

## THE NMR VIEW OF PROTEINS – FROM IMMUNE SUPPRESSION TO MAD COW DISEASE

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Premio Nobel de Química 2002*

Following some initial experiments using nuclear magnetic resonance (NMR) spectroscopy with proteins during the decade 1957 to 1967, exploration of the use of solution NMR techniques for studies of proteins has been pursued at an ever increasing pace during the past 3 years. Over the decades, the «NMR view» of proteins has greatly changed due to advances in NMR instrumentation, computer science and the techniques of molecular biology and biochemistry used for sample preparation.

In this lecture I will illustrate the evolution of NMR as a major technique of structural biology and structural genomics with biomedical projects pursued in my Zürich laboratory. In particular, this will include studies of drug-receptor interactions in immune suppression, and structure determinations of proteins related to transmissible spongiform encephalopathies (TSE). TSEs manifest, for example, as Creutzfeldt-Jacob-Disease in humans, scrapie in sheep, bovine spongiform encephalopathy (BSE) in cattle, and chronic wasting disease (CWD) in cervids.