

Michael N. Hall, awardee in the Biology and Biomedicine category (12th edition)

I am immensely honored and delighted to receive the prestigious BBVA Foundation Frontiers of Knowledge Award in Biology and Medicine. I am also deeply grateful. It is particularly gratifying that the BBVA Foundation is explicitly recognizing 'knowledge'. As scientists and scholars, my fellow laureates and I have dedicated our lives to the acquisition of knowledge. Furthermore, in this day and age, when science and facts are commonly denied as we confront the double scourge of a pandemic and climate change, we need knowledge more than ever. I thank and congratulate the BBVA Foundation for its vision in celebrating knowledge.

The importance of knowledge and its acquisition were first instilled in me by my parents when they sent me and my brothers away as a young boys to study in a foreign country. In other words, they sent us away to gain knowledge. I regret that my parents are not here today, particularly my mother who herself, as a young lady of 18, left her family in the United States to study at the University of Madrid in 1934. My long fascination with science was kindled in college when I did my first experiment and was able to discover something previously unknown. I realized I could create new knowledge, although it was of little interest to others. This led to an academic career at the University of Basel where for over thirty years I have had the privilege to pursue curiosity driven research. I was also fortunate to be able to generate new knowledge that was of interest not only to me but also to others. We discovered a central biochemical pathway that widely controls cell growth in, for example, the growth of a young child or even the growth of an insect, plant or worm. The same pathway, when disrupted either by a genetic mutation or a poor diet, can lead to many diseases including cancer, diabetes or mental illness. The biomedical implications of this new knowledge are that we now have a better molecular understanding of many diseases, and importantly, how to treat them. Indeed, our challenge now is to apply our new knowledge to alleviate the suffering caused by disease and thereby to improve the human condition. This is what I will dedicate myself to in the years ahead.

I would now like to come to the most important part of what I have to say today. What I have to

21 de septiembre de 2021

say can be distilled into a single word, and that word is "Thank-you". However, I have many to thank and it will thus require several words.

First, I would like to express my profound gratitude to the BBVA Foundation. The Frontiers of Knowledge Award is a special accolade - this is evident in the list of former and current laureates. Thank you to the BBVA Foundation and the BBVA selection committee for recognizing our work. There is no greater reward for a scientist than to be recognized by one's peers.

Throughout my talk, I referred to "our" work but the work is of course that of the many talented students, postdoctoral fellows and support personnel whom I have been fortunate to have as colleagues and to whom I also owe a very large debt of gratitude. I thank all, past and present, who have made this journey possible. Indeed, I am standing here today because of them.

I would also like to thank the University of Basel, and in particular my host institute the Biozentrum, for 34 years of unwavering support.

Next, I would like to acknowledge my adopted country, Switzerland. Switzerland is a small land-locked country with few natural resources, and thus invests heavily in education, research and innovation. I am fortunate to have been a beneficiary of this visionary policy.

Last, but certainly not least, I would like to thank my family - in particular my wife Sabine. Having a scientist as a husband or a father is not easy. As a scientist, you are gone physically or mentally most of the time. The science philosopher Jacob Bronowski described it best with the quote: "...as a profession, science attracts men whose temperament is grave, awkward, and absorbed." These might be good traits for a scientist, but not for a husband. So, a special thank you to Sabine, not only for putting up with my absences, but also for the 40 years of support that made all this possible. I would like to iterate, this would not have been possible without you. Thank you.