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# World Drug Delivery Summit

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## Preparation and application of a novel intact solid lipid nano-vesicles

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We have successfully achieved the preparation of intact solid lipid nano-vesicles that carry active pharmaceutical ingredients (API) and upon rehydration form liposomes with controlled drug release capability. To demonstrate this, solid lipid nano-vesicles were prepared by lyophilizing the mixture of liposomes combined with or without ligands such as DSS or CA9, entrapped water-soluble API such as albuterol or siRNA or insulin, mixed with cryo-protectant lactose and a plasticizer glycerol and water. Liposome structure, entrapped API and controlled release capability were retained after lyophilization and rehydration, and the *in vivo* delivery effectives were confirmed. Since solid lipid nano-vesicles are more adaptable than liposomes or other nanoparticles to a wide variety of APIs and dosage forms, our novel invention allows a much wider usage of liposome technology in numerous pharmaceutical, chemical and biological situations.

### Biography

Zhijun Yang graduated at Shenyang Pharmaceutical University in 1986, after that he became a tutor and then lecturer in China Pharmaceutical University. During the period, he learned basic theories of Traditional Chinese Medicine at Nanjing University of Traditional Chinese Medicine, and conducted research in Gifu Pharmaceutical University in Japan as a visiting scholar. In 1993, he studied in Chiba University in Japan as a doctoral candidate, and obtained the PhD. in Pharmaceutical Science in 1997. Subsequently, Yang assumed the duty of a researcher in TaiYo Pharmaceutical Industry Ltd in Japan. In 2000, he carried out his postdoctoral research in University of British Columbia, Canada.

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