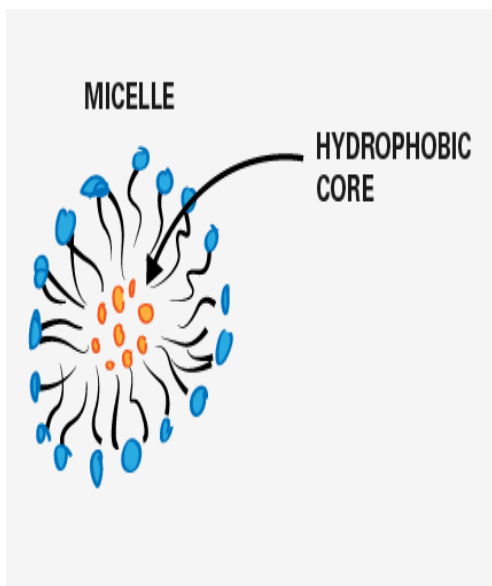


SERVICES



We specialize in the production of novel delivery devices wherein medications such as anti-rejection drugs are encapsulated in biologically inert nanoparticle devices and delivered in a focused manner to a transplanted organ with triggered-release. We have created a **Rapamycin Micelle** device, both Targeted (TRaM) and untargeted (RaM), at a size conducive to therapeutic delivery and cellular uptake (10-15nm). Tracking fluorophores are attached to the RaM and TRaM in order to follow the trafficking ability of the drug delivery device. Focused delivery is achieved by decorating the nanoparticle with various targeting molecules. This includes, but is not limited to, specific targets for cells lining the blood vessels of organs and transplanted organs themselves. Local rupture of the device allowing for delivery of the payload has been programmed such that release of a particular therapy is dependent on the environment specific to the transplanted organ. The capacity of human cells to take up both the TRaM and RaM has been assessed and visualized with various imaging techniques. We have also found that the TRaM suppresses markers of injury with better efficiency than the current systemically delivered standard of care. These devices are anticipated to allow patients to keep their organs without causing their entire immune system to shut down.