# Development of Smart Bandages to Control the Healing Process of Chronic Wounds

Vidal, Pablo (School: UTRGV Mathematics and Science Academy)

Smart fine fiber scaffolds were developed to monitor and aid the healing process. Solutions of ECDA: 5,7 Eicosadiynoic acid (DA) with polyvinyl butyrate (PVB) were spun into fiber membranes and subjected to UV light to polymerize the DA. The polydiacetylene (PDA)-PVB fibers were exposed to gram-positive and negative bacteria. The developed mats were characterized by scanning electron microscopy (SEM), thermogravimetric analysis (TGA) and differential scanning calorimetry (DSC).

**Awards Won:**