

Bio Encapsulation & Nanomedicine

We have extensive experience in encapsulating biological materials (5 nm to 5 mm) such as

- proteins, enzymes/growth factors,
- antigens, DNA/RNA,
- (stem) cells, virus, spore, fungi,
- Bacteria

Example projects include:

- pancreatic islets encapsulation for diabetes;
- protective bacteria encapsulation for oral enteric delivery;
- virus/antigen encapsulation for (nano) vaccine;
- nano encapsulation of (stem) cells for targeted cell therapy, tissue engineering and regeneration;
- nano encapsulation of subunit peptides using liposome as intranasal flu vaccine and chlamydia vaccine;
- nano encapsulation of protein-based therapeutics or drugs for traumatic brain injury (TBI), acute lung injury, and muscle injury.

Targeted/triggered formulation for specific cells, tissues, organs and systems are available. Examples include nanoparticles targeting

- macrophage
- bone, lung, brain, endothelium, dermal or transdermal tissue
- tumor/cancer
- and inflamed tissues/organs, etc.

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