

Operon.

The open-source AI agent that speaks computational biology.



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THE GAP

A general agent knows how to **code**.
Operon knows how to do **science**.

Generic AI agents read the whole internet — but they’ve never seen your lab. They don’t know your **conda env** or **SLURM partition**, that you use **scVI** and **pyDESeq2**, or that your cohort can’t leave the network.



Operon takes the **coding**. You’re free to **program**.

A DAY IN THE LAB

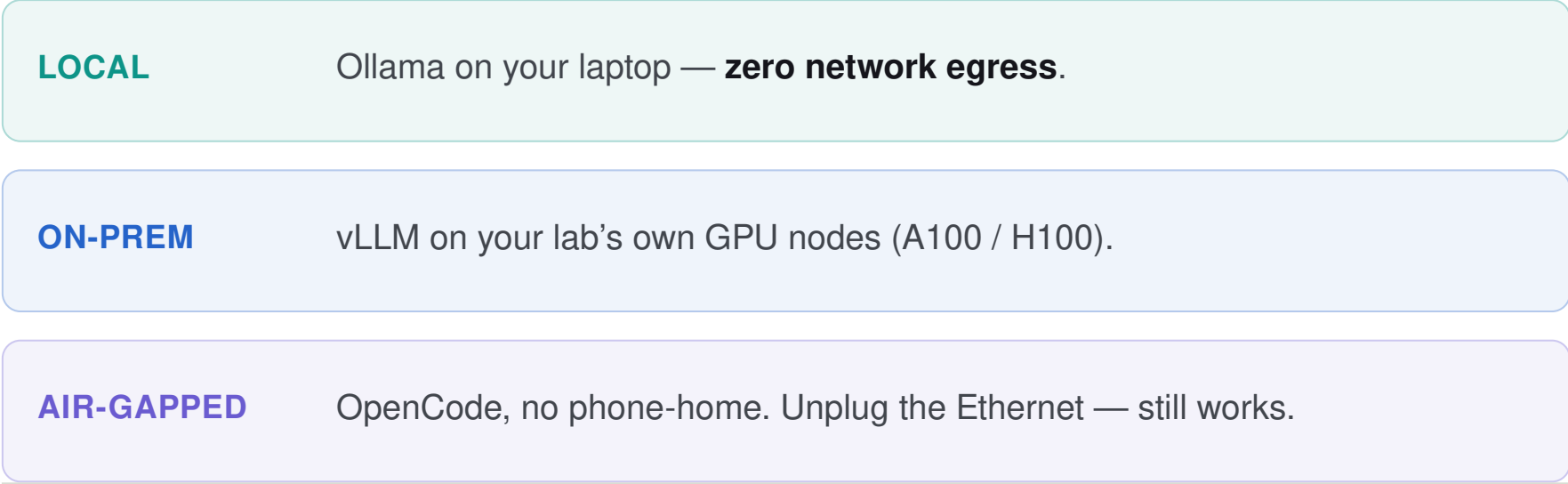
you › Download **GSE132877**, run bulk RNA-seq DE by sex, build an interactive volcano-plot site.
operon › Found **bulk-rnaseq.v3** → plan approved → SLURM job 4821 → publication-ready figures & site.
you › Now annotate cell types and draft the methods section.
operon › MapMyCells annotations + a cited methods paragraph, committed to **report.md**.

You described the experiment. Operon ran it.
HPC-native over SSH + tmux + SLURM — persistent sessions survive a dropped connection.

PRIVATE BY DESIGN

Your data never leaves.

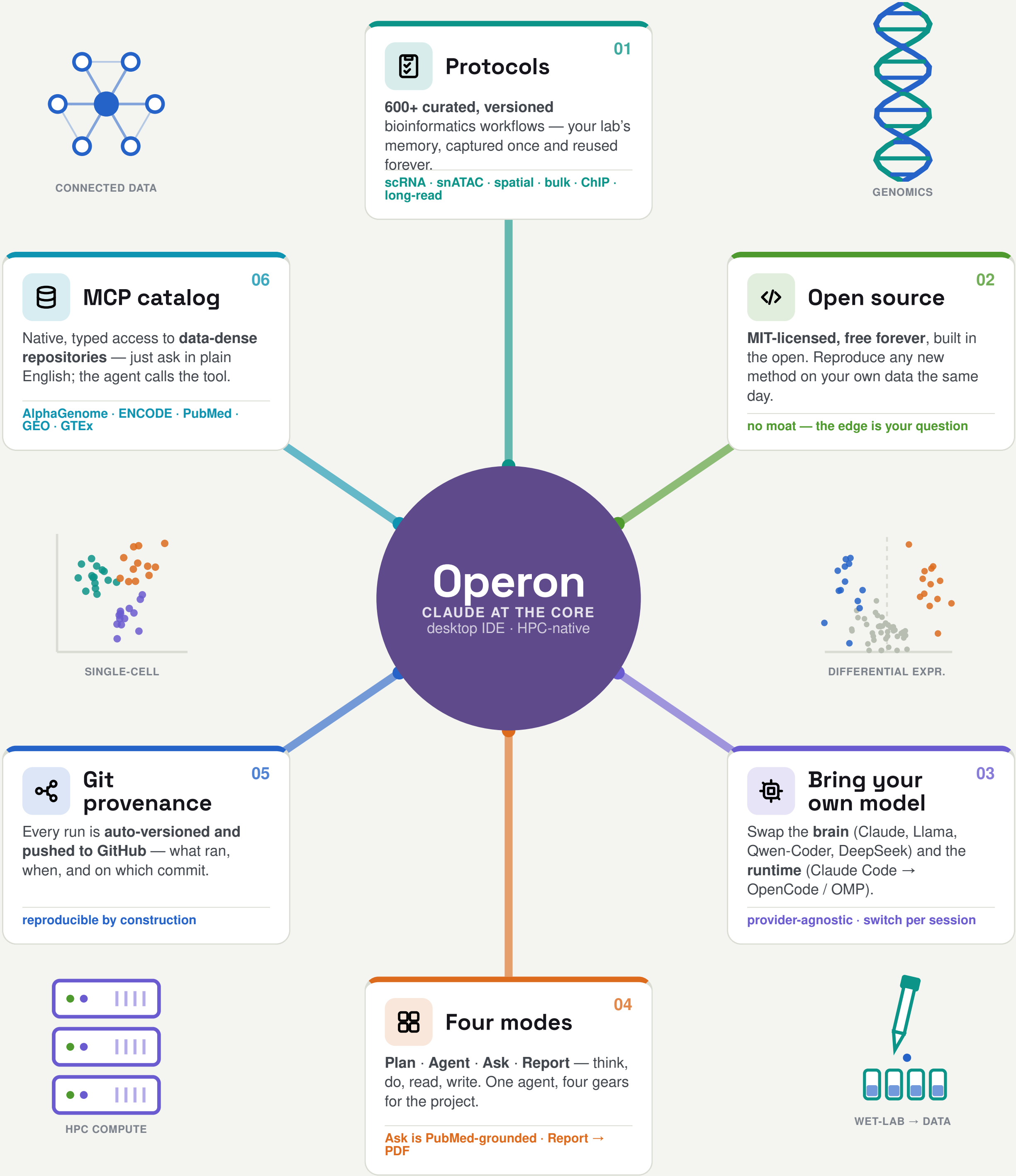
Run the agent, the model, and the analysis entirely inside your network — built for clinical cohorts and embargoed data.



HIPAA / SOC2-ready · source-available (FSL-1.1-MIT). Patient data never touches a third-party API.

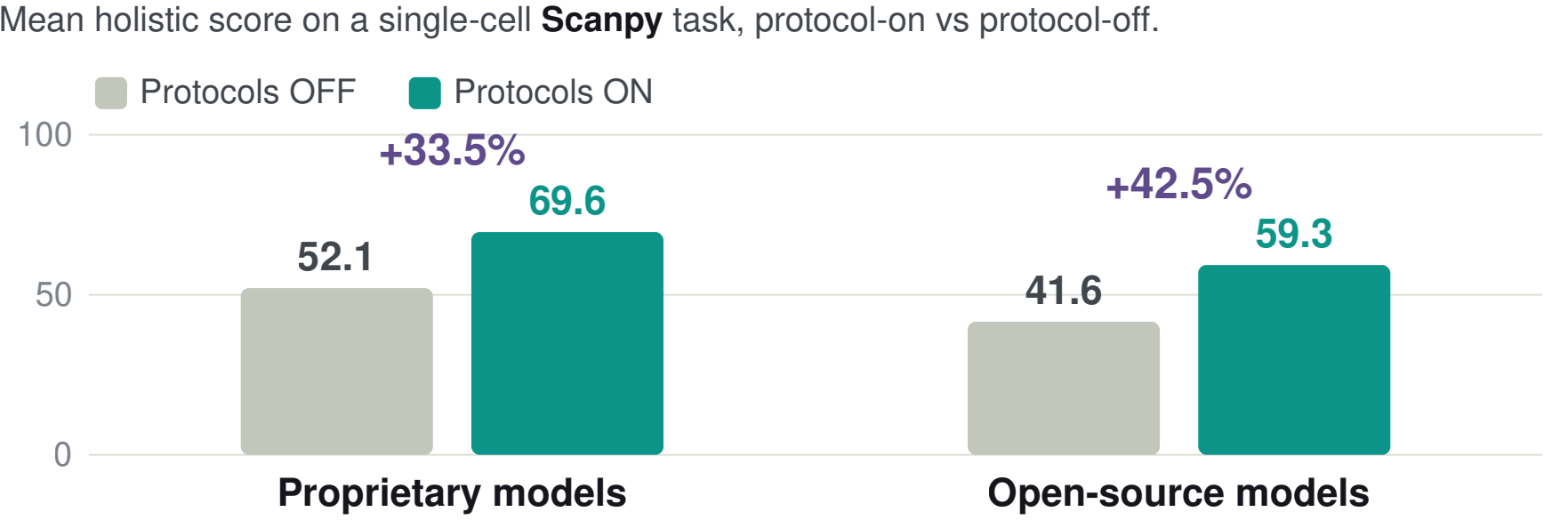
THE ARCHITECTURE

Six capabilities, one interface.



THE PROOF

Protocols help every model. **+36.9%**

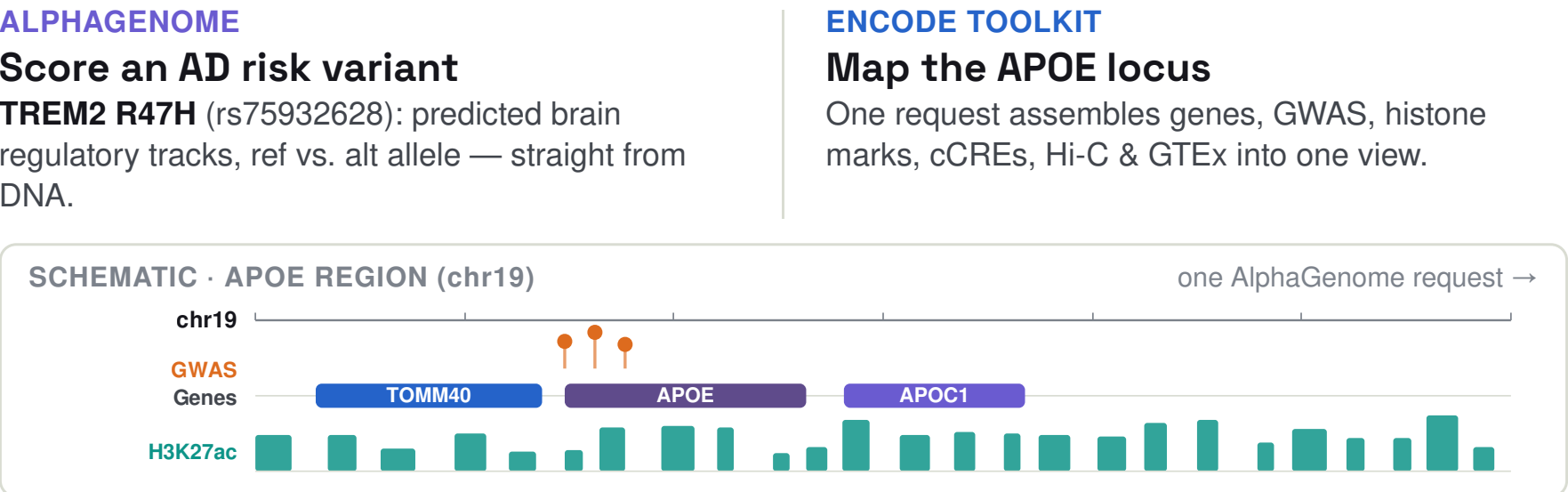


95.6/100 best run · Opus 4.8
7 × 14 families · runs
open +42.5% open models gain most

Independently scored by an external GPT-5.5 reviewer.

IN PRACTICE · ALZHEIMER’S

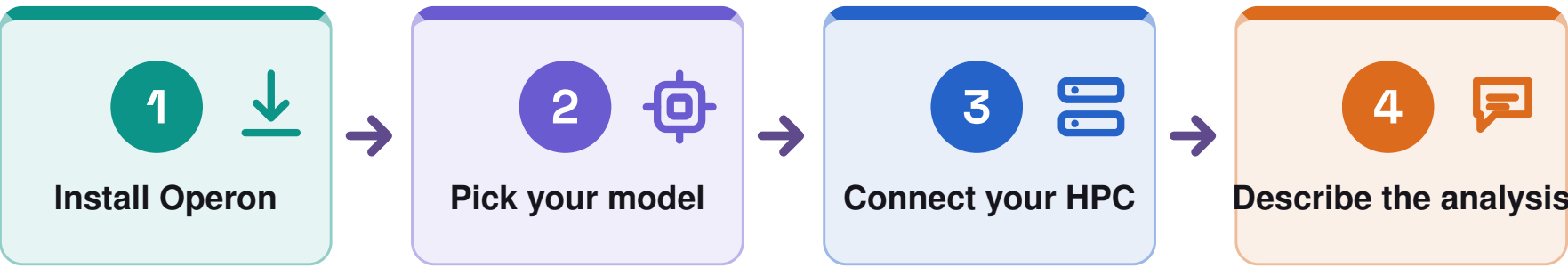
Operon does Alzheimer’s science.



Built with Operon: lab resources like **Stellar Atlas** — from raw data to a shareable single-cell atlas, agent-driven end to end.

START IN MINUTES

From install to analysis.



macOS fully supported · Windows supported · scan below to get Operon ↓

20+

universities
UC IRVINE · UCLA · HARVARD ·
& more

Low floor, high ceiling. Newcomers describe analyses in plain English; experts batch dozens of runs and A/B-test methods in seconds.

built by biologists,
not a vendor

Open source. MIT-licensed. Free forever.
github.com/swaruplab/operon · swaruplab.bio.uci.edu/operon · vswarup@uci.edu



GET OPERON



DOCS & DEMOS