

**Research Translation Plan for  
University of Washington Superfund Research Program  
Project 2**

PI: Zhengui Xia  
May 22, 2018

**Research translation goals:**

1. Emphasize to health care practitioners that the risk of neurodegenerative disease is a combination of exposure and genomics.
2. Bring insights from animal work to the practice of patient care.
3. Emphasize the positive effects of good exercise, finding happiness, lowering stress, and exploring new activities on the process of neurogenesis.

**Intended audience:**

- Medical practitioners.
- Groups that advocate for and educate about neurodegenerative diseases (e.g. The Michael J. Fox Foundation, the National Parkinson Foundation, Alzheimer's groups).
- Families.
- Caregivers.

**What might interest the intended audience about this research:**

- Exposure to cadmium increases risk for neurodegenerative diseases and impaired olfaction.
- This is a brand-new insight that no one talks about and it is important.
- There have only been one or two human studies, but most emphasis has historically been on cancer risk.

**Three main points:**

1. Environmental exposure to contaminants like cadmium can cause cognitive decline and impair olfaction. Olfaction is important because, without it, people often don't eat well and may suffer from malnutrition.
2. Genetics are responsible for only about 5% of the risk for cognitive decline. A majority of cases are non-familial.
3. Most research on neurodegenerative declines has been done by pure neuroscientists. The role of environmental exposures is only just beginning to be explored.

**Opportunities to engage:**

- Developing a continuing education course for medical practitioners, advocates, and families affected by neurodegenerative diseases.
- Emphasizing the role of environmental exposure to other researchers in the field who focus more on the neuroscience.

**Next steps:**

- Developing a continuing education course for 2019.
- Presenting at an international conference titled "Targeting Therapy of Alzheimer's and Related Neurodegenerative Diseases Conference" June 1-4.

**Impacts on audience:**

- Seeing medical practitioners consider environmental exposure to contaminants like cadmium when thinking about risk factors for neurodegenerative diseases.
- Helping educate the public about how to promote neurogenerative behaviors and limit harmful exposures.

**Impacts on scientists:**

- For other researchers who work on neurodegenerative diseases: Raise awareness that environmental exposures are important.
- For the Xia lab: Encourage thinking about the impacts of SRP research on public health and remind researchers about why their work is important.

**Gathering feedback:**

- Surveying information needs before developing a continuing education class.
- Surveying success of the class afterwards in terms of process and impacts/ outcomes.

**Responding to feedback:**

- Weigh the feedback with what is feasible and meaningful while planning the next phase of research translation.
- Plan for follow-up from the outset.