Removal of Biologically Active Contaminants from the Surfaces of Surgical Implants and Planetary Spacecraft Surfaces

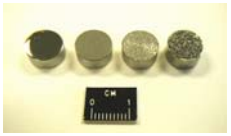
Progress: Planetary Spacecraft

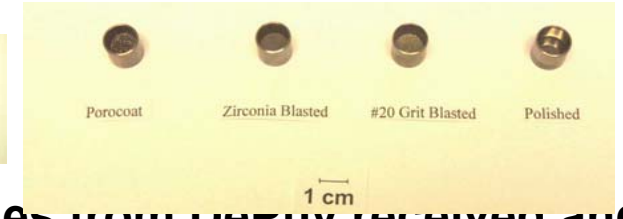
- Cell culturing hardware procured
- Samples include β-cloth, Anodized Al (6061-T6), Kapton, and FEP Teflon

Plans & Challenges:

- Optimize cell culture techniques
- Dose spacecraft material samples without contamination
- Determine atomic oxygen fluence required to eradicate D. radiodurans

Progress: Surgical Implants



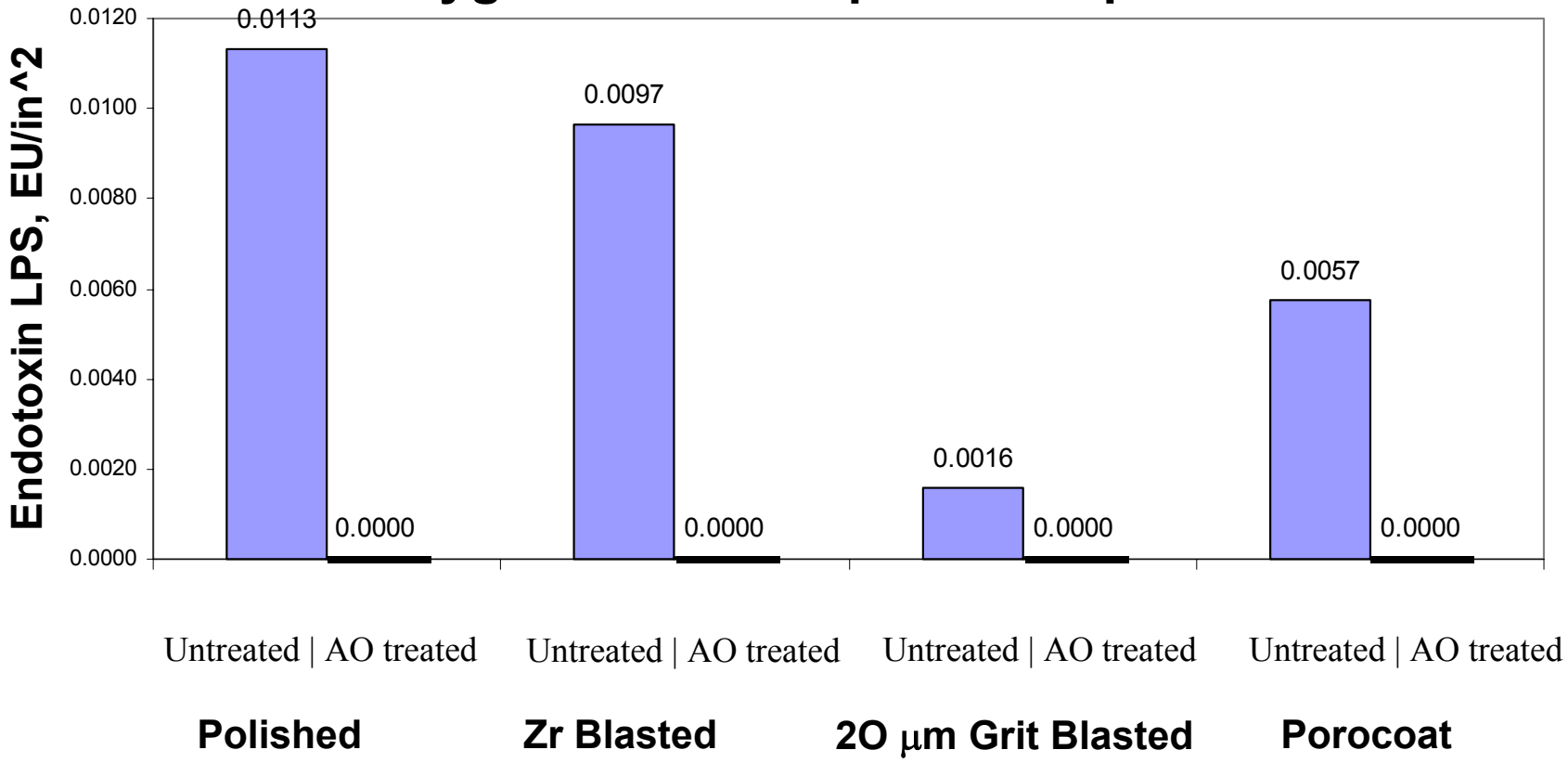


- Samples from DePuy received and testing completed
- Patent Awarded
- Tech Brief article published

Plans & Challenges:

- Atomic oxygen fluence requirement
- Endotoxin (lipopolysacchride) dosing of functional implant surfaces by CWRU
- Atomic oxygen removal of endotoxins from samples
- Endotoxin assay testing for quantification of removal

Endotoxin Level of Untreated and Atomic Oxygen Treated Implant Samples



Provided by Ed Greenfield

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