

Budget Justification

Salaries and Wages

Funds are requested for 1 month of summer salary for the Principal Investigator in years 1-3, and a one-course teaching release (0.9 academic month) in year 2. The PI will have overall responsibility for the project and oversight for the graduate and undergraduate research assistants. The PI will also be responsible for the production, characterization, and derivatization of widgets and, at a later stage of the project, other elements (e.g., widget portions).

Two full-time graduate research assistants will be employed for the project. The graduate students will be essential for the successful execution of the program and will dedicate 100% of their time for this proposed research. Both graduate research assistants will be involved in the functionalization of widget electrodes and the identification of appropriate widget partners with active labels. This work will be carried out both at NIU and in the laboratory of the collaborating researcher in Wales.

One part-time undergraduate research assistant will be employed on the project during the summer months of each project year. The undergraduate researcher will dedicate 50% of his/her time (20 hours per week) during the summers to this project. The undergraduate research assistant will work under the direction of the PI and/or one or both graduate assistants on one or more aspects of the proposed research plan.

Increases of 4% are estimated for faculty and students each year. Fringe benefits for the PI's summer salary are calculated at the faculty summer salary rate of 12.5%. Fringe benefits for the PI's course release time are calculated at the appropriate University rate of 30.72%. No fringe benefits are calculated for the graduate student. Fringe benefits for undergraduate students are calculated at 7.65%.

Travel

Funds are requested for travel expenses to enable the PI and research assistants to attend and make presentations at major scientific conferences. We anticipate one domestic conference per year in years 2 and 3 of the project, and one international conference in the third year.

Additional foreign travel funds are requested to allow the PI and/or up to two students to perform research in Dr. Strangelove's laboratory in Wales twice a year. The exact duration of these visits will depend on the work to be performed at the time, but they will typically last for several weeks each. The requested funds will cover both airfare and ground transportation, accommodations, and per diem for these stays. An increase of 3% is estimated for travel costs each year.

Equipment

A one-time fund is requested in the amount of \$16,233 in the first year for the purchase of a laminar flow hood (\$10,841) and a liquid nitrogen cryostorage system (\$5,392). As these items are available from Fisher Scientific's general catalog, specific quotes were not obtained. PDF copies of the relevant catalog pages from the company's website have been uploaded as supplementary documents.

Although both a laminar flow hood and a liquid nitrogen dewar are currently available in the Department of Widgetry at NIU, these are shared by several groups. For example, the laminar flow hood is currently used by four groups, and two new faculty members are likely to start widget work within the next year. Therefore, our work would be facilitated by having unrestricted access to a laminar flow hood. Similarly, the liquid nitrogen dewar available in the department is being used by several groups and is close to capacity.

Materials and Supplies

Funds are also requested to cover the costs of materials such as standard reagents, plasticware, media, serum, antibiotics, small laboratory equipment items, solvents, widget supports, and other materials to purify and characterize reaction intermediates and products.

Other

Publication costs of \$500 are included in the budget, to cover the cost of any page charges, reprints, or costs for color figures arising from the publication of research results. An additional \$500 is requested per year to cover the costs of shipping research samples and materials to and from the collaborating laboratory in Wales. Tuition remission for two graduate assistants (\$49,373 over three years) is also included in the budget.

Facilities & Administrative Costs

F&A costs are charged as a percentage of the modified total direct costs at a rate of 45.0% negotiated on August 6, 2008. This rate is set by the University's Cognizant Audit Agency, the Department of Health and Human Services.