

## **Ruth Waxman (Natural Sciences) – Israel, August 2012**

In the Hebrew University Laboratories of Jerusalem, I worked in the Institute of Dental Research on a project overseen by Professor Dan Deutsch and under the direct instruction of Dr Amir Haze. Throughout the month that I worked, I contributed to a number of different experiments that were going on concurrently, all involving ligament regeneration. On average, I worked about 8 hours a day, some days staying much later than other, depending on the constraints of the protocols that day.

The research group has already published a number of papers regarding their discoveries to date, but one has not been published for a significant amount of time due to their need to collect enough evidence to publish in a high profile journal. Given we already knew the effect of their protein, amylogenin, on ligament regeneration ( - it works), I was mainly preparing experimental tissues from rats, cutting the tissue onto slides, staining the slides and then analyzing them using light microscopy. In doing this, we hoped to find markers that highlighted certain cell-types to provide evidence of their recruitment on application of the amylogenin. I also had the privilege of seeing the electron microscope in use, something I've never done before.

We started a new experiment to find out the mechanism of the ligament regeneration, operating on nine rats, then sacrificing them four days later in order to examine the tissue. Working with live animals and helping with the surgeries was a novel and interesting experience, which opened my eyes to my own views on animal sacrifice for the sake of medical advancement. It also gave me a window of insight into the process of research, which one can only scratch the surface of without actually conducting some research of their own.

I made some imaginative contributions to the projects and started my own protocols; therefore I very much hope to be co-authored in the paper when it is eventually published. I continue to keep in touch with my coworkers, who send me updates with the progress of the projects.