I participated in the co-op experience for the Fall '12 term from August 27th, 2012 to December 21st, 2012 at the Institute of Medical Research, University of Belgrade, Serbia. I was officially employed as a research assistant and my main responsibility was to be involved in the current research work. Specifically, I was placed in the Laboratory for Experimental Hematology and Stem Cells, a particular division of the faculty that specializes in experiments relating to mesenchymal stem cells (MSC). During the four months, I was assigned different tasks and projects. I was specifically involved in the following experiments: Cultivation of human MSCs from umbilical cord and peripheral blood and mouse MSC derived from bone marrow; determination of the influence of athletes’ plasmas on C2C12 cells based on difference in proliferation, migration, myogenic differentiation, and osteogenic differentiation; determination of the influence of direct cell contact between peripheral blood MSCs and umbilical cord MCSCs and peripheral blood mononuclear cells on the expression of different molecules associated with MSCs function, such as HLA-DR, HIF-1, COX2; determination of the influence of mouse bone marrow MSCs on the proliferation of syngeneic splenocytes.

I was exposed to various methods regarding cell cultivation and molecular biology, including cell cultivation of both cell lines (C2C12) and primary human cells (peripheral blood mononuclear cells and MSCs), PCR/Electrophoresis, Western blot, flow cytometry, cell proliferation assays (BrdU, CFSE, MTT), cell migration assay, and differentiation assays. I have either already learned these techniques (given from my previous research experience in Cornell) or learned them throughout my co-op term. Training was informal and provided spontaneously. My mentor, a research professor who my employer appointed me to, assigned me specific tasks and gave me additional reading or help from another colleague if I did not have the necessary background to complete the work. My mentor was the first person I consulted for questions and help. I directed other technical questions to my co-workers and occasionally people from other labs.

The working environment was collaborative and open. A single experiment takes time and joint effort to successfully complete. Communication is crucial for creating a positive group dynamic and I was able to develop relationships with my co-workers even on a personal level. This position influenced my personal development as I developed people skills and understood the significance of completing one’s task in a responsible manner. Professionally, I learned advanced lab techniques that could be applied to complex biology systems, a task requiring specific knowledge and information. I focused on academic interests that I wanted to learn hands-on in a professional lab. The experience was engaging and informative; if I were to go through this experience again, I would like to take more initiative, providing innovative ideas that could advance the group’s research interests.

I was fortunate enough to experience employment responsibilities expected out of my daily routine. I attended two academic conferences, sat in monthly lab meetings, and made two presentations to my lab group. The conferences were formal events that required an invitation