INTEGRATING FIRST YEAR STUDENTS INTO PRIMARY BIOLOGICAL RESEARCH.

ALASTAIR TRACEY, ALISON COWIE, KIMBERLEY DEJ, AND ROBIN CAMERON

Student outcomes.
Students will acquire:

- laboratory skills and techniques.
- scientific literacy skills.
- an appreciation for interdisciplinary scientific inquiry.
- an understanding of research ethics.
- an appreciation for the link between course content and real-world research
- the opportunity to contribute to primary biological research.

Early exposure to conducting original scientific research.
Current questions in Biology:

- How do genes change over time?
- How do genes affect traits?
- Does the environment influence gene evolution?

- Students:
  - collect personal data: amylase protein and DNA
  - analyze aggregate data
  - consider research ethics
  - present results.

Student ownership of research project.

Aligning lecture and lab themes.

Why amylase?

Protein of the month:
February 2006.

Industry: amylase in the production of high-fructose corn syrup

Our bodies: Digestion of starch

Microbiome: Microbes help us digest our food

Students study:

- the starch-digesting Amylase protein
- the coding gene, AMY1

A multidisciplinary approach allows students to learn many techniques and concepts used throughout various fields in Biology.