

METHODS AND RESULTS IN CRYSTALLIZATION OF MEMBRANE PROTEINS

edited by SO IWATA

Preface:

I am often asked by people what the trick is to be so successful in obtaining membrane protein crystals. My answer is always "No trick is the trick". Nobody has ever succeeded in producing a magic solution for membrane protein crystallisation. Therefore, I do not stick to one particular method but try all possible approaches. This flexibility, together with some confidence, may be keys to success. Unfortunately, this determination itself cannot help you to cover the whole multidimensional space of screening conditions of membrane proteins. Therefore, we need a clear strategy to cover the most relevant conditions as efficiently as possible. I believe that understanding the principles of membrane protein crystallisation and learning from successful examples are the key to more rational and efficient screening. Based on this policy, this book was edited. I collected as many successful examples of membrane protein crystallisation as possible and provided chapters to summarize these results. Also included are chapters dealing with the basic principles of membrane proteins such as phase diagrams and classification of membrane protein crystals. I hope this combination is useful for designing your crystallisation experiment. My last word of advice for people starting membrane protein crystallisation is "Think hard and work hard".