

Jorge Almodovar, PhD

Department of Chemical Engineering
University of Puerto Rico Mayaguez
Call Box 9000
Mayaguez, PR 00681-9000

Office: IQ 207-J
Tel: +1 (787) 832-4040 ext. 5859
Fax: +1 (787) 265-3818
Email: jorge.almodovar1@upr.edu
www.uprm.edu/biomaterials

EDUCATION

- PhD in Chemical Engineering, Colorado State University, 2011
Dissertation title: *Polysaccharide-based nanostructures for growth factor delivery and mesenchymal stem cells activation*
Thesis advisor: Prof. Matt Kipper
- BS in Chemical Engineering, Iowa State University, 2007
- University of Oviedo, Spain, Summer 2006
Study abroad program: International Summer Course in Chemical Engineering

PROFESSIONAL EXPERIENCE

- Program Coordinator, Alfred P. Sloan Program of Exemplary Mentoring, University of Puerto Rico Mayaguez, Mayaguez, PR. January 2014 – Present
- Assistant Professor, Bioengineering Program, University of Puerto Rico Mayaguez, Mayaguez, PR. August 2014 – Present
- Assistant Professor, Department of Chemical Engineering, University of Puerto Rico Mayaguez, Mayaguez, PR. September 2013 – Present
- Post-Doctoral Scholar, LMGP, Grenoble Institute of Technology, Grenoble, France. Advisor: Prof. Catherine Picart. November 2011 – August 2013.
- Graduate Research Assistant, Department of Chemical and Biological Engineering, Colorado State University, Fort Collins, CO. August 2007 – August 2011.
- Research Intern, Empirical Labs, Fort Collins, CO. May 2009 – August 2009.
- Undergraduate Research Assistant, Iowa State University, Department of Chemical and Biological Engineering, Ames, IA. Advisor: Prof. Surya Mallapragada. January 2006 – May 2007.

AWARDS AND HONORS

- UPRM Distinguish Professor of Chemical Engineering for academic year 2015 – 2016 (awarded Spring 2017)
- SHPE Hispanic Faculty Congress Awardee (2015)
- AIChE Janice Lumpkin Travel Award (2014)
- Biomedical Engineering Society Innovation and Career Development Travel Award (2013)
- Poster Prize sponsored by Acta Biomaterialia at the FEBS Biological Surfaces and Interfaces Workshop, Catalonia, Spain (2013)
- Nanosciences Foundation Poster Award 6th NaMiECeB Workshop, Grenoble, France (2013)
- Whitaker Travel Enhancement Fund (2012)
- Whitaker International Program (2011-2013)
- Graduate Assistantship, Colorado State University (2007-2011)
- Colorado Graduate Grant (2007-2011)

- Bridge to the Doctorate Fellowship, Colorado State University (2007-2008)
- McNair Fellowship, Colorado State University (2007-2008)
- Cargill Oviedo Scholar (2006)
- Omega Chi Epsilon (2006-2007)
- American Chemical Society Scholar (2003-2007)
- Gates Millennium Scholar (2003-2009)

LANGUAGES

Fluent in both oral and written English and Spanish. Beginner level of French.

RESEARCH SUPPORT

Current Research Support

- NSF ERC (Oct 1, 2017 – Sep 30, 2022) Title: Engineering Research Center for Cell Manufacturing Technologies. PI Krishnendu Roy. Georgia Institute of Technology. Role: Senior Personnel. Total Amount: \$3,500,000
- NIH NIGMS/INBRE (Jun 1, 2016 – May 31 2018) Title: Regeneration of Damaged Neural Tissue Using a Collagen Scaffold Containing Neurotrophins. A sub-project under “Advancing Competitive Biomedical Research in Puerto Rico” PI: Jose Rodriguez-Medina. University of Puerto Rico Mayaguez. Role: PI of sub-award. Total amount: \$200,000
- NSF REU Site (Jan 1, 2015 – Dec 31 2017) Title: Research Experiences for Undergraduates in Reconfigurable and Multifunctional Soft Materials at UPRM. PI: Ubaldo Cordova. University of Puerto Rico Mayaguez. Role: Senior Personnel. Total amount: \$275,000

Completed Research Support

- NSF EPSCoR/RII Start-Up Funds for new Faculty (Aug 1, 2015 – July 31, 2017) Title: Osteoinductive Integrin-Containing Biopolymeric Nano-Coatings for Bone Repair. University of Puerto Rico Mayaguez. Role: PI. Total Amount: \$200,000
- Puerto Rico Science, Technology, & Research Trust: Small Research Grant Program (Jan 1, 2016 – Aug 31, 2017) Title: Osteoinductive Integrin-Containing Biomaterials for Bone Repair. University of Puerto Rico Mayaguez. Role: PI. Total Amount: \$70,000
- DoD/ARO 66323-RT-REP (Feb 1, 2015 – Jan 31, 2016) Title: Acquisition of Infrared Variable Angle Spectroscopic Ellipsometer (IR-VASE). University of Puerto Rico Mayaguez. Role: PI. Total Amount: \$219,387.00
- University of Puerto Rico Mayaguez, Dean of Engineering’s Office, Start-Up Funds for new Faculty (Sep 1, 2013 – May 31, 2014). Role: PI. Total amount: \$20,000

RESEARCH INTERESTS

Polymeric Biomaterials, Cell-Material Interactions, Growth Factor Presentation, Biomimetic Materials, Electrospinning, Layer-by-Layer Films, Biomaterial Surface Modification, Gradients in Physical and Chemical Cues, Polysaccharide-Based Biomaterials, Neural Tissue Regeneration, Bone Tissue Regeneration, Collagen-Based Biomaterials, Cell and Tissue Engineering, Regenerative Medicine, Cell Manufacturing

SCIENTIFIC PUBLICATIONS (peer reviewed)

1. Ayala-Caminero R., Pinzon-Herrera L., Rivera-Martinez C., Almodovar J.; “Polymeric scaffolds for three-dimensional culture of nerve cells: a model of peripheral nerve regeneration”, *MRS Communications*, 7(3), **2017**, 391-415

2. Castilla Casadiego D., Maldonado M., Sundaram P., Almodovar J.; “Green electrospinning of a collagen/hydroxyapatite composite nanofibrous scaffold”, *MRS Communications*, 6(4), **2016**, 402-407
3. Castilla Casadiego D., Ramos Avilez H. V., Herrera-Posada S., Calcagno B., Loyo L., Shipmon J., Acevedo A., Quintana A., Almodovar J.; “Engineering of a stable collagen nanofibrous scaffold with tunable fiber diameter, alignment, and mechanical properties”, *Macromolecular Materials and Engineering*, 301(9), **2016**, 1064-1075
4. Caridade SG., Monge C., Almodovar J., Guillot R., Lavaud J., Josserand V., Coll JL., Mano JF., Picart C.; “Myoconductive and osteoinductive free-standing polysaccharide membranes”, *Acta Biomaterialia*, 15, **2015**, 139-149
5. Monge C., Almodovar J., Boudou T., Picart C.; “Spatio-temporal control of LbL films for biomedical applications: from 2D to 3D”, *Advanced Healthcare Materials*, 4(6), **2015**, 811-830
6. Dalonneau F., Liu X.Q., Sadir R., Almodovar J., Mertani H.C., Brucker F., Albiguez-Rizo C., Weidenhaupt M., Lortat-Jacob H., Picart C.; “The effect of delivering the chemokine SDF-1 α in a matrix-bound manner on myogenesis”, *Biomaterials*, 35(15), **2014**, 4525-4535
7. Almodovar J., Guillot R., Monge C., Vollaire J., Selimović Š., Luc-Coll J., Khademhosseini A., Picart C.; “Spatial patterning of BMP-2 and BMP-7 on biopolymeric films and the guidance of muscle cell fate”, *Biomaterials*, 35(13), **2014**, 3975-3985
8. Almodovar J., Crouzier T., Selimović Š., Boudou T., Khademhosseini A., Picart C.; “Gradients of Physical and Biochemical Cues on Polyelectrolyte Multilayer Films Generated via Microfluidics”, *Lab on a Chip*, 13 (8), **2013**, 1562-1570
9. Almodovar J., Mower J., Banerjee A., Sarkar A., Ehrhart N.P., Kipper M.J.; “Chitosan-Heparin Polyelectrolyte Multilayers on Cortical Bone: Periosteum-Mimetic, Cytophillic, Antibacterial Coatings”, *Biotechnology and Bioengineering*, 110(2), **2013**, 609-618 **Article featured on the Spotlights section of Vol 110, Issue 2**
10. Volpato F.Z., Almodovar J., Erickson K., Popat K.C., Migliaresi C., Kipper M.J.; “Preservation of FGF-2 Bioactivity Using Heparin-Based Nanoparticles, and Their Delivery From Electrospun Chitosan Fibers”, *Acta Biomaterialia*, 8, **2012**, 1551-1559
11. Almodovar J., Place L.W., Gogolski J., Kipper M.J.; “Layer-by-Layer Assembly of Polysaccharide-Based Multilayers: A Spectroscopic Study of Hydrophilicity, Composition, and Ion Pairing”, *Biomacromolecules*, 12, **2011**, 2755-2765
12. Almodovar J., Kipper M.J.; “Coating Electrospun Chitosan Nanofibers With Polyelectrolyte Multilayers Using the Polysaccharides Heparin and *N,N,N*-Trimethyl Chitosan”, *Macromolecular Biosciences*, 11, **2011**, 72-76
13. Kisiday J.D., Hale B.W., Almodovar J., Lee C.M., Kipper M.J., McIlwraith C.W., Frisbie D.D.; “Expansion of Mesenchymal Stem Cells on Fibrinogen-Rich Protein Surfaces Derived From Blood Plasma”, *Journal of Tissue Engineering and Regenerative Medicine*, 5, **2011**, 600-611
14. Almodovar J., Bacon S., Gogolski J., Kisiday J.D., Kipper M.J.; “Polysaccharide-Based Polyelectrolyte Multilayer Surface Coatings can Enhance Mesenchymal Stem Cell (MSC) Response to Adsorbed Growth Factors”, *Biomacromolecules*, 11, **2010**, 2629-2639
15. Boddohi S., Almodovar J., Zhang H., Johnson P., Kipper M.J.; “Layer-by-Layer Assembly of Polysaccharide Based Nanostructured Surfaces Containing Polyelectrolyte Complex Nanoparticles”, *Colloids and Surfaces B: Biointerfaces*, 77, **2010**, 60-68

CONFERENCE PROCEEDINGS (non-peer reviewed)

1. Almodóvar J., Kipper M.J.; “Glycosaminoglycan-Based Surface Coatings: Versatile Surfaces for Growth Factor Delivery” PMSE preprints 224th American Chemical Society National Meeting, Philadelphia, PA, August **2012**
2. Almodóvar J., Kipper M.J.; “Tailoring Polysaccharide-Based Nanostructured Biomaterials for Guided Mesenchymal Stem Cell (MSC) Response”, *Annual Biochemical Engineering Symposium* (Fort Collins, CO), May **2009**
3. Almodóvar J., Dempsy L., Kipper M.J.; “FT-IR Studies on Stability of Proteins Adsorbed to Polysaccharide-Based Polyelectrolyte Multilayers”, *Annual Biochemical Engineering Symposium* (Ames, IA), April **2008**

BOOK EDITOR

Electrospun Biomaterials and Related Technologies, Ed. Almodóvar J., Springer, **2017**, In Press

BOOK CHAPTER

1. Castilla Casadiego D.A., Rivera C., Quiñones B., Almodóvar J., “Electrospun collagen biomaterials” in *Electrospun Biomaterials and Related Technologies*, Ed. Almodóvar J, Springer, **2017**, In Press.
2. Ramos Avilez H.V., Castilla Casadiego D.A., Vega A.L., Perales O.J., Almodóvar J., “Production of Chitosan Coatings on Metal and Ceramic Biomaterials” in *Chitosan-based biomaterials Fundamentals Vol 1*, Eds. Jennings A., Bumgardner J., Overend L., Woodhead Publishing, **2016**, P. 255-294. Print.
3. Almodóvar J., Castilla Casadiego D.A., Ramos Avilez H.V. “Polysaccharide based biomaterials for cell-material interface” in *Cell and Material Interface: Advances in Tissue Engineering, Biosensor, Implant, and Imaging Technologies*, Ed. Vrana N., Boca Raton, FL: CRC, **2015**. P. 215-244. Print.
4. Gilde F., Guillot R., Fourel L., Almodovar J., Crouzier T., Boudou T., Picart C., “Matrix-Bound Presentation of Bone Morphogenetic Protein 2 by Multilayer Films: Fundamental Studies and Applications to Orthopedics” in *Layer-by-Layer Films for Biomedical Applications*, Eds. Picart C., Caruso F., Voegel J.C., KGaA, Weinheim, Germany: Wiley-VCH Verlag GmbH & Co., **2015**. Print.
5. Kipper M., Almodóvar J. “Engineering Soft Nanostructures for Guided Cell Response” in *Nanotechnology in Tissue Engineering and Regenerative Medicine*, Ed. Popat K., Boca Raton, FL: CRC, **2011**. Print.

INVITED TALKS

1. “Engineering Extracellular Matrix Mimetic Materials” Department of Chemical Engineering, REU Program, University of Puerto Rico Mayaguez. July 12, 2017
2. “Osteoinductive Integrin-Containing Biomaterials for Bone Repair” Puerto Rico Science, Technology, and Research Trust Forward Grantees Symposium, Universidad del Este, Carolina, PR. May 27, 2017.
3. “Engineering Extracellular Matrix Mimetic Materials” Bioengineering Graduate Seminar, University of Puerto Rico Mayaguez. February 14, 2017
4. “Engineering Extracellular Matrix Mimetic Materials” Chemistry Department, University of Puerto Rico Mayaguez. September 9, 2016
5. “Engineering of Biopolymeric Nanomaterials” (Video Conference) AICHE Student Chapter Inauguration, Department of Chemical Engineering, Universidad del Atlántico, Barranquilla, Colombia. November 24, 2015

6. "Engineering of Biopolymeric Nanomaterials" Chemistry Department, University of Puerto Rico Mayaguez. September 25, 2015
7. "Engineering of Biopolymeric Nanomaterials" Department of Chemical Engineering, REU Program, University of Puerto Rico Mayaguez. July 15, 2015
8. "Electrospinning of a Collagen Solution" Integra Lifesciences & Collagen Board (via conference call), Añasco, PR. May 22, 2015
9. "Engineering of Biopolymeric Nanomaterials" Department of Chemical Engineering, Universidad del Atlántico, Barranquilla, Colombia. February 11, 2015
10. "Generation of Surface Gradients in Polymeric Films Containing Biochemical and Physical Cues for Investigating Cell-Material Interactions" Department of Bioelectronics, Ecole Nationale Supérieure des Mines de Saint Etienne, Gardanne, France. June 21, 2013.
11. "Engineering of Biopolymeric Nanomaterials: from Fundamental Studies to Healthcare Applications" Department of Chemical Engineering, University of Puerto Rico Mayaguez. February 20, 2014.
12. "Engineering of Biopolymeric Nanomaterials: from Fundamental Studies to Healthcare Applications" Department of Chemistry, University of Puerto Rico Mayaguez. February 28, 2014.
13. "Generation of Surface Gradients in Polymeric Films Containing Biochemical and Physical Cues for Investigating Cell-Material Interactions" Advances in 3D Cell Cultures: from Biology to Technology, Center of Microelectronics in Provence, Gardanne, France. June 20, 2014.

PROFESSIONAL SERVICE

Member: American Chemical Society (ACS), American Institute of Chemical Engineers (AIChE), Biomedical Engineering Society (BMES)

Reviewer:

Proposals: National Science Foundation, Comisión Nacional de Investigación Científica y Tecnológica, Gobierno de Chile

Publications: Wiley Books publishing house, Journal of Tissue Engineering and Regenerative Medicine, International Polymer, Biomacromolecules, Langmuir, ACS Biomaterials Science & Engineering, Biomaterials Science, ACS Applied Materials and Interfaces, and Colloids and Surfaces B, Biomaterials, Acta Biomaterialia, MRS Communications

Conference Organization:

Organizing & Scientific Committee: 1st European Research Council BIOMIM Meeting held in Grenoble, France (April 10-12, 2013).

Chair: "General Papers/New Concepts in Polymeric Materials" (PMSE, ACS Spring 2017 meeting), "Biomaterials I" (AIChE Annual Meeting 2015), "Spatially Patterned Biomaterials" (AIChE Annual Meeting 2014)

Co-Chair: "Area Plenary: Leaders in Biomaterials (Invited Talks)" (AIChE Annual Meeting 2017), "Poster Session: Materials Engineering & Sciences (08B - Biomaterials)" (AIChE Annual Meeting 2016), "Spatially Patterned Biomaterials" (AIChE Annual Meeting 2013), "Tissue Engineering Microenvironment II" (AIChE Annual Meeting 2012), "Nanostructured Biomaterials" (AIChE Annual Meeting 2012).

TEACHING EXPERIENCE

University of Puerto Rico – Mayaguez:

BING 6115 Biomaterials (Spring 2017)

INQU 4010 Momentum Transfer Operations (Fall 2013, Spring 2014, Fall 2014, Spring 2015)

INQU 4011 Chemical Engineering Thermodynamics I (Spring 2014)
INQU 6029/8996 Graduate Chemical Engineering Seminar (Spring 2014 –Spring 2016)
INQU 4027 Chemical Engineering Seminar (Fall 2013, Fall 2014, Fall 2015)
INQU 4002 Mass Transfer Operations (Summer 2015, Fall 2015, Spring 2016, Fall 2016, Spring 2017)
INQU 4005 Material and Energy Balances (Summer 2016, Fall 2017)
INQU 4998 Undergraduate Research (Every semester since spring 2014)
INQU 6036 Special Problems (Fall 2015, Fall 2016)

Grenoble Institute of Technology:

Cell Culture and Confocal Microscopy. International Summer School at MINATEC. (June 2013)

Introduction to Biomaterials. FAME Erasmus Mundus Master of Science program. (November 26, 2012 – October 17, 2012)

Other:

Fluid Mechanics Refresher Course. Lilly del Caribe, Carolina PR. (May 2016)

COLLABORATORS

Aldo Acevedo, Chemical Engineering, UPRM
Barbara Calcagno, Materials Engineering, UPRM
Andrés García, Mechanical Engineering, Georgia Institute of Technology
Sean Palecek, Chemical and Biological Engineering, University of Wisconsin – Madison
Oscar J. Perales, Materials Engineering, UPRM
Anibal Quintana, Integra Lifesciences
Paul Sundaram, Mechanical Engineering, UPRM
Madeline Torres-Lugo, Chemical Engineering, UPRM

STUDENTS SUPERVISED**Current Graduate Students:**

Radames Ayala, MS (PhD in Bioengineering Expected Spring 2018)
David Castilla Casadiego, MS (PhD in Chemical Engineering Expected Spring 2019)
Luis C. Pinzon (PhD in Chemical Engineering Expected Spring 2019)
Carol Rivera (MS in Bioengineering Expected Spring 2018)

Former Graduate Students:

David Castilla Casadiego, (MS in Chemical Engineering, Spring 2016)
Heleine Ramos Avilez (ME in Chemical Engineering, Fall 2016)

Current Undergraduate Students (from UPRM unless stated otherwise):

Coral Alvarado (Biology)
Carlo Bosques Casillas (Industrial Biotechnology)
Edwin Burgos (Industrial Microbiology)
Giancarlo Gonzalez Areizaga (Chemistry)
Adriana C. Mulero Russe (Chemical Engineering)
Luis Peña (Microbiology)
Beatriz Quiñones (Industrial Microbiology)
Marcos R. Rodríguez Muñoz (Chemical Engineering)
Bethsylvia Soto (Chemical Engineering)

Former Undergraduate Students (from UPRM unless stated otherwise):

Alexander Collado (Chemical Engineering)
Wisberty Gordian (Chemical Engineering)

Luis Loyo (Chemical Engineering)

Jacoby Shipmon (Department of Chemical, Biological and Bio Engineering, North Carolina Agricultural and Technical State University)

Kiara Vega (Biology & Psychology)

Michael Maldonado (Mechanical Engineering)

Ferdinand Zavala (Chemical Engineering)

PRESENTATIONS AT INTERNATIONALS, NATIONAL, AND REGIONAL MEETINGS

(*presenter)

1. Vega-Figueroa K.*, Santillán J., Almodovar J., López J., Ortiz E.O., Nicolau E.: “Towards an arsenic-specific aptasensor based on Au/thiol interactions” Poster presented at the 253th ACS National Meeting and Exposition in San Francisco, CA. April 2017
2. Almodovar J.*, Castilla D., Maldonado M., Sundaram P.: “Engineering nanostructured hydroxyapatite/collagen composite scaffolds by green electrospinning” Paper presented at the 253th ACS National Meeting and Exposition in San Francisco, CA. April 2017
3. Quiñones B.*, Castilla D., Almodovar J.: “Characterization of polymeric films prepared by the Layer- by-Layer technique: An infrared variable angle spectroscopic ellipsometry study” Paper presented at the 2017 Emerging Researchers National (ERN) Conference in STEM, Washington DC. March 2017
4. Almodovar J.* “Regeneration of damaged neural tissue using a collagen scaffold containing neurotrophins” PRINBRE External Advisory Committee Meeting, Dorado, PR. March 2017
5. Quiñones B.*, Castilla D., Almodovar J.: “Engineering biopolymeric nanostructured fibers and films for tissue engineering applications” Paper presented at the 2016 Symposium on Biomaterials Science, New Jersey Center for Biomaterials in Iselin, NJ. October 2016
6. Castilla D.*, Almodovar J.: “Engineering Versatile and Stable Collagen Nanofibers from a Mild Solvent” Poster presented at the BMES Annual Meeting in Minneapolis, MN. October 2016
7. Castilla D.*, Maldonado M., Sundaram P., Almodóvar J.; “Green electrospinning of 3D biomimetic scaffolds of bone extracellular matrix” Poster presented at the Puerto Rico Science Technology and Research Trust 1st Forward Research and Innovation Summit in San Juan, PR. September 2016.
8. Pinzon LC.*, Castilla D., Quiñones B., Almodóvar J.; “Characterization of polymeric films prepared by the Layer-by-Layer technique: evaluating the rinsing step” Poster presented at the Puerto Rico Science Technology and Research Trust 1st Forward Research and Innovation Summit in San Juan, PR. September 2016.
9. Almodóvar J.*, Castilla D.; “Engineering of a collagen-based extracellular matrix mimetic scaffold via electrospinning” Paper presented at the 10th World Biomaterials Congress in Montréal, Canada. May 2016
10. Castilla D.*, Almodóvar J.; “Production of a type I collagen nanofibrous scaffold via electrospinning using a mild solvent that preserves its chemical structure” Poster presented at the Institute for Functional Nanomaterials Annual Meeting in Caguas, PR. April 2016
11. Almodovar J.*; “Engineering biopolymeric nano materials for tissue engineering applications” Poster presented at the Institute for Functional Nanomaterials External Advisory Board Meeting in Rio Piedras, PR. March 2016
12. Quiñones B.*, Castilla D., Almodóvar J.; “Polysaccharide-based polyelectrolyte multilayers: Physicochemical characterization and in vitro studies” Poster presented at the UPRM’s Department of Biology Annual Symposium in Mayaguez, PR. April 2016
13. Quiñones B.*, Castilla D., Almodóvar J.; “Polysaccharide-based polyelectrolyte multilayers: Physicochemical characterization and in vitro studies” Paper presented at the 6th Annual Research

- Symposium of the Asociación de Estudiantes de Medicina de Puerto Rico in San Juan, PR. April 2016
14. Burgos E.*, Quiñones B., Castilla D., Almodóvar J.; “Evaluating the effect of degree of crosslinking and RGD peptide over cellular adhesion in polymeric bilayers” Paper presented at the 6th Annual Research Symposium of the Asociación de Estudiantes de Medicina de Puerto Rico in San Juan, PR. April 2016
 15. Quiñones B.*, Castilla D., Almodóvar J.; “Polysaccharide-based polyelectrolyte multilayers: Physicochemical characterization and in vitro studies” Poster presented at the XXI Sigma Xi Poster Day at UPRM in Mayaguez, PR. April 2016
 16. Quiñones B.*, Castilla D., Almodóvar J.; “Polysaccharide-based polyelectrolyte multilayers: Physicochemical characterization and in vitro studies” Paper presented at the 2016 Junior Technical Meeting (JTM) and the Puerto Rico Interdisciplinary Meeting (PRISM) in Ponce, PR. March 2016
 17. Burgos E.*, Quiñones B., Castilla D., Almodóvar J.; “Evaluating the effect of degree of crosslinking and RGD peptide over cellular adhesion in polymeric bilayers” Paper presented at the 2016 Junior Technical Meeting (JTM) and the Puerto Rico Interdisciplinary Meeting (PRISM) in Ponce, PR. March 2016
 18. Almodóvar J.*; “Engineering of Biopolymeric Nanomaterials” Paper presented at the Society of Hispanic Professional Engineers Conference in Baltimore, MD. November 2015
 19. Castilla D.*, Almodóvar J.; “Production of a type I collagen nanofibrous scaffold via electrospinning using a mild solvent that preserves its chemical structure” Poster presented at the Society of Hispanic Professional Engineers Conference in Baltimore, MD. November 2015
 20. Castilla D.*, Almodóvar J.; “Production of a type I collagen nanofibrous scaffold via electrospinning using a mild solvent that preserves its chemical structure” Poster presented at the 39th Senior Technical Meeting ACS Puerto Rico Section in Ponce, PR. November 2015
 21. Rivera C.*, Castilla D., Almodóvar J.; “Engineering biopolymeric nanofibers as biomaterials for tissue regeneration” Poster presented at the URGREAT-MBRS-RISE Undergraduate Research Symposium in Carolina, PR. October 2015
 22. Shipmon J., Castilla D., Almodóvar J.; “Electrospinning of Collagen Nanofibers” Poster presented at the REU RMSM UPRM Poster Session, Mayaguez, PR. July 2015
 23. Rivera C.*, Castilla D., Almodóvar J.; “Engineering biopolymeric nanofibers as biomaterials for tissue regeneration” Poster presented at the 8th Northeastern Alliance (NEA) Science Day in Mayagüez, PR. March 2015
 24. Soto B.*, Castilla D., Almodóvar J.; “Novel Biomaterials for Tissue Regeneration” Paper presented at the 2015 Junior Technical Meeting (JTM) and the Puerto Rico Interdisciplinary Meeting (PRISM) in Rio Piedras, PR. March 2015
 25. Almodovar J., Picart C.; “Surface gradients in biopolymeric films containing biochemical and physical cues for investigating cell-material interactions” Paper presented at the 249th ACS National Meeting and Exposition in Denver, CO. March 2015
 26. Almodóvar J.* Guillot R., Monge C., Vollaie J., Selimović Š., Luc-Coll J., Khademhosseini A., Picart C.; “Spatial Patterning of BMP-2 and BMP-7 on Biopolymeric Films and the Guidance of Muscle Cell Fate” Paper presented at the 4th International Colloids Conference in Madrid, Spain. June 2014
 27. Almodóvar J.* Picart C.; “Cellular Response on Growth Factor and Stiffness Gradients on Polyelectrolyte Multilayers” Paper presented at the University of Puerto Rico Medical Sciences Campus 34th Annual Research and Education Forum. April 2014

28. Almodóvar J.,* Dalonneau F., Boudou T., Khademhosseini A., Picart C.; “Cellular Response on Matrix-Bound Growth Factor Gradients and Stiffness Gradients Generated on Polyelectrolyte Multilayer Films” Poster presented at the BMES Annual Meeting in Seattle, WA. September 2013
29. Almodóvar J.,* Dalonneau F., Boudou T., Khademhosseini A., Picart C.; “Cellular Response on Matrix-Bound Growth Factor Gradients and Stiffness Gradients Generated on Polyelectrolyte Multilayer Films” Poster presented at the FEBS Biological Surfaces and Interfaces Workshop in Catalonia, Spain. July 2013
30. Almodóvar J.,* Dalonneau F., Boudou T., Khademhosseini A., Picart C.; “Polyelectrolyte Multilayer Films Containing Gradients of Physical and Biochemical Cues: A Versatile Tool to Investigate Cellular Processes” Poster presented at the 6th Nano and Microsystems for Cell Biology Workshop in Grenoble, France. April 2013
31. Almodóvar J.,* Crouzier T., Selimović Š., Khademhosseini A., Picart C.; “Engineering of Surface Gradients On Biopolymeric Films for the Spatial Presentation of Growth Factor and Physical Properties.” Paper presented at the AICHE Annual Meeting in Pittsburgh, PA. November 2012
32. Almodóvar J.,* Mower J., Banerjee A., Sarkar A., Ehrhart N., Kipper M.J.; “Periosteum-Mimetic Polysaccharide-Based Coatings for Cortical Bone Allografts towards Orthopedic Tissue Engineering Applications.” Paper presented at the AICHE Annual Meeting in Pittsburgh, PA. November 2012
33. Gilde F., Maniti O., Guillot R., Almodóvar J.,* Picart C.; “Structure and Stability of Poly(L-lysine)/Hyaluronan Thin Films as Nanoreservoirs for the Bone Morphogenetic Protein-2.” Paper presented at the AICHE Annual Meeting in Pittsburgh, PA. November 2012
34. Fourel L., Almodóvar J.,* Albiges-Rizo C., Picart C.; “Mechano-Transduction Pathway Interference with BMP-2 Signaling Cascade” Paper presented at the AICHE Annual Meeting in Pittsburgh, PA. November 2012
35. Almodóvar J.,* Crouzier T., Selimović Š., Khademhosseini A., Picart C.; “Generation of Surface Gradients in Polymeric Films Containing Biochemical and Physical Cues for Investigating Cell-Material Interactions” Paper presented at the BMES Annual Meeting in Atlanta, GA. November 2012
36. Almodóvar J.,* Mower J., Banerjee A., Sarkar A., Ehrhart N., Kipper M.J.; “Polymeric Coatings for Cortical Bone Allografts Towards Orthopedic Tissue Engineering Applications” Poster presented at the BMES Annual Meeting in Atlanta, GA. November 2012
37. Fourel L., Almodóvar J.,* Albiges-Rizo C., Picart C.; “Synergistic Signaling Between Integrin Receptors and Matrix-Bound Growth Factor Receptors Revealed via Biopolymeric Films Containing the Bone Morphogenetic Protein 2” Poster presented at the BMES Annual Meeting in Atlanta, GA. November 2012
38. Almodóvar J., Kipper M.J.*; “Glycosaminoglycan-Based Surface Coatings: Versatile Surfaces for Growth Factor Delivery” Paper presented at the 224th ACS National Meeting, Philadelphia, PA. August 2012
39. Almodóvar J.,* Crouzier T., Selimović Š., Khademhosseini A., Picart C.; “Generation of Surface Gradients of Biomolecules on Biopolymer-Based Polyelectrolyte Multilayer Films for Investigating Cell-Materials Interactions.” Poster presented at the Colloids and Nanomedicine Conference in Amsterdam, Netherlands. July 2012
40. Almodóvar J.,* Place L.W., Gogolski J., Kipper M.J.; “Layer-by-Layer Assembly of Polysaccharide-Based Multilayers: A Spectroscopic Study of Hydrophilicity, Composition, and Ion Pairing.” Poster presented at the Colloids and Nanomedicine Conference in Amsterdam, Netherlands. July 2012
41. Almodóvar J.,* Mower J., Banerjee A., Sarkar A., Kipper M.J.; “Functionalization of Devitalized Bone Using Polysaccharide-Based Multilayers Supports Mammalian Cell Growth and Inhibits

- Bacterial Growth.” Paper presented at the 14th International Conference on Organized Molecular Films in Paris, France. July 2012
42. Almodóvar J.,* Crouzier T., Selimović Š, Khademhosseini A., Picart C.; “Generation of Surface Gradients of Biomolecules on Biopolymer-Based Polyelectrolyte Multilayer Films for Investigating Cell-Materials Interactions.” Poster presented at the Nano and Microsystems for Cell Biology Workshop in Grenoble, France. April 2012
 43. Almodóvar J.,* Bacon S., Zomer Volpato F., Migliaresi C., Kisiday J.D., Kipper M.J.; “Electrospun Chitosan Nanofibers for Growth Factor Delivery and Mesenchymal Stem Cell Activation.” Poster presented at the AICHE Annual Meeting in Minneapolis, MN. October 2011
 44. Almodóvar J.,* Bacon S., Zomer Volpato F., Migliaresi C., Kisiday J.D., Kipper M.J.; “Electrospun Chitosan Nanofibers for Growth Factor Delivery and Mesenchymal Stem Cell Activation.” Paper presented at the BMES Annual Meeting in Hartford, CT. October 2011
 45. Mower J.,* Almodóvar J., Kipper M.J.; “Coating Ovine Bone With Polyelectrolyte Multilayers Using the Polysaccharides Heparin and Chitosan” Poster presented at the BMES Annual Meeting in Hartford, CT. October 2011
 46. Almodóvar J.,* Bacon S., Gogolski J., Kisiday J.D., Kipper M.J.; “Polysaccharide-Based Polyelectrolyte Multilayer Surface Coatings can Enhance Mesenchymal Stem Cell (MSC) Response to Adsorbed Growth Factors.” Paper presented at the AICHE Annual Meeting in Salt Lake City, UT. November 2010
 47. Almodóvar J.,* Bacon S., Gogolski J., Kisiday J.D., Kipper M.J.; “Polysaccharide-Based Polyelectrolyte Multilayer Surface Coatings can Enhance Mesenchymal Stem Cell (MSC) Response to Adsorbed Growth Factors.” Poster presented at the BMES Annual Meeting in Austin, TX. October 2010
 48. Volpato F.Z., Almodóvar J.,* Kipper M.J., Migliaresi C.; “Functionalization of Chitosan Electrospun Networks by Polyelectrolyte Multilayer and Nanoparticle Adsorption.” Paper presented at the Materials Research Society Functionalized Nanobiomaterials for Medical Applications Meeting in Denver, CO. October 2010
 49. Almodóvar J.,* Bacon S., Gogolski J., Kisiday J.D., Kipper M.J.; “Polysaccharide-Based Polyelectrolyte Multilayer Surface Coatings can Enhance Mesenchymal Stem Cell (MSC) Response to Adsorbed Growth Factors.” Poster presented at the Nanotechnology Symposium in Fort Collins, CO. April 2010
 50. Gogolski J.,* Almodóvar J., Kipper M.J.; “Surface Modification of Titanium Using Polysaccharide-Based Polyelectrolyte Multilayer.” Paper presented at the AICHE Regional Meeting, Rocky Mountain Region in Albuquerque, NM. April 2010
 51. Almodóvar J.,* Kipper M.J.; “Tailoring Polysaccharide-Based Nanostructured Biomaterials for Guided Mesenchymal Stem Cell (MSC) Response.” Paper presented at the AICHE Annual Meeting in Nashville, TN. November 2009
 52. Boddohi S.,* Almodóvar J., Johnson P.A., and Kipper M.J., “Nanostructured Polysaccharide Based Surface Coatings: Tailored Morphology and Chemistry.” Paper presented at the AICHE Annual Meeting in Nashville, TN. November 2009
 53. Almodóvar J.,* Kipper M.J.; “Tailoring Polysaccharide-Based Nanostructured Biomaterials for Guided Mesenchymal Stem Cell (MSC) Response.” Poster presented at the Annual Biochemical Engineering Symposium in Pringree Park, CO. May 2009
 54. Almodóvar J.,* Kipper M.J.; “FT-IR Studies on Stability of Proteins Adsorbed to Polysaccharide-Based Polyelectrolyte Multilayers.” Paper presented at the AICHE Annual Meeting in Philadelphia, PA. November 2008

55. Almodóvar J.* Gogolski J., Kipper M.J.; “Nanostructured Polysaccharide-Based Surface for MSC Differentiation.” Poster presented at the AIChE Annual Meeting in Philadelphia, PA. November 2008
56. Almodóvar J.* Kipper M.J.; “FT-IR Studies on Stability of Proteins Adsorbed to Polysaccharide-Based Polyelectrolyte Multilayers.” Paper presented at the Annual Biochemical Engineering Symposium in Ames, IA. April 2008