**Budget justification**

**A. Personnel:**

*Piurleyuh Gogetter, PhD, PI.*Dr. Gogetter will be responsible for administering and overseeing all work related to the project, supervising the graduate student responsible for cell culture work, ensuring that all safety and compliance protocols are developed, approved and executed, and ensuring that the graduate student acquires the appropriate technical and safety training. She will take the lead on the proposed mathematical modeling. She will also be responsible for all reporting associated with this grant.

Dr. Gogetter is requesting course release buyout for one 2 credit through session summer course. This has been approved by the department head of the Department of Biomathematics.

*Ima Smartguy, BS.* Mr. Smartguy is a PhD student in his 2nd year of graduate study with Dr. Gogetter. Mr. Smartguy is currently supported by a T32 training grant, which pays his academic year stipend but not his summer stipend or dissertation research needs. The proposed cell culture work is intended to allow Mr. Smartguy to develop a novel project in Dr. Gogetter’s laboratory that will also form the basis of his dissertation. His responsibilities will include execution of all proposed experiments with Dr. Gogetter’s novel lung cancer cell line. Two months coverage for Mr. Smartguy’s stipend is requested.

**B. Equipment (Items >$5000)**

*Oxygen controller for CO2 incubator.* The proposed project requires maintenance of cells in a hypoxic environment. Although Dr. Gogetter’s start-up package included a high-end cell incubator that is flexible for atmosphere conditions, she did not negotiate for (or anticipate) the currently proposed studies at the time her package was negotiated. This controller is central to the proposed work.

**C. Materials and Supplies**

Plastics/Consumables($500): These funds are requested for the purchase of general laboratory supplies including but not limited to culture plates, filtration units, pipettes, and other plastics related to cell culture.

Cell culture($1,000): These funds are required to support gases, buffers, media, and medium supplements for lung cell cultures.

Gene expression analysis ($1,000): These funds are requested to cover RNA isolation, cDNA synthesis, primers, and other reagents for endpoint and quantitative PCR. This includes PCR array kits and associated reagents.

Computer software ($600): Funds are requested to purchase a software license for MathModelSupreme® software. This software is newly released and provides all of the capabilities that Dr. Gogetter and Mr. Smartguy will need to analyze and model the data from this study.

**D. Travel**

Domestic travel: Mr. Smartguy will travel for three days to University of Chicago to learn how to cultivate the lung cell line from its creator, Dr. Weer Outa-Air. The cost of this travel is expected to be $300 airfare, $500 lodging and $100 per diem.