
BUDGET JUSTIFICATION FOR TERRYTOONS UNIVERSITY

Note: All costs are increased 3 percent per year to account for inflation.

PERSONNEL

Dr. Phlapyer Wings (2 calendar months' effort per year) is the **Director of the My-T Mouse Center**. He has extensive experience with generating knockout mice and developed the Zymogwin procedure which is used world-wide for transilectomies. He has published prolifically on the development of sharwings and ebbernoodles. Dr. Wings collaborates with ornithologists, zoologists, and educators on projects related to mammalian flight. He will be directly responsible for statistical analyses of data collected in experiments in aims 1, 3, and 4. He will coordinate the work done at Terrytoons University, the subcontracted work done at Unique University, and the Cores. He will also be responsible for writing all progress reports and supervising the postdoctoral fellow. ($\$120,000/\text{year base salary} \times 2/12 = \$20,000$ per year)

Dr. Pearl Pureheart, Postdoctoral Fellow (12 calendar months' effort per year) has been a part of the Wings lab for two years, bringing experience with the Maximowz procedure as well as extensive work with anthropomorphism. Dr. Pureheart will perform the gene replacement regimen and other experiments for Aims 1 and 3 as well as assisting with data management. She will also supervise the undergraduate student researchers. ($\$40,000/\text{year base salary} \times 12/12 = \$40,000$ per year)

Two Undergraduate Student Researchers (1 calendar month effort each per year) will assist with basic lab procedures and preparing mice for surgery. ($\$10/\text{hr.} \times 175 \text{ hours} \times 2 \text{ students} = \$3,500$ per year)

Total Personnel Costs

Year 1 Request	Year 1 Cost Match	Year 2 Request	Year 2 Cost Match	Year 3 Request	Year 3 Cost

FRINGE BENEFITS

Fringe benefits are calculated at the University's federally negotiated rate of 30 percent for full-time employees. No fringe benefits are calculated for the undergraduate student researchers.

Total Fringe Benefits Costs

From: M.M. Licklider and the University of Missouri Grant Writer Network. 2012. Grant Seeking in Higher Education: Strategies and Tools for College Faculty. Jossey-Bass.

Year 1 Request	Year 1 Cost Match	Year 2 Request	Year 2 Cost Match	Year 3 Request	Year 3 Cost

Total Equipment Costs

Year 1 Request	Year 1 Cost Match	Year 2 Request	Year 2 Cost Match	Year 3 Request	Year 3 Cost

EQUIPMENT

A Flimsadiddle microscope will be purchased in Year 1 for use in the insertion phase of the Maximowz procedure. A quote of \$11,200 for this microscope is attached. Having this microscope in the Wings lab relieves the team from paying fees to use the Biochemistry Department’s microscope which would add more than \$8,000 in fees over the course of the project. As this equipment would be used for other projects as well, the University will fund half of the cost, requesting only \$5,600.

TRAVEL

Collaboration travel funds: Funds are requested for the PI and Postdoctoral Fellow to coordinate research efforts with the team at Unique University in Iowa. This subcontract team will be responsible for Aim 2 in Years 2 and 3 of the project. Two 2-day trips a year are planned for Years 2 and 3 (600 miles per round trip × \$0.525/mile × 2 trips; 2 hotel rooms × \$100 per night × 1 night × 2 trips; \$42 per diem × 2 days × 2 people × 2 trips) for a total request of \$1,366 per year for Years 2 and 3.

Travel to scientific conferences: Funds are requested to support participation in the US Knockout Science Conference where research results from this project will be presented. Estimated costs for a three-day trip to this conference include \$800 for airfare, \$42 per diem, \$100/night for lodging, \$50 for ground transportation, and \$300 for conference registration (\$1,476 per year).

Total Travel Costs

Year 1	Year 1 Cost	Year 2	Year 2 Cost	Year 3	Year 3 Cost

From: M.M. Licklider and the University of Missouri Grant Writer Network. 2012. Grant Seeking in Higher Education: Strategies and Tools for College Faculty. Jossey-Bass.

Request	Match	Request	Match	Request	

Materials and Supplies

Two Mouse Landing Strips with safety stripes, computer interface, and software will be purchased to monitor the distance traveled for each flight. These landing strips also measure food consumed per day and directly upload results to the computer. A quote for these strips is attached (\$1,200 each, or \$2,400 total in Year 1 only).

Five enzyme kits are required each year to perform the Maximowz procedure. At \$850/kit, this is \$4,250/year. Fluorescent antibodies will be utilized for the mouse dance procedures. Only half the mice will be subjected to this procedure. At \$30/mouse for 180 mice, antibodies will cost \$5,400/year.

Disposables (plasticware, gloves, reagents, etc.) are estimated to cost \$3,500/year. Laboratory chemicals will cost about \$5,000/year.

Total Materials and Supplies Costs

Year 1 Request	Year 1 Cost Match	Year 2 Request	Year 2 Cost Match	Year 3 Request	Year 3 Cost

SUBCONTRACT WITH UNIQUE UNIVERSITY

A subcontract to Unique University will be required in Years 2 and 3 for the analysis of the sentient mouse hyperation in Aim 2. The Unique team has the expertise and equipment required to do this portion of the work. The PI and Postdoc will visit with the Unique team twice a year to coordinate processes and results.

Subcontract Personnel Dr. X. Ray Vision (0.5 calendar month effort per year) will serve as the PI for Unique University’s portion of work. He has extensive experience in hyperation analysis as well as serving as an expert on flight simulation with Marvelizing Filimation. He will oversee the Graduate Research Assistant as well as provide expertise for the mouse dance procedures being done at Terrytoons University. (\$60,000/year base salary × 0.5/12 = \$2,500 for Years 2 and 3)

From: M.M. Licklider and the University of Missouri Grant Writer Network. 2012. Grant Seeking in Higher Education: Strategies and Tools for College Faculty. Jossey-Bass.

A Graduate Research Assistant (3 calendar months' effort per year) will perform the lab work required for the hyperation analysis including the use of the Hanns-Downe dance simulator. (\$30,000/year base salary \times 3/12 = \$7,500 for Years 2 and 3)

Subcontract Fringe Benefits Fringe benefits are calculated at Unique University's federally negotiated rate of 35 percent for full-time employees. Medical insurance is provided to the GRA for \$1,227.50 per year. Tuition is also provided for the GRA and is listed under Other Direct Costs.

Subcontract Materials and Supplies Hyperation analysis requires the use of four Haydonical Ablation Kits each year at a cost of \$502.25 each (\$2,009 total per year). Chemicals, plasticware, and reagents will cost about \$3,100 in Years 2 and 3.

In addition, in Year 3, 200 hyperation instellagatory blankets are required for the final step of the analysis at a cost of \$13 each, totaling \$2,600.

Subcontract Other Direct Costs Tuition fees for the Graduate Research Assistant are requested for 9 credits per year at \$350/credit.

Subcontract F&A F&A is calculated at Unique University's federal negotiated rate of 56 percent. This percentage was applied to Modified Total Direct Costs which is equal to the Total Direct Costs minus equipment (over \$5,000), subcontracts in excess of \$25,000, patient care costs, rentals, student support costs, and animal care costs paid as per diem.

Total Subcontract Costs

Year 1 Request	Year 1 Cost Match	Year 2 Request	Year 2 Cost Match	Year 3 Request	Year 3 Cost

OTHER DIRECT COSTS

Animal Care. Per diem costs for 90 cages (4 mice/cage for 360 mice) are included for all years of the project (\$0.70/cage/day \times 365 days \times 90 cages). Cage care for this quantity of mice is requested as the project will establish lines of mice by interbreeding onomatopoeia mice for the generation of a cohort of all relevant genotypes in a common set of litters due to the mixed genetic background of the existing mice.

DNA Core Fees. This Core utilizes a 3730 96-capillary DNA Analyzer with Applied Biosystems Big Dye Terminator cycle sequencing chemistry. The 96-capillary instrument with robotic plate

From: M.M. Licklider and the University of Missouri Grant Writer Network. 2012. Grant Seeking in Higher Education: Strategies and Tools for College Faculty. Jossey-Bass.

handler provides a high throughput capacity at minimal cost to investigators. Core charges are \$408 (\$4.25/well) for a 96-well plate. The 10 plates required for the Maximowz procedure will cost \$4,080/year.

Transgenic Animal Core Fees. This Core will generate transgenic mice on FVB and c57B16 strains using DNA which the PI already possesses. This Core will also provide genotyping assays. At \$20/mouse for 200 mice, this service will be \$4,000. Assays will cost \$50/assay for 100 assays for a total of \$5,000/year.

Total Other Direct Costs

Year 1 Request	Year 1 Cost Match	Year 2 Request	Year 2 Cost Match	Year 3 Request	Year 3 Cost

F&A

F&A is calculated at the university's federal negotiated rate of 51.5 percent of Modified Total Direct Costs, which is equal to the Total Direct Costs minus equipment (over \$5,000), subcontracts in excess of \$25,000, patient care costs, rentals, student support costs, and animal care costs paid as per diem.

Total F&A Costs

Year 1 Request	Year 1 Cost Match	Year 2 Request	Year 2 Cost Match	Year 3 Request	Year 3 Cost

Total Project Costs

Year 1 Request	Year 1 Cost Match	Year 2 Request	Year 2 Cost Match	Year 3 Request	Year 3 Cost