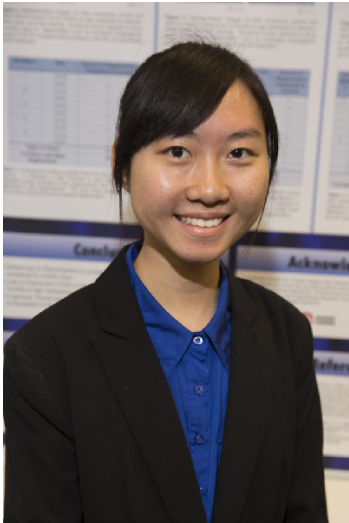


## CWSF 2016 - Montreal, Quebec



### Nancy Liu

#### The Role of Panx3 and CCN1 in Intervertebral Disc Health in Mice

**Challenge:** Health

**Category:** Senior

**Region:** Thames Valley

**City:** London, ON

**School:** Central S.S.

**Abstract:** Lower back pain resulting from intervertebral disc degeneration causes more global disability than any other condition. There is a pressing need to better understand the processes involved in disc degeneration in order to develop disease modifying treatments. My project involves studying the role of proteins, specifically Panx3 and CCN1, in regulating disc disease in the intervertebral disc using knockout mouse models.

### Biography

My name is Nancy Liu, and I am in grade 11 at London Central Secondary School. I have many hobbies and interests, including playing musical instruments such as the piano and flute, writing short novels, and making origami. However, there is nothing that I am more passionate about than science. This year, I participated in the science fair for the first time, and I realized how exciting it is to research a topic that no one has ever explored. Along the process of conducting my project on the role of proteins in the intervertebral disc, I learned countless things. The most invaluable lesson that I learned was that there are so many things left to be explored, and my project was only a small step. My advice to other students is to choose a topic that they are interested in, be excited to conduct their experiment, and appreciate the complexity of the science behind their research.