

### Kim Claire O'Connor

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### Education

Ph.D.	Caltech	Major: Chemical Engineering Minor: Biology	GPA 3.8 Advisor: James Bailey	1987
B.S.	Rice University	Major: Chemical Engineering Magna Cum Laude	GPA 3.8 Advisor: Larry McIntire	1982

### Primary Appointments

1990-present	Tulane University:	Professor, Chemical & Biomolecular Engineering Dept., 2003-present Professor, Chemical Engineering Dept., 2002-2003 Associate Professor, Chemical Engineering Dept., 1996-2002 Assistant Professor, Chemical Engineering Dept., 1990-1996
1988-1990	Postdoctoral Research Fellow, Northwestern University:	Chemical Engineering Dept. Biochemistry, Molecular Biology & Cell Biology Dept.
1987-1988	Postdoctoral Research Fellow, Caltech,	Chemistry Dept.

### Related Experience

2014-present	Faculty, Tulane Center for Computational Science
2012-present	Faculty, DeBaKey Scholars Program
2009-present	Faculty, Tulane Center for Stem Cell Research and Regenerative Medicine
2006-present	Faculty, Biological Chemistry Program, Tulane
1999-present	Adjunct Assoc. Professor, Department of Surgery, Tulane Medical School
1994-present	Faculty, Tulane Cancer Center
1991-present	Faculty, Interdisciplinary Molecular & Cellular Biology Graduate Program (1991-2006), renamed Biomedical Sciences Graduate Program (2006-present) Tulane Medical School (100+ faculty across 3 campuses): Steering Committee Member, 1993-2006 Co-Director, 1996-1999 (elected) Interim Director, 1997 (with Prof. Bill Toscano)
2005	Visiting Professor, Center for Cell and Gene Therapy, Baylor College of Medicine

### Honors

Gaden Award for an outstanding paper published in Biotechnology & Bioengineering, 2013  
Poster finalist, European Society for Animal Cell Technology (Germany, 1993; Austria, 2011)  
IDEA Award for technology innovation, Tulane University, 2011, 2014  
Oliver Fund Scholar Award Finalist, Tulane University, for research in regenerative medicine, 2010  
Tulane Health Sciences Award for Leadership & Excellence in Intercampus Collaborative Research, 2005  
Editorial Board Member, Journal of Cellular and Molecular Medicine, 2004-2006  
Interdisciplinary Teaching Award, Tulane University, 2001  
Society of Tulane Engineers and Lee H. Johnson Award for Teaching Excellence, 2001  
Who's Who Among American Teachers, 2000, 2005  
Provost's Award for Excellence in Undergraduate Teaching, Tulane University, 1999  
NASA Space Act Award, 1994, 1995, 1996  
Sigma Xi, 1987  
Weyerhaeuser Company Foundation Fellow, 1982-1983  
Outstanding Engineering Student Award, Texas Society of Professional Engineers, 1982  
Magna Cum Laude, Rice University, 1982  
Tau Beta Pi, 1982  
Max Roy Merit Scholar, 1981-1982  
Phi Lambda Upsilon, 1981  
George R. Brown Engineering Merit Scholar, 1980-1982

Robert A. Welch Merit Scholar, 1978-1982

### Research Areas

Stem Cell Technology: mesenchymal stem cells, clonal heterogeneity, cell signaling, aging and regenerative therapies

### Publications

102 Total: 57 Peer-Reviewed Publications (2 in preparation) and Patents, 23 Abstracts, 22 Proceedings  
Total citations = 900, citations/year = 117, average citations/article = 18, h index = 15, Researcher ID = H-3145-2012 (<http://www.researcherid.com/rid/H-3145-2012>)

#### Peer-Reviewed Publications (\* Corresponding Author)

KC Russell, HA Tucker, BA Bunnell, M Andreeff, W Schober, AS Gaynor, KL Strickler, S Lin, MR Lacey and **KC O'Connor\***. Cell-surface expression of neuron-glia antigen 2 (NG2) and melanoma cell adhesion molecule (CD146) in heterogeneous cultures of marrow-derived mesenchymal stem cells. *Tissue Eng Part A*, 19: 2253-66 (2013).

**K O'Connor\***, BL Barrilleaux, DG Phinney, BW Fischer-Valuck, KC Russell and DJ Prockop. Regulating in vitro motility of human mesenchymal stem cells with macrophage migration inhibitory factor (MIF) and a small-molecule MIF antagonist. Cellular Solutions for Clinical Challenges, N Jenkins, N Barron and PM Alves, Eds. (Springer Publishers, Netherlands, 2012), 149-160.

KC Russell, MR Lacey, JK Gilliam, HA Tucker, DG Phinney and **KC O'Connor\***. Clonal analysis of proliferation potential of human bone marrow mesenchymal stem cells as a function of potency. *Biotechnol Bioeng*, 108: 2716-26 (2011). **[FEATURED ARTICLE; K O'Connor earned the 2013 Gaden Award from Biotechnology & Bioengineering for this article.]**

KC Russell, DG Phinney, MR Lacey, BL Barrilleaux, KE Meyertholen and **KC O'Connor\***. In vitro high-capacity assay to quantify the clonal heterogeneity in trilineage potential of mesenchymal stem cells reveals a complex hierarchy of lineage commitment. *Stem Cells*, 28: 788-98 (2010). **[Among Top 50 Downloaded Articles in Stem Cells for March 2010]**

BL Barrilleaux, BW Fischer-Valuck, JK Gilliam, DG Phinney and **KC O'Connor\***. Activation of CD74 inhibits migration of human mesenchymal stem cells. *In Vitro Cell Dev Biol - Anim*, 46: 566-72 (2010).

BW Fischer-Valuck, BL Barrilleaux, DG Phinney, KC Russell, DJ Prockop and **KC O'Connor\***. Migratory response of mesenchymal stem cells to macrophage migration inhibitory factor and its antagonist as a function of colony-forming efficiency. *Biotechnol Lett*, 32: 19-27 (2010).

BL Barrilleaux, DG Phinney, BW Fischer-Valuck, KC Russell, G Wang, DJ Prockop and **KC O'Connor\***. Small-molecule antagonist of macrophage migration inhibitory factor enhances migratory response of mesenchymal stem cells to bronchial epithelial cells. *Tissue Eng Part A*, 15: 2335-46 (2009).

**KC O'Connor\***. An introductory course in bioengineering and biotechnology for chemical engineering sophomores. *Chem Eng Edu*, 41: 247-52 (2007).

**K O'Connor\***, C Vidulescu, S Clejan, H Song and M Venczel. Predicting tissue assembly of prostate cancer spheroids. Cell Technology Processes for Cell Products, R Smith, Ed. (Springer Publishers, Netherlands, 2007), 297-302.

**KC O'Connor\***, JW Muhitch, DJ Lacks and M Al-Rubeai. Modeling suppression of cell death by Bcl-2 over-expression in myeloma NS0 6A1 cells. *Biotechnol Lett*, 28: 1919-24 (2006).

BL Barrilleaux, DG Phinney, DJ Prockop and **KC O'Connor\***. Ex vivo engineering of living tissue with adult stem cells. *Tissue Eng*, 12: 3007-19 (2006). **[FEATURED ARTICLE]**

(Hurricane Katrina closed Tulane for four months in 2005 and severely damaged Prof. O'Connor's lab.)

**KC O'Connor\*** and M Venczel. Predicting aggregation kinetics of DU145 human prostate cancer cells in liquid-overlay culture. *Biotechnol Lett*, 27: 1663-8 (2005).

**KC O'Connor\***. Incorporating molecular and cellular biology into a chemical engineering degree program. *Chem Eng Edu*, 39: 124-127 & 133 (2005).

H Song, S Jain, RM Enmon and **KC O'Connor\***. Restructuring dynamics of DU 145 and LNCaP prostate cancer spheroids. *In Vitro Cell Dev Biol - Anim*, 40: 262-7 (2004). **[FEATURED ARTICLE]**

C Vidulescu, S Clejan and **KC O'Connor\***. Vesicle traffic through intercellular bridges in DU 145 human prostate cancer cells. *J Cell Mol Med*, 8: 388-96 (2004).

H Song, O David, S Clejan, CL Giordano, H Pappas-LeBeau, L Xu and **KC O'Connor\***. Spatial composition of prostate cancer spheroids in mixed and static cultures. *Tissue Eng*, 10: 1266-76 (2004).

- H Song, **KC O'Connor\***, DJ Lacks, RM Enmon and SK Jain. Monte Carlo simulation of LNCaP human prostate cancer cell aggregation in liquid-overlay culture. *Biotechnol Prog*, 19: 1742-9 (2003).
- KC O'Connor\***, H Song, N Rosenzweig and DA Jansen. Extracellular matrix substrata alter adipocyte yield and lipogenesis in primary cultures of stromal-vascular cells from human adipose. *Biotechnol Lett*, 25: 1967-72 (2003).
- H Song, **KC O'Connor\***, O David, CL Giordano, H Pappas-LeBeau and S Clejan. Immunohisto-chemical analysis of differentiation in mixed and static prostate cancer spheroids. *J Cell Mol Med*, 7: 180-6 (2003).
- RM Enmon, **KC O'Connor\***, H Song, DJ Lacks and DK Schwartz. Aggregation kinetics of well and poorly differentiated human prostate cancer cells. *Biotechnol Bioeng*, 80: 580-8 (2002).
- KC O'Connor\***, NL Cowger, DCR De Kee and RP Schwarz. Prolonged shearing of insect cells in a Couette bioreactor. *Enzyme Microb Technol*, 31: 600-8 (2002).
- H Song, **KC O'Connor\***, KD Papadopoulos and DA Jansen. Differentiation kinetics of in vitro 3T3-L1 preadipocyte cultures. *Tissue Eng*, 8: 1071-81(2002).
- S Clejan\*, **K O'Connor** and N Rosenzweig. Tri-dimensional prostate cell cultures in simulated microgravity and induced changes in lipid second messengers and signal transduction. *J Cell Mol Med*, 5: 60-73 (2001).
- NJ Hallab\*, KJ Bundy, **K O'Connor**, RL Moses and JJ Jacobs. Evaluation of metallic and polymeric biomaterial surface energy and surface roughness characteristics for directed cell adhesion. *Tissue Eng*, 7: 55-71 (2001).
- RM Enmon, **KC O'Connor\***, DJ Lacks, DK Schwartz and RS Dotson. Dynamics of spheroid self-assembly in liquid-overlay cultures of DU 145 human prostate cancer cells. *Biotechnol Bioeng*, 72: 579-91 (2001).
- JW Muhitch, **KC O'Connor\***, DA Blake, DJ Lacks, N Rosenzweig and GF Spaulding. Characterization of aggregation and protein expression of bovine corneal endothelial cells as microcarrier cultures in a rotating-wall vessel. *Cytotechnology*, 32: 253-63 (2000).
- NL Cowger, **KC O'Connor\***, TG Hammond, DJ Lacks and GL Navar. Characterization of bimodal cell death of insect cells in a rotating-wall vessel and shaker flask. *Biotechnol Bioeng*, 64: 14-26 (1999).
- KC O'Connor\***. Three-dimensional cultures of prostatic cells: tissue models for the development of novel anti-cancer therapies. *Pharm Res*, 16: 486-93 (1999) **[INVITED]**.
- N Cowger and **K O'Connor\***. Enhanced apoptosis in insect cells cultivated in simulated microgravity. *New Developments and New Applications in Animal Cell Technology*, O-W Merten, P Perrin and B Griffiths, Eds. (Kluwer Academic Publishers, Dordrecht, 1998), 231-3.
- KM Francis, **KC O'Connor\*** and GF Spaulding. Cultivation of Fall Armyworm Ovary cells in simulated microgravity. *In Vitro Cell Dev Biol - Anim*, 33: 332-6 (1997) **[INVITED]**.
- KC O'Connor\***, RM Enmon, RS Dotson, AC Primavera and S Clejan. Characterization of autocrine growth factors, their receptors and extracellular matrix present in three-dimensional cultures of DU 145 human prostate carcinoma cells grown in simulated microgravity. *Tissue Eng*, 3: 161-71 (1997).
- NL Cowger, **KC O'Connor\*** and JE Bivins. Influence of simulated microgravity on the longevity of insect-cell culture. *Enzyme Microb Technol*, 20: 326-32 (1997).
- N Cowger and **K O'Connor\***. Applications of simulated microgravity to insect-cell culture. *Invertebrate Cell Culture: Novel Directions and Biotechnology Applications*, K Maramorosch and J Mitsuhashi, Eds. (Science Publishers, Enfield, New Hampshire, 1997), 131-8 **[INVITED]**.
- K O'Connor\***, R Enmon, A Primavera, R Dotson and S Clejan. Characterization of extracellular matrix in three-dimensional cultures of DU 145 human prostate carcinoma cells. *Animal Cell Technology: From Vaccines to Genetic Medicine*, MCarrondo, B Griffiths and J Moreira, Eds. (Kluwer Academic Publishers, Dordrecht, 1997), 571-5.
- S Clejan, **KC O'Connor\***, NL Cowger, MK Cheles, S Haque and AC Primavera. Effects of simulated microgravity on DU 145 human prostate carcinoma cells. *Biotechnol Bioeng*, 50: 587-97 (1996) **[INVITED]**.
- NJ Hallab, KJ Bundy\*, **K O'Connor**, R Clark and RL Moses. Cell adhesion to biomaterials: correlations between surface charge, surface roughness, adsorbed protein and cell morphology. *J Long-Term Effects Med Implants*, 5: 209-31 (1995) **[INVITED]**.
- W Hugler, **KC O'Connor\***, SJ Landry and JE Bivins. Induction of stress proteins in anoxic and hyperthermic *Spodoptera frugiperda* cells. *Cytotechnology*, 17: 91-101 (1995) **[INVITED]**.

- K Francis, **K O'Connor\***, D Blake, D Caldwell and G Spaulding. Growth and structure of corneal tissue in simulated microgravity. *Animal Cell Technology: Developments Towards the 21st Century*, E Beuvery, J Griffiths and W Zeijlemaker, Eds. (Kluwer Academic Publishers, Dordrecht, 1995), 959-63.
- KJ Bundy\*, OC Roberts, **KC O'Connor**, B Rahn and V McLeod. Quantification of fibroblast adhesion to biomaterials using a fluid mechanics approach. *J Mat Sci: Mater Med*, 5: 500-2 (1994).
- N Kommareddi, **KC O'Connor** and VT John\*. EPR characterization of alpha-chymotrypsin active site dynamics in reversed micelles at enhanced gas pressures and after subjection to clathrate formation conditions. *Biotechnol Bioeng*, 43: 215-24 (1994).
- K O'Connor\***, T Prewett, T Goodwin, K Francis, A Andrews and G Spaulding. Animal-cell cultivation in the NASA rotating-wall vessel. *Animal Cell Technology: Products for Today, Prospects for Tomorrow*, R Spier, J Griffiths and W Berthold, Eds. (Butterworth-Heinemann, London, 1994), 293-5.
- KC O'Connor\*** and ET Papoutsakis. Agitation effects on microcarrier and suspension CHO cultures. *Biotechnol Tech*, 6: 323-8 (1992).
- KC O'Connor** and JE Bailey\*. ESR investigations of free and immobilized glutamate dehydrogenase. *Biotechnol Bioeng*, 34: 110-6 (1989).
- KC O'Connor**, H-J Schütz and JE Bailey\*. Alteration of substrate regulation patterns in glutamate dehydrogenase by enzyme immobilization. *Biotechnol Bioeng*, 33: 896-905 (1989).
- KC O'Connor** and JE Bailey\*. Hydrolysis of emulsified tributyrin by porcine pancreatic lipase. *Enzyme Microb Technol*, 10: 352-6 (1988).

#### Patents

- KC O'Connor**. Cell-Surface Marker of Early MSC Aging. Provisional Patent Application 61/978,708, USA (2014).
- KC O'Connor** and KC Russell. Method for identification and culture of multipotent mesenchymal stem cells with high proliferation potential. Utility patent application 13992953, USA (2013).
- Ibid., Utility patent application 11851821.6, Europe (2013).
- Ibid., Utility patent application, 2818699, Canada (2013).
- Ibid., Utility patent application, 2011349168, Australia (2013).
- Ibid., Utility patent application, 2013-546358, Japan (2013).
- Ibid., Utility patent application, 201180061596.0, China (2013).
- Ibid., Utility patent application, 4707/DELNP/2013, India (2013).
- KC O'Connor**, GF Spaulding, TJ Goodwin, LA Aten, KM Francis, DR Caldwell, TL Prewett and WS Fitzgerald. Three-dimensional optic tissue culture and process. US Patent 5,962,324 (1999).
- GF Spaulding, TJ Goodwin, **KC O'Connor**, KM Francis, AD Andrews and TL Prewett. Recombinant protein production and insect cell culture and process. US Patent 5,637,477 (1997). Licensed to VivoRx Pharmaceuticals, Inc., Santa Monica, CA (NASA DE-200, partially exclusive license).

#### Abstracts

- Spotlight:** Clonal assay resolves proliferation-potency relationship in mesenchymal stem cells. *Biotechnol Bioeng*, 108: fm vi (2011).
- KC O'Connor, KC Russell, DG Phinney, MR Lacey, BL Barrilleaux and KE Meyertholen. High-capacity assay to quantify the clonal heterogeneity in potency of mesenchymal stem cells. *BMC Proceedings*, 5: O14 (2011).
- BL Barrilleaux, DG Phinney, BW Fischer-Valuck, KC Russell, G Wang, DJ Prockop and KC O'Connor. Small-molecule antagonist of macrophage migration inhibitory factor enhances migratory response of mesenchymal stem cells to bronchial epithelial cells. *BioProcess Int*, 7: S19 (2009).
- KC Russell, DG Phinney, MR Lacey, BL Barrilleaux, K Meyertholen, DJ Prockop and KC O'Connor. High-capacity assay to evaluate colony-forming efficiency and multipotency of bone marrow stromal cells. *FASEB J*, 23: LB247 (2009).
- K O'Connor and H Song. Computational tissue engineering: Monte-Carlo simulation of restructuring dynamics during tissue self-assembly of prostate cancer spheroids. *In Vitro Cell Dev Biol - Animal*, 44: S33 (2008).
- K O'Connor, H Song and S Clejan. Computer-aided tissue engineering: predicting self-assembly of prostate cancer spheroids. *In Vitro Cell Dev Biol - Animal*, 42: 19-A (2006).
- H Song, S Jain, RM Enmon and KC O'Connor. Restructuring of prostate spheroids. *In Vitro Report, Journal Highlights*, 39.2 (2005).

- CF Vidulescu, S Clejan and K O'Connor. Vesicle traffic through intercellular bridges in DU145 human prostate cancer cells. *FASEB J*, 19: A822 (2005).
- H Song, K O'Connor, D Lacks, R Enmon and S Jain. Monte Carlo simulation of LNCaP human prostate cancer cell aggregation in liquid-overlay culture. *In Vitro Cell Dev Biol - Animal*, 40: 35-A (2004).
- G Spaulding, T Goodwin, L Aten, K O'Connor, D Caldwell and K Francis. Growing three-dimensional corneal tissue in a bioreactor. *NASA Tech Briefs* 27: 65 (2003).
- H Song, K O'Connor, K Papadopoulos and D Jansen. Differentiation kinetics of in vitro 3T3-L1 preadipocyte cultures. *In Vitro Cell Dev Biol - Animal*, 39: 30A (2003).
- R Enmon, K O'Connor, H Song, D Lacks and D Schwartz. Spheroid self-assembly of well and poorly differentiated prostate cancer cells. *In Vitro Cell Dev Biol - Animal*, 38: 7A (2002).
- R Enmon, K O'Connor, D Lacks, D Schwartz and R Dotson. Population dynamics of spheroid self-assembly of prostate cancer cells. *In Vitro Cell Dev Biol - Animal*, 37: 29A (2001).
- J Muhitch, K O'Connor, D Blake and N Rosenzweig. Cultivation of bovine corneal endothelial cells in rotating-wall vessel. *In Vitro Cell Dev Biol - Animal*, 35: 546 (1999).
- N Cowger, K O'Connor, D Lacks, D DeKee and R Schwarz. Modeling population dynamics of insect cells cultured in rotating-wall vessel and shaker flask. *In Vitro Cell Dev Biol - Animal*, 35: 36A (1999).
- G Spaulding, T Goodwin, L Aten, K O'Connor, D Caldwell and K Francis. Growing three-dimensional corneal tissue in a bioreactor. *NASA Tech Briefs* 21: 74-5 (1997).
- K O'Connor, S Clejan, R Enmon, N Cowger and A Primavera. The use of three-dimensional growth to develop tissue-like spheroids and bilayers as prostate cancer cell models. *In Vitro Cell Dev Biol - Animal*, 33: 28A (1997).
- G Spaulding, T Goodwin, T Prewett, A Andrews, K Francis and K O'Connor. Cultivating insect cells to produce recombinant proteins. *NASA Tech Briefs* 20: 56 (1996).
- N Cowger, K O'Connor and J Bivins. Characterization of microgravity cultures of insect cells in stationary and death phase. *In Vitro Cell Dev Biol - Animal*, 32: 37A (1996).
- K O'Connor, N Rosenzweig and S Clejan. Simulated microgravity inhibition of in vitro aggressiveness of prostate cancer is accompanied by change in signal transduction and lipid second messengers. *FASEB J*, 10: A1395 (1996).
- N Hallab, K Bundy, K O'Connor and R Moses. Biofilm composition and cellular morphology as related to cellular adhesion to biomaterials. *J Long-Term Effects Med Implants*, 5: 87-8 (1995) **[FEATURED]**.
- K Francis, N Johnson, K O'Connor and G Spaulding. Metabolic activity of insect cells cultured in simulated microgravity. *In Vitro Cell Dev Biol - Animal*, 30A: 55 (1994).
- K Francis, K O'Connor, D Blake, D Caldwell and G Spaulding. Growth and structure of corneal tissue in simulated microgravity. *Cytotechnology*, 14: Suppl. 1, 7.16 (1994).

#### *Proceedings*

- K O'Connor, Elmer Gaden Award Lecture. American Chemical Society, 245: 94-BIOT (2013).
- K O'Connor, K Russell, M Lacey, A Tucker, and D Phinney. Analysis of the proliferation-potency relationship in heterogeneous cultures of mesenchymal stem cells with a high-capacity clonal assay. American Chemical Society, 245: 25-BIOT (2013).
- K O'Connor, H Song, C Giordano, S Clejan, O David and H LeBeau. Expression of multidrug resistance proteins in static and mixed cultures of prostate cancer spheroids. *Proceedings of the American Association for Cancer Research*, 44: 736 (2003).
- H Song, K O'Connor, C Giordano, S Clejan, O David and H LeBeau. Influence of mixing on phenotypic differences in well and poorly differentiated prostate cancer spheroids. American Chemical Society, 225: U225 (2003).
- K O'Connor, N Cowger and D Lacks. Modeling population dynamics of insect cells cultivated in simulated microgravity. *Proceedings of the 2<sup>nd</sup> Pan Pacific Basin Workshop on Microgravity Sciences*, paper BT-1166 (2001).
- R Enmon, K O'Connor, D Lacks and D Schwartz. Modeling multicellular spheroid formation from human prostate carcinoma cell cultures. *Proceedings of the American Association for Cancer Research*, 40: 463 (1999).
- G Piringer, S Bhattacharya and K O'Connor. Anaerobic acidogenic pretreatment of nitrophenol-containing wastewater. American Chemical Society, 218: U702-3 (1999).
- R Enmon, K O'Connor, D Lacks, D Schwartz and S Clejan. Use of 3D growth to develop tissue-like spheroids and bilayers as prostate cancer cell models. American Chemical Society, 218: U917 (1999).

- K O'Connor, S Clejan, R Enmon, N Cowger, R Dotson, M Cheles and S Haque. Effects of simulated microgravity on growth patterns and select biological markers of DU 145 human prostate carcinoma cells. American Institute of Aeronautics and Astronautics, paper 99-0958 (1999).
- N Cowger, K O'Connor, T Hammond, G Navar and D Lacks. Characterization of bimodal cell death of insect cells cultured in a rotating-wall vessel and shaker flask. American Chemical Society, 216: U254 (1998).
- N Cowger and K O'Connor. Application of the extreme low-shear regime of simulated microgravity to insect-cell cultivation. American Institute of Aeronautics and Astronautics, paper 98-0461 (1998).
- N Hallab, K Bundy and K O'Connor. Surface properties affecting cellular adhesion. Proceedings of the Annual Meeting of the Society for Biomaterials, 30 (1997).
- K O'Connor, S Clejan, S Haque, N Cowger, R Enmon, M Cheles and A Primavera. Effects of simulated microgravity on DU 145 human prostate carcinoma cells. American Chemical Society, 211: 226 (1996).
- N Hallab, K Bundy, K O'Connor, R Clark and R Moses. Surface charge, biofilm composition and cellular morphology as related to cellular adhesion to biomaterials. Proceedings of the Southern Biomedical Engineering Conference, 81-4 (1995).
- K Francis, K O'Connor, N Johnson and G Spaulding. Viral infection of insect cells cultured in simulated microgravity. Proceedings of the Louisiana Aerospace Forum, 139 (1994).
- N Hallab, R Clark, K Bundy and K O'Connor. Surface charge and energy affect fibroblast adhesion to biomaterials. Proceedings of the Annual Meeting of the Society for Biomaterials, 205 (1994).
- K Bundy, K O'Connor, O Roberts, B Rahn, R Clark and N Hallab. Physical and biological effects influencing fibroblast adhesion to biomaterials. Proceedings of the Annual Meeting of the Orthopaedic Research Society, 16 (1994).
- K Francis, K O'Connor, T Prewett, T Goodwin and G Spaulding. Growth, metabolic activity and recombinant protein expression for Fall Armyworm Ovary cells cultured in the NASA high-aspect ratio vessel. American Institute of Aeronautics and Astronautics Space Programs & Technologies Conference, paper 93-4099 (1993).
- K Bundy, B Rahn, K O'Connor, O Roberts and H Gerber. Cell adherence to biomaterials of varying surface characteristics. Proceedings of the Annual Meeting of the Society for Biomaterials, 248 (1993).
- K O'Connor, O Roberts, K Bundy and V McLeod. Strength of cellular adhesion to specific biomaterial surfaces. Proceedings of the Southern Biomedical Engineering Conference, 257-9 (1993).
- K Bundy, K O'Connor, C Roberts and M Sosa. Cell/biomaterial adherence measured with the microjet impingement technique. Proceedings of the Southern Biomedical Engineering Conference, 91-2 (1992).
- V John, J Phillips, N Kommareddi and K O'Connor. Protein extraction and recovery from reversed micelles through pressure-induced micellar phase-transitions. American Chemical Society, 202: 46 (1991).

## Grants

*\$ 6.7 million awarded: \$ 2.7 million as principal investigator, \$ 1.5 million as co-investigator, \$ 2.5 million as collaborator*

### *Grants Awarded with K. O'Connor as Principal Investigator*

Invention Disclosure Enhancement Award, \$ 20,000 Tulane, 11/14-7/15.

Resolving the clonal heterogeneity of osteogenic mesenchymal stem cells at the cellular and molecular levels. B Bunnell (Co-I) and L Nakhleh (Consultant), \$ 513,376 total (\$ 499,377 initial grant + \$ 6,000 REU supplement '12 + \$ 1,999 travel supplement '12 + \$ 6,000 REU supplement '13), NSF (CBET-1066167), 4/11-3/14. **[Highest score among approx. 50 proposals reviewed in the panel]**

Invention Disclosure Enhancement Award, \$ 20,000 Tulane, 3/11-12/11.

Competitive Bridge Funding, \$ 30,000 Tulane, 5/10-4/11.

Mechanism of progenitor enrichment during amplification of marrow stromal cells. D Phinney and M Lacey (Co-I's), and D Prockop (consultant), \$ 141,107 NIH (5 R03 EB007281-02), 6/07-5/10.

Factors influencing plasticity of adult stem cells in co-culture. D Phinney, S Clejan, and S Srivastav (Co-I's), and D Prockop (consultant) \$ 496,381 NSF (BES-0514242), 7/05-6/09.

Spatial organization within prostate cancer spheroids. S Clejan and D De Kee (Co-I's), \$ 522,000, NASA NAG 9-1351, 8/01-9/06.

Spatial organization within prostate cancer spheroids: supplement. \$ 6,000, Tulane Cancer Center, 7/02-6/03.

Use of tissue engineering to develop a breast implant alternative for mastectomy patients. D Jansen (Co-I), \$ 369,005, Joe W. and Dorothy Dorsett Brown Foundation, 5/98-1/02.

Influence of metastatic potential on the kinetics of spheroid self-assembly. \$ 7,000, Tulane Cancer Center, 7/2000-6/01.

Insect-cell cultivation in simulated microgravity. \$ 422,850, NASA NAG9-826, 8/95-12/2000.

Developing three-dimensional spheroids of DU 145 human prostate carcinoma cells as a model of prostatic tumors. \$ 7,000, Tulane Cancer Center, 1/98-12/98.

Renowned women in chemical engineering speaker series. \$ 12,400, Newcomb Foundation, 9/91-8/00.

Three-dimensional cornea regeneration. D Blake and D Caldwell (Co-I's), \$ 10,000, Greater New Orleans Foundation, 5/95-4/96.

Characterization of extracellular matrix in corneal tissue models prepared in simulated microgravity. D Blake and D Caldwell (Co-I's), \$ 5,741, LaSpace, 5/95-4/96.

Mechanisms affecting metastatic potential in three-dimensional cultures of DU 145 human prostate carcinoma cells. S Clejan (Co-I), \$12,250, Tulane Cancer Center, 5/95-4/96.

Insect-cell cultivation in the NASA high-aspect ratio vessel. \$ 30,914, NASA NAG 9-733, 5/94-3/95.

Organ/tissue regeneration in simulated microgravity: a study with corneal cell culture. D Caldwell (Co-I), \$ 10,000, LaSpace, 6/94-5/95.

Three-dimensional cornea regeneration. D Caldwell (Co-I), \$ 13,500, Greater New Orleans Foundation, 5/94-4/95.

Factors affecting recombinant protein expression in animal cells: a study with NASA's RWV. \$ 10,000, LaSpace, 1/93-12/93.

Graduate research assistantship. \$ 11,118, NASA/University Space Research Association, 12/92-9/93.

Expression of the Alzheimer's protease inhibitor domain of the amyloid beta-protein precursor in Sf9 cells. D Mullin (Co-I), \$ 20,000, Interdisciplinary Program in Molecular and Cellular Biology at Tulane, 3/92-2/93.

New research investigator grant. \$ 30,000, Shell Oil Company Foundation, 6/91-5/95.

Investigations of hyper- and hypoxia. \$ 5,000, Tulane NIH-BRSG Program, 6/91-5/92.

Animal-cell culture: reactor studies of *Spodoptera frugiperda*. \$ 4,000, Tulane Committee on Research, 5/91-8/91.

*Grants Awarded with K. O'Connor as Co-Investigator*

Acquisition of a fluorescence activated cell sorter. WT Godbey (PI), K O'Connor, V John, K Papadopoulos and D Overby (Co-I's). \$ 154,842, Louisiana BoR, 6/07.

Confocal video (capillary) microscopy with fluorescence. K Papadopoulos (PI), Y Lu, G Boyd, V John, and K O'Connor (Co-I's). \$ 81,000, NSF 0318995, 4/03-5/04.

Atomic force microscope acquisition for chemical engineering research and education. V John (PI), K O'Connor, K Papadopoulos, R Gonzalez and D Lacks (Co-I's), \$ 131,748, Louisiana BoR, 5/01.

Involvement of reactive oxygen species in breast cancer cells development, maintenance and death. N Rosenzweig (PI), K O'Connor (Mentor Co-I) and D Jansen (Co-I), \$ 150,000, DoD HBCU/MI-Focused Training Award 21C302-1233-7505-20, 7/00-6/02.

Biomaterialization mimetics and particle synthesis in microstructured environments. V John (PI), G McPherson and K O'Connor (Co-I's), \$ 348,000, NSF 10920136-1, 7/92-6/95.

Use of the microjet impingement technique for measuring cell adherence to biomaterials: a feasibility study. K Bundy (PI) and K O'Connor (Co-I), \$ 5,000, Tulane NIH-BRSG Program, 1/92-12/92.

Formation and emission of methane in rice soils: experimental determination and modeling analysis. V Law and C Lindau (PI's), R DeLaune, W Patrick, K O'Connor and S Bhattacharya (Co-I's), \$ 413,155, DoE National Institute for Global Environmental Change, 7/91-6/92.

Formation and emission of methane in rice soils: experimental determination and modeling analysis. V Law and W Patrick (PI's), C Lindau, R DeLaune and K. O'Connor (Co-I's), \$ 221,073, DoE National Institute for Global Environmental Change, 7/90-6/91.

*Grants Awarded with K. O'Connor as Collaborator*

Acquisition of high-end confocal laser scanning microscopy for bioengineering and life science applications at Tulane University. A Robinson (PI), K O'Connor is one of 17 investigators, \$ 342,184, Louisiana BoR, 4/13-3/14.

Lung cancer and stem cells. D Sullivan (PI), G Morris, J Lasky, and D Prockop (Co-I's), K O'Connor and S Hill (consultants). \$ 85,000, Tulane Research Enhancement Fund, 4/07-3/09.

Development of a nationally recognized model in research commercialization, education and workforce development in chemical engineering and the chemical sciences through university and community college collaborations. V John, C Stevens, V De Angelis, and L Goodwin (PIs), K O'Connor is one of several faculty consultants, \$ 1,200,000 for Tulane University, Louisiana BoR, 9/07-8/10.

Research training in surgical oncology. B Jaffe (PI), K O'Connor is one of 15 preceptors, \$ 921,280, NIH 1T32CA65436, 7/97-6/02.

## Presentations

*135 Total: 61 Podium Conference Presentations, 32 Posters, 33 Extramural Invited Speeches, 9 Intramural Invited Speeches*

### *Podium Conference Presentations (\* Speaker)*

K Russell, A Tucker, B Bunnell, M Lacey and K O'Connor\*. Resolving Proliferation-Potency Relationship Identifies Survival Marker for Multipotent Mesenchymal Stem Cells, American Institute of Chemical Engineers, Atlanta, GA, 2014.

K Russell, A Tucker, B Bunnell, M Andreeff, W Schober, A Gaynor, K Strickler, S Lin, M Lacey and K O'Connor\*. Differential expression of neuron-gial antigen 2 (NG2) selects for cell survival during high-throughput enrichment of marrow-derived mesenchymal stem cells. International Conference on Stem Cell Engineering, Society of Biological Engineering & International Society for Stem Cell Research, Coronado, CA, 2014. [Rapid fire talk]

K Russell, A Tucker, B Bunnell, M Andreeff, W Schober, A Gaynor, K Strickler, S Lin, M Lacey and K O'Connor\*. Isolation of a subpopulation of mesenchymal stem cells with enhanced survival based on expression of neuron-gial antigen 2, Tissue Engineering and Regenerative Medicine International Society, Atlanta, GA, 2013.

K Russell, M Lacey, J Gilliam, H Tucker, D Phinney and K O'Connor\*. Analysis of the proliferation-potency relationship in heterogeneous cultures of mesenchymal stem cells with a high-capacity clonal assay, Tissue Engineering and Regenerative Medicine International Society, Houston, TX, 2011.

K Russell, D Phinney, M Lacey, B Barrilleaux, K Meyertholen and K O'Connor\*. High-capacity assay to quantify the clonal heterogeneity in potency of mesenchymal stem cells. European Society for Animal Cell Technology, Vienna, Austria, 2011. [FEATURED]

Ibid., American Institute of Chemical Engineers, Salt Lake City, UT, 2010.

Ibid., (K Russell – speaker), Louisiana Gene Therapy Research Symposium, New Orleans, LA, 2009.

B Barrilleaux, D Phinney, B Fischer-Valuck, K Russell, G Wang, D Prockop and K O'Connor\*. Small-molecule antagonist of macrophage migration inhibitory factor enhances migratory response of mesenchymal stem cells to bronchial epithelial cells. European Society for Animal Cell Technology, Dublin, Ireland, 2009.

Ibid., (Barrilleaux – speaker), American Institute of Chemical Engineers, Philadelphia, PA, 2008.

D Phinney\*, M Dutreil, N Tremain, L Ortiz, I Isakova, D Gaupp, A Pandey, K Russell and K O'Connor. Biochemical heterogeneity of mesenchymal stem cells accounts for their broad therapeutic potential. Plenary session speaker, 1<sup>st</sup> UK-Korea Stem Cell Symposium, Annual Meeting of the Korean Society for Stem Cell Research, Seoul National University, Seoul, South Korea, 2008.

D Phinney\*, M Dutreil, N Tremain, L Ortiz, I Isakova, D Gaupp, A Pandey, K Russell and K O'Connor. A SAGE view of mesenchymal stem cells. Taiwan International Somatic Stem Cell Symposium. Taipei Veterans General Hospital, Taipei, Taiwan, 2008.

K O'Connor\* and H Song. Computational tissue engineering: Monte-Carlo simulation of restructuring dynamics during the self-assembly of prostate cancer spheroids. Society for In Vitro Biology, Tucson, AZ, 2008.

Ibid., American Institute of Chemical Engineers, Salt Lake City, UT, 2007.

K O'Connor\*, M Almagor, C Vidulescu, S Clejan and H Song. Computer-aided tissue engineering: predicting self-assembly of prostate cancer spheroids. American Institute of Chemical Engineers, San Francisco, CA, 2006.

Ibid., Society for In Vitro Biology, Minneapolis, MN, 2006.

Ibid., European Society for Animal Cell Technology, Harrogate, North Yorkshire, UK, 2005.

Ibid., NASA Cell Science Conference, Galveston, TX, 2005.



- L Lawson\*, K O'Connor and K Papadopoulos. Protein conjugation at the oil/water interface of emulsion droplets. Louisiana Conference on Advanced Materials and Emerging Technologies, New Orleans, LA, 2005.
- H Song, R Enmon, S Jain, D Lacks and K O'Connor\*. Monte Carlo simulation of LNCaP human prostate cancer cell aggregation in liquid-overlay culture. Society for In Vitro Biology, San Francisco, CA, 2004. Ibid., NASA Cell Science Conference, Palo Alto, CA, 2004.
- L Lawson\*, K O'Connor, and K Papadopoulos. Protein conjugation at the oil/water interface of emulsion globules, American Chemical Society Colloid and Surface Science Symposium, New Haven, CT, 2004.
- H Song, R Enmon, S Jain, D Lacks and K O'Connor\*. Monte Carlo simulation of LNCaP human prostate cancer cell aggregation in liquid-overlay culture. American Institute of Chemical Engineers, San Francisco, CA, 2003.
- H Song, K O'Connor\*, K Papadopoulos and D Jansen. Differentiation kinetics of in vitro 3T3-L1 preadipocyte cultures. Society for In Vitro Biology, Portland, OR, 2003.
- H Song, K O'Connor\*, C Giordano, S Clejan, O David and H LeBeau. Spatial organization of prostate cancer spheroids in rotating-wall vessel and liquid-overlay culture. NASA Cell Science Conference, Houston, TX, 2003.
- H Song, K O'Connor\*, K Papadopoulos and D Jansen. Differentiation kinetics of in vitro 3T3-L1 preadipocyte cultures. American Institute of Chemical Engineers. Indianapolis, IN, 2002.
- K O'Connor\*, R Enmon, H Song, D Lacks and D Schwartz. Spheroid self-assembly of well and poorly differentiated prostate cancer cells. Society for In Vitro Biology, Orlando, FL, 2002. Ibid., NASA Cell Science Conference, Palo Alto, CA, 2002.
- R Enmon, K O'Connor\*, H Song, D Lacks and D Schwartz. Aggregation kinetics during spheroid self-assembly of well and poorly differentiated prostate cancer cells. American Institute of Chemical Engineers, Reno, NV, 2001.
- K O'Connor\*, N Cowger and D De Kee. Cumulative shear effects on attachment-independent cells in simulated microgravity. 2<sup>nd</sup> Pan-Pacific Basin Workshop on Microgravity Sciences, Pasadena, CA, 2001. Ibid., NASA Cell Science Conference, Houston, TX, 2001.
- R Enmon\*, K O'Connor, D Lacks, D Schwartz and R Dotson. Dynamics of spheroid self-assembly in liquid-overlay cultures of DU 145 human prostate cancer cells. American Institute of Chemical Engineers, Los Angeles, CA, 2000.
- K O'Connor\*, N Cowger, D Lacks, J Muhitch and M Al-Rubeai. Modeling population dynamics of animal cells. American Institute of Chemical Engineers, Dallas, TX, 1999.
- K O'Connor\*, N Cowger, D De Kee, D Lacks, R Schwarz and J Muhitch. Development of a Couette bioreactor for suspension cultures of animal cells. American Institute of Chemical Engineers, Dallas, TX, 1999.
- R Enmon\*, K O'Connor, D Lacks, D Schwartz and R Dotson. The use of three-dimensional growth to develop tissue-like spheroids as prostate cancer cell models. American Chemical Society, New Orleans, LA, 1999.
- N Cowger\*, K O'Connor, D Lacks, D De Kee and R Schwarz. Modeling population dynamics of insect cells cultured in rotating-wall vessel and shaker flask. Society for In Vitro Biology, New Orleans, LA, 1999.
- R Enmon, K O'Connor\*, D Lacks, D Schwartz and S Clejan. Application of simulated microgravity to the development of multicellular spheroids as prostate tumor models. American Institute of Aeronautics and Astronautics, Reno, NV, 1999.
- N Cowger\*, K O'Connor, T Hammond, D Lacks and G Navar. Characterization of bimodal cell death of insect cells cultured in a rotating-wall vessel and shaker flask. American Chemical Society, Boston, MA, 1998.
- N Cowger, K O'Connor\*, T Hammond and G Navar. Application of the extreme low-shear regime of simulated microgravity to insect-cell cultivation. American Institute of Aeronautics and Astronautics, Reno, NV, 1998.
- K O'Connor\*, S Clejan, R Enmon, N Cowger and A Primavera. The use of three-dimensional growth to develop tissue-like spheroids and bilayers as prostate cancer cell models. Society for In Vitro Biology, Washington, DC, 1997.
- N Hallab, K Bundy\* and K O'Connor. Surface properties affecting cellular adhesion. Society for Biomaterials, New Orleans, LA, 1997.

- K O'Connor\*, S Clejan, R Enmon, R Dotson and A Primavera. Characterization of autocrine regulatory processes in DU 145 human prostate carcinoma cells. American Institute of Chemical Engineers, Chicago, IL, 1996.
- N Cowger\*, K O'Connor and J Bivins. Behavior of insect cells during long-term cultivation in simulated microgravity. American Institute of Chemical Engineers, Chicago, IL, 1996.
- N Cowger, K O'Connor\* and J Bivins. Characterization of microgravity cultures of insect cells in stationary and death phase. Society for In Vitro Biology, San Francisco, CA, 1996.
- K O'Connor\*, R Enmon, A Primavera, R Dotson and S Clejan. Characterization of growth factors and extracellular matrix in three-dimensional cultures of DU 145 human prostate carcinoma cells. European Society for Animal Cell Technology, Vilamoura, Portugal, 1996.
- K O'Connor\*, S Clejan, N Cowger, R Enmon, R Dotson and A Primavera. Effects of simulated microgravity on DU 145 human prostate carcinoma cells. American Chemical Society, New Orleans, LA, 1996.
- N Cowger\*, K O'Connor and J Bivins. Long-term cultivation of insect cells in simulated microgravity. American Institute of Chemical Engineers, Miami Beach, FL, 1995.
- K O'Connor\*, W Hugler, N Cowger, S Landry and J Bivins. Properties of insect cells cultivated in simulated microgravity. The Glaxo International Baculovirus and Insect Cell Gene Expression Conference, Pinehurst, NC, 1995.
- N Hallab\*, K Bundy, K O'Connor, R Clark and R Moses. Surface charge, biofilm composition and cellular morphology as related to cellular adhesion to biomaterials. Southern Biomedical Engineering Conference, Shreveport, LA, 1995.
- K Bundy\*, K O'Connor, O Roberts, B Rahn, R Clark and N Hallab. Physical and biological effects influencing fibroblast adhesion to biomaterials. Orthopaedic Research Society, New Orleans, LA, 1994.
- N Hallab, R Clark, K Bundy\* and K O'Connor. Surface charge and energy affect fibroblast adhesion to biomaterials. Society for Biomaterials, Boston, MA, 1994.
- K Bundy\*, B Rahn, K O'Connor, O Roberts and H Gerber. Cell adherence to biomaterials of varying surface characteristics. Society for Biomaterials, Birmingham, AL, 1993.
- K O'Connor\*, O Roberts, K Bundy and V McLeod. Strength of cellular adhesion to specific biomaterial surfaces. Southern Biomedical Engineering Conference, New Orleans, LA, 1993.
- K O'Connor, T Prewett, T Goodwin, K Francis and G Spaulding\*. Application of simulated microgravity to mammalian & insect-cell cultivation: a study with the NASA rotating-wall vessel. American Institute of Chemical Engineers, St. Louis, MO, 1993.
- K O'Connor\*, T Prewett, T Goodwin, K Francis, A Andrews and G Spaulding. Animal-cell cultivation in the NASA rotating-wall vessel. European Society for Animal Cell Technology, Würzburg, Germany, 1993.
- [FEATURED]**
- K Bundy\*, O Roberts, K O'Connor, B Rahn and V McLeod. Quantification of fibroblast adhesion to biomaterials using a fluid mechanics approach. European Society for Biomaterials, Davos, Switzerland, 1993.
- K Bundy\*, K O'Connor, C Roberts and M Sosa. Cell/biomaterial adherence measured with the microjet impingement technique. Southern Biomedical Engineering Conference, Memphis, TN, 1992.
- N Kommareddi, M Ayyagari, K O'Connor and V John\*. Response of proteins in reverse micelles to pressure-induced changes in surface microstructure. American Institute of Chemical Engineers, Miami Beach, FL, 1992.
- V John\*, K O'Connor, N Kommareddi, M Rao and C Karayigitoglu. Interfacial effects on enzyme activity in reverse micelles at non-ambient thermodynamic conditions. American Institute of Chemical Engineers, Los Angeles, CA, 1991.
- V John\*, A Rao, N Kommareddi and K O'Connor. Protein extraction and recovery using microemulsions at enhanced pressures. American Chemical Society, New York, NY, 1991.
- K O'Connor\* and J Bailey. Structure-function relationships in free and immobilized glutamate dehydrogenase, an allosteric oligomer. American Institute of Chemical Engineers, Miami Beach, FL, 1986.

#### *Posters*

- K Russell, A Tucker, B Bunnell, M Andreeff, W Schober, A Gaynor, K Strickler, S Lin, M Lacey and K O'Connor. Differential expression of neuron-glia antigen 2 (NG2) selects for cell survival during high-throughput enrichment of marrow-derived mesenchymal stem cells. International Conference on Stem

- Cell Engineering, Society of Biological Engineering & International Society for Stem Cell Research, Coronado, CA, 2014.
- K O'Connor, K Russell, A Tucker, B Bunnell, M Lacey, K Strickler, M Andreeff. Differential Expression of Neuron-Glial Antigen 2 (NG2) and Melanoma Cell Adhesion Molecule (CD146) in Mesenchymal Stem Cells. NIH Single-Cell Analysis Meeting, Bethesda, MD, 2013.
- Ibid., NSF CBET Grantee Conference, Baltimore, MD, 2012.
- K Russell, D Phinney, M Lacey, B Barrilleaux, K Meyertholen and K O'Connor. High-capacity assay to quantify the clonal heterogeneity in potency of mesenchymal stem cells. NIH National Graduate Student Research Conference, Bethesda, MD, 2011. **[Competitive NIH travel award (top 25%) to K Russell]**
- Ibid., NIH Center for Regenerative Medicine/Stem Cell Interest Group Stem Cell Symposium, Bethesda, MD, 2011.
- Ibid., European Society for Animal Cell Technology, Vienna, Austria, 2011. **[Selected as a poster finalist (top 7%) for short podium presentation]**
- Ibid., Stem Cell Engineering & Cell-Based Therapies Meeting, Cold Spring Harbor Laboratories, New York, 2011.
- B Barrilleaux, D Phinney, B Fischer-Valuck, K Russell, G Wang, D Prockop, J Gilliam and K O'Connor. Small-molecule antagonist of macrophage migration inhibitory factor enhances migratory response of mesenchymal stem cells to bronchial epithelial cells. International Society for Stem Cell Research, San Francisco, CA, 2010.
- K Russell, D Phinney, M Lacey, B Barrilleaux, K Meyertholen and K O'Connor. High-capacity assay reveals heterogeneity of mesenchymal progenitors. Federation of American Societies for Experimental Biology, New Orleans, LA, 2009.
- Ibid., American Institute of Chemical Engineers, Philadelphia, PA, 2008.
- Ibid., Biomedical Engineering Society, St. Louis, MO, 2008.
- B Barrilleaux, B Fischer-Valuck, K Russell, D Phinney, D Prockop and K O'Connor. Factors influencing the formation of co-cultures of human bone marrow stromal and bronchial epithelial cells. American Institute of Chemical Engineers, Salt Lake City, UT, 2007.
- B Barrilleaux, D Phinney, W Lai, I Isakova, B Fischer-Valuck, R Gonzales, D Prockop and K O'Connor. Preservation of early progenitors in transgenic cultures of human bone marrow stromal cells. Biomedical Engineering Society, Los Angeles, CA, 2007.
- Ibid., American Institute of Chemical Engineers, San Francisco, CA, 2006.
- C Vidulescu, S Clejan, and K O'Connor. Vesicle traffic through intercellular bridges in DU 145 human prostate cancer cells. American Society for Biochemistry and Molecular Biology, San Diego, CA, 2005.
- H Song, R Enmon, S Jain, D Lacks and K O'Connor. Monte Carlo simulation of human prostate cancer spheroid formation. Biomedical Engineering Society, Philadelphia, PA, 2004.
- H Song, K O'Connor, O David, C Giordano, H LeBeau and S Clejan. Expression of multidrug resistance proteins in static and mixed cultures of prostate cancer spheroids. American Association of Cancer Research, Washington, DC, 2003.
- Ibid., Tulane Engineering Forum, New Orleans, LA, 2003.
- H Song, K O'Connor, C Giordano, S Clejan, O David and H LeBeau. Influence of mixing on phenotypic differences in well and poorly differentiated prostate cancer spheroids. American Chemical Society, New Orleans, LA, 2003.
- K O'Connor, J Muhitch, D Blake, D Lacks, N Rosenzweig, G Spaulding and C Giordano. Aggregation and protein expression of bovine corneal endothelial cells as microcarrier cultures in a rotating-wall vessel. American Institute of Chemical Engineers, Los Angeles, CA, 2000.
- G Piringer, S Bhattacharya and K O'Connor. Anaerobic acidogenic pretreatment of nitrophenol-containing wastewater. American Chemical Society, New Orleans, LA, 1999.
- J Muhitch, K O'Connor, D Blake, D Lacks and G Spaulding. Cultivation of bovine corneal endothelial cells in rotating-wall vessel. Society for In Vitro Biology, New Orleans, LA, 1999. **[FEATURED]**
- R Enmon, K O'Connor, D Lacks and D Schwartz. Modeling multicellular spheroid formation from human prostate carcinoma cell cultures. American Association for Cancer Research, Philadelphia, PA, 1999.
- R Enmon, K O'Connor and D Lacks. Kinetics of multicellular spheroid formation from prostate cancer cells. American Institute of Chemical Engineers, Miami Beach, FL, 1998.
- N Cowger, K O'Connor, G Navar and T Hammond. Shift in death mechanism for *Spodoptera frugiperda* cells in a rotating-wall vessel versus a shaker flask. American Institute of Chemical Engineers, Los Angeles, CA, 1997.

- N Cowger, K O'Connor, G Navar and T Hammond. Enhanced apoptosis in insect cells cultivated in simulated microgravity. European Society for Animal Cell Technology, Tours, France, 1997.
- N Cowger and K O'Connor. Simulated microgravity induces a shift from necrosis to apoptosis in insect cells. Keystone Molecular and Cellular Biology Symposium on Apoptosis and Programmed Cell Death, Tamarron, CO, 1997.
- K O'Connor, R Enmon, N Cowger, R Dotson, A Primavera and S Clejan. Simulated microgravity inhibits in vitro aggressiveness of prostate cancer. Joint Meeting of the American Society for Biochemistry and Molecular Biology, American Society for Investigative Pathology and American Association of Immunologists, New Orleans, LA, 1996.
- K O'Connor, S Clejan, N Cowger, R Enmon, R Dotson and A Primavera. Effects of simulated microgravity on DU 145 human prostate carcinoma cells. Cancer Association of Greater New Orleans, New Orleans, LA, 1996.
- K Francis, K O'Connor, D Blake, D Caldwell and G Spaulding. Growth and structure of corneal tissue in simulated microgravity. Joint Meeting of the European Society for Animal Cell Technology and the Japanese Association for Animal Cell Technology, Veldhoven, The Netherlands, 1994.
- K Francis, K O'Connor, N Johnson and G Spaulding. Viral infection of insect cells cultured in simulated microgravity. Louisiana Aerospace Forum, Baton Rouge, LA, 1994.
- K O'Connor, T Prewett, T Goodwin, K Francis, A Andrews and G Spaulding. Animal-cell cultivation in the NASA rotating-wall vessel. European Society for Animal Cell Technology, Würzburg, Germany, 1993.  
**[Selected as a poster finalist (top 7%) for short podium presentation]**

*Extramural Invited Speeches*

- Gaden Lecture for outstanding paper published in Biotechnology & Bioengineering**, American Chemical Society, New Orleans, LA, 2013
- MD Anderson Cancer Center, Dept. of Leukemia, Prof. Andreeff's Research Group, Houston, TX, 2011
- City College of New York, Dept. of Chemical Engineering, New York, NY, 2010.
- Trinity College, Centre for Bioengineering, Dublin, Ireland, 2009.
- The Pennsylvania State University, Dept. of Chemical Engineering, University Park, PA, 2007.
- University of Massachusetts (Amherst), Dept. of Chemical Engineering, MA, 2007.
- Xavier University, Dept. of Chemistry, New Orleans, LA, 2003.
- Rice University, Dept. of Chemical Engineering, Houston, TX, 2002.
- The Cooper Union, Dept. of Chemical Engineering, New York, NY, 2002.
- New Orleans Chapter of the American Institute of Chemical Engineers, New Orleans, LA, 2001.
- NASA Johnson Space Center, Houston, TX, 2000.
- NASA Johnson Space Center, Houston, TX, 1999.
- NASA Johnson Space Center, Houston, TX, 1998.
- International Mechanical Engineering Conference and Exposition, Bio-heat/mass transfer under microgravity session, Anaheim, CA, 1998.
- NASA Johnson Space Center, Houston, TX, 1997.
- Purdue University, Dept. of Chemical Engineering, West Lafayette, IN, 1997.
- NASA Johnson Space Center, Houston, TX, 1996.
- NASA Johnson Space Center, Houston, TX, 1995.
- American Institute of Chemical Engineers, Tissue engineering session, San Francisco, CA, 1994.
- Tissue Culture Association, Cell culture in microgravity session, Research Triangle Park, NC, 1994.
- Commencement speech, Duchesne Academy of the Sacred Heart, Houston, TX, 1994.
- Japanese Association for Animal Cell Technology, Insect-cell culture and applications session, Nagoya, Japan, 1993.
- American Institute of Aeronautics and Astronautics Space Programs and Technologies Conference, Biotechnology applications of microgravity session, Huntsville, AL, 1993.
- NASA Johnson Space Center, Houston, TX, 1993.
- SmithKline Beecham Pharmaceuticals, Epsom, England, 1992.
- University College London, London, England, 1992.
- Matritech Inc., Cambridge, MA, 1991.
- Merck & Company, Rahway, NJ, 1990.
- Tulane University, Dept. of Chemical Engineering, New Orleans, LA, 1990.
- Baylor College of Medicine, Dept. of Microbiology and Immunology, Houston, TX, 1990.
- Duke University, Dept. of Bioengineering, Raleigh/Durham, NC, 1989.
- Schering-Plough Corporation, Kenilworth, NJ, 1989.

Pfizer, Inc, Groton, CT, 1989.

*Intramural Invited Speeches*

Tulane hosts New Orleans Chapter of the American Institute of Chemical Engineers, 2014.

Tulane Center for Stem Cell Research and Regenerative Medicine, 2010.

Dept. of Chemical and Biomolecular Engineering, Board of Advisors' Meeting, 2010 & 2013.

Dept. of Cellular and Structural Biology, 2002.

Tulane University Association of Women, 2002.

Dept. of Pathology, 1997.

Tulane Cancer Center, 1996.

Dept. of Biomedical Engineering, 1994.

**Extramural Professional Service**

*Peer-Review Service*

Editorial Position: member Editorial Board and Board of Reviewers, Journal of Cellular and Molecular Medicine, 2004-2006

Review Panels: NSF, 2002, Spring 2006, Fall 2006, 2011; NIH, 2012; Interagency NSF/NIH/NASA/DoE, 2005; European Space Agency, Tours, France, 1997

Grant Proposals: NASA, 1995, 2001; NSF, 2001, 2003-2008; Joe W. and Dorothy Dorsett Brown Foundation, 2001; University of Arizona, 1998; Medical Research Council, United Kingdom, 2014.

Research Center: NASA Site Visit to Morehouse School of Medicine, Atlanta, GA (\$ 5.0 million), 2000.

Tenure & Promotion: Texas A&M Health Science Center, 2013; Louisiana State University, 2006; Univ. of Oklahoma, 2005

Manuscripts: Biotechnology and Bioengineering, 1990-present; In Vitro, 1999-present; Biotechnology Progress, 1998-present; Tissue Engineering, 2002-present; Chemical Engineering Education, 2006-present; Stem Cells and Development, 2007-present; Experimental Cell Research, 2010-present; Stem Cell Research, 2012-present; Journal of Biotechnology, 2013; Medicinal Research Reviews, 2012; Cell and Tissue Research, 2010; Journal of Biomedical Materials Research, 2009; Journal of Biomaterials Science, 2008; Journal Cellular and Molecular Medicine, 2004-2006; Colloids and Surfaces, 1999; Journal of Engineering Education, 1994; Annals of Biomedical Engineering, 1992-1996

*Professional Affiliations*

American Institute of Chemical Engineers

European Society for Animal Cell Technology

International Society for Stem Cell Research

Society for Biological Engineering

Society for In Vitro Biology

Animal Cell Sciences Section Officer, Secretary, 2004-2008

Tissue Engineering Society and Regenerative Medicine International Society

*Sessions Chaired and Committee Service*

Chair, Stem Cell Biology & Cancer Drug Development. Society for In Vitro Biology, Tucson, AZ, 2008.

Chair, Animal Cell Biotechnology. Society for In Vitro Biology, Tucson, AZ, 2008.

Member, Poster Prize Committee, European Society for Animal Cell Technology, Harrogate, North Yorkshire, UK, 2005.

Chair, Tissue Engineering, NASA Cell Science Conference, Galveston, TX, 2005.

Chair, Cancer Cell Biology, Society for In Vitro Biology, San Francisco, CA, 2004.

Chair, Cell Models and Cellular Differentiation, Society for In Vitro Biology, Portland, OR, 2003.

Chair, Vertebrate/Cell Toxicology Session, Society for In Vitro Biology, Orlando, FL, 2002.

K O'Connor and N Searby, Co-Chairs. Tissue Modeling, NASA Cell Science Conference, Palo Alto, CA, 2002.

K O'Connor and B Pyle, Co-Chairs. Models in Lower Organisms Session, NASA Cell Science Conference, Houston, TX, 2001.

E Cilento, Chair, and K O'Connor, Co-Chair. Biotechnology Poster Session, Group 15, Annual Meeting of the American Institute of Chemical Engineers, San Francisco, CA, 1994.

B Allen, Chair, and K O'Connor, Co-Chair. Biotechnology Poster Session, Group 15, Annual Meeting of the AIChE, St. Louis, MO, 1993.

Area Chair, Annual Meeting of the AIChE, Area 4 m, 1993.

K O'Connor, Chair, and J Sinclair, Co-Chair. Young Faculty Forum, Group 4, Annual Meeting of the AIChE, Miami Beach, FL, 1992.

Area Chair, Annual Meeting of the AIChE, Area 4 m, 1992.

P Burban, Co-Chair, and K O'Connor, Co-Chair. Young Faculty Forum, Group 4, Annual Meeting of the AIChE, Los Angeles, CA, 1991.

#### *Extramural Collaborations and Consultations*

M Andreeff, MD Anderson Cancer Center, Houston, TX, 2011-2013

D Phinney, Scripps Research Institute, Jupiter, FL, 2009-2011

G Wang, Louisiana State University Medical School, New Orleans, LA 2006-2009

M Al-Rubeai, University College Dublin, Ireland, 2004-2006

R Schwarz, Synthecon, Houston, TX, 1999-2002

Millennium Pharmaceuticals, Inc., Cambridge, MA, 1999

VivoRx Pharmaceuticals, Inc., Santa Monica, CA, 1997

G Spaulding, National Aeronautics and Space Administration, Houston, TX, 1992-1997

SmithKline Beecham Pharmaceuticals, Epsom, United Kingdom, 1992

Matritech, Inc., Cambridge, MA, 1991

#### **Intramural Professional Service**

##### *Department of Chemical and Biomolecular Engineering*

Founder/Director, Chemical Engineering/Molecular & Cellular Biology Combined Degree Program, 1993-2006; renamed Chemical Engineering/Biomedical Sciences Combined Degree Program, 2006-present

Chair, Tenure and Promotion Committee, 2006-2007

Faculty Search Committee: Junior Faculty 2002-2004 (Chair, 2003-2004); Department Chair 2008-2009

Visibility/Nominations Committee: 2013

Graduate Committee: Recruitment 1992-1994, 1997-2002 (Chair, 1997-1999); Qualifying Exam, 1998, 2000-2004, 2006-2009, 2011, 2013-2014 (Chair, 2003, 2006-2009); Curriculum and Policy, 2003-2009 (Chair, 2003-2008; 2012)

Undergraduate Committee: Recruitment, 1996, 1999, 2000, 2002-2005; Class Advisor, 2000, 2004, 2012-present; Curriculum, 1993-1994, 2002, 2004-2005

Founder/Director, Newcomb Lectureship-Renowned Women in Chemical Engineering, 1991-1999

Coordinator, Seminar Series, 1995-1997

##### *School of Science and Engineering*

Promotion and Tenure Committee, 1997-1998, 2000-2001, 2002-2004, 2007-2010 (Chair, 2009-2010)

Nominating Committee, 2009-2012, 2013-present (Chair, 2014-2015)

Graduate Committee, 1997-1999, 2003-2008 (Chair, 2005)

Committee on Honors, 1991-2003 (Chair, 1997-2000, 2001-2002)

Undergraduate Committee, 2001

Engineering Science Advisory Committee, 1997-1999

Faculty-Student Relations Committee, 1990-1991

Judge, Research Days, 2013

Girls in STEM at Tulane (GIST) Program, designed and offered laboratory workshop, 2012-2013

Commencement Marshal, 2001-2002; 2007

##### *Biomedical Sciences Graduate Program (formerly Molecular & Cellular Biology Graduate Program)*

Faculty, 1990-present

Steering Committee, 1993-2006

Internal Review Committee, 1994, 2001

Grievance Committee, 2001

Co-Director, 1996-1999

Interim Director with Prof. Bill Toscano, 1997

Training Grant Committee, 1994-1995

##### *Tulane Cancer Center*

Contributing Member, 1994-present

Prostate Cancer Task Force, 1996  
Molecular Determinants of Cancer Program, 1995

*University in General*

Newcomb-Tulane College Academic Requirements Committee, 2013-2014  
Faculty recruitment for Pathology (2009), Center of Stem Cell Research and Regenerative Medicine (2009-2011), and Biomedical Engineering (2008, 2010, 2012)  
Search Committee, Executive Director of the Newcomb College Institute, 2008  
2020 University Planning Taskforce, Genetics and Genomics Subcommittee, Regenerative and Restorative Medicine Subcommittee, 2008  
Genetics and Gene Therapy Committee, Tulane Medical School, 2007-2008  
Awards Judge, Tulane Health Sciences Center Research Day, 2007, 2010, 2012  
Selection Committee, Shaffer Award for Excellence in Research, Tulane Medical School, 2005  
Provost's Search Committee, Vice-President of Student Affairs & Dean of Students, 2002-2003  
Provost's Undergraduate Action Committee, 2001-2002  
University Focus Group on Uptown/Downtown Collaborations, 2001  
Award Committee, Inspirational Undergraduate Professor, 2001  
Graduate School Honor Board, 2000  
Gene Therapy Scientific Advisory Committee, Tulane Medical School, 1999  
Bioenvironmental Research Center, Internal Peer-Review Panel: DoD & Office of Naval Research, 1999  
Steering Committee, Tulane 3-2-2 Program for Minority Education, 1997-1998  
Committee on Newcomb College, 1993-1994  
Joint Hearing Board and Appellate Committee, Conduct Code Judiciary, 1991-1994; Chair, Appellate Committee for precedent date-rape case, 1992

**Courses Taught**

*School of Science and Engineering*

Transport Phenomena I. CENG 232, 2008-present  
Advances in Biotechnology. CENG 677/477 (3 credits, BMS elective, co-listed as CENG 477 starting in 2007), Created by K. O'Connor, 1994, 1999, 2002, 2006-present  
Introduction to Biomolecular Engineering and Biotechnology. CENG 250 (3 credits, CENG core course), Created by K. O'Connor, 2005-2007  
Biochemical Engineering. CENG 671/471 (3 credits, BMS elective, co-listed as CENG 471 starting in 2004), 1990-1996, 1998, 2000-2001, 2003-2004  
Engineering Thermodynamics. ENGR 213 (3 credits), 1994-1999, 2001, 2006  
Practice School. CENG 460/462 (6 credits), 1991-1992, 1995-2005, 2007, 2010  
Chemical Engineering Thermodynamics. CENG 212 (3 credits), 2000-2004  
Material and Energy Balances. CENG 214 (3 credits), 1991-1993  
Introduction to Chemical Engineering, ENGR 102 (1 credit), 2003 (with K Papadopoulos)

*Biomedical Sciences Graduate Program (formerly Molecular & Cellular Biology Graduate Program)*

Research Methods BMS 712 (2 credits), guest lecturer 1993-2008, 2010-present  
Research Methods. BMS 713 (2 credits), research supervisor 1993, 1998, 2000, 2003-2004  
Workshop. BMS 710/711 (1 credits), 1992-1994

**Research Assistants**

*55 Research Assistants: 5 Visiting Professors/Postdocs, 10 Ph.D.'s, 5 M.S.'s with thesis, 2 M.S. without thesis, 10 B.S.'s. with honors thesis, and 16 B.S. 's without thesis, 7 student technicians*

*Professors and Postdoctoral Fellows*

Dr. Katie Russell, Postdoctoral Fellow, 2013-2014; Professor of Practice, 2014  
Dr. Miriam Almagor, Hubert Humphrey Fellow and Visiting Research Professor, 2004-2005  
Dr. Cristina Vidulescu, Fulbright Scholar and Visiting Associate Professor, 2003-2004  
Dr. Tania Grivas, Medical Resident, 1998-1999.  
Dr. Nitsa Rosenzweig, Postdoctoral Fellow, 1998; Adjunct Assistant Professor, 1999-2003

*Ph.D.*

Sean Madsen, Ph.D. Chemical Engineering/M.S. Biomedical Sciences, 2013-present

- Katie Russell, Ph.D. Chemical Engineering/M.S. Biomedical Sciences, 2006-2012  
Ph.D. Development of enrichment strategies for mesenchymal stem cells  
M.S. In vitro high-capacity assay to quantify the clonal heterogeneity in trilineage potential of mesenchymal stem cells reveals a complex hierarchy of lineage commitment
- Bonnie Barrilleaux, Ph.D. Chemical Engineering/M.S. Biomedical Sciences, 2004-2009  
Ph.D. Effect of macrophage migration inhibitory factor and its receptor (CD74) on chemokinesis of human mesenchymal stem cells from bone marrow stroma  
M.S. Small-molecule antagonist of macrophage migration inhibitory factor enhances chemotactic response of mesenchymal stem cells to bronchial epithelial cells
- Hong Song, Ph.D. Chemical Engineering/M.S. Biomedical Sciences, 1998-2003  
Ph.D. Spatial assembly and composition of prostate cancer spheroids  
M.S. Kinetics of preadipocyte differentiation
- Richard Enmon, Ph.D. Chemical Engineering/M.S. Biomedical Sciences, 1995-2000  
Ph.D. Kinetics of spheroid self-assembly in well and poorly differentiated prostate cells  
M.S. Dynamics of spheroid self-assembly in human prostate cells
- Jim Muhitch, Ph.D. Chemical Engineering/M.S. Biomedical Sciences, 1995-2000  
Ph.D. Modeling population dynamics of freely suspended animal-cell cultures  
M.S. Tissue modeling of bovine corneal endothelium: an application of simulated microgravity
- Nancy Cowger, Ph.D. Chemical Engineering/M.S. Biomedical Sciences, 1993-1999  
Ph.D. Population dynamics of insect-cell cultures in different bioreactor environments and as a function of shear stress  
M.S. Aspects of extended cultivation of insect cells in simulated microgravity
- Robert Dotson, Ph.D. Molecular and Cellular Biology, S Clejan (primary advisor), 1998  
Nadim Hallab, Ph.D. Biomedical Engineering, K. Bundy (primary advisor), 1996  
Nagesh Kommareddi, Ph.D. Chemical Engineering, V. John (primary advisor), 1994

*M.S. with Thesis*

- Benjamin Fischer-Valuck, M.S. Chemical Engineering, Migratory response of mesenchymal stem cells to macrophage migration inhibitory factor and its antagonist as a function of colony-forming efficiency, 2007-2009
- Mark Venczel, M.S. Chemical Engineering, Predictive capacity of mathematical model of human prostate cancer cell aggregation, 2001-2003
- Atilio Zardetto, M.S. Chemical Engineering, Cloning of the Alzheimer's beta protein precursor inhibitor domain, 1992-1996
- Walter Hugler, M.S. Chemical Engineering, Protein expression of Sf9 cells under stress and simulated microgravity, 1992-1994
- Clive Roberts, M.S. Biomedical Engineering, K. Bundy (primary advisor), 1993

*M.S. without Thesis*

- Anthony Lawrenz, M.S. Chemical Engineering, 2012-2014  
Karen Strickler, M.S. Chemical Engineering, 2011-2013

*B.S. Chemical Engineering with Thesis*

- Carson Discher, 2014-present
- Andrew Gaynor, Differentiation and proliferation characterization of senescent mesenchymal stem cells, Cellular and Molecular Biology, Jewish Studies triple major, 2011-2014
- Shuwen Lin, Heterogeneity of mesenchymal stem cells at the cellular and molecular levels, 2011-2014
- Kristin Meyertholen, Evaluating multipotency of adult bone marrow stromal cells, Cellular and Molecular Biology double major, 2006-2008
- Carrie Giordano, Multidrug resistance protein expression in static and mixed cultures of DU 145 Human Prostate Carcinoma Cells, Cellular and Molecular Biology double major, 1999-2003
- Shamik Jain, Spatial assembly of human prostate carcinoma cells, Cellular and Molecular Biology double major, 1997-2001
- Sandeep Sule, A study of carbohydrate consumption in *Spodoptera frugiperda* (Sf9) insect cells, 1993-1996
- Paige Hastings, Synthesis and cloning of Alzheimer's APP1 gene, 1990-1993  
Angela Andrews, Recombinant protein expression in Sf9 insect cells, 1990-1993  
Colleen Kelley, V. John (primary advisor), 1991



*B.S. without Thesis*

Kyle Hoerger, 2008-2009  
Andrew Katz, 2007-2009  
Ross Gonzales, 2005-2007  
Benjamin Fischer-Valuck, 2004-2007  
Andrew Larson, 2001-2003  
Daniel Jung, 1998-2000  
Julie Talavera, 1996-1999, with junior year abroad  
Krista Brandt, 1997-1998  
Amy Connolly, 1997-1998  
Brian Leitsch, 1995-1997  
Amy Primavera, 1993-1996  
Jessica Bivins, 1993-1996  
Sara Dawdy, 1994-1995  
Karen Francis, 1990-1993, with junior year abroad  
Val McLeod, 1991-1993  
Wayne Fink, 1990-1991

*Student Technicians*

Alexander Girau, 2011  
Jennifer Gilliam, 2008-2010  
Santosh Dhule, 2007-2009  
Li Xu, 2002-2004  
Karen Francis, 1993-1995  
Suresh Lakkapragada, 1991-1993  
Rahul Tandon, 1990-1993

**Additional Dissertation/Thesis Committee Service**

Carol Chen (Biomedical Engineering), Ph.D., Advisor-D. Khismatullin, 2013  
Yuly Jaimes (Chemical & Biomolecular Engineering), Ph.D., Advisor-K. Papadopoulos, 2013  
Carolina Rojas-Gonzalez (Chemical & Biomolecular Engineering), Ph.D., Advisor-K. Papadopoulos, 2008  
Chris Newton (Chemical & Biomolecular Engineering), M.S., Advisor-K. Papadopoulos, 2005  
Louise B. Lawson (Chemical & Biomolecular Engineering), Ph.D., Advisor-K. Papadopoulos, 2005  
Quan Liu (Chemical & Biomolecular Engineering), Ph.D., Advisor-D. De Kee, 2004  
Gerhard Piringer (Environmental Engineering), Ph.D., Advisor-S. Bhattacharya, 2000  
Michael Greene (Molecular and Cellular Biology), Ph.D., Advisor-S. Landry, 1999  
Dong Yuan (Chemical Engineering), M.S., Advisor-D. Lacks, 1999  
Vikas Uberoi (Environmental Engineering), Ph.D., Advisor-S. Bhattacharya, 1996  
Zewen Liu (Chemical Engineering), Ph.D., Advisor-K. Papadopoulos, 1996  
Adesina Oyefodun (Chemical Engineering), Ph.D., Advisor-V. Law, 1996  
Richard Madura (Environmental Engineering), M.S., Advisor-S. Bhattacharya, 1995  
Murthy Tata (Chemical Engineering), Ph.D., Advisor-V. John, 1994

**Research Assistant Honors**

*Graduate Students and Postdoctoral Fellows*

2012 K. Russell: Louisiana Engineering Society (Woman's Auxiliary) Fellowship, Tulane CBE  
2011 K. Russell: Outstanding Graduate Research Award, Tulane CBE  
2011 K. Russell: Distinguished Graduate Student Award, Tulane CBE  
2011 K. Russell: NIH Travel Award  
2010 K. Russell: Distinguished Graduate Student Award, Tulane CBE  
2010 K. Russell: American Institute of Chemists Graduate Student Award, Tulane CBE  
2009 B. Barrilleaux: Outstanding Graduate Research Award, Tulane CBE  
2009 B. Barrilleaux: Distinguished Graduate Student Award, Tulane CBE  
2009 B. Fischer-Valuck: Distinguished Graduate Student Award, Tulane CBE  
2007-2009 B. Fischer-Valuck: Louisiana Board of Regents Fellow  
2006-2010 K. Russell: Louisiana Board of Regents Fellow  
2006 B. Barrilleaux: American Institute of Chemists Graduate Student Award, Tulane CBE

2005 Dr. C. Vidulescu: American Institute of Chemists Postdoctoral Award, Tulane CBE  
2004-2008 B. Barrilleaux: Louisiana Board of Regents Fellow  
2003 H. Song: Graduate Student Achievement Award, Tulane, School of Engineering  
2002-2003 M. Venczel: Joe W. and Dorothy Dorsett Brown Fellow  
2002 H. Song: Outstanding Research Award, Tulane ChE  
2002 H. Song: Omega Chi Epsilon Teaching Assistant Award (Alpha Iota Chapter)  
1999-2001 R. Enmon: Louisiana Board of Regents Fellow  
1998-2000 R. Enmon: Joe W. and Dorothy Dorsett Brown Fellow  
1997-1998 R. Enmon: Vince A. Forte Fellow  
1997 N. Cowger: American Institute of Chemists Graduate Student Award, Tulane ChE  
1996 J. Muhitch: Omega Chi Epsilon Teaching Assistant Award (Alpha Iota Chapter)  
1995-1996 N. Cowger: Joe W. and Dorothy Dorsett Brown Fellow

#### *Undergraduate Honors Students*

2014 A. Gaynor: William Wallace Peery Society, top 15 Tulane seniors  
2014 A. Gaynor: Gerald S. Gussack '75 M.D. Award, Tulane Cell & Molecular Biology senior with outstanding GPA & honors thesis  
2014 A. Gaynor: American Institute of Chemists Undergraduate Student Award, Tulane CBE  
2014 S. Lin: Senior Scholarship Award, Tulane CBE  
2013 S. Lin: AIChE Highest Scholastic Average Award, Tulane CBE  
2013 S. Lin: Chevron Undergraduate Award, Tulane CBE  
2013 A. Gaynor: Chevron Undergraduate Award, Tulane CBE  
2008 A. Katz: Randall K. Nichols Award, Tulane CBE  
2008 K. Meyertholen: American Institute of Chemists Undergraduate Student Award, Tulane CBE  
2007 K. Meyertholen: NIH Exceptional Summer Student Award  
2007 K. Meyertholen: Newcomb Scholar, Tulane University  
2007 K. Meyertholen: Randall K. Nichols Award, Tulane CBE  
2007 R. Gonzales: American Institute of Chemists Undergraduate Student Award, Tulane CBE  
2006 R. Gonzales: Randall K. Nichols Award, Tulane CBE  
2003 C. Giordano: AIChE Activity Award, Tulane ChE  
2002 C. Giordano: Randall K. Nichols Award, Tulane ChE  
2001 S. Jain: Leon H. Scherck Award, Tulane, School of Engineering  
2001 S. Jain: Valedictorian, School of Engineering  
2001 S. Jain: Senior Scholarship Award, Tulane ChE  
2000 S. Jain: AIChE Highest Scholastic Average Award, Tulane ChE  
1996 S. Sule: Senior Scholarship Award, Tulane ChE  
1995 S. Sule: AIChE Highest Scholastic Average Award, Tulane ChE  
1993 A. Andrews: Senior Scholarship Award, Tulane ChE

#### **Research Assistant Appointments**

##### *Graduate Students and Postdoctoral Fellows*

2014 Anthony Lawrenz, Scientist, AllCells, Alameda, CA  
2013 Karen Strickler: Engineer, INEOS Olefins & Polymers USA, League City, TX  
2012 Katie Russell: Postdoctoral Fellow, Chemical & Biomolecular Engineering Dept., Tulane  
Current Position: Professor of Practice, Chemical & Biomolecular Engineering Dept., Tulane  
2009 Bonnie Barrilleaux: Postdoctoral Fellow, Institute for Pediatric Regenerative Medicine, Shriners Hospital for Children and the University of California at Davis, Sacramento, CA  
Current Position: Data Scientist, LinkedIn, Mountain View, CA  
2009 Ben Fischer-Valuck: Medical Student, Louisiana State University Medical School, Shreveport, LA  
2005 Dr. Miriam Almagor: Director, Division of Clinical Laboratories and Blood Transfusion Services, Bikur Cholim Hospital, Jerusalem, Israel  
2004 Dr. Cristina Vidulescu (deceased): Past Assoc. Professor, Cellular and Molecular Medicine Dept., Carol Davila University of Medicine and Pharmacy, Bucharest, Romania  
2003 Hong Song: Postdoctoral Fellow, Johns Hopkins School of Medicine, Baltimore, MD  
Current Position: Assistant Professor, Johns Hopkins School of Medicine, Baltimore, MD  
2003 Mark Venczel: Graduate Student, Clarkson University, Potsdam, NY

- 2001 Rich Enmon: Postdoctoral Fellow, Department of Medical Physics, Memorial Sloan-Kettering Cancer Center, New York, NY  
Current Position: Patent Attorney, Vossius & Partner, Munich, Germany
- 2000 Jim Muhitch: Process Engineer, Meril (a Merck Company), North Brunswick, NJ  
Current Position: Chemistry Manufacturing Controls Team Lead, Alcon Laboratories (Novartis Eye Care Division), Fort Worth, TX
- 1999 Nancy Cowger: Senior Research Scientist, SteISys, LLC, Baltimore, MD  
Current Position: Senior Technology Licensing Officer, Office of Technology Transfer, University of Maryland, Baltimore, MD
- 1999 Tania Grivas: Resident, Department of Surgery, Tulane University, New Orleans, LA
- 1998 Dr. Nitsa Rosenzweig: Assistant Professor, Department of Chemistry, Xavier University, New Orleans, LA  
Current Position: Scientific Review Administrator, Division of Molecular and Cellular Mechanisms, National Institutes of Health, Center for Scientific Review, Bethesda, MD
- 1998 Robert Dotson: Instructor, Department of Cell and Molecular Biology, Tulane  
Current Position: Senior Professor of Practice, Department of Cell and Molecular Biology, Tulane
- 1996 Nadim Hallab: Postdoctoral Fellow, Department of Orthopedic Surgery, Rush University Medical Center, Chicago, IL  
Current Position: Associate Professor, Department of Orthopedic Surgery, Rush University Medical Center, Chicago, IL
- 1996 Atilio Zardetto: Manager, Research and Development, Xutja Corp., Guatemala City, Guatemala
- 1994 Nagesh Kommareddi: Baker Hughes Inc.  
Current Position: Baker Hughes Inc., Broken Arrow, OK
- 1994 Walter Hugler: Cydsa Corporation, Monterrey, Mexico; Adjunct Professor, University of Monterrey, Mexico  
Current Position: MGM International, Miami, FL
- 1993 Clive Roberts: Design Engineer, Titleist Golf, Carlsbad, CA  
Current Position: R&D Platform Development Manager, Stryker Instruments, Kalamazoo, MI

*Undergraduate Honors Students*

- 2014 Shuwen Lin: Tulane University Medical School, New Orleans, LA
- 2014 Andrew Gaynor: University of Delaware, Chemical & Biomolecular Dept., Newark, DE
- 2008 Kristin Meyertholen: University of Texas Medical School, Galveston, TX
- 2003 Carrie Giordano: Merck Research Laboratories, Fermentation and Mammalian Cell Culture Process Development Department, West Point, PA
- 2001 Shamik Jain: Johns Hopkins University, Medical School, Baltimore, MD  
Current Position: Medical Staff, Stevens Hospital, Edmonds, WA
- 1996 Sandeep Sule: University of Alabama School of Medicine, Birmingham, AL  
Current Position: Founding Member/Medical Director, Sule Plastic Surgery Clinic, Dallas, TX
- 1993 Angela Andrews: University of Texas Southwestern Medical Center, Dallas, TX
- 1993 Page Hastings: Shell Chemical Company, Norco, LA
- 1991 Colleen Kelley: Massachusetts Institute of Technology, Cambridge, MA