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Department of Homeland Security
U.S. Citizenship and Immigration Services
Texas Service Center

~~XXXXXXXXXX~~
~~XXXXXXXXXX~~
Professur für Neurowissenschaften
der Universität und der ETH Zürich
Chair of Neurosciences

Zurich, 23. January 2008

Re: I-140, Immigrant Petition for Alien Worker, filed on behalf of
~~XXXXXXXXXX~~ PhD, as a Professional Holding an Advanced
Degree or of Exceptional Ability in the National Interest

To Whom It May Concern:

This statement is submitted in support of the Form I-140, Immigrant Petition for Alien Worker, filed on behalf of ~~XXXXXXXXXX~~, PhD, as a foreign national who is and has been an outstanding researcher in the field of Nervous System Regeneration.

My name is ~~XXXXXXXXXX~~, PhD, MD h.c., Professor for Brain Research at the Medical Faculty of the University of Zurich, and Professor of Neuroscience at the Swiss Institute of Technology (ETH) Zurich, Switzerland. I have over 35 years experience in the field of Neuroscience, and over 24 years of experience in the field of spinal cord injury and regeneration. I am presently employed in the position of Full Professor at the University of Zurich and at the Swiss Institute of Technology (ETH) Zurich. I am heading the Zurich Neuroscience Center and the Neuroscience training program. My research focuses on the mechanisms of spinal cord regeneration and repair, where we are currently one of the world's leading groups. My own research group comprises about 30 scientists. I have published over 260 scientific articles and I give an average of 20-30 scientific lectures in universities and research institutions all over the world each year. I have followed the research of Barbara Grimpe in the spinal cord injury field very closely for many years, so that I am very well placed to assess her position of from an international and research perspective.

Through personal meetings at scientific congresses and through her publications I am thoroughly familiar with the work which has been performed by ~~XXXXXXXXXX~~ and with which she is currently engaged. I meet ~~XXXXXXXXXX~~ when she was a PostDoc in Prof. ~~XXXXXXXXXX~~'s laboratory,



which she joined in 1999 coming from the Max Planck Institute of Biochemistry and Neurobiology. She is the first scientist who introduced the DNA enzyme technology to the field of Neuroscience and Regeneration by designing a DNA enzyme to the laminin gamma 1 chain, demonstrating that this family of axon growth promoting ECM molecules is expressed as basement membrane-independent molecules in the CNS and participates in axon growth of mossy fibers in the hippocampus. The family of ECM molecules also contains axon growth inhibitory molecules such as proteoglycan (PG), which participate in the formation of the glial scar. To improve regeneration after spinal cord injury Barbara designed and tested a second DNA enzyme to xylosyltransferase-1 (XT-1), an enzyme critical in the initiation of glycosaminoglycan (GAG-) side chains onto PG core proteins. She was able to demonstrate that this novel approach successfully down-regulated GAG-chain synthesis in cultured astrocytes and improved axonal regeneration in vivo. Now, she is in the process of translating this technology to a clinical application in rats after a contusion injury to the spinal cord. These exciting results show the potential of the DNA enzyme technology for the development of safe repair strategies for the contused spinal cord.

Based on the potential of this technology she patented the DNA enzyme to XT-1. Recognition of her work is reflected by the almost 200 citations of her publications including in 11 patents. Furthermore, she is on the editorial board of "Current Medicinal Chemistry-Central Nervous System Agents" (June 2004) and "Recent Patent Reviews on CNS Drug Discovery" (March 2005) She also co-chaired the session "Extracellular Matrix Regulation on Injury/Recovery" at the 24th Annual National Neurotrauma Symposium in St. Louis, MO, July 7-9, 2006. She is independent peer reviewer for "The New Jersey Commission on Spinal Cord Research" since March 2006, external Assessor for the Research Grant Council of Hong Kong (April 2003) and she is independently solicited peer reviewer for Journal of Neuroscience, Experimental Neurology, Current Medicinal Chemistry-Central Nervous System Agents, Journal of Biochemistry and Journal of Cerebral Blood Flow and Metabolism.

Just recently she introduced another project now as Instructor, in which she developed a computer program suite to comprehend the underlying protein-protein interactions that occur after spinal cord injury. This computer suite collects, arranges and organizes the overwhelming amount of information concealed in the literature. It provides the necessary knowledge to be able to investigate new or less well analyzed protein-protein interactions. Therefore, it will form the cornerstone for future experimental designs to find a cure for paralysis. The first phase of the program suite has been published in 2007.

In my professional opinion she is among the world's foremost researchers in the field of spinal cord injury and her research work is of critical national interest on the basis of understanding the molecular and cellular mechanisms that underlay repair processes at injury of the nervous system. Her work is relevant not only in spinal cord injury but also in traumatic brain injury and stroke. All three conditions generate a glial scar after insult to the central nervous system and her proposed strategies can be deployed to all of them. Her strategies could bring relief to the 253,000 existing cases of spinal cord injury in the USA and 5.3 million Americans, 2% of the U.S. population, that currently live with disabilities resulting from traumatic brain injury (many of them victims



of combat) and 5 million stroke victims. She has received widespread acclaim and recognition by authorities in this field, both internationally as well as in the U.S.

██████████'s work is original, creative, and scholarly. The DNA enzyme technology as well as the computer program suite are innovative and pioneering applications to the Regeneration and Spinal Cord Injury field. In my opinion, ██████████ is, without a doubt, an individual who is an outstanding researcher in her field, and I expect her contributions and work in the highly complex area of repair of the injured spinal cord and brain to continue to be of significant national interest.

If you require any further information, please do not hesitate to contact me.

Sincerely,