Center for Bone and Tissue Repair and Regeneration
- bioactive glass for repair of hard and soft tissues
- hollow microspheres and microparticles for controlled-release devices
- rapid prototyping of bioactive glass for bone and joint repair
- biosensors for in vitro and in vivo monitoring of bioactive glass conversion to a bone-like material

Cancer Detection and Treatment
- image processing techniques for automated diagnosis of skin cancer
- early cancer screening using urinary pteridines as biomarkers
- TheraSphere™ – radioactive glass microspheres for treating liver cancer

Medical Devices
- self-calibrating, autonomous glucose sensors
- small, portable medical x-ray device using a plasma-based pseudospark for x-ray generation

Lead poisoning and its treatment with antioxidants
Biodiversity imaging and informatics
In vitro neural system to explore new learning mechanisms