It is my pleasure to write this ietter to support the application of Dr Clement Riedel for its I-140 immigrant petition in the EB1-Extraordinary Ability category.I am an Emeritus Research Director of the French Scientific Research National Council. I have studied biochemistry, with a particular interest for enzymes, for forty five years. I wrote more than two hundreds papers in prestigious international peer reviewed journals (including Nature or Biochemistry) and several books about the subject. I am therefore well qualified to judge Dr Riedel’s research.

I met Dr Riedel at an international congress last November at which he presented to me his research in the laboratory of Dr Carlos Bustamante at the University of California at Berkeley. He impressed me very favourably as someone to whom the description as a researcher of extraordinary ability certainly applies. Although I do not have an extensive acquaintance with him, I know his supervisor Dr Bustamante very well and have discussed Dr Riedel with him. Dr Bustamante is one of the foremost researchers working in the USA at present, and his work in single-molecule biophysics, a currently very active ﬁeld, is very highly regarded throughout the world. He is in a position to restrict his group to students and post-doctoral fellows of the highest ability.

Dr Riedel’s own work focuses on the study of soft and biological matter at the nano-scale. He wrote 12 papers in high-quality journals, as well as two book chapters. He is currently studying the effect of a chemical reaction on a single enzyme catalyzing this reaction. Enzymes are present and play a fundamental role in almost all living organism. Understanding how they work and the effect of catalysis on their structure and diffusion is of the utmost importance and had a wide range of implication, notably in biology or medicine: enzymes have a variety of essential functions such as signal transduction, active transport or virus integration.

In order to perform his research, Dr Riedel had to master several techniques including: protein purification, the modification and use of different affinity tags, solubilization assays protein precipitation, dialysis, size-exclusion chromatography, fluorescence assays, and interpretation of single molecule data. He developed an assay at the single molecule level that permits to measure an enhanced diffusion of a protein upon catalysis using fluorescence correlation spectroscopy. Dr Riedel measured a linear dependence between the diffusion of the enzyme and the reaction rate of the reaction. Their theory predicts that the heat released by the reaction is one of the factor affecting the enzyme. This research is in preparation to be submitted to the journal Nature — one of the foremost scientiﬁc journals in the world. Dr Riedel research is of fundamental interest for basic science and I have no doubt that these research will have a high impact..Dr Riedel was born in La Réunion, and obtained his secondary education there. This is one of the most remote areas of France, very far from the European continent, and the fact that he has already advanced so far in his career, at such a young age, is a strong recommendation. I have no doubt that he will advance much further as a researcher.

Based on its outstanding scientific qualities, I regard Dr Riedel as thoroughly qualified to obtain the right of permanent residence in the USA under the EB1-A category. I do believe that his high quality research will benefit the USA.