About the Talk
A historical account of the discovery of reversible protein phosphorylation will be presented. It occurred about 60 years ago during a study undertaken with Ed Krebs to elucidate the complex hormonal regulation of glycogen phosphorylase. It was shown that the reaction was triggered by Ca²⁺, Mg²⁺ and ATP. It led to the establishment of the first hormonal cascade of enzymes acting successively on one another, initiated by cAMP and discovered by Earl Sutherland. We know today that the process represents one of the most prevalent mechanism by which eukaryotic cellular events are regulated, being involved in the control of many physiological processes as well as hereditary, bacterial and viral diseases. Most forms of cancer result from an imbalance of this system. It also showed how two different physiological processes (carbohydrate metabolism and muscle contraction) could be regulated by the release of calcium ions. A couple of video clips of Ed Krebs speaking of our early work will be shown.

About the Speaker
Prof Edmond H. Fischer has been the President of the World Cultural Council since November 2007. He was awarded the 1992 Nobel Prize in Physiology or Medicine for his joint research with Edwin G. Krebs for their discoveries concerning reversible protein phosphorylation as a biological regulatory mechanism. He has received numerous other awards and honors in recognition of his contributions to science.