



RESEARCH2REALITY

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An interview with **Nika Shakiba**, Biomedical Engineer
Assistant Professor, UBC School of Biomedical Engineering

Most people probably think of cells as fundamental units of life. They make up our tissues and organs, help us live.

We like to think of cells as fundamentally programmable units of life, so much like you would program a computer writing computer code, we write DNA code and upload that into cells. And hopefully that will lead to better health products and therapies for patients all over the world.

As engineers we always have our outlook on an application that can have an impact in the real world, and the one that really motivates us is regenerative medicine. So, cell therapies that can be transplanted in the body to treat degenerative diseases, like diabetes or say a spinal cord patient who severed their spinal cord, we need to regenerate that. So having these kind of on-demand, off-the-shelf cell therapies or tissue products that we can, you know, pick and choose for the application of that patient kind of circumvents the need for waiting for transplant donors, and that's oftentimes a big bottleneck.

I think where we're going is that we're going to be in a place where cells are kind of like our smartphones: you can upload these apps, new functions to cells, and then put them in the body, and they'll do kind of remarkable things that we couldn't imagine.

TODAY'S RESEARCH. TOMORROW'S REALITY.

