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# Pipette Tip Sterilization System Grant Proposal

**Possible Academic Connections:** Genomics, Chemistry, Biology, Chemical Engineering, College of Medicine, Marketing, Business, Communications

**Recommended project length:** Year or Thesis/dissertation

[**Experiential Learning**](https://www.ohio.edu/academic-excellence/experiential-learning/overview)**?** Likely

[**Community Engagement**](https://www.ohio.edu/university-college/campus-community-engagement)**?** Likely

**Remote learning possible?** Yes

**Connection to** [**OHIO Sustainability & Climate Action Plan**](https://www.ohio.edu/sites/default/files/sites/sustainability/files/2021%20OHIO%20Sustainability%20and%20Climate%20Action%20Plan.pdf)**:** Waste

**Brief description:** Generate a cost-benefit analysis and grant proposal for the purchase of pipette tip sterilization equipment to reduce plastic usage in Ohio University labs.

**Project contact:**

Bill Broach, broach@ohio.edu

**Project description:**

Due to COVID-19 research, the availability of presterilized pipette tips, especially those with aerosol filters, has decreased significantly, causing the prices to increase drastically and making the tips more difficult to obtain.

Bill Broach, the Genomics Facility Director, identified a system able to sterilize pipette tips using plasma technology, allowing for their reuse up to 40 times. Implementation of this pipette tip sterilization system would decrease the University’s dependence on the availability and price of new pipette tips, while also decreasing plastic usage in labs and decreasing the carbon footprint of Ohio University. Students may be asked to pursue one or more of the following tasks:

1. Evaluate triple bottom line cost and benefits
2. Develop a grant proposal for the purchase of the pipette sterilization system.
3. Develop a research proposal for equipment testing
4. Facilitate collaboration with companies in Athens to further utilize the pipette sterilization system outside of the Ohio University community.

**Resources available to students/faculty to complete project:**

[PureTIP SAS](https://nam11.safelinks.protection.outlook.com/?url=https%3A%2F%2Fionfieldsystems.com%2Fproducts%2Fpuretip-sas%2F&data=04%7C01%7Cgoetze%40ohio.edu%7C799e25a6e6f84b9e0f2c08d96d63bae9%7Cf3308007477c4a70888934611817c55a%7C0%7C0%7C637661097372287934%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C1000&sdata=0Ic4%2BuXevKKEp0SCOtXOOELB4zuA501cru1BX59etR8%3D&reserved=0)

[FASEB listing of instrumentation grants](https://www.faseb.org/Portals/2/PDFs/opa/2016/Instrumentation;%20Federal%20Grants%20and%20Programs%20for%20the%20Life%20Sciences.pdf)

**Project alignment to OHIO Sustainability & Climate Action Plan:**

* + [Waste](https://www.ohio.edu/sustainability/operations/waste-management) (goal #1) - r[educe municipal and Universal solid waste](https://www.ohio.edu/sustainability/operations/waste-management)

**Please send final project deliverables to****sustainability@ohio.edu****for tracking and reporting purposes.**