



## 2020 IMPACT CIRCLE

### ***Does using a Sauna protect against Alzheimer's disease and Parkinson's Disease***

Investigators: Gordon J. Lithgow, Julie K. Andersen, Suzanne Angeli

#### Unmet Need:

Alzheimer's disease (AD) is the leading cause of dementia in those over the age of 65. Currently, 5 million Americans have AD. Population demographic projections for AD suggest a two to three-fold increase by 2050 in the absence of its cure or prevention, a highly significant economic and social burden. Various attempts to develop treatments have failed dramatically. Developing interventions are critical.

#### Background:

There is evidence for health benefits from regular sauna use. In one case people using a sauna two or three times a week had lowered risk of Alzheimer's and in another "all cause mortality" was reduced. In simple laboratory animals, we have shown that short term exposure to heat can extend lifespan.

#### Novel Hypothesis:

Short term heat exposure activates protective mechanisms that fight neurological disease

#### Proposal:

We want to test whether simple exposure to heat can slow down the rate of Alzheimer's progression in simple animals (nematode worms). We will also test whether there is an effect on Parkinson's. We will then work out how this happens.

#### Impact:

Preliminary data could result in a grant to study heat exposure in laboratory mouse models of neurological disease which could suggest heat interventions in humans.

Specialized Equipment Needs: A Buck Sauna! No, actually, none.