METHODS

Enveloped porous nanoparticles for RNA delivery to insects

HOW THIS IS DIFFERENT THAN RELATED RESEARCH

Studies of silica nanoparticle carriers for RNA have primarily focused on delivery to mammalian cells, often targeting cancer cells. Only recently have nanoparticle synthesis techniques advanced to provide a pore size sufficient to load RNA and a controlled spherical particle of a size appropriate for cell uptake. This allows for examination of the role of pore size on RNA loading, protection, and release. By bringing together a team of researchers with expertise in entomology, biomolecular interactions and advanced materials synthesis, materials are being designed that specifically overcome some of the challenges associated with developing carriers for RNA delivery to insects.

MEMBER BENEFITS

- New approaches to deliver RNA to insects utilizing porous carriers
- Multi-disciplinary expertise applied to nanoparticle design for insect delivery applications.
- Understanding of the role of nanopores in loading and protecting RNA that can be broadly applied to delivery to insects.

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