
The Story of Mikuláš with Visual Impairment

Mikuláš Klenor: I'm Learning to See Things Differently

In biology, there's always room for a bit of magic," says Mikuláš Klenor, a 22-year-old student at the [Faculty of Science at Charles University](#), who, despite his visual impairment, also works at the [Institute of Organic Chemistry and Biochemistry of the Czech Academy of Sciences \(IOCB\)](#). He still dreams of molecular modeling—and of beautiful music.

I must admit, at the beginning of our meeting, I had doubts about whether the young man sitting across from me really had a severe visual impairment. Mikuláš speaks thoughtfully, yet smiles almost constantly during our conversation. While thinking, he occasionally adjusts unruly strands of hair falling into his eyes. And if I let him, he would happily talk for hours about molecular modeling. But I also wanted to hear how his studies at the music conservatory turned out, how he's doing at the Faculty of Science, and how he ended up working at the elite IOCB.



That's exactly where I went—to the scientific kingdom of Dejvice—to meet with Mikuláš. It's clear he knows the labyrinth of corridors well and leads me confidently. A bit of uncertainty only shows when he hands me a glass of water. During the interview, I learn that a degenerative retinal disease first manifested when he was seven years old. "It may sound strange, but I'm actually grateful for my disability—it teaches me to look at the world from a completely different perspective," says the handsome young man.

Mikuláš, are you more of a conservatory student or a scientist?

After a year and a half at the Jaroslav Ježek Conservatory, I realized the program didn't meet my expectations. I had hoped it would take me further. Until then, playing guitar had been just a hobby. Around the same time, I received an offer to work at the Academy of Sciences, and I had to weigh my options: Should I study at two schools, work in a lab, and barely see any of it properly? It felt like too much for one person. So I quit the conservatory and focused on science.

So science won?

I'm currently studying biology, which I enjoy. But originally, I wanted to study bioinformatics—basically biology on a computer. My dream was to do molecular modeling. Unfortunately, in my first year, it became clear that adapting the coursework to my needs was going to be difficult. So I looked for a field that would be easier for me to study. It might sound odd, but reading notes off the blackboard is a real challenge for me. The ideal situation is when the lecturer uses PowerPoint, because then I can follow the lecture directly on my tablet. In the end, I'm still studying "my" bioinformatics thanks to the way I've selected biology courses that align with it.

And what about after your final exams?

I'd like to continue with a master's degree. I want to focus more on the molecular side and connect it with my work at the IOCB. Once again, it looks like that dream of molecular modeling. I constantly feel the need to create something, and molecular biology is rich in opportunities for creative science. Chemistry is simply more exact than biology, and you get the feeling that you can calculate everything. But in biology, there's always space for a bit of magic.

It's amazing how in biology everything happens within a kind of super-system—whether it's a cell, the human body, or an entire ecosystem. Molecules and proteins only make sense in the context of the whole, and it's good to understand why something came into existence and where it's heading through evolution.

Molecular biology is just fantastic—so full of information! And it's also highly practical. Just imagine, during the times of the plague, if they had managed to develop a vaccine within a year of the outbreak—how many lives could have been saved. Just like with the COVID-19 pandemic. It's truly incredible what's possible today.

So you're both a student and a researcher?

Being at the IOCB is a unique opportunity to learn an incredible amount, and I really appreciate it. I'm grateful to my supervisors, especially Professor Pavel Hobza (a renowned computational chemist and one of the most cited Czech scientists—editor's note). Since I'm a biology student working in a theoretical chemistry lab, some areas are a bit foreign to me, and I need time to understand them. Still, I try to repay the trust Professor Hobza has placed in me. Hopefully, he's satisfied with my work.



What do you actually want to do in the future?

I have a personal plan: By the time I'm forty, I'd like to work in molecular biology or chemistry. It's possible that, due to my disability, I'll lose my sight completely... In that case, I have a backup plan—to finally kickstart my great music career. I'll become a famous guitarist and singer (he laughs).

So the guitar is still part of your life...

In a way, it's how I relax from my beautiful daydreams about molecules (he really drifts off for a second). I'm still a member of the Prague Chamber Guitar Orchestra. I meet with my fellow musicians—who are also close friends—every Thursday. We have an amazing conductor who would do anything for us. Sometimes we let him down a bit by not putting in enough time and effort. And because I can't read music, sight-reading is out of the question for me. I also never forget my sheet music at home—because I don't use any! (he smiles) I simply have to memorize every piece. When learning a new part, I rely about 70% on listening... It's a shame we can't meet up right now.

Mikuláš, how has the pandemic affected you?

It might sound strange, but I've actually benefited from this terrible situation. Lecturers now prepare online presentations, which I can finally follow in real-time during lectures! Plus, I save time I'd otherwise spend commuting or sitting in class. So I actually feel happier with my work at IOCB right now—either I'm watching lectures or working in the lab.

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