



## *Technology Available for License*

### **Nanotechnology Platform Uses Proteins to Produce a Range of New Materials**

**Protein cages serve as unique platforms for producing nanomaterials with precisely controlled characteristics.**

#### **The Protein Cage Nanoplatform**

Montana State University researchers have developed a suite of technologies for using protein cages to produce a range of nanomaterials. Regions inside and outside the cage along with the cage wall can be manipulated to control such characteristics as size and geometry of nanomaterials, self-assembly, migration of materials into and out of the protein cage, and surface affinities.

Demonstrated applications include catalysts, targeted delivery of therapeutic molecules, and self-assembly of monolayer magnetic surfaces.

#### **Applications**

The protein cage technology can be used for virtually any nanomaterial technology.

Demonstrations have included:

- Nanolayer self-assembled magnetic deposition
- Enhanced contrast agent resolution and targeted drug delivery
- Gel encapsulated catalysts – specifically hydrogenase production of hydrogen

#### **Protein Cage Benefits**

- Variety of nanotechnology applications
- Range of protein cage geometries and sizes
- Self-assembly
- Controlled migration of materials into and out of the protein cage
- Targeted delivery of molecules
- Production of inorganic and organic nanomaterials.
- Recombinant protein production of identical protein cages.

#### **Technology Transfer and Development Status**

Issued and pending patents, and publications are available. The research is ongoing.

#### Contact for licensing or further details

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