

# CWSF 2010 - Peterborough, Ontario



## Zahra Merali

### Diffusion Through Osseous Matter

**Division:** Earth & Environmental Sciences

**Category:** Senior

**Region:** North Bay

**City:** Corbeil, ON

**School:** West Ferris S.S.

**Abstract:** Bone allografts, particularly allografts in the knee are a common procedure in today's medical practices. This project investigates an innovative drug delivery system- by putting medications (such as immunosuppressant's, anti-inflammatory medications and bisphosphonates) into an allograft before it is transplanted into a patient. Cow tibias were placed into drug solutions and after time were tested for differences in mass and concentration of the drug solution.

### Biography

My name is Zahra Merali and I am in grade 11. I have always had an overwhelming interest in anything that affects humans. I believe that before we can go on to discover things like space and the world around us, we first need to discover and learn all we can about ourselves, as humans. After being in the hospital for about one month this year my need to learn about the human body and medical disasters is now even higher. In addition to science, I also love theater and have been in multiple school plays. I enjoy sports, am president of our school student council and have over 100 volunteer hours. I am a person who always needs to take action when dealing with causes, problems, or even interests. I hope my science fair project helps at least one person somewhere by giving them hope for the future, inspiration, or medical awareness. In the future, I hope to become a doctor, and in result hopefully help as many people as I can.

### Awards

### Value

The University of Western Ontario Scholarship Bronze Medallist - \$1000 Entrance Scholarship Sponsor: University of Western Ontario	\$1 000
University of Ottawa Entrance Scholarship Senior Bronze Medallist - \$1000 Entrance Scholarship Sponsor: University of Ottawa	\$1 000
Bronze Medal - Biotechnology & Pharmaceutical Sciences - Senior Sponsor: Youth Science Canada	\$300
<b>Total</b>	<b>\$2 300</b>