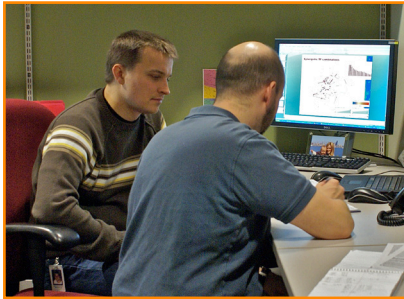


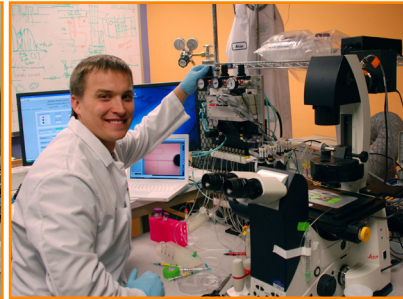
# Celebrating Science at Work



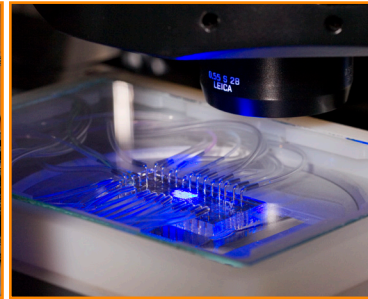
ISB scientist, Alexander Ratushny



Alexander working with a colleague at ISB



Alexander working in the Microfluidics facility



Microfluidics chip created at ISB



Lab at ISB

I grew up in Andizhan, a city in the Republic of Uzbekistan that at that time was still part of the Soviet Union. At school, recognizing that I liked to learn, my teachers encouraged me to take part in “Olympiads” where students compete against each other in different subject areas. I quickly realized that when you want to compete, you have to understand things better than is required in class, and that you have to be really creative as there are no standard procedures to solve a given problem.

At the age of 14 I had won the school competitions in history, geography, and mathematics and decided to proceed with Mathematics. During the final republic-wide competitions, an official representative from Akademgorodok interviewed me. I had never heard about this place, and learned it is part of the city of Novosibirsk in Siberia, and one of the biggest educational and scientific centers of Russia. After the competition I was invited to go to school there. I was very scared and excited at the same time. It was hard for me to imagine moving to a very different and absolutely unknown place 2,000 km north of my home.

The Specialized Educational Scientific Center of Novosibirsk State University was a school where about 200 kids my age gathered from different places to study

physics, mathematics, chemistry, biology, and other subjects. In the end, this experience was not that scary, but rather a lot of fun and I was very happy I had made the decision to attend the school.

I stayed in Novosibirsk until I finished my studies and then moved to Seattle to work as a Postdoctoral Fellow at the Institute for Systems Biology. Mathematics is still a big part of my work. Mathematics helps scientists to better understand biological systems such as cells; to appropriately design experiments; to test different hypotheses; and ultimately, to improve the treatment of various diseases.

What I like about science is that you are constantly trying to discover something that has never been discovered. You might be the first person that solves an unsolved problem or make a discovery. You are a pioneer! It is extremely hard, but at the same time it is incredibly interesting.

In everyday life you can always find something scientific in your area of interest. For example, when playing cards, you are learning about statistics, or when you ride a bike, you can learn about mechanics.

If you are really interested in something, and you dig deep, you will encounter science.

*“If you are really interested in something, and you dig deep, you will encounter science.”*

— ALEXANDER RATUSHNY