

# Brinda D. Badwe

Manager, Advanced Materials & Processing (Stryker)

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## Education:

**Stony Brook University- State University of New York, Stony Brook**  
Master of Science (M.S) in Materials Science and Engineering, May 2010

## Project Management Institute

PMP (Project Management Professional) Certification, April 2017

**University of Mumbai, Institute of Chemical Technology (UIC, formerly UDCT)** Mumbai, India

Bachelor of Technology, Polymer Engineering and Technology, April 2008

## Experience:

<b>Stryker</b>	<i>Manager</i>	<i>September 2023 - Present</i>
<b>Joint Replacement</b>	<i>Associate Manager</i>	<i>March 2022 – Sept 2023</i>
<b>Advanced Technology</b>	<i>Project Manager</i>	<i>July 2019 – Feb 2022</i>
	<i>Sr. Engineer</i>	<i>October 2015 – June 2019</i>

- Technical subject matter expert for all Stryker – Joint Replacement UHMWPE (Ultra high Molecular Weight Polyethylene) products specifically used in bearing applications.
- Managing a team of polymer and biologics experts to evaluate novel technologies in the implant space as well as ensuring continued product supply for our UHMWPE and bone cement product lines.
- Managing state of the art lab facilities for polymer characterization, histology and bone cement testing capabilities including mechanical, physical, chemical testing and histology and cell/bacteria culture capabilities.

**Massachusetts General Hospital,  
Harris Orthopaedic Laboratory**

*Sr. Research Tech.  
Research Tech.*

*Boston, MA (April 2013 – Sep 2015)  
Boston, MA (Nov 2010 – April 2013)*

- Project management of independent multiple research studies which range from conducting experiments to analyzing results and drawing conclusions to suggesting changes. Supervision and mentoring of interns and junior research technicians with experimentation and data analysis.
- Worked alongside orthopaedic companies to commercialize choice implant materials by converting to large scale manufacturing as well as implementing manufacturing process improvements and troubleshooting production problems.
- Led work on novel techniques for developing and modifying UHMWPE (Ultra high molecular weight polyethylene) used in hip and knee implants for total joint arthroplasty; which includes polyethylene fixation to the bone.
- Experience with in-vitro cell studies including determination of cytotoxicity, osteoblast attachment and cell viability with modified UHMWPE.
- Firsthand experience with various analytical and characterization techniques (FT-IR, SEM, Micro-CT, DSC, TGA, Instron, Wear Testing) as well as molding techniques like compression molding, extrusion etc.

## Publications:

- Fu J., Doshi B., Oral E., Muratoglu O., Radiation Cross-linked, High Temperature Melted, Vitamin E-blended UHMWPE is Oxidation Resistant with Low Wear and High Impact Strength, *Polymer* 2013.
- Doshi B., Ward J., Oral E., Muratoglu O., Impact Strength Correlates with Fatigue Strength of Irradiated Vitamin E/UHMWPE blends (*Journal of Applied Polymer Science, January 2016*).
- Doshi B., Ghali B., Godleski-Beckos C., Lozynsky A., Oral E., Muratoglu O., High Pressure Crystallization of Vitamin E-containing Radiation Cross-linked UHMWPE, *Macromolecular Materials and Engineering, 2015*.
- Oral E., Neils A., Lyons C., Fung M., Doshi B., Muratoglu O., Surface Cross-linked UHMWPE Can Enable the Use of Larger Femoral Heads in Total Joints, *Journal of Orthopaedic Research, Jan 2013*.
- Oral E., Neils A., Doshi B., Fu J., Muratoglu O., The Effects of Oxidation on the In Vitro Wear and Mechanical Properties of Irradiated and Melted Highly Cross-linked UHMWPE (*Submitted in Journal of Biomedical Materials Research, June 2014*).
- Doshi B., Fu J., Oral E., Muratoglu O., High Temperature Melting of Radiation Cross-linked UHMWPE (*Submitted in Journal of Applied Polymer Science, May 2015*).

## Presentations:

- Doshi B., Oral E., Muratoglu O., Chemically Cross-linked UHMWPE, *UHMWPE Society 2015, Poster*.
- Doshi B., Chan D., Wannomae K., Oral E., Muratoglu O., Diffusion of Vitamin E in High Temperature Melted, Radiation Cross-linked UHMWPE, *UHMWPE Society 2015, Poster*.
- Doshi B., Fu J., Oral E., Muratoglu O., High Temperature Melting of Radiation Cross-linked UHMWPE, *Orthopaedic Research Society 2014, Poster*.
- Doshi B., Chan D., Wannomae K., Oral E., Muratoglu O., Diffusion of Vitamin E in High Temperature Melted,

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Radiation Cross-linked UHMWPE, *Orthopaedic Research Society 2014, Poster.*

- Doshi B., Chan D., Wannomae K., Oral E., Muratoglu O., Diffusion of Vitamin E in High Temperature Melted, Radiation Cross-linked UHMWPE, *Society for Biomaterials 2014, Poster.*
- Doshi B., Fu J., Oral E., Muratoglu O., High Temperature Melting of Radiation Cross-linked UHMWPE, *Society for Biomaterials 2014, Poster.*
- Doshi B., Oral E., Muratoglu O., Optimization of Toughness and Wear Resistance of High Temperature Melted, Radiation Cross-linked Vitamin E-blended UHMWPE, *Society for Biomaterials 2013, Podium.*
- Doshi B., Oral E., Muratoglu O., Diffusion of Vitamin E in UHMWPE using Annealing under Pressure, *Orthopaedic Research Society 2013, Poster.*
- Doshi B., Ward J., Oral E., Muratoglu O., Impact Strength Correlates with Fatigue Strength of Irradiated Vitamin E/UHMWPE blends, *Orthopaedic Research Society 2013, Poster.*
- Doshi B., Fu J., Oral E., Muratoglu O., Radiation Cross-linked High Temperature Melted, Vitamin E-blended UHMWPE is Stable Against Oxidation, *Orthopaedic Research Society 2012, Poster.*
- Doshi B., Oral E., Muratoglu O., High Temperature Melting of UHMWPE/Vitamin E blend does not lead to Grafting/Cross-linking without Irradiation, *Orthopaedic Research Society 2012, Poster*

## Honors:

- Recipient of the Golden Jubilee Scholarship and Departmental Scholarship for the year 2004-05 for standing first in the Polymer Department.
- Reviewer for *Biomedical Research International* and *Acta Biomaterialia*.
- Recipient of *Best Poster Award* at UHMWPE Conference – October 2015