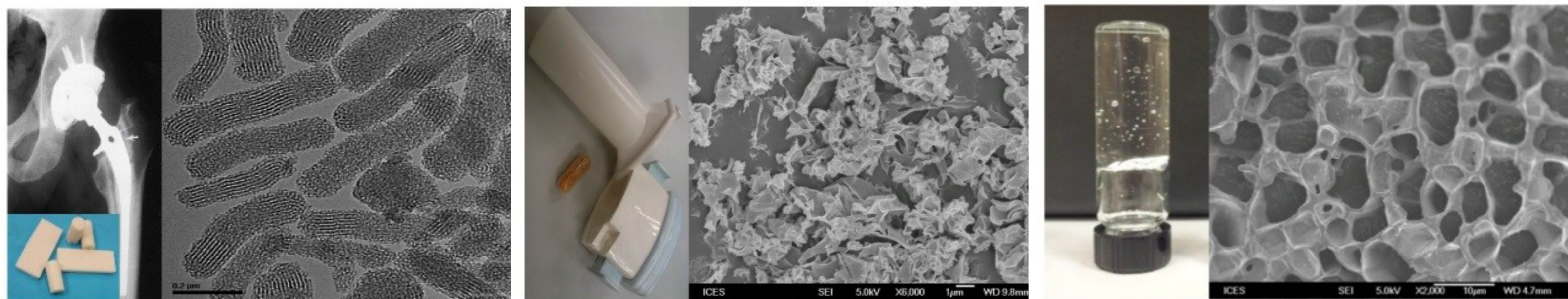


NOVEL IMPLANT, ORAL, RESPIRATORY, TRANSDERMAL AND PERSONAL CARE FORMULATIONS
TARGETED DELIVERY OF ACTIVE INGREDIENTS



CHALLENGES

To deliver active ingredients to the consumers as intended

OUR SOLUTION

Design and develop novel implant, oral, respiratory, transdermal and personal care formulations to the target region with optimum efficacy and other desired properties

- (From left)
- 1) Mesoporous silica nanoparticles (MSN) formulated bone cement
 - 2) Inhaled synergistic antibiotic cocktails (dry powder)
 - 3) Natural sugar-based surfactant microemulsion (nanogel)

Bone:

- Bone cement formulated with mesoporous silica nanoparticle enhances antibiotic release profile

Stomach/Small Intestine:

- Shapeless solid dispersions entrapped in mesoporous channel enhances dissolution rate and increases absorption of poorly water-soluble drugs

Tongue:

- Orally dissolving melt formed films mask the bitter taste of a drug's active ingredient

Lung:

- Inhaling of combined antibiotic formulations boost fight against respiratory illnesses and antibiotic-resistant superbugs. Increasing effectiveness and possible dosage reductions due to direct targeting.

Skin:

- Natural sugar-based surfactant nanostructured gel and microemulsion formulations allows skincare products to have better solubility and permeability, allowing better absorption and increased long-term stability and shelf life.

Hair:

- Shampoos microcapsule system with conditioner release profiles improves cleaning efficiency and enhances conditioner deposition, hence leading to hair smoothness, softness and shine.

BENEFITS

Achieves delivery of active ingredients to designated parts, at the desired time and precise amount.

APPLICATIONS

Depending on the intended delivery site, the formulated products can be used for a variety of applications, ranging from healthcare to personal care.

