Protein Aggregation in Bacteria: Functional and Structural Properties of Inclusion Bodies in Bacterial Cells
Silvia Maria Doglia (Editor), Marina Lotti (Editor)

E-Book 978-1-118-85503-4 April 2014 $111.99
Hardcover 978-1-118-44852-6 April 2014 $139.25
O-Book 978-1-118-84536-3 April 2014 Available on Wiley Online Library

DESCRIPTION

Focuses on the aggregation of recombinant proteins in bacterial cells in the form of inclusion bodies—and on their use in biotechnological and medical applications

The first book devoted specifically to the topic of aggregation in bacteria, Protein Aggregation in Bacteria: Functional and Structural Properties of Inclusion Bodies in Bacterial Cells provides a large overview of protein folding and aggregation, including cell biology and methodological aspects. It summarizes, for the first time in one book, ideas and technical approaches that pave the way for a direct use of inclusion bodies in biotechnological and medical applications.

Protein Aggregation in Bacteria covers:

• Molecular and cellular mechanisms of protein folding, aggregation, and disaggregation in bacteria

• Physiological importance and consequences of aggregation for the bacterial cell

• Factors inherent to the protein sequence responsible for aggregation and evolutionary mechanisms to keep proteins soluble

• Structural properties of proteins expressed as soluble aggregates and as inclusion bodies within bacterial cells both from a methodological point of view and with regard to their similarity with amyloids

• Control of the structural and functional properties of aggregated proteins and use thereof in biotechnology and medicine
Protein Aggregation in Bacteria is ideal for researchers in protein science, biochemistry, bioengineering, biophysics, microbiology, medicine, and biotechnology, particularly if they are related with the production of recombinant proteins and pharmaceutical science.

ABOUT THE AUTHOR

SILVIA MARIA DOGLIA, PhD, is Professor of Physics at the University of Milano-Bicocca, Italy. She received her Laurea degree in Physics at the University of Milano. She has been Staff Research Scientist of the Italian National Research Council; Visiting Scientist at the University of Stockholm; Visiting Professor at the Universities of Orléans (Fr) and of Reims (Fr). Her research in Biophysics at the University of Milano-Bicocca is focused on the study of protein folding and aggregation in vitro and in situ.

MARINA LOTTI, PhD, is Professor of Biochemistry at the University of Milano-Bicocca, Italy, where she leads the group Protein Engineering and Industrial Enzymology, and is the Head of the Department of Biotechnology and Biosciences. She obtained her PhD degree at the Max-Planck Institute of Molecular Genetics, Berlin, and was a researcher of the Italian National Research Council. Major research topics include the production of recombinant proteins, protein aggregation, cold-active enzymes, and intrinsically disordered proteins.

SERIES

Wiley Series in Protein and Peptide Science

To purchase this product, please visit https://www.wiley.com/en-us/9781118448526