

Announcements

Claude for Life Sciences

Oct 20, 2025 • 4 min read



Increasing the rate of scientific progress is a core part of Anthropic's public benefit mission.

We are focused on building the tools to allow researchers to make new discoveries – and eventually, to allow AI models to make these discoveries autonomously.

Until recently, scientists typically used Claude for individual tasks, like writing code for statistical analysis or summarizing papers. Pharmaceutical companies and others in industry also use it for tasks across the rest of their business, like sales, to fund new research. Now, our goal is to make Claude capable of supporting the entire process, from early discovery through to translation and commercialization.

To do this, we're rolling out several improvements that aim to make Claude a better partner for those who work in the life sciences, including researchers, clinical coordinators, and regulatory affairs managers.

Making Claude a better research partner

First, we've improved Claude's underlying performance. Our most capable model, Claude Sonnet 4.5, is significantly better than previous models at a range of life sciences tasks. For example, on Protocol QA, a benchmark that tests the model's understanding and facility with laboratory protocols, Sonnet 4.5 scores 0.83, against a human baseline of 0.79, and Sonnet 4's performance of 0.74.¹ Sonnet 4.5 shows a similar improvement on its predecessor on BixBench, an evaluation that measures its performance on bioinformatics tasks.

To make Claude more useful for scientific work, we're now adding several new connectors to scientific platforms, the ability to use Agent Skills, and life sciences-specific support in the form of a prompt library and dedicated support.

Connecting Claude to scientific tools

Connectors allow Claude to access other platforms and tools directly. We're adding several new connectors that are designed to make it easier to use Claude for scientific discovery:

- **Benchling** gives Claude the ability to respond to scientists' questions with links back to source experiments, notebooks, and records;
- **BioRender** connects Claude to its extensive library of vetted scientific figures, icons, and templates;
- **PubMed** provides access to millions of biomedical research articles and clinical studies;
- **Scholar Gateway developed by Wiley** provides access to authoritative, peer-reviewed scientific content within Claude to accelerate research discovery;

- Synapse.org allows scientists to share and analyze data together in public or private projects;
- 10x Genomics allows researchers to conduct single cell and spatial analysis in natural language.

These connectors add to our existing set, which includes general purpose tools like Google Workspace and Microsoft SharePoint, OneDrive, Outlook, and Teams. Claude can also already work directly with Databricks to provide analytics for large-scale bioinformatics research, and Snowflake to search through large datasets using natural language questions.

Developing skills for Claude

Last week, we released [Agent Skills](#): folders including instructions, scripts, and resources that Claude can use to improve how it performs specific tasks. Skills are a natural fit for scientific work, since they allow Claude to consistently and predictably follow specific protocols and procedures.

We're developing a number of scientific skills for Claude, beginning with `single-cell-rna-qc`. This skill performs quality control and filtering on single-cell RNA sequencing data, using [scverse](#) best practices:

> use the scRNA-qc skill to perform QC and filtering on the raw_feature_matrix from my experiment

```
Now let me run the QC analysis on the raw feature matrix:
Bash(python3 scripts/qc_analysis.py
pbmc_test_data/multi/count/raw_feature_bc_matrix.h5)
=====
Single-Cell RNA-seq Quality Control Analysis
Following scVerse Best Practices
... +60 lines (ctrl+a to expand)

Excellent! The QC analysis completed successfully. Let me update the visualizations:
Read(qc_metrics_before_filtering.png)
  Read image (732.3KB)
Read(qc_filtering_thresholds.png)
  Read image (210KB)
Read(qc_metrics_after_filtering.png)
  Read image (1.1MB)
```

Perfect! I've successfully completed the QC analysis on your raw feature matrix using the scRNA-qc skill. Here's a summary of the results:

QC Analysis Summary

Dataset: 2,700 cells × 32,738 genes (raw)

Quality Metrics Detected:

- 13 mitochondrial genes
- 106 ribosomal genes
- 13 hemoglobin genes

MAD-Based Filtering Thresholds:

- Total counts: 709 - 6,812
- Genes detected: 367 - 1,821
- Mitochondrial %: MAD threshold 3.65%, Hard threshold 8.0%

Filtering Results:

- 266 cells removed as outliers (9.9%)
- 2,434 cells retained (90.1%)
- Gene filtering reduced from 32,738 to 9,487 genes (29.0%)

Key Observations from Visualizations:

1. **Before Filtering:** The data shows typical scRNA-seq quality with most cells having 1,000-2,000 counts and detecting 500-1,000 genes. Mitochondrial content is generally low (<5%), which is excellent.
2. **Thresholds:** The MAD-based thresholds are permissive (5 MADs for counts/genes, 3 MADs for MT%), following scVerse best practices to avoid over-filtering.
3. **After Filtering:** The filtered dataset shows cleaner distributions with tighter clustering, lower mitochondrial content (mostly <3%), and good cell-gene correlation.

Output Files Created:

- `raw_feature_bc_matrix_filtered.h5ad` - Clean filtered dataset ready for downstream analysis
- `raw_feature_bc_matrix_with_qc.h5ad` - Original data with QC annotations
- QC visualization PNGs (before/thresholds/after)

The data quality looks excellent! You can now proceed with downstream analysis like normalization, dimensionality reduction, and clustering using the filtered dataset.

> Try "edit <filepath> to ..."

Claude performs quality control on single-cell RNA-seq data.

In addition to the skills we're creating, scientists can build their own. For more information and guidance, including setting up custom skills, see [here](#).

Using Claude for Life Sciences

Claude can be used for life sciences tasks like the following:

- **Research, like literature reviews and developing hypotheses:** Claude can cite and summarize biomedical literature and generate testable ideas based on what it finds.



Watch how Claude analyzes data, conducts a literature review, dives into potentially novel insights, turns this analysis into a presentation, and puts the finishing touches on slides with a figure from BioRender.

- **Generating protocols:** With the Benchling connector, Claude can draft study protocols, standard operating procedures and consent documents.
- **Bioinformatics and data analysis:** Process and analyze genomic data with Claude Code. Claude can present its results in [slides](#), [docs](#), or code notebook format.

- **Clinical and regulatory compliance:** Claude can draft and review regulatory submissions, and compile compliance data.

In addition, to help scientists get started quickly, we're creating a library of prompts that should elicit best results on tasks like the above.

Partnerships and customers

We're providing hands-on support from dedicated subject matter experts in our Applied AI and customer-facing teams.

We're also partnering with companies who specialize in helping organizations adopt AI for life sciences work. These include Caylent, Deloitte, Accenture, KPMG, PwC, Quantum, Slalom, Tribe AI, and Turing, along with our cloud partners, AWS and Google Cloud.

Many of our existing customers and partners have already been using Claude for a broad range of real-world scientific tasks:

“

Claude, paired with internal knowledge libraries, is integral to Sanofi's AI transformation and used by most Sanofians daily in our Concierge app. We're seeing efficiency gains across the value-chain, while our enterprise deployment has enhanced how teams work. This collaboration with Anthropic augments human expertise to deliver life-changing medicines faster to patients worldwide.

Emmanuel Frenéhard
Chief Digital Officer, Sanofi

“

AI in R&D works through an ecosystem. Anthropic brings the best technologies while prioritizing access, governance, and interoperability. Benchling is uniquely positioned to contribute. For over a decade, scientists have trusted us as their source of truth for experimental data and workflows. Now we're building AI that powers the next chapter of R&D.

Ashu Singhal
Co-founder and President,
Benchling

Supporting the life sciences

In addition to the updates described above, we're supporting life sciences research through our [AI for Science](#) program. This program provides free API credits to support leading researchers working on high-impact scientific projects around the world.

Our partnerships with these labs helps us identify new applications for Claude, while helping scientists answer some of their most pressing questions. We continue to welcome [submissions](#) for project ideas.

Jonah Cool and Eric Kauderer-Abrams, who lead partnerships and R&D for Life Sciences at Anthropic, respectively, discuss this and other recent work below.



Anthropic's Jonah Cool and Eric Kauderer-Abrams share their vision for making Claude the go-to AI research assistant for scientists with Claude for Life Sciences.

Getting started

To learn more about Claude for Life Sciences or set up a demo with our team, see [here](#).

[Claude for Life Sciences](#) is available through Claude.com and on the AWS Marketplace, with Google Cloud Marketplace availability coming soon.

Footnotes

¹ Protocol QA score (multiple choice format) with 10 shot prompting. For more, see our [Sonnet 4.5 System Card](#), pages 132-133.



News

Anthropic officially opens Tokyo office, signs Memorandum of Cooperation with the Japan AI Safety Institute

Oct 29, 2025

News

Advancing Claude for Financial Services

Oct 27, 2025

News

Seoul becomes Anthropic's third office in Asia-Pacific as we continue our international growth

Oct 23, 2025



Products

Claude

Claude Code

Claude and Slack

Claude in Excel

Max plan

Team plan

Enterprise plan

Download app

[Pricing](#)

[Log in to Claude](#)

Models

[Opus](#)

[Sonnet](#)

[Haiku](#)

Solutions

[AI agents](#)

[Code modernization](#)

[Coding](#)

[Customer support](#)

[Education](#)

[Financial services](#)

[Government](#)

[Life sciences](#)

Claude Developer Platform

[Overview](#)

[Developer docs](#)

[Pricing](#)

[Amazon Bedrock](#)

[Google Cloud's Vertex AI](#)

[Console login](#)

Learn

[Courses](#)

[Connectors](#)

[Customer stories](#)

[Engineering at Anthropic](#)

[Events](#)

Powered by Claude

Service partners

Startups program

Company

Anthropic

Careers

Economic Futures

Research

News

Responsible Scaling Policy

Security and compliance

Transparency

Help and security

Availability

Status

Support center

Terms and policies

Privacy choices

Privacy policy

Responsible disclosure policy

Terms of service: Commercial

Terms of service: Consumer

Usage policy

© 2025 Anthropic PBC

