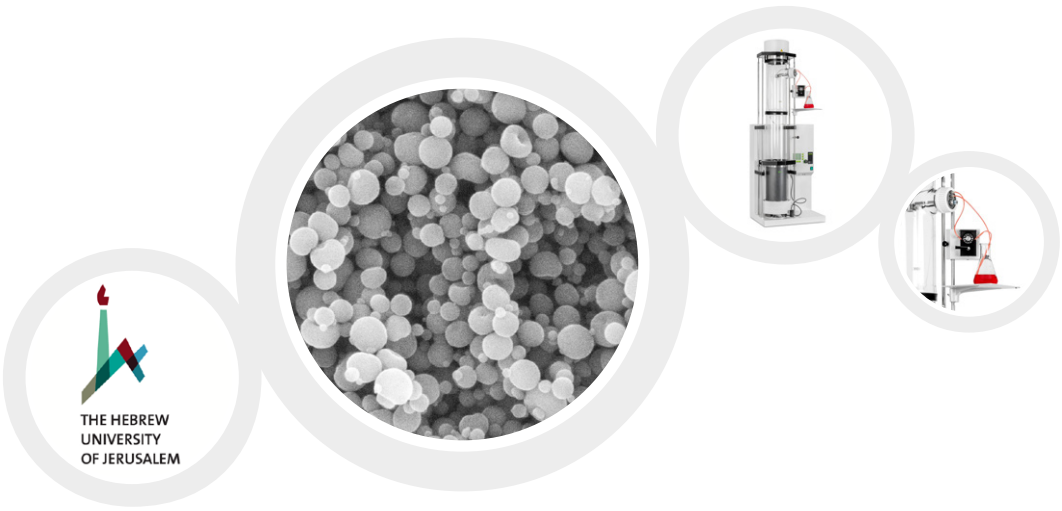
Case Study
Solid nano-in-nanoparticles



Customer: Hebrew University of Jerusalem

The research focuses on polymeric nano- and micro-particulate and lipid-based drug delivery systems aimed at improving bioavailability.

Application: Double Nano Carriers for pharmaceutical delivery

Although other therapeutics exhibit great potential to treat a wide range of disorders, they suffer from low cellular uptake or short half-life in blood circulation. Double nanocarriers can overcome this issue by controlling the release of the target molecule following systemic administration and therefore protect it until it enters the cells.

Equipment: Nano Spray Dryer B-90 HP

The Nano Spray Dryer B-90 HP is an appropriate solution to produce submicron particles from the nanosuspension of sensitive materials. It is therefore the most suitable solution to produce solid nano-in-nanoparticles of sensitive molecules with relatively high productivity.

Benefit / Conclusion: Optimized productivity of submicron particles

By using the Nano Spray Dryer B-90 HP, submicron particles can be obtained with high enough throughputs and recovery yields. These parameters will therefore enable the production of double nano carriers in sufficient amount to start preclinical testing of our product.

"The Nano Spray Dryer B-90 HP's high spray efficiency enables us to obtain particles below the micrometer range, with the required size distribution and good sphericity."

Prof. Simon Benita, Director of the Hebrew University Institute for Drug Research and the School of Pharmacy, The Hebrew University of Jerusalem

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