

**PUBLICATIONS**

**Ledesma-Mendoza, A.,** "Development of a Skin Irritation Assay using poly(*N*-isopropyl acrylamide) (pNIPAM) derived substrates" To be submitted as honors thesis and publication in Biointerphases.

**SKILL SUMMARY**

- Bilingual in English and Spanish both written and spoken. Moderate fluency in Italian.
- Proficiency with MATLAB, COMSOL and ASPEN Plus
- **Lab skills:**
  - Cell culture: Mammalian cells (BAECs), neonatal rat ventricular myocytes (NRVM), placental derived pericytes, human vein endothelial cells (HUVEC), kidney epithelial cells (Vero) and 3T3 fibroblasts.
  - Surface modification: RF plasma reactor vapor deposition, micro-contact printing with fibronectin, CO<sub>2</sub> laser engraver, sol-gel and spin coating using pNIPAM, polydimethylsiloxane (PDMS) and other silicon gels.
  - Surface characterization: Goniometer, bi-axial tensiometer, nano-indenter.
  - Cell behavior characterization: Cell detachment via pop off, cell fixation, immunocytochemistry and optical mapping system (OMS).

**OTHER ACTIVITIES**

- **Memberships:**
  - Tau Beta Pi Engineering Honor Society Spring 2015 – Spring 2016
  - National Society of Collegiate Scholars Spring 2012 – spring 2016
  - American Institute of Chemical Engineers Spring 2012 – Spring 2016
  - UNM School of Engineering Ambassador Spring 2012 – Spring 2016
- **Volunteering/Outreach**
  - NM Mesa Math Moves-U  
Help 5<sup>th</sup> to 7<sup>th</sup> graders build *bionic fingers* using common materials
  - NM Mesa Day  
Assist middle school children with STEM demonstrations and explaining the basic concepts related to the demonstrations
  - NHCC Dream Builders: A Celebration of STEM + Arts  
Assist children from minorities in Albuquerque with various STEM-related demonstrations
  - UNM School of Engineering Open House  
Inform high school seniors about the Chemical and Biological Engineering curriculum and opportunities