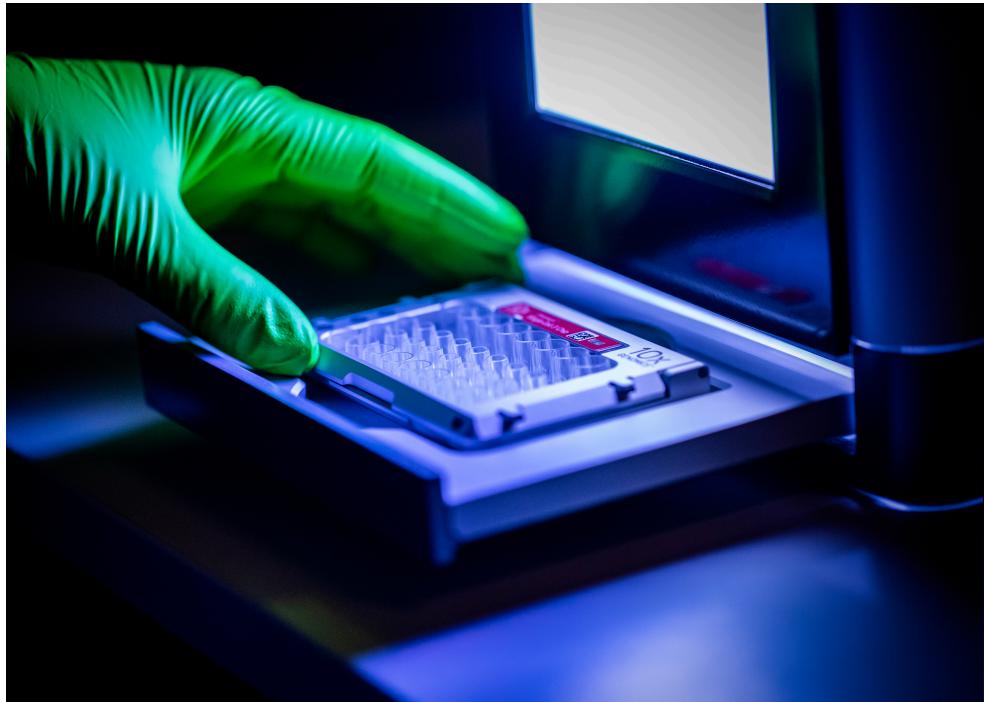
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ate order library analysis



Questions?

Contact: support@ngisweden.se

