Conference Speaker Information

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Presentation Title	Exosome engineering for delivery of therapeutic proteins: principles and applications
Presentation Summary	Our group has recently developed an opto-genetically engineered exosome system, named 'exosomes for protein loading via optically reversible protein–protein interaction" (EXPLOR) that can deliver soluble proteins into the cytosol via controlled, reversible protein–protein interactions (PPI). By integrating a reversible PPI module controlled by blue light with the endogenous process of exosome biogenesis, cargo proteins of our interest can be loaded into newly generated exosomes. Protein-loaded EXPLORs were shown to significantly increase intracellular levels of cargo proteins and their function in recipient cells in both a time- and dose-dependent manner. In this presentation, I will introduce the basic principles of EXPLOR technology and follow-up studies for application.