

Humanitas University, Opening of the Academic 2021/22 year.  
Katalin Karikó, accepting the honorary degree.

November 29, 2021

Dear professors, doctors, researchers, Dear guests, students and colleagues,

I am deeply honored and grateful to the Humanitas University giving me the honorary doctorate degree. It is a wonderful feeling to be recognized for my work. I am humbled, excited and have a deep sense of appreciation.

I have not been in the spot lite, my life has not been like that. For 4 decades I worked quietly in the laboratory performing the experiments myself, wrote the labnotes, the papers. I knew that what I was doing is important and didn't expect anybody to tap my shoulder praising me for my work. The only award ceremonies I attended when my daughter won gold medals in rowing at Olympic games in Beijing and London and many world championships.

I grew up in a small Hungarian town with a population of ten thousand. My mother was bookkeeper, my father butcher and learned from him how to make sausage. We had a big garden and animals in the yard. As a little girl I watch the chickens hatching from the eggs, the plants growing out of the small seeds we put into the soil. I was curious. I had great teachers and they encouraged me to keep learning. So that was my humble beginnings and there was long winding road on which I have arrived here.

My greatest joys in science have been the small and large victories in the lab. Many times when I got disappointed that my experiment didn't work, a quote from Leonardo da Vinci written on the wall in the lab cheered me up. It said

"Experiments never err, only your expectations do," So there is no failure, we just need to think critically.

We spent years working on technologies that seemed unconventional and almost science fiction to some, but we shared an immense belief that if the result of our work could improve the life of at least one person, then we have succeeded. It is such a relief to know that by now, the vaccines successfully protected millions of people from the serious effects of COVID-19.

I learned so much during those years, so I thought I share some of my experience with you

1. Love your work.

We spend most of our life working, so it is important to enjoy it. And because you like the work you will be good at it. As you have already decided to be a physician you will dedicate your life to helping others, taking care of the patients.

2. Learn to handle stress

In high school my teacher handed me a book called The Stress of Life in which Hans Selye wrote that helped me to stay on track, no matter how challenging it might have been. Selye coined the word stress in the 1930s. He said that stress can kill you depending on how you react to it, but without stress life is boring. You need stress, but learn to convert the negative stress to

positive one. So if you are fired from your job embrace the news and take it as a new opportunity. I needed this advice as I have been terminated in my position several times. So by *“adopting the right attitude you can convert a negative stress into a positive one”*. you need positive stress, expectation, excitement. I wouldn't be here today if I would not have been terminated in my position several times. So I looked at it as one door is closed but another opened.

### 3. Focus on what you can do what you can change

Many burns out in their work because they compare themselves with others, those who might work less, but achieve more, paid more, promoted. Please do not pay attention on things that you can't change, it is a distraction. Rather spend your energy to improve yourself, work harder, be more creative and perform better.

### 4. Believe in yourselves

The environment can be intimidating. As a small town girl coming from Hungary to an American Ivy league school, I was asking myself could I think of something that all those very smart scientists working in that famous university wouldn't. I had to answer YES, why not. Please believe in yourself, Do not settle for a lesser job, aim high and believe you can do it. “Believing in yourselves is an endless destination, believing you will fail is the end of your journey.

### 5. Get to know your fellow students, be nice to them, follow their professional work.

In 2003, when from my experiments I concluded I need to make nucleoside-modified mRNA to prove the importance of modification, first turned to Tamas Kiss biologist who used to be a fellow student at University of Szeged, we used to live in the same dormitory. He worked in Toulouse and I knew that he discovered and published the molecular mechanism of the occurrence of such RNA modifications in our cells. I called him up and ask for help. He gave me good advise, but needed more help. So I called the organic chemist Janos Ludwig who used to be a fellow graduate student, we worked shoulder-to-shoulder in the same RNA lab in 1980s and he told me where I can buy material that I eventually did and could generate the desired mRNA

So when you are sitting in the classroom, look around you because those students will be experts one day and you will need their help. Talk to them, create a relationship and follow their work, after graduation, learn what they are doing.

### 6. Find the right partner for life

I met my husband while we were students. He has supported my decision every step of the way, moved to a foreign country with me when we had hardly any money in our pockets and our 2-year-old child by our side... all so that I could continue my research. He never told me stop research and cook something when on the weekends I was rushing back to do “one” more experiment. He even supported my move to Germany 8 years ago when I felt it was needed it for he mRNA to enter into clinical trial. He knew how important science was for me. My daughter Susan Francia grew up to appreciate my lifelong commitment to my science, always encouraged me.

Girls, my advice is, you do not need to choose between your career and having a child. Find the right husband who cares about your dreams and supports your decisions.

And finally let me tell you a story about my daughter. She was 7 years old just finished 2<sup>nd</sup> grade, and when she got home started writing a letter right away. I asked her who you are writing to, and she said to my teacher Misses Wilson, I am thanking her the wonderful year, we learned so much. I was 35 years old and realized I have not sent letter to my teachers but then it all changed. Now I visit them, call them, send letters and express my appreciation.

So the conclusion: Do not hesitate to learn from anybody, even a 7 year old can teach you something, and from time-to-time tell those who helped you how much you value what they have done.

So with that

I would like to say that I am very grateful to my family for their life long support, my parents who taught me that hard work is part of life, to all those who have helped me on my journey my mentors, my teachers, colleagues for their generosity and inspiration. And thank you for your attention.