

**Funding Report – April 26, 2018**

To: Wortman Lung Cancer Foundation (WLCF)  
Re: Longitudinal Lung Health Study (LLHS)

The Longitudinal Lung Health Study (LLHS) was implemented in 2017 in parallel with the WLCF Running Lungs Races. This study was developed to begin to form a longitudinal data base on lung health linking personal health habits (exercise and nutrition), genetics and environmental factors (e.g., air quality). The intent was for the funding support from the WLCF to be seed funding to help launch project, allow it to grow and during this period more long term sustainable funding is to be sought out and secured. Members of the Johnson laboratories based in Scottsdale, AZ and Rochester, MN attended Bozeman Running Lungs race (July 15<sup>th</sup>) the Lung Health Day (November 2<sup>nd</sup>) and Running Lung Race (November 4<sup>th</sup>) in Rochester and Fountain Hills Running Lung trail race (November 19<sup>th</sup>), this past year. The funding provided by the WLCF has covered the personnel time of members of the Johnson lab (one or two members per race) attending these events to recruit participants and the travel costs with getting lab members to some of these events. However, recruitment is really only the initial step for subject participation in the project as this is primarily a “remote or web based” study. So outside of the races, the funding supports the efforts of lab member to coordinate sending email requests to those recruited to complete five different questionnaires and then entering the responses into a database. The last step of the participation is getting a cheek swab from participants; the funding has also supported the mailing costs of send the kits to the participants who complete all the questionnaires and paying for the return shipping for the collected sample. Lastly our project goals are to expand the study from this initial pilot phase and build upon questionnaire gathered data. We have been working with: 1) BreathResearch, a respiratory acoustics and mobile application company, to improve lung health monitoring and allow lung function measurements to be performed using smart phones; 2) Arizona State University collaborators and 3) MA Tech who have developed sensors for measuring environmental exposures. These are key technology developments and metrics for the project going forward. We have also been working with Linda and the WLCF in applying for different grant funding and writing letters of support to support the LLHS and other foundation efforts.

We are very appreciative of the seed funding from WLCF and look forward to another productive year.

Sincerely,

Bruce Johnson PhD and Courtney Wheatley PhD  
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