**University of Idaho Budget justification**

**1. Personnel** *($309,436 total over 3 years*)

For all personnel, we assume a 3% annual increase in salaries.

*The University of Idaho has determined the salary year for senior personnel to be based on the calendar year.*

**Senior Personnel:** *($72,555 total over 3 years)*

a. Scott Nuismer, PI. We request 4.0 months of calendar year salary for Dr. Nuismer in the first year of the project and 1.0 month in years 2 and 3. We request 4.0 months in the first year because Dr. Nuismer will be on sabbatical and thus on only a half-time university appointment. Dr. Nuismer will oversee work on the project, develop and analyze mathematical models, develop statistical methods for analyzing data provided by collaborators, and mentor the graduate student and undergraduate students.

**Other Personnel:** *($236,882 total over 3 years)*

a. Funds to support a Graduate Student research assistant in each of the three years are requested. This student will be based at the University of Idaho and work with PI Nuismer to develop, analyze, and parameterize mathematical models. Salary is requested for all three years, calculated from a base salary of $35,000 in year 1 with the University of Idaho standard 3% inflation adjustment per year.

b. Funds are requested to support research training of three Undergraduate Researchers during each year of the project. Salary is requested for all three years in the amount of $14,300 per student per year.

**Fringe Benefits:** *($30,367 total over 3 years)*

The University of Idaho Consolidated fringe rates are 30.1% for faculty, 42% for staff and 3.6% for students.

**2. Travel:** *($44,460 total over 3 years)*

<u>Domestic</u>

Funds are requested to support visits by PI Nuismer to Rocky Mountain Laboratories in Hamilton Montana in the first and second years of the project. Costs for a 60-day visit during the first year of the proposed work are requested. The cost of this visit is estimated to be $303 for travel by private vehicle to and from Hamilton, Montana and the Federal per diem of $165/day for Hamilton, Montana accrued over the 60-day visit for a total of $9,900 in per diem expenses. Costs for a 14-day visit during the second year of the proposed work are requested. The cost of this visit is estimated to be $303 for travel by private vehicle to and from Hamilton, Montana and the Federal per diem of $165/day for Hamilton, Montana accrued over the 14-day visit for a total of $2,310 in per diem expenses.

Additional funds are requested to support travel by four people from the University of Idaho team to a scientific meeting in each year of the award. We estimate the cost of this travel to be $1000 in airfare, $251/day per diem, and $500 in registration fees per person and meeting.

Assuming a three-day meeting, this yields an estimated annual cost of $9,012 ($27,036 project total).

International

Funds are requested in the first year of the project to support a visit by PI Nuismer to the lab of Dr. Daniel Strecker in Glasgow, Scotland. Airfare is estimated to be $1500 and living expenses to be $3,108 based on the federal per-diem for Glasgow, Scotland ($222/day) and a visit of 14 days.

**3. Other Direct Costs:** *($69,500 total over 3 years)*

***Graduate student tuition and fees:***

Graduate Student tuition and fees at the University of Idaho are currently $9,968 per year, $600 per summer credit and health insurance is $2082 per year. Starting in year 1, an 8% escalation has been applied. (total $44,352)

***Publication cost:***

We request funds to defray publication costs for open-access journals ($2,000 in year one, $4,000 in year two, and $8,000 in year three (total $14,000).

***Research Computing and Data Sciences services:***

Funds are requested in project years 1-3 to support the hardware and software development service fee $1,600 per year to the Research Computing and Data Sciences (RCDS) at the University of Idaho. RCDS will host and support continued development of the transmissible vaccines website. (total $4,800)

***Materials and Supplies:***

Funds are requested for four Mathematica licenses to support data analysis and modeling at a rate of $529 per license each year for a total of $2,116 per year ($6,348 project total).

**4. Equipment** ***($6,000 total over 3 years)***

Funds are requested to purchase one workstation computer in year one for a total of $6,000. This workstation will be essential to the rapid development and validation of predictive models and statistical methodologies.

**5. Indirect Costs** ***($204,706 total over 3 years)***

The University of Idaho Indirect Cost rate is 50%. Graduate Student Fees and Insurance are not subject to indirect costs.