Yang Lab Undergraduate Research Onboarding SOP

1. Who We Are Looking For

We welcome undergraduate students who are interested in computational biology, cancer immunology, and single-cell/spatial omics.

More importantly, we value:

- **Reliability**: consistently follows through on tasks
- **Initiative**: attempts to solve problems before asking for help
- **Curiosity**: connects analysis to biological questions
- **Commitment**: able to engage steadily over time

Prior experience is helpful but **not required**. Motivation and consistency matter more.

2. Expected Commitment

To ensure a meaningful research experience, we expect:

- A minimum commitment of **2 semesters (or equivalent duration)**
- **~10–15 hours per week**, on average
- Regular communication and progress updates

Students who cannot meet these expectations may not be a good fit at this time.

3. Application Process

Step 1 – Initial Contact
Please email:

- CV (including GPA and relevant coursework)
- Brief statement of interest (why this lab, what you hope to learn)

Step 2 – Conversation with Lab Members
Selected applicants will meet with a research scientist, postdoc or graduate student to discuss:

- Background and interests
- Expectations and availability

Step 3 – Short Trial Project (2–3 weeks)
Final candidates will complete a short guided project involving real data.
You will be asked to:

- Perform a small analysis task
- Submit a brief report (1–2 pages)
- Present your work (~10 minutes)

4. Selection Criteria

Admission to the lab is based on:

- Engagement and initiative during the trial project
- Ability to follow through and communicate clearly
- Fit with ongoing lab projects
- Availability of mentorship within the lab

5. Project Structure

Undergraduate projects are designed as **components of ongoing lab research**, rather than standalone topics.

You will:

- Work under the guidance of a postdoc or graduate student
- Contribute to a defined sub-question within a larger project
- Build skills in data analysis, interpretation, and scientific communication

6. Working Style and Expectations

- **Weekly progress updates** (brief written or slides)
- **Biweekly or regular meetings** with your mentor
- Ask questions, but also **attempt solutions independently first**
- Maintain organized code, notes, and results

7. End-of-Project Deliverables

At the end of your project, you are expected to provide:

- Well-documented code and analysis workflow
- Organized data/results files
- A short summary of findings
- A clear description of possible next steps

Strong projects may lead to:

- Honors thesis
- Poster or oral presentations
- Contribution to manuscripts (depending on scope and progress)

8. Final Notes

Joining the lab is a **commitment to a collaborative research environment**.
Our goal is to support your growth while contributing meaningfully to ongoing scientific work.

We look forward to working with students who are motivated, thoughtful, and ready to engage.