Recent Advances and Future Challenges in Lyophilization of Biopharmaceuticals

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Abstract:

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Lyophilization of biopharmaceuticals has now been used for more than 30 years but still lacks complete understanding of all the details and there is still a lot of room for improvement.
The presentation will shortly summarize the state of the art concepts and what we believe as common ground of understanding of protein freeze drying processes and related aspects of protein stability. We will then hear about the hot topic of today in the area, including, pellet freezing and moving bed freeze drying, controlled nucleation, collapse drying and the relevance of the specific surface area of freeze dried matrices.
All that, combined with an outlook on novel monitoring tools and analytical methods related to freeze dried protein formulations will complete the talk.
The ultimate quest is still the most effective, fast and cheap process leading to the most stable and fast dissolving lyophilizates.