SPEECH OF PROF.

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On the Occasion of the Awarding

Of The 1988 King Faisal International Prize

Your Royal Highness Prince Nayif bin Abd Al-Aziz
your Highnesses, the Princes
Your Eminences, the Ulama
Your Excellencies
Ladies & Gentlemen

First of all let me say a few words of apology. Although both my father and mother were Lebanese, I was born in Mexico and did not learn to speak Arabic. That was a gross mistake which I regret very much, because it prevents me from thanking you directly in Arabic.

I am extremely grateful to the King Faisal Foundation for their Award, which I humbly accept as a great honor not only to me, but also to the many colleagues who have helped me with my work and especially also to my wife who for so many years has patiently helped me to spend endless hours in my laboratory.

I am particularly pleased to receive the King Faisal Award in Saudi Arabia, because in my work I am trying to understand how the brain works and, in this respect, I am following a lead that originated in the Arab world. I say this is because the first recorded studies of the brain were carried out some 5000 years ago in Alexandria and these led to the first experiments on the nervous system, done about 2000 years ago. Therefore, it seems to me that the foundations of Modern Neuroscience were laid down many years ago by surgeons and scientists working in the Arab world and enlarged and transmitted to us by Islamic Science and literature.

The brain is the most complex organization in existence. It is made up of myriads of nerve cells that are inter—connected by a countless number of synapses. These synapses are the points where nerve cells make contacts with other nerve cells and where signals are transmitted from one cell to another. I think it is fair to say that all those brain functions that really make an individual, learning, memory, love, hate, etc. all depend on the correct functioning of the nerve cell and their synapses.

Because the nerve cells of the brain are very small and difficult to study, we have developed a new method to study the brain. This method seems a bit fantastic. What we do is that we actually convert a frog egg into something like a nerve cell. But, because the frog egg is comparatively very large we can now do, experiments that we never dreamed of doing before. These converted eggs have many of the properties of real nerve cells, and can be used to develop and test new medicines to help alleviate sane diseases of the brain.

I would like to end by stating again that I am very grateful for receiving this award and the generous hospitality of the Kingdom of Saudi Arabia. When I was a child my father used to tell me about the great achievements of the Arab world in the past. I am certain that he would have been very pleased to see what is being developed here today. For my part, I look forward to seeing here a new flourishment of Neuroscience that will again help people all over the world.

Thank you.