



## JAMES JOHN O'DONNELL

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[www.pharmaconsultantinc.com](http://www.pharmaconsultantinc.com)

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### EXPERIENCE

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#### *Rosalind Franklin University of Medicine and Science*

Assistant Professor

Department of Medical Education, Innovation and Humanities

Department of Cellular and Molecular Pharmacology, Chicago Medical School

Department of Pharmaceutical Sciences, College of Pharmacy

12/16-present

#### *Pharmaconsultant, Inc.*

Vice President—Research and Development, Consultant in pharmacology and analytical toxicology

8/15 – present

#### *Indiana University School of Medicine—South Bend*

Postdoctoral Fellow

7/14-7/15

#### *University of Chicago Department of Medicine*

Section of Pulmonary and Critical Care (Respiratory Biology Training Grant)

Postdoctoral Fellow

5/14/12-5/13/14

#### *Rush University Medical Center*

Department of Pharmacology

Research Associate

1/1/12-4/12

#### *University of Wisconsin-Madison*

Graduate Research Assistant in organometallic chemistry

2003 – 2005

#### *Northwestern University*

Research Assistant in organometallic/polymer chemistry

2002 - 2003

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### EDUCATION

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#### *Rush University Medical Center*

Ph.D., Department of Pharmacology

2006-2011

Advisor: Dr. Hazel Lum

Project: "P120 Catenin Suppresses the Inflammatory Response in Endothelial Cells"

#### *University of Wisconsin-Madison*

Masters of Science, Chemistry

2003-2005

#### *Northwestern University*

Special Student in Chemistry

2001-2003

#### *Massachusetts Institute of Technology (MIT)*

B.S. Electrical Engineering and Computer Science

1996-2001

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**AWARDS**

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University of Chicago Department of Medicine Research Day	
Best Abstract, Translational Medicine/Fellow Category	2013
Rush University	
Paul E. Carson, MD Award for Excellence in Pharmacology	2012
Sigma Xi Poster Competition, 3rd out of 63 students at Rush University Research Forum	2010
Other	
National Merit Scholarship Winner (awarded to top 2,000 students in U.S.A. by National Merit Scholarship Corporation)	1996

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**PROFESSIONAL ORGANIZATIONS**

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American Academy of Clinical Toxicology (AACT)	2015-present
American Society for Pharmacology and Experimental Therapeutics (ASPET)	2013-present
American Physiological Society (APS)	2008-2011
American College of Clinical Pharmacology (ACCP)	2015-present

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**TEACHING EXPERIENCE**

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Rosalind Franklin University (2013-present)	
Drugs for Gout	2/17
Parkinson's Disease Treatment – small group discussion	1/17
Psychopharmacology – small group discussion	12/16
General Pharmacology of the CNS	4/15
Advanced Clinical Medicine	2015
(Pharmacology component for physical therapy program)	
Analgesics and DMARDS	10/14
NSAIDs and Glucocorticoids	10/14
Advanced Clinical Medicine and Pharmacology (HPTH 724),	2013
Advanced Clinical Medicine and Pharmacology (HPTH 724)	
Lecturer (5 lecture hours, physical therapy students)	
NSAIDs and Glucocorticoids	9/13
Analgesics	9/13
Muscle Relaxants and Local Anesthesia	10/13
Medications for Traumatic Brain Injury (TBI) and Other Neurological Conditions	10/13
Cardiovascular Pharmacology	10/13
Rush University Medical Center (2008-present)	
Cellular Physiology (GCC520-General Pharmacology)	8/16
Preparing a Scientific Manuscript (GCC508—Writing Practicum)	2016
Mechanisms of Disease (2 <sup>nd</sup> year Medical School)	
Pharmacokinetics	2013-2014
Medical Pharmacology (2 <sup>nd</sup> year Medical School)	
Pharmacokinetics	2008-2012
Safety Pharmacology	10/15
Neurological Clinical Medicine and Pharmacology (HPTH644-15SP)	2015
Introduction to Medical Pharmacology with Medical Physiology,	2011

(course for all students in PhD, physician assistantship (P.A.), and biotechnology programs); taught Pharmacokinetics  
Advanced Pharmacokinetics  
taught course to 2<sup>nd</sup> year Pharmacology graduate students

2010

University of Wisconsin-Madison  
Teaching Assistant for General Chemistry

2003-2005

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## PROGRAMS ATTENDED

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National Institute of Health (NIH) -- PCR Methodology: Principles, Optimization and Applications (NIH Course) Bethesda, MD 7/14.  
Marine Biological Laboratory—Strategies and Techniques for Analyzing Microbial Populations, Woods Hole, MA 8/15.  
American College of Medical Toxicology Seminars in Forensic Toxicology: a Legal “Potpourri” (marijuana/alcohol) Denver, CO, 12/15.  
MRO and Beyond: Advanced Drug Testing Interpretation (American College of Medical Toxicology Annual Scientific Meeting, Satellite Session) Huntington Beach, CA 3/16.  
SEAK National Expert Witness Conference. Chicago, IL 5/16.  
World Preclinical Congress. Boston, MA 6/16

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## SERVICE

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Reviewer, Microvascular Research (2016-present)  
Reviewer, American Journal of Therapeutics (2013-2015)  
Reviewer, PLoS One (2014)  
Poster Session Judge, American Society for Pharmacology and Experimental Therapeutics-Great Lakes Chapter (ASPET-GLC) Annual Meeting (2015)  
Councilor, American Society for Pharmacology and Experimental Therapeutics, Great Lakes Chapter (ASPET-GLC) (2013-2015)  
Activities Coordinator, Graduate Student Council (2006-2008)  
-coordinated silent auction and participated in other facets of running Emerald Ball fundraiser event (2007-2008)

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## PUBLICATIONS – JOURNAL ARTICLES/ABSTRACTS

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1. Tian, Y.; Gawlak, G.; **O'Donnell III, J.J.**; Birukova, A.A.; Birukov, K.G.; *Activation of Vascular Endothelial Growth Factor (VEGF) receptor-2 mediates endothelial permeability caused by cyclic stretch.* J Biol Chem. 2016 May 6;291(19):10032-45. doi: 10.1074/jbc.M115.690487. Epub 2016 Feb 16.
2. Gawlak, G.; Son, S.; Tian, Y.; O'Donnell III, J.J.; Birukov, K.; Birukova, A.; *Chronic high magnitude cyclic stretch stimulates EC inflammatory response via VEGF Receptor 2 dependent mechanism.* Am J Physiol Lung Cell Mol Physiol. 2016 Jun 1;310(11):L1062-70.
3. Birukova, A.; Tian, Y.; Gawlak, G.; **O'Donnell III, J.J.**; Mambetsariev, I.; *Modulation of endothelial inflammation by low and high magnitude cyclic stretch.* PLoS One. 2016 Apr 29;11(4):e0153387.
4. Tian, Y.; Tian, X.; Gawlak, G.; **O'Donnell III, J.J.**; Sacks, D.B.; and Birukova, A.B.; *IQGAP1 regulates endothelial barrier function via EB1 – cortactin crosstalk.* Mol Cell Biol. 2014 Sep 15;34(18):3546-58.
5. **O'Donnell III, J.J.**; Birukova, A.A.; Beyer, E.C.; Birukov, K.G.; 2014. *Gap Junction Protein Connexin 43 (Cx43) Exacerbates Lung Vascular Permeability.* PLoS One. 2014 Jun 26;9(6):e100931.
6. Gawlak, G., Tian, Y.; **O'Donnell III, J.J.**; Tian, X.; Birukova, A.A.; and Birukov, K.G. *Paxillin mediates stretch-induced Rho signaling and endothelial permeability via assembly of paxillin - p42/44MAPK - GEF-H1 complex.* FASEB J. 2014 Jul; 28(7):3249-60.
7. Cowan, C.; **O'Donnell III, J.J.**; Lum, H.; and Xu, S.; *MicroRNA-146 Inhibits Thrombin-induced NF-κB Activation and Subsequent Inflammatory Responses in Human Retinal Endothelial Cells.* 2014. Invest Ophthalmol Vis Sci. 2014 Jul 1;55(8):4944-51.
8. O'Donnell JT, Marks D.H., Danese P., and **O'Donnell III JJ**, Marks DM. *Drug Induced Liver Disease: Primer for the Primary Care Physician.* DILD Vol 60, No 2 pages 49-104 Feb 2014 ISSN 0011-5029
9. **O'Donnell III JJ**, O'Donnell JT and Juettner VM. 2012. *Clinical Pharmacology for the Primary Care Physician.* Disease-a-Month, October 2012.Elsevier.
10. **O'Donnell III, J.J.**; Zhuge, Y.; Holian, O.; Cheng, F; Thomas L. L.; Forsyth C. B.; Lum, H., 2011. *Loss of P120 Catenin Upregulates Transcription of Pro-inflammatory Adhesion Molecules in Human Endothelial Cells.* Microvasc Res. 82(2), 105-12.
11. Zhang, J.; **O'Donnell III, J. J.**; Holian, O.; Vincent, P.A.; Kim, K.S.; Lum, H., 2010. *P120 Catenin*

- Represses Transcription through Kaiso in Endothelial Cells.* Microvasc. Res. 80(2), 233-9.
12. **O'Donnell, J. J.**; Zhang, J.; Forsyth, C.; Lum, H., 2009. Intracellular movement of p120-catenin in Endothelial Cells and Implications for Transcriptional Regulation. FASEB J. 23, 1028.2, (abstract)
  13. Lum, H.; Cheng, F. **O'Donnell, J. J.**; Im, H.; and Holian, O., 2009. *Adherens Junction Protein, P120 Catenin, Represses Transcriptional Activity of Endothelial Cells.* FASEB J. 23:1028.3. (abstract)
  14. Jensen, T.R.; **O'Donnell III, J. J.**; Marks, T.J. 2004. D<sup>o</sup>/F<sup>n</sup>-Mediated Ring-Opening Ziegler Polymerization (ROZP) and Copolymerization with Mono- and Disubstituted Methylenecyclopropanes. Diverse Mechanisms and a New Chain-Capping Termination Process. Organometallics. 23(4), 740-754.
  15. Seyam, A.M.; Stubbert, B.D.; Jensen, T.R.; **O'Donnell III, J.J.**; Stern, C.L.; Marks, T.J. 2004. Organolanthanide Constrained Geometry Complexes Modified for Catalysis: Synthesis, Structure, and Aminoalkane Hydroamination Properties of a Pyrrolidine-substituted Constrained Geometry Organolanthanum Complex. Inorganica Chimica Acta, 357, 4029-4035.

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## PUBLICATIONS – BOOKS/BOOK CHAPTERS

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1. O'Donnell J.T., **O'Donnell III, J.J.** Marijuana: Pharmacology and Medical-Legal Issues. In: Callahan L.M. and Tiftickjian J.M. Medicolegal Aspects of Marijuana Washington Edition. Tucson, AZ: Lawyers & Judges Publishing Company, Inc.: 2016.
2. O'Donnell, J.T., **O'Donnell III, J.J.** eds. Drug Injury. 4th ed. Tucson, AZ: Lawyers & Judges Publishing Company, Inc.: (in press)
3. O'Donnell III, J.J., O'Donnell J.T., and ImObersteg, A.D. Forensic Drug Testing. In: O'Donnell J.T., **O'Donnell III, J.J.**, eds. Drug Injury. 4th ed. Tucson, AZ: Lawyers & Judges Publishing Company, Inc.: (in press)
4. **O'Donnell III, J.J.**, O'Donnell, J.T., Juettner V. General Principles of Pharmacology. In: O'Donnell J.T., **O'Donnell III, J.J.**, eds. Drug Injury. 4th ed. Tucson, AZ: Lawyers & Judges Publishing Company, Inc.: (in press)
5. O'Donnell, J.T., **O'Donnell III, J.J.** Allergic Drug Reactions. In: O'Donnell J.T., **O'Donnell III, J.J.** eds. Drug Injury. 4th ed. Tucson, AZ: Lawyers & Judges Publishing Company, Inc.: (in press)
6. O'Donnell, J.T., Marks, D.H., Danese, P., and **O'Donnell III, J.J.** Drug-induced Liver Disease. In: O'Donnell J.T., **O'Donnell III, J.J.** eds. Drug Injury. 4th ed. Tucson, AZ: Lawyers & Judges Publishing Company, Inc.: (in press)
7. O'Donnell, J.T., **O'Donnell III, J.J.** Dangers of Opiates. In: O'Donnell J.T., **O'Donnell III, J.J.** eds. Drug Injury. 4th ed. Tucson, AZ: Lawyers & Judges Publishing Company, Inc.: (in press)
8. **O'Donnell III, J.J.**, O'Donnell, J.T. Drug-induced Falls. In: O'Donnell J.T., **O'Donnell III, J.J.**, eds. Drug Injury. 4th ed. Tucson, AZ: Lawyers & Judges Publishing Company, Inc.: (in press)
9. **O'Donnell III, J.J.**, O'Donnell, J.T., ImObersteg, A.D. Drug Testing in the Workplace. In: O'Donnell J.T., **O'Donnell III, J.J.**, eds. Drug Injury. 4th ed. Tucson, AZ: Lawyers & Judges Publishing Company, Inc.: (in press)
10. O'Donnell, J.T., **O'Donnell III, J.J.** Alcohol. In: O'Donnell J.T., **O'Donnell III, J.J.**, eds. Drug Injury. 4th ed. Tucson, AZ: Lawyers & Judges Publishing Company, Inc.: (in press)
11. O'Donnell, J.T., **O'Donnell III, J.J.**, Benjamin, D.M. Marijuana: Pharmacology and Medical-Legal Issues. In: O'Donnell J.T., **O'Donnell III, J.J.**, eds. Drug Injury. 4th ed. Tucson, AZ: Lawyers & Judges Publishing Company, Inc.: (in press)
12. Benjamin D, O'Donnell JT and **O'Donnell JJ.** Pharmacology and Toxicology of Marijuana. In: *Legal Medicine and Medical Ethics*, 9th Edition, American College of Legal Medicine, 2015.
13. O'Donnell JT and **O'Donnell JJ.** Pharmacology of Marijuana, in Tiftickjian J. *Medical Legal Aspects of Marijuana – Colorado Edition*. L&J Publishers, Tucson, 2015.
14. O'Donnell JT and **O'Donnell JJ.** Alcohol in Civil Litigation. In: Caplan Y and Goldberger B eds., *Garriott's Medicolegal Aspects of Alcohol*, 6<sup>th</sup> Edition, October 2014.
15. **O'Donnell III J.J.**, O'Donnell JT, and Juettner VM. 2012. In: Basic Pharmacology in Drug Injury: Liability, Analysis, and Prevention, 3<sup>rd</sup> Ed. L&J Publ, Tucson, AZ.

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## PUBLICATIONS – VIDEOS

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1. **O'Donnell III J.J.** *Autobrewery*; 11/2016. Available at: <http://pharmaconsultantinc.com/category/videos/>
2. **O'Donnell III J.J.** *Ambien Sleep Driving*; 10/2016. Available at: <http://pharmaconsultantinc.com/category/videos/>
3. **O'Donnell III J.J.** *Retrograde Extrapolation*; 8/2016. Available at: <http://pharmaconsultantinc.com/category/videos/>

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**CONFERENCES/DEPARTMENTAL SEMINARS**

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1. 3/2016, Traffic Law CLE, Northwest Suburban Bar Association, *DUI and Prescription Drugs*, Arlington Heights, IL.
2. 3/2016, Traffic Law CLE, Northwest Suburban Bar Association, *Retrograde Extrapolation*, Arlington Heights, IL.
3. 4/2014, Indiana University School of Medicine Seminar, *Gap Junction Protein Connexin 43 (Cx43) Exacerbates Lung Vascular Permeability*, South Bend, IN. **O'Donnell III, J.J.** (Invited Talk)
4. 2/2014, Haim and Jane Graumann Nagirner Weinstein Centennial Symposium Series, Rosalind Franklin University. *Gap Junction Protein Connexin 43 (Cx43) Exacerbates Lung Vascular Permeability*, Chicago, IL. **O'Donnell III, J.J.** (Invited Talk)
5. 7/2013, International Gap Junction Conference, Gap Junction Protein Connexin 43 (Cx43) Exacerbates Lung Vascular Permeability. Charleston, SC. **O'Donnell III, J.J.**; Birukova, A.A.; Beyer, E.C.; Birukov, K.G. (Invited Talk)
6. 6/2013, American Society for Pharmacology and Experimental Therapeutics (ASPET) Great Lakes Chapter Meeting, *Gap Junction Protein Connexin 43 (Cx43) Exacerbates Lung Vascular Permeability*. Chicago, IL. **O'Donnell III, J.J.**; Birukova, A.A.; Beyer, E.C.; Birukov, K.G.
7. 5/2013, American Thoracic Society Conference, *Gap Junction Protein Connexin 43 (Cx43) Exacerbates Lung Vascular Permeability*. Philadelphia, PA. **O'Donnell III, J.J.**; Birukova, A.A.; Beyer, E.C.; Birukov, K.G.
8. 2/2013, Rush University Pharmacology Department Seminar, *The Role of Connexins in the Regulation of Endothelial Permeability*. Chicago, IL. **O'Donnell III, J.J.** (invited)
9. 5/2011, Chicago Signal Transduction Symposium, *Loss of P120ctn Upregulates Transcription of Pro-inflammatory Adhesion Molecules in Human Endothelial Cells*. Chicago, IL. **O'Donnell III, J.J.**; Zhuge, Y.; Cheng, F.; Thomas, L.L.; Forsyth, C. B.; Lum, H.
10. 5/2011, Rush University Research Forum. *Loss of P120ctn Upregulates Transcription of Pro-inflammatory Adhesion Molecules in Human Endothelial Cells*. Chicago, IL. **O'Donnell III, J.J.**; Zhuge, Y.; Cheng, F.; Thomas, L.L.; Forsyth, C. B.; Lum, H.
11. 3/2011, Rush University Pharmacology Department Seminar, *Loss of P120 Catenin Upregulates Transcription of Pro-inflammatory Adhesion Molecules in Human Endothelial Cells*. Chicago, IL. **O'Donnell, J.J.**
12. 4/2010, Rush University Research Forum, *P120 Catenin Suppresses the Inflammatory Response in Endothelial Cells*. Chicago, IL. **O'Donnell, J.J.**; Cheng, F.; Zhang, J.; Zhuge, Y.; Holian, O.; Lum, H.
13. 4/2010, Experimental Biology Conference, *P120 Catenin Suppresses the Inflammatory Response in Endothelial Cells*. Anaheim, CA. **O'Donnell, J.J.**; Cheng, F.; Zhuge, Y.; Zhang, J.; Holian, O.; Lum, H.
14. 2/2010, Rush University Pharmacology Department Seminar, *P120 Catenin Suppresses the Inflammatory Response in Endothelial Cells*. Chicago, IL. **O'Donnell, J.J.**
15. 3/2009, Experimental Biology Conference, *Nuclear Translocation of P120-catenin in Endothelial Cells and Implications for Transcriptional Regulation*. New Orleans, LA, **O'Donnell, J. J.**; Zhang, J.; Forsyth, C.; Lum, H.
16. 3/2009, Experimental Biology Conference, *Adherens Junction Protein, P120 Catenin, Represses Transcriptional Activity of Endothelial Cells*. New Orleans, LA. Lum, H.; Cheng, F.; **O'Donnell, J. J.**; Im, H.; Holian, O.
17. 5/2009, Rush University Pharmacology Department Seminar, *Intercellular Movement of P120-catenin in Endothelial Cells: Implications for Transcription Regulation*. Chicago, IL. **O'Donnell, J.J.**
18. 4/2009, Rush University Research Forum, *Intracellular Movement of P120-catenin in Endothelial Cells and Implications for Transcriptional Regulation*. Chicago, IL. **O'Donnell, J.J.**; Zhang, J.; Forsyth, C.; Lum, H.
19. 4/2009, Rush University Research Forum, *Adherens Junction Protein, P120 Catenin, Suppresses Transcription of Inflammatory Genes in Human Microvascular Endothelial Cells*. Chicago, IL. Cheng, F.; **O'Donnell III, J.J.**; Im, H.J.; Holian, O.; Kim, K.S.; Lum, H.
20. 5/2008, Rush University Pharmacology Department Seminar, *Junctional Protein P120 Catenin Enhances Barrier Function and Represses Transcription in Endothelial Cells*. Chicago, IL. **O'Donnell, J.J.**
21. 4/2008, Rush University Research Forum, *Junctional Protein P120 Catenin Enhances Barrier Function and Represses Transcription in Endothelial Cells*. Chicago, IL. **O'Donnell III, J. J.**; Cheng, F.; Zhang, J.; Holian, O.; Predescu, S.; Lum, H.
22. 5/2007, Rush University Pharmacology Department Seminar, *Role of P120 Catenin in the Regulation of Kaiso-mediated Transcription Repression in Endothelial Cells*, Chicago, IL. **O'Donnell, J.J.**
23. 9/2006, Rush University Pharmacology Department Seminar, *Role of P120 Catenin in the Regulation of Kaiso-mediated Transcription Repression in Endothelial Cells*, Chicago, IL. **O'Donnell, J.J.**

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## SELECTED LABORATORY TECHNIQUES

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**Bioinformatics/Computer skills:**

QIIME, Uparse, UClust, Usearch, Oligotyping, UNIX, python, R, Excel, SPSS, Reference Manager, Mathcad, Powerpoint, Microsoft Word

**Analytical Chemistry:** method validation for analytical instrumentation, nuclear magnetic resonance (nmr) spectroscopy, gas chromatography (GC), mass spectrometry (MS), high performance liquid chromatography (HPLC), Liquid chromatography/mass spectrometry (LC/MS), infrared spectrometry, thermal gravimetric analysis (TGA), differential scanning calorimetry (DSC), thin layer chromatography (TLC)

**Synthetic Chemistry:** air-free chemistry for organometallic synthesis (Schlenk line, glovebox), organic synthetic chemistry

**Molecular biology:**

molecular cloning and subcloning, DNA gel electrophoresis, RNAi technology, RT-PCR (with primer design,) RNA/DNA concentration measurement with Nanodrop

**Protein work:**

SDS-PAGE, Western blot, protein concentration determination

**Imaging techniques:**

immunofluorescence, immunohistochemistry, confocal microscopy, live imaging, Licor/Odyssey

**Animal models:**

intraperitoneal and subcutaneous injection, submandibular bleed, cardiac exsanguination, euthanasia, restraint.

**Cell culture:**

transfection, endothelial cell types (HPAEC, PMVEC, HBMEC, BPAEC)

**Specialized techniques:**

Luciferase reporter assay, dye transfer assay (gap junction function), dye uptake assay (hemichannel function), neutrophil isolation and adhesion assay, electrical cell-substrate impedance signaling (ECIS) for monitoring barrier function, cyclic stretch, adenovirus infection, UV spectroscopy

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## ADDITIONAL COURSEWORK

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Basic Computing for Bioinformatics (SP15-BIOS-60132-01) (audited, completed all exams and projects) 2015

Introduction to Computer Science and Programming Using Python (MITx – 6.00.1x) 2015

Introduction to Computational Thinking and Data Science (MITx – 6.00.2x) 2015