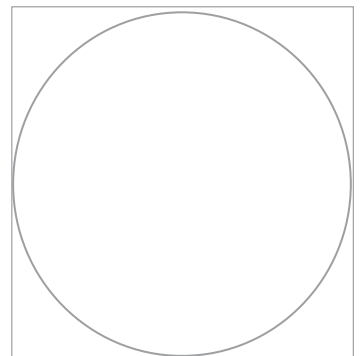


OFFICIAL ABSTRACT and CERTIFICATION

Category  
Pick one only—  
mark an “X” in box  
at right

- Animal Sciences
- Behavioral & Social Sciences
- Biochemistry
- Biomedical & Health Sciences
- Biomedical Engineering
- Cellular & Molecular Biology
- Chemistry
- Computational Biology & Bioinformatics
- Earth & Environmental Sciences
- Embedded Systems
- Energy: Chemical
- Energy: Physical
- Engineering Mechanics
- Environmental Engineering
- Materials Science
- Mathematics
- Microbiology
- Physics & Astronomy
- Plant Sciences
- Robotics & Intelligent Machines
- Systems Software
- Translational Medical Sciences

1. As a part of this research project, the student directly handled, manipulated, or interacted with (check ALL that apply):
  - human participants       potentially hazardous biological agents
  - vertebrate animals       microorganisms       rDNA       tissue
2. I/we worked or used equipment in a regulated research institution or industrial setting:       Yes       No
3. This project is a continuation of previous research.       Yes       No
4. My display board includes non-published photographs/visual depictions of humans (other than myself):       Yes       No
5. This abstract describes only procedures performed by me/us, reflects my/our own independent research, and represents one year’s work only       Yes       No
6. I/we hereby certify that the abstract and responses to the above statements are correct and properly reflect my/our own work.       Yes       No



*This stamp or embossed seal attests that this project is in compliance with all federal and state laws and regulations and that all appropriate reviews and approvals have been obtained including the final clearance by the Scientific Review Committee.*