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Yet there is undisputed evidence that a human fetus detects and reacts to pain as early as 8 weeks. And this evidence requires us to decide whether we will act to protect the fetus from *possible* suffering, just as we protect animals from *possible* suffering. The scientific evidence is more than sufficient to *require* an answer to the question, “Why not human beings?”

44. My fee for giving any deposition(s) is \$1,000.00 per hour for testimonial time, \$75.00 per hour for travel time, \$400.00 per hour for time spent reviewing and correcting any resulting deposition transcript and 100% of any out-of-pocket expenses incurred.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.

Date: July 12, 2018

By: /s/ Maureen L Condic  
Dr. Maureen L. Condic, Ph.D

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Curriculum Vitae

Last Updated: 16 January, 2017

PERSONAL DATA

Name: Maureen L. Condic  
Birth Place: Chicago, Illinois  
Citizenship: United States  
Mailing Address Department of Neurobiology  
and Anatomy  
University of Utah,  
School of Medicine  
401 MREB, 20 North 1900 East  
Salt Lake City, UT 84132-3401

EDUCATION

Years	Degree(s)	Institution (Area of Study)
1978-1982	B.A.	University of Chicago (Psychology)
1983-1989	Ph.D.	University of California, Berkeley (Neurobiology)
1989-1991	Postdoc	University of California, Berkeley (Development)
1991-1997	Postdoc	University of Minnesota, Minneapolis (Cell Biology)

PROFESSIONAL EXPERIENCE

**Full Time Positions**

7/1/1997-2/28/1999 Research Assistant  
Professor, Department of  
Neurobiology  
University of Utah,  
Salt Lake City, UT, USA

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7/1/1997-6/30/2010	Adjunct Assistant Professor, Department of Pediatrics, University of Utah, Salt Lake City, UT, USA
3/1/1999-6/30/2004	Assistant Professor, Department of Neurobiology University of Utah, Salt Lake City, UT, USA
7/1/2004-Present	Associate Professor, Tenured, Department of Neurobiology University of Utah, Salt Lake City, UT, USA
7/1/2010-Present	Adjunct Associate Professor, Department of Pediatrics, University of Utah, Salt Lake City, UT, USA

**Part Time Positions**

2007-2012	Westchester Institute, Senior Fellow
2007-Present	National Catholic Bioethics Quarterly; Scientific Advisory Board
2008-Present	Bioethics Defense Fund; Director, Scientific Advisory Board
2011-Present	Charlotte Lozier Institute, Associate Scholar
2014-Present	Ombudsman, University of Utah
2014-Present	Center for Ethics and Culture, Fellow, Notre Dame University
2015-Present	Pontifical Academy for Life, Corresponding Member

**Temporary Positions**

- 2010 Oxford University, Harris Manchester College, Theology Department Ph.D. External Examiner. *Stem Cell Research, A critical study of the thought of John Harris, Mary Warnock and H. Tristram Engelhardt in the light of Christian holistic anthropology*, by Angeliki Kerasidou.
- 2011-15 Visiting Professor, Notre Dame University, South Bend, IN.
- 2013 Visiting Professor, Catholic University of America, Washington, DC.
- 2013 Visiting Professor, St. John's University, Rome, Italy.
- 2016 House Investigative Panel, U.S. House of Representatives, Washington, DC., Scientific Consultant.

**Editorial Experience**

- 2007-Present National Catholic Bioethics Quarterly; Editorial Board
- 2010-Present Stem Cell Reviews and Reports, Editorial Board
- 1997-Present Journal Referee:  
(12-20 manuscripts/year)
- Cell Biology
  - Cell Stem Cell
  - Development
  - Developmental Biology
  - Developmental Dynamics

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European Journal of  
Neuroscience  
Experimental Cell Research  
Experimental Neurology  
Expert Opinion On Therapeutic  
Patents  
Journal of Cell Biology  
Journal of Cellular Physiology  
Journal of Comparative  
Neurology  
Journal of Neuroscience  
Molecular Biology of the Cell  
Molecular and Cellular  
Neuroscience  
National Catholic Bioethics  
Quarterly  
Neural Development  
Regenerative Medicine  
Science  
Stem Cells  
Stem Cells and Development  
Stem Cell Reviews and Reports  
Stem Cells Translational  
Medicine

SCHOLASTIC HONORS

1999	Pew Scholarship Nominee, University of Utah
1999-2001	Basil O'Conner Young Investigator, March of Dimes, USA
2002-2005	McKnight Neuroscience of Brain Disorders Investigator

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- 2006 Invited Audience with His Holiness  
Pope Benedict XVI
- 2015-6 Invited Audience with His Holiness  
Pope Francis

ADMINISTRATIVE EXPERIENCE

- 2000-2003 Co-chair, Faculty Recruitment  
Committee, Neurobiology and Anatomy.
- 2001-2006 Director of Graduate Studies,  
Neurobiology and Anatomy.
- 2006-2009 Course Director, School of Medicine,  
Medical Embryology course.
- 2010- Embryology curriculum Director,  
Present School of Medicine,
- 2010-2011 Member, Promotions Committee,  
School of Medicine.
- 2011-2014 Member, Curriculum Evaluation  
Committee, School of Medicine.
- 2012-2013 Southwest Regional Developmental  
Biology Organizing Committee Member
- 2013 Southwest Regional Developmental  
Biology meeting; Stem cells and  
Regeneration session chair.
- 2014- Member, Curriculum Committee,  
Present School of Medicine.
- 2014 Chair, organizing committee CUA/BDF  
symposium on the determination of  
death.

UNIVERSITY COMMUNITY ACTIVITIES

- 1997- Member, Molecular Biology, Molecular  
Present Biology Graduate Training Program.

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- 1997-  
Present Member, Neuroscience Program,  
Neuroscience Graduate Training  
Program.
- 1999-2000 Member and Co-Chair, Neurobiology  
and Anatomy Department, Faculty  
Recruitment Committee.
- 1999-2003 Member and Director, Neurobiology  
and Anatomy Department, Student  
Advising Committee.
- 1999-2003 Member, Neuroscience Program,  
Seminar Selection Committee.
- 1999-  
Present Member, Pediatrics Department, Child  
Health Research Career Development  
Award Advisory Committee.
- 2001-2003 Member, Molecular Biology, Molecular  
Biology Program Steering Committee.
- 2001 Member, Neurobiology and Anatomy  
Department, Departmental Advisory  
Committee (DAC).
- 2003 Member, School of Medicine, Research  
Subcommittee for Reaccreditation.
- 2005 Member, Neurobiology and Anatomy  
Department, Departmental Advisory  
Committee (DAC).
- 2007 Member, School of Medicine,  
University of Utah Academic Senate  
Nominating Committee.
- 2007 Member, University of Utah Graduate  
Council, Department of Bioengineering,  
Internal departmental review  
committee.

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- 2009 Member, Neurobiology and Anatomy Department, Departmental Advisory Committee (DAC).
- 2010 Member, Neurobiology and Anatomy Department, Departmental Advisory Committee (DAC).
- 2010 Member, Neuroscience Program, Admissions Committee.
- 2010-2011 Member, School of Medicine, Promotions Committee.
- 2011 Member, Neurobiology and Anatomy Department, Departmental Advisory Committee (DAC).
- 2011- Present Member, Department of Pediatrics Early Career Development Research Grant review committee.
- 2011- Present Member, Department of Pediatrics Women and Child Institute Basic Science Design Group.
- 2011- Present Member, Department of Pediatrics Women and Child Institute Faculty Career Development Design Group.
- 2011-2014 Member, Curriculum Oversight Group, School of Medicine.
- 2014- Present Member, Curriculum Committee, School of Medicine.
- 2014- Present Ombusman, University of Utah.

**PROFESSIONAL COMMUNITY ACTIVITIES**

**Grant Review Committee/Study Sections**

- 1998-1999 Member, Spinal Cord Research Foundation



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- 1999 Ad Hoc Member, NIH MCDN7 Study Section
- 2000 Ad Hoc Member, NIH NSDB Study Section
- 2002 Ad Hoc Member, NIH MCDN1 Study Section 2002 Member, Alzheimer's Association
- 2003 Member, Wellcome Trust
- 2004-2005 Ad Hoc Member, NIH NCF Study Section
- 2005 Ad Hoc Grant Reviewer, National Science Foundation, Developmental Systems
- 2007 Ad Hoc Grant Reviewer, Medical Research Council, United Kingdom
- 2009 Ad Hoc Member, NIH NDPR Study Section
- 2010 Ad Hoc Member, NIH NSC2 Study Section

**Public Education: Scientific and Bioethics interviews (Radio, Print, Television)**

- 2001 Radio interview, WWJ (Detroit, MI); Current scientific research on spinal cord injury.
- 2001 Radio interview, WMUK (Kalamazoo, MI); Gene manipulation as a treatment for spinal cord Injury.
- 2001 Newspaper interview, Salt Lake Tribune (Salt Lake City, UT) 29 July; Troy Goodman "Utah Leaders in debate over ethics, possibilities of stem cell research".

- 2002 Radio interview, KUER (Salt Lake City, UT); Research on spinal cord injury and therapeutic approaches to rehabilitation.
- 2002 Radio interview, KCPW, Talk of the City Science Friday (Salt Lake City, UT); Current brain research at the University of Utah.
- 2002 Newspaper interview; Our Sunday Visitor (National circulation); Woodeene Koenig-Bricker. Scientific issues surrounding stem cells.
- 2004 Interview, Science and Theology News, Templeton Foundation (National circulation); Chhari Sadhcev. Science Policy and Science funding.
- 2005 Interview, Health Sciences Report, University of Utah, Salt Lake City, UT; Phil Sahn. Current research on Neural Crest development.
- 2005 Interview, Wired Magazine (National circulation); Clive Thompson. Scientific and ethical issues surrounding altered nuclear transfer.
- 2006 Interview, The Weekly Standard (National Circulation) 3 July; Colleen Carroll Campbell. A clone by any other name; Missouri's deceptively worded ballot measure.
- 2006 Interview, National Review Online (National Circulation) 7 July; Fr, Thomas Berg. A Step Toward Clarity. Recent cloning headlines may herald the end of embryo name games.
- 2006 Radio Interview, KSL, The Doug Wright Show (Salt Lake City, UT); Potential of stem cell research.

- 2006 Interview, Catholic News Service (International Circulation) 18 September; Carol Glatz. Pope endorses adult stem-cell research.
- 2006 Interview, Brain Institute news; Julie Kiefer. Two research papers report “ethical” means to derive embryonic stem cells; The debate rages on.
- 2007 Interview, KVSS, The Spirit Morning Show (Omaha, Nebraska) 10 January; Kris McGregor, The science of stem cell research.
- 2007 Interview, Representative Rob Inglis (South Carolina), 10 January; Discussion with Rep, Inglis staff of human development, embryonic and adult stem cell research. Dr. Willy Lensch (Harvard Medical School), co-participant.
- 2007 Interview, Dr. David Stevens, CEO for the Christian Medical & Dental Associations (National membership) 12 February; Science of stem cell research.
- 2007 Interview. Scientist hopeful about new stem cell studies. 6 June; Carrie Gress. Zenit, (International circulation). Rome Italy.
- 2007 Radio Interview. Induced Pluripotent Stem cells. Family news in focus (National syndication). 20 June. Steve Jordahl. Colorado Springs, CO.
- 2007 Radio Interview. Cloning legislation. Chip Maxwell. KKAR. Omaha, NE.
- 2007 Interview. Stem Cell Breakthrough Hailed. 20 November; Carrie Gress. ZENIT news agency, (International circulation). Rome Italy.

- 2007 Interview. Scientist hopeful about new stem cell studies. 6 June; Carrie Gress. ZENIT news agency, (International circulation). Rome Italy.
- 2008 Interview. Ethical concerns with the iPS approach. 22 January; Tom McFeely, Contributing Editor. National Catholic Register (National Circulation). North Haven, Connecticut.
- 2008 Interview, Science of direct reprogramming. 30 January; Jim Schwarz. KFUE radio. St. Louis, MO.
- 2008 Interview. Primate cloning and Induced pluripotent stem cells. 19 February; Ted Katauskas, Editor-at-Large, Portland Monthly. Portland, OR.
- 2008 Interview. Pluripotent stem cells and infertility treatments. Jane Bosveld, Contributing Editor, Discover Magazine. New York, NY.
- 2008 Interview. Trends in Embryonic stem cell research. Anna Persky, Contributing Journalist, Washington Lawyer. Washington, DC.
- 2008 Interview. Westchester inaugural White Paper. Karna Swanson Lozoya, Editor. ZENIT news agency, (International circulation). Rome Italy.
- 2008 Interview. Westchester inaugural White paper. Alton J. Pelowski, Managing Editor, Columbia magazine (International circulation). New Haven, CT.
- 2008 Interview. Biological issues raised by Congregation for the Doctrine of the Faith Dignitas Personae. 10 December; Ann Rodgers, Pittsburgh Post-Gazette.

- 2008 Interview. Biological issues raised by Congregation for the Doctrine of the Faith Instruction Dignitas Personae. 10 December; Rob Stein, The Washington Post.
- 2009 Interview. Uso clínico de célula iPS será difícil, diz cientista. 29 January; Herton Escobar, O Estado de S. Paulo. São Paulo, Brazil.
- 2009 Interview. Scientific Community Differs About Stem Cells. 12 March; Michael P. Tremoglie. The Philadelphia Bulletin. Philadelphia, PA.
- 2009 Interview. When does life begin? 15 June; Sue Ellen Browder. The National Catholic Register (National Circulation). North Haven, CT.
- 2009 Interview. Chinese stem cell breakthrough. Joan Desmond. December 13-19, 2009. The National Catholic Register (National Circulation). North Haven, CT.
- 2009 Interview. Patient specific model of type-1 diabetes. Nima Reza. Family News and Focus (National Syndicate). Colorado Springs, CO.
- 2010 Interview. Newly approved stem cell lines, Audrey Bright. 12 December, 2010. Family News and Focus Radio (National Syndicate). Colorado Springs, CO.
- 2013 Interview/panel discussion. When does life begin? Huffington Post Live. Josh Zepps. 15 May, 2013. New York, NY.
- 2013 Interview. "When does life begin?" Through the Wormhole. 5 June 2013. Discovery Channel.
- 2013 Interview. Advances in stem cell research, Christianity today. Bob Smietana. 23 August, 2013. Carol Stream, Illinois.

- 2013 Interview. Controversies over embryology. Prolife Magazine. Brett Attebery. 4 July 2013.
- 2013 Interview. Small survivors: How the disputed science of fetal pain is reshaping abortion law. Eric Schulzke, Deseret News. Published: Monday, 2 September, 2013. Salt Lake City, UT.
- 2014 Interview. Stem cell research, recent developments. Theresa Laurance. Tennessee Register. Nashville, TN. 25 Feb, 2014.
- 2014 Interview. Bioethics and the Pontifical Academy for Life. Marie Mischel. Editor, Inter-mountain Catholic. 3 December, 2014.
- 2015 Interview. Patrick Madrid show. "Is It Ethical to Create Babies From Three DNA Sources? Absolutely,/" Immaculate Heart radio (national syndication). 5 February, 2015
- 2015 Interview. Sheila Liaugminas, A closer look. Relevant Radio. "Fetal pain, the scientific evidence." 5 August 2015.
- 2016 Interview. Janet Morena. The Catholic view for women. EWTN. "Controversies in medicine." 3 March 2016.
- 2016 Interview. Jan Bentz. Catholic News Agency EWTN news. "Biomedical ethics." 4 March 2016.

## RESEARCH FUNDING

### **Pending Grants**

- 01/01/18- Transcriptional repression in human  
01/30/22 stem cell differentiation.

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National Institutes of Health.

Role: Principal Investigator

**Past Grants**

1984-1987 National Science Foundation Predoctoral  
Research Fellowship

1989-1993 Cell shape changes during *Drosophila*  
morphogenesis  
American Cancer Society Postdoctoral  
Fellowship  
Role: Principal Investigator

1996-1997 Mechanism of neuronal adaptation to  
inhibitory proteoglycans Spinal Cord  
Research Foundation Postdoctoral  
Fellowship  
Role: Principal Investigator

1998-2003 5R01NS38138 Adaptation of neurons to  
inhibitory extracellular matrix  
National Institutes of Health (NINDS)  
Total Costs: \$825,778.  
Role: Principal Investigator

1998-2001 PID9808009 Regulation of Integrin  
expression and neuron adhesion by Bcl-2  
Total Costs: \$50,000.  
Primary Children's Medical Foundation  
Role: Principal Investigator

1999-2001 5FY980726 Integrin Regulation controls  
neural crest migration  
Total Costs: \$100,000  
March of Dimes Research Foundation  
Basil O'Connor Young Investigator Award  
Role: Principal Investigator

1999 PID9908008 Control of Cell Fate and  
Axon Outgrowth in Sensory Neurons  
Total Costs: \$33,800

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- University of Utah Funding  
Incentive Seed Program  
Role: Principal Investigator
- 1999 07928 Videomicroscopy apparatus  
University of Utah Research  
instrumentation Fund  
Total Costs: \$80,000  
Role: Principal Investigator
- 2001-2004 1FY01-172 Integrin Regulation Controls  
Neural Crest Migration  
Total Costs: \$243,936  
March of Dimes Birth Defects  
Foundation (Renewal of MOD Basil  
O'Connor Young Investigator Award)  
Role: Principal Investigator
- 2002-2005 PID2109100 Integrin-mediated  
stimulation of adult neuronal  
regeneration  
McKnight Endowment Fund for  
Neuroscience McKnight Neuroscience  
of Brain Disorders Award  
Total Costs: \$300,000  
Role: Principal Investigator
- 2005-2007 PID2504037 Interaction between Integrins  
and molecular inhibitors of regeneration  
Direct Costs: \$153,472  
Craig H. Neilsen Foundation  
Role: Principal Investigator
- 2004-2011 5R01NS048382-05 Specification and  
Development of Sensory Neurons  
\$1,040,625  
National Institutes of Health  
Role: Principal Investigator



Grants to Trainees

- 2001-2003 1 T32 HD 07491 “Integrin regulation in adult and embryonic regeneration.” Dr. Michele Lemons, Postdoctoral Fellowship.  
Direct Costs: \$72,392  
National Institute of Health, Institute of Child Health and Human Development, Developmental Biology training grant.  
Role: Mentor
- 2003-2005 “Cell autonomous factors influence regeneration.” Dr. Michele Lemons, Postdoctoral Fellowship.  
Paralyzed Veterans of America, Spinal Cord Research Foundation.  
Direct Costs: \$100,450.  
Role: Mentor
- 2003-2004 International Outstanding Young Investigators Award, Dr. Michele Lemons, Postdoctoral Award.  
Paralyzed Veterans of America, Spinal Cord Research Foundation.  
Role: Mentor
- 2002-2005 F31 NS43849 “Surface Integrin regulation controls neural crest migration.”  
Lauren Strachan, Graduate student, National Institute of Health Predoctoral Fellowship.  
Direct Costs: \$74,238.  
Role: Mentor
- 2011 Undergraduate Research Opportunities Program “Gene expression profiling of amniotic stem cells.” Jennifer Akiona, Undergraduate  
Direct Costs: \$1200  
Role: Mentor

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2011-2013 2T32HL007576 “Training in Cardiology”  
Colin Maguire, postdoc  
Role: Co-mentor

### TEACHING RESPONSIBILITIES

#### **Course and Curriculum Development**

2010-present Phase I: Human embryology content director,  
University of Utah, Salt Lake City.

2010-present Phase II: Metabolism and  
Reproduction, Human embryology  
content director,  
University of Utah, Salt Lake City.

2011 Phase II: Circulation, Respiration and  
Regulation, Human embryology  
content director,  
University of Utah, Salt Lake City.

#### **Courses Directed**

2001-2006 Course Director, “*Research in  
Progress Seminar*”. (Anat 7720).  
University of Utah, Salt Lake City.

2001-2003 Co-Director (with Dr. C.-B. Chien),  
“*Axon guidance*”. (Mbiol 6100).  
University of Utah, Salt Lake City.

2006 Co-Director (with Dr. A. Moon), “*Cell  
adhesion and motility*”. (Mbiol 6100).  
University of Utah, Salt Lake City.

2006-2009 Course Director, “*Human  
Embryology*,” (Anat 6060). University  
of Utah School of Medicine, Salt Lake  
City.

2010 Course Director, “*Human embryology  
and craniofacial development*”.  
Independent component of (Orb 133),

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University of Utah School of  
Dentistry, Salt Lake City.

**Course Lectures**

- 1985-1986 Graduate instructor,  
Laboratory Instructor,  
*"Developmental Biology"*. 30  
students, 15 lectures, 15 labs,  
University of California, Berkeley.
- 1988 Graduate instructor,  
Laboratory Instructor, *"Biology"*.  
30 students, 15 lectures, 15 labs,  
University of California, Berkeley.
- 1989 Graduate Instructor,  
*"Integrated Systems Neurobiology"*.  
8 students, 30 lectures,  
University of California, Berkeley.
- 1992-1996 Instructor, Discussion Leader,  
*"Developmental Neurobiology"*.  
30 students, two lectures,  
University of Minnesota, Minneapolis.
- 1993-1995 Instructor, Discussion Leader,  
*"Molecular, Cellular Development"*.  
30 students, two lectures,  
University of Minnesota, Minneapolis.
- 1998-Present Instructor, Discussion Leader,  
*"Developmental Neurobiology,"*  
(Anat 7750). 10-15 students, 4-6  
lectures, 1-2 discussions,  
University of Utah, Salt Lake City.
- 1998-2010 Instructor,  
*"Frontiers in Neuroscience,"*  
(Neusc 6010),

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- 8-20 students, one lecture,  
University of Utah, Salt Lake City.
- 1998-2010 Instructor,  
“*Faculty Research in Progress*,”  
(Mbiol 6050).  
20-30 students, one lecture.
- 1999 Instructor,  
“*Cell Biology*,” (Mbiol 6480).  
20-30 students, two lectures,  
University of Utah, Salt Lake City.
- 1999-2006 Instructor,  
“*Human Embryology*,” (Anat 6060).  
110-120 students, 4-6 lectures,  
University of Utah, Salt Lake City.
- 2001-2006 Course Director,  
“*Research in Progress Seminar*,”  
(Anat 7720).  
20-30 students,  
University of Utah, Salt Lake City.
- 2001 Co-Director,  
“*Axon Guidance*,” (Mbiol 6100).  
Offered 2001, 2003.  
8-10 students,  
University of Utah, Salt Lake City.
- 2006-2008 Course Director,  
“*Human Embryology*,” (Anat 6060).  
110-120 students, 10 lectures,  
University of Utah, Salt Lake City.
- 2007 Instructor,  
“Genetics and Society (Honors 3215).  
18 students, one lecture,  
University of Utah, Salt Lake City,

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- 2010 Instructor,  
“Health Law” (LAW 7360).  
30 students, one lecture,  
University of Utah, Salt Lake City.
- 2010 Course Director,  
*“Human embryology and  
craniofacial development*  
Independent component (Orb 133) ,  
University of Utah, Salt Lake City.  
10 Students. 6 lectures.
- 2010-Present Course/Content Director,  
“Human Embryology” in Phase I,  
Phase II.  
University of Utah School of  
Medicine, Salt Lake City.  
110-120 Students. 11 lectures
- 2013 Instructor/observer  
(lecture preparation),  
“Dental Neuroanatomy,”  
University of Utah School of  
Dentistry, Salt Lake City.  
10 Students.

**Laboratory Teaching**

- 1985-1986 Graduate Instructor,  
Laboratory Instructor,  
*“Developmental Biology”*.  
30 students, 15 lectures, 15 labs,  
University of California, Berkeley.
- 1988 Graduate Instructor,  
Laboratory Instructor, *“Biology”*.  
30 students, 15 lectures, 15 labs,  
University of California, Berkeley.

**Small Group Teaching**

- 2010-2012 Instructor, Integrated Case presentation, Phase I, 80 students, in groups of 10. University of Utah School of Medicine, Salt Lake City.
- 2012 Instructor, Small group facilitator, Phase I. 15 weeks
- 2013 Instructor, Small group facilitator, Phase I. 15 weeks
- 2014-present Instructor, Small group facilitator, Phase II; Skin Muscle Bone and Joint. 7 weeks

**Trainees Supervised**

- 1997 Undergraduate, Catherine Clark, University of Utah.
- 1998 Graduate Rotation, Wei Guan, Neuroscience Program.
- 1998 Graduate Rotation, Manojkumar Puthenveedu, Neuroscience Program.
- 1998 Graduate Rotation, Jeong-Soo Lee, Molecular Biology Program.
- 1999 Graduate, Wei Guan, Psychiatry resident, University of Louisiana Health Science Center, Shreveport, LA.
- 1999 Graduate Rotation, Viravuth Yin, Molecular Biology Program.
- 1999 Graduate Rotation, Andrea Papier, Molecular Biology Program.
- 1999 Graduate Rotation, Jing Li Cal, Molecular Biology Program.

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- 1999 Graduate Rotation, Anne Luebeke,  
Molecular Biology Program.
- 1999 Undergraduate, Jeremy Cox,  
University of Utah.
- 2000 Graduate, Lauren Strachan,  
NIH Predoctoral Fellowship.
- 2000 Undergraduate, Suman Barua,  
University of Utah.
- 2000 Graduate Rotation, Xulei Lui,  
Neuroscience Program.
- 2000 Graduate Rotation, Debjani Bhar,  
Molecular Biology Program.
- 2001 Postdoctoral Fellow, Michele Lemons,  
NIH Postdoctoral Fellowship, Paralyzed  
Veterans of America Postdoctoral Fellowship,  
Paralyzed Veterans of America International  
Outstanding Young Investigators Award,  
Assistant Professor (tenure track)  
Assumption College, Worcester, MA,
- 2001 Graduate Rotation, Sandhiya  
Kalyanasundaram, Neuroscience Program.
- 2001 Graduate Rotation, Nirmalya Roychowdhury,  
Neuroscience Program.
- 2001 Graduate Rotation, Deepak Raj,  
Molecular Biology Program.
- 2002 Graduate Rotation, Hara Kang,  
Molecular Biology Program.
- 2002 Graduate Rotation, Linclon Hunt,  
Neuroscience Program,
- 2003 Undergraduate, Luke Marzec,  
University of Pennsylvania.
- 2003 Undergraduate, Kevin Woody,  
University of Utah.

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- 2004 Undergraduate, Katheryn Cousins,  
University of Chicago.
- 2004 Graduate Rotation, Kathy Zukor.  
Neuroscience Program.
- 2004 Graduate Rotation, Jared Cassiano,  
Molecular Biology Program.
- 2005 Graduate, Kath Zukor.
- 2005 Undergraduate, Benjamin Saliwanchik,  
University of Chicago.
- 2005 Graduate Rotation, Michael Abanto.  
Neuroscience Program.
- 2007 Graduate Rotation, Gretchen Carr,  
Neuroscience Program.
- 2009 Graduate, Erin Cadwalader,  
Co-advisor with H. J. Yost.
- 2010 Postdoctoral Fellow, Colin McGuire.
- 2011 Undergraduate fellow, Jennifer Akiona
- 2011 Undergraduate trainee, Flor Pineiro
- 2012 Undergraduate trainee, Emily Means
- 2012 Undergraduate trainee, Annie Marsden

### **Graduate Student Committees**

- 1999-01 Laura Storjohann.  
Neurobiology and Anatomy.
- 1999-04 Wei Guan. Neurobiology and Anatomy.
- 2000-01 Roy Smeal, Bioengineering.
- 2000-05 Lauren Strachan.  
Neurobiology and Anatomy.
- 2001-04 Jeong-Soo Lee.  
Neurobiology and Anatomy.
- 2004-08 Suzanna Gribble.  
Neurobiology and Anatomy.



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- 2004-10 Melissa Hardy.  
Neurobiology and Anatomy.
- 2005-09 Eon Joo Park. Human Genetics.
- 2006-10 Katherine Zukor.  
Neurobiology and Anatomy.
- 2010-14 Lisa Benko, Neurobiology and Anatomy.
- 2011-16 Tony Hsiao, Bioengineering.

**Continuing Medical Education  
Lectures/Presentations**

- 9/2002 Conference speaker (National).  
*Scientific basis of pediatric practice.*  
University of Utah, Salt Lake City, UT.
- 4/2004 Symposium Speaker (International).  
*Integrative Master Class in Anatomy:  
The Gastrointestinal System.*  
Experimental Biology National Meeting.  
Washington, D.C.
- 11/2005 Keynote Speaker (International).  
*Suffering and Hope: The ideas behind  
the medical specialty of palliative care.*  
The University of Texas MD Anderson  
Cancer Center and the University of St.  
Thomas, Houston TX.
- 9/2006 Congress speaker (International).  
*Stem cells: What future for therapy?  
Scientific aspects and bioethical problems.*  
Azienda Ospedaliera Santa Maria della  
Misericordia, FIAMC (Fédération Interna-  
tionale des Associations Médicales Catho-  
liques) and the Pontifical Academy for Life.  
Rome, Italy.

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- 10/2006 Colloquium speaker (National).  
*The beginning of life: Human embryology.*  
DeVos Medical Ethics Colloquy. Grand  
Valley State University, Spectrum Health  
Hospitals, St. Mary's Hospital, Metropoli-  
tan Hospital, Calvin College, Aquinas Col-  
lege and the Van Andel Research Institute.  
Grand Rapids, Michigan.
- 4/2008 Keynote Speaker (National).  
*The nature of human embryos.*  
Alice D. and Frederick C. LaBrecque  
Lecture In Medical Ethics/Bioethics.  
Boston College. Boston, MA.
- 10/2008 Invited speaker (National).  
*Human embryology and science politics.*  
*Moral Conviction vs. Political Pressure.*  
Allegheny General Hospital and  
Franciscan University of Steubenville.  
Steubenville, OH.
- 7/2010 Invited Speaker (National).  
Who is human and what is not?  
"Beyond Therapy: Exploring Enhancement  
and Human Futures."  
The Center for Bioethics & Human  
Dignity, Deerfield, IL.
- 4/2011 Invited Research In Progress Seminar  
(Regional). Amniotic fluid stem cells and  
congenital heart defects.  
Department of Pediatrics.  
University of Utah, Salt Lake City, UT.
- 9/2011 Plenary Speaker.  
*Human reproductive embryology.*  
Biologic Basis of Pediatric disease.  
Department of Pediatrics.  
Salt Lake City, UT.

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- 2/2012 Plenary Speaker. Stem cell research.  
Natl. AAPLOG meeting. Washington, D.C.
- 7/2012 Plenary Speaker.  
*Early human development.*  
American Academy of Fertility Care  
Professionals. Salt Lake City, UT.
- 1/2014 Keynote Speaker.  
*Scientific evidence for when life begins.*  
Catholic Medical Association. St. Paul, MN.
- 9/2014 Keynote Speaker.  
*Stem cells and medicine.*  
Catholic Medical Association and Diocese  
of Salt Lake. Salt Lake City, UT.
- 4/2015 Invited Lecturer and Session Co-chair.  
*Healing or Human Enhancement?*  
*The Future of Medicine.*  
Maryland Nurses Association,  
Providence Hospital and the John Paul II  
Pontifical Institute. Washington, DC.
- 6/2015 Plenary Speaker,  
The Center for Bioethics & Human  
Dignity's 22nd annual summer conference,  
"Science, Research, and the Limits of  
Bioethics." Deerfield, IL.
- 11/2016 Plenary Speaker,  
3rd International Conference on  
Responsible Stem Cell Research,  
Pontifical Academy for Life and the  
University of Padua, Padua, Italy.

**Other Educational Activities**

- 1998-Present Molecular Biology Program,  
Admissions Interview.

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- 1998-Present Neuroscience Program,  
Admissions Interview.
- 1998 Gregory Yochum. Ontological  
Sciences, Qualifying Examinations.
- 1998 Meredith Lee. Neurobiology and  
Anatomy, Qualifying Examinations.
- 1998 James Kemmerle. Human Genetics,  
Qualifying Examinations.
- 2000 Wei Guan. Neurobiology and  
Anatomy, Qualifying Examinations.
- 2001 Jeong-Soo Lee. Neurobiology and  
Anatomy, Qualifying Examinations.
- 2004 Melissa Hardy, Neurobiology and  
Anatomy, Qualifying Examinations.
- 2004 Suzanne Gribble. Neurobiology and  
Anatomy, Qualifying Examinations.
- 2005 Eon Joo Park. Human Genetics,  
Qualifying Examinations.
- 2006 Katherine Zukor. Neurobiology and  
Anatomy, Qualifying Examinations.
- 2011 Lisa Benko, Neurobiology and  
Anatomy, Qualifying Examinations.
- 2012 Tony Hsiao, Bioengineering,  
Qualifying Examinations.

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- 11 along the dorsal-ventral axis in *Xenopus*. *Dev. Biol.* 214, 288-297.
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4. Condic, M.L. (2011). Chapter 10: A biological definition of the human embryo. *A Critical Analysis of Pro-Choice Arguments: Persons, Moral Worth, and Embryos*. Ed. Stephen Napier. *Philosophy and Medicine Series*, Springer, New York, NY.

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3. Condic, M.L. (2010). "James L. Sherley, et al. v. Kathleen Sebelius," Brief *AMICUS CURIAE*. *United States Court of Appeals for the District of Columbia Circuit*. No. 10- 5287.
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5. Condic, M.L. (2012). “Personhood Oklahoma v. Brittany Mays Barber et al.” Affidavit, Appendix A, Brief, *AMICUS CURIAE*, AAPLOG, *Supreme Court of the United States*. NO. 12-145.
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28. Lemons, M.L., Abanto, M., Dambrauskas, N., Duke, V., Clements, C., Condic, M.L. (2008). Netrin-1 induced growth cone collapse is mediated by integrins. *Soc. Neurosci.* 33.
29. Lemons, M.L., Dambrauskas, N., Abanto, M., Clements, C., Condic, M.L., (2010). An interaction between netrin-1 and integrin receptors in growth cones. *Cold Spring Harbor.* 138.
30. Maguire, C.T., Demarest, D., Akiona, J., Hill, J., Palmer, J. Brothman, A.R., Yost, H.J., Condic, M.L. (2012). Human amniocytes contain subpopulations of stem cells that have a repressed cardiogenic status. *Weinstein Cardiovascular Conference.*
31. Maguire, C.T., Demarest, D., Hill, J., Brothman, A.R., Yost, H.J., Condic, M.L. (2013). Human amniocytes express a distinct multilineage phenotype that has a repressed cardiogenic status. *Southwest Developmental Biology.*
32. Maguire, C.T. Jackson, J., Demarest, B., Hill, J., Brothman, A.R., Yost, H. J., Condic, M.L. (2013). Minicircle DNA vectors to reprogram human amniocytes into cardiomyocytes. *Keystone Symposium: Cardiac Remodeling, Signaling, Matrix and Heart Function (D4).*

33. Maguire, C.T., Gorski, B., Demarest, B., Jackson, J., Sunderland, R., Hill, J., Yost, H.J., Condic, M.L. (2014). Reprogramming transcriptionally repressed human amniocytes into cardiomyocytes by manipulating DNA demethylation. *Southwest Developmental Biology*.
34. Maguire, C.T., Demarest, B., Jackson, J., Sunderland, R., Jou, C.J., Tristani-Firouzi, M., Yost, H.J., Condic, M.L. (2015). Whole-genome analyses reveal developmental regulators of cardiomyocyte subtype differentiation in human amniocytes. *Keystone Symposium: Cardiac Remodeling, Signaling, Matrix and Heart Function (D4)*.

#### ORAL PRESENTATIONS

##### **Symposia and Conferences:**

##### **Keynote or Plenary Presentations**

##### International

- 3/2005 Plenary Speaker: *Global state of stem cells and cloning in science, ethics and law* Regina Apostolorum Pontifical University, Rome, Italy.
- 11/2005 Keynote Speaker. *Suffering and Hope: The ideas behind the medical specialty of palliative care*. The University of Texas MD Anderson Cancer Center and the University of St, Thomas, Houston TX. (CME)
- 9/2006 Plenary speaker. *1st International Conference on Responsible Stem Cell Research Stem cells: What future for therapy? Scientific aspects and bioethical problems*. Azienda Ospedaliera Santa Maria della Misericordia, FIAMC (Federation internationale des Associations Médi-

cales Catholiques) and the Pontifical Academy for Life, Rome, Italy. (CME)

- 1/2009 Plenary Speaker, Scientific criteria for the organismal status of the embryo. *Focus on The Embryo*. Social Trends Institute, Barcelona, Spain.
- 2/2011 Plenary Speaker, *Embryonic stem cell research*. NCBC biannual workshop on Bioethics. Dallas, Texas.
- 9/2013 Invited Debate participant. “The acquisition of human rights.” Aggiornamento Institute and Colorado State University. Fort Collins, CO.
- 10/2013 Plenary Speaker, “*Stem cell research and ethics*.” Council of the European Union conference, Human stem cell research, therapeutic applicability, ethical and legal issues of stem cell technologies in the EU, Kaunas, Lithuania.
- 11/2013 Plenary Speaker, “*When does life begin?*” Human Life International’s 19th Asia-Pacific Congress. Kota Kinabalu, Malaysia.
- 11/2013 Plenary Speaker, “*Stem cell research and ethics*.” Human Life International’s 19th Asia-Pacific Congress. Kota Kinabalu, Malaysia.
- 6/2014 Plenary Speaker, “Determination of death: A scientific perspective.” Catholic University-Bioethics Defense Fund 1st Annual Conference. Washington, DC.
- 4/2015 Plenary Speaker and Session Co-chair. *Healing or Human Enhancement? The Future of Medicine*. Maryland Nurses Association,

- Providence Hospital and the John Paul II Pontifical Institute. Washington, DC. (CME)
- 6/2015 Plenary Speaker, The Center for Bioethics & Human Dignity's 22nd annual summer conference, "Science, Research, and the Limits of Bioethics." Deerfield, IL. (CME)
- 3/2016 Plenary Speaker, "Virtues beyond the utilitarian approach in biomedical research." in The role of virtues in the ethics of life. Pontifical Academy for Life. Rome, Italy.
- 9/2016 Plenary Speaker, "Twinning and Individuality," Science and Religion conference, Fellowship of Catholic Scholars. Washington, DC.
- 11/2016 Plenary Speaker, 3rd International Conference on Responsible Stem Cell Research, Pontifical Academy for Life and the University of Padua, Padua, Italy. (CME)
- 2/2017 Plenary Speaker, "Biotechnology and human life," National Catholic Bioethics Center Bishop's Workshop. Dallas, TX.

#### National

- 9/2002 Plenary speaker. *Scientific basis of pediatric practice*, University of Utah, Salt Lake City, UT. (CME)
- 3/2003 Plenary speaker. *Bioethics*. Notre Dame Law School, Thomas J. White Center on Law and Government. South Bend, IN.
- 6/2004 Plenary speaker. *Integrins and cAMP in neuronal regeneration*. McKnight Conference on Neuroscience. Aspen Institute, Aspen Meadows, CO.



- 4/2005 Plenary speaker. *Altered nuclear transfer*. Westchester Institute Scholars Forum. Washington, DC.
- 6/2005 Plenary speaker. *Human embryonic stem cell research*. Center for Ethics in Science and Technology, University of San Diego. San Diego, CA.
- 8/2005 Plenary speaker. *Stem cells: the state of the science*. United States Conference of Catholic Bishops, National Conference of diocesan pro-life coordinators annual meeting. Phoenix, AZ.
- 9/2005 Plenary speaker. *Science of stem cells and embryology*. United States Conference of Catholic Bishops, Committee on Science and Human Values. Washington, D.C.
- 3/2006 Plenary speaker. *On the human embryo*. Westchester Institute Scholars Forum. Washington, DC.
- 10/2006 Plenary speaker. *The beginning of life: Human embryology*. DeVos Medical Ethics Colloquy, Grand Valley State University, Spectrum Health Hospitals, St. Mary's Hospital, Metropolitan Hospital, Calvin College, Aquinas College and the Van Andel Research Institute. Grand Rapids, Michigan. (CME)
- 3/2007 Keynote speaker. *Embryonic and non-embryonic stem cell research; the state of the science*. Scientific address to members of the Florida State Legislature. Tallahassee, FL.
- 5/2007 Plenary speaker. *Defining embryos*. Westchester Institute Scholars Forum, Washington, DC.

- 10/2007 Keynote speaker, *Stem cells; opportunities and challenges*. Scientific address to members of the Ohio State Legislature. Columbus, OH.
- 11/2007 Keynote speaker. *Stem cells and human cloning; state of the science*. Scientific address to members of the Nebraska State Legislature. Lincoln, NE
- 4/2008 Keynote speaker. Alice D. and Frederick C. LaBrecque Lecture in Medical Ethics. *The nature of human embryos*. Boston College. Boston, MA. (CME).
- 4/2008 Plenary speaker. Witherspoon Institute University Colloquium. *The nature of university education and the pursuit of truth in academic science*. Princeton University, Princeton, NJ.
- 4/2008 Plenary speaker. *When Do We Die: Brain Death, Irreversible Circulatory Cessation, and the Debate over the End of Life*. Westchester Institute Scholars Forum. Washington, DC.
- 8/2008 Keynote speaker. *Human Embryology and organismal function*. Newman Seminar Series. Kalamazoo MI.
- 10/2008 Plenary speaker. *Human embryology and science politics*. Moral Conviction vs. Political Pressure. Allegheny General Hospital and Franciscan University of Steubenville. Steubenville, OH. (CME)
- 4/2010 Keynote Speaker. Student Affairs. *When does life begin?* Notre Dame University. South Bend, IN.

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- 7/2010 Plenary Speaker. *Who is human and what is not?* “Beyond Therapy: Exploring Enhancement and Human Futures.” The Center for Bioethics & Human Dignity, Deerfield, IL. (CME)
- 9/2011 Plenary Speaker. *Human reproductive embryology*. Biologic Basis of Pediatric disease. Department of Pediatrics. Salt Lake City, UT. (CME)
- 2/2012 Keynote Speaker. Cuthbert Allen Lecturer. Stem cell research; ethics and science. Belmont Abbey College, Belmont, NC.
- 2/2012 Plenary Speaker. *Human development*. National AAPLOG meeting. (Public) Washington, D.C. (CME)
- 2/2012 Plenary Speaker. *Stem cell research*. National AAPLOG Research meeting. (invitation only) Washington, D.C.
- 6/2012 Plenary Speaker. *Scientific evidence for when life begins*. National UFL Life and Learning XX. J. Reuben Clark Law School, Brigham Young University. Provo, UT.
- 7/2012 Plenary Speaker. *Early human development*. American Academy of Fertility Care Professionals. Salt Lake City, UT. (CME)
- 10/2013 Plenary Speaker. *Human development and human rights*. Journal of Law & Public Policy at the University of St. Thomas. National Symposium. Minneapolis, MN.
- 1/2014 Keynote Speaker. *Scientific evidence for when life begins*. Catholic Medical Association. St. Paul, MN. (CME)

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- 10/2014 Keynote Speaker. Texas A&M medical school. Definition of death. College Station, TX. (CME)
- 10/2014 Keynote Speaker. When life begins. Conference of State Legislators and Aides, Austin, TX.
- 9/2015 Plenary Speaker and Panelist. "A Medical Perspective on Embryo Adoption." LCMS International Center, St. Louis, MO.
- 9/2015 Plenary Speaker. "Fetal Pain". Briefing for Senate Staff, sponsored by the Charlotte Lozier Institute. Washington, DC
- 3/2016 Plenary Speaker, "Mitochondrial disease and early human development" In: The Intellectual Tasks of the New Evangelization 2016: Science and Religion United States Conference of Catholic Bishops, Secretariat of Doctrine. Washington, D.C.
- 6/2016 Plenary Speaker. "integration and the human embryo." University Faculty for Life, National conference, Marquette University, Milwaukee, WI.
- 9/2016 Plenary Speaker, "When human life begins," Northwestern University and Students for Life, Illinois. Evanston, IL.
- 10/2016 Plenary Speaker, "Fetal pain," 20/20 Vision Conference, Archdiocese of Newark and Lifenet. Scotch Plains, NJ.
- 4/2017 Plenary Speaker, "When does life begin: the science." 9th Annual Converging Roads Conference, St. John Paul ii Foundation. Houston TX. (CME)

**Symposia and Conferences:  
Invited Presentations**International

- 4/2004 Symposium Speaker. *Integrative Master Class in Anatomy: The Gastrointestinal System*. Experimental Biology National Meeting. Washington, D.C. (CME)
- 10/2004 Panelist, Comparative Law Colloquium: *The Legal Regulation of Stem Cell Research in the United States and the Federal Republic of Germany*. The Catholic University of America. Washington, D.C.
- 3/2006 Symposium speaker. *Axonal Growth in the Complex Environment Surrounding Spinal Cord Injury*. American Society for Neurochemistry National Meeting. Portland, OR.

National

- 7/2002 Invited conference participant. McKnight Conference on Neuroscience. Aspen Institute, Aspen Meadows, CO.
- 6/2005 Invited conference participant. McKnight Conference on Neuroscience. Aspen Institute, Aspen Meadows, CO.
- 11/2007 Invited panelist. *Bioethics panel discussion*. Witherspoon Institute conference. Princeton University, Princeton, NJ.
- 3/2009 Invited speaker. *The Politics of Knowledge; science and technology*. Women's and Gender Studies, University of South Carolina, Columbia, SC.

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- 9/2009 Invited colloquium participant. The Neuhaus Colloquium on Ethics and Public Affairs. *Human life and scientific research*. The Witherspoon Institute, Princeton University. Princeton, NJ.
- 3/2011 Invited Panelist. *Scientific perspective on early embryogenesis*. Student Affairs. Notre Dame University, South Bend, IN.
- 2/2012 Invited President's Roundtable participant. *The use of fetal cell lines In research*. The Catholic University of America. Washington, DC.

Regional/Local

- 10/1998 Symposium speaker. Interdepartmental Neuroscience program symposium, University of Utah. Salt Lake City, UT.
- 8/1999 Symposium speaker. Combined program in Molecular Biology and Biological Chemistry Student Orientation Seminar, University of Utah. Salt Lake City, UT.
- 3/2001 Invited educational lecture, Birth defects registry staff, University of Utah Hospital. General lecture for non-scientific staff on human development and the causes of birth defects. Salt Lake City, UT.
- 5/2001 Invited scientific panelist, "Stem cell research, panel discussion" Women's State Legislative Council of Utah. Salt Lake City, UT.
- 9/2002 Invited educational lecture. *Stem Cells and Human Life*. Newman Center, Salt Lake City, UT.

- 9/2004 Symposium series speaker. *“People need a fairy tale”*; *Stem cells and human life*. Educational Resource Development Council. University of Utah School of Medicine. Salt Lake City, UT.
- 10/2004 Symposium Speaker. *Control of sensory neuron fate*. Neuroscience Program Snowbird Scientific Symposium, Salt Lake City, UT.
- 2/2005 Symposium Speaker. *Growth cone motility and regeneration*, Spinal cord research interest group, The Brain Institute, University of Utah, Salt Lake City, UT.
- 3/2006 Symposium Speaker. *Growth cone motility and regeneration*, The Brain Institute, University of Utah, Salt Lake City, UT.
- 3/2006 Invited educational lecture for spinal cord injured patient population, *Growth Cone Motility and Regeneration*. Spinal Cord forum, Salt Lake City, UT.
- 3/2007 Invited educational lecture for spinal cord injured patient population, *Growth Cone Motility and Regeneration*. Spinal Cord forum, Salt Lake City, UT.
- 2/2008 Symposium series speaker. *Stem cell hope and hype*. Educational Resource Development Council. University of Utah School of Medicine. Salt Lake City, UT.
- 3/2008 Invited educational lecture for spinal cord injured patient population, *Stem Cells and Spinal Injury Update*. Spinal Cord forum, Salt Lake City, UT.

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- 3/2010 Invited educational lecture for spinal cord injured patient population, *Stem Cells and Spinal Injury Update*. Spinal Cord forum, Salt Lake City, UT.
- 11/2010 Invited educational lecture, Gastrointestinal development. Pediatric Gastroenterology, Department of Pediatrics. University of Utah. Salt Lake City, UT.
- 3/2011 Invited educational lecture for spinal cord injured patient population, *Stem Cells and Spinal Injury Update*. Spinal Cord forum, Salt Lake City, UT.
- 4/2011 Invited Seminar. Amniotic fluid stem cells and congenital heart defects. Department of Pediatrics. University of Utah, Salt Lake City, UT. (CME).
- 4/2012 Invited educational lecture for spinal cord injured patient population, *Stem Cells and Spinal Injury Update*. Spinal Cord forum, Salt Lake City, UT.
- 1/2013 Invited speaker, Diocese of Salt Lake. When does life begin? A scientific perspective. Taylorsville, UT.
- 4/2013 Invited educational lecture for spinal cord Injured patient population, *Stem Cells and Spinal Injury Update*. Spinal Cord forum, Salt Lake City, UT.
- 5/2013 Invited speaker, Parish Council, Our Lady of Lourdes. When does life begin? A scientific perspective. Magna. UT.
- 9/2013 Invited speaker, Diocese of Salt Lake Annual educational conference. Beginning of life and end of life. Draper, UT.



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- 2/2014 Invited panelist, Public Forum on abortion. St. Luke's Episcopal, Park City, UT.
- 3/2014 Invited educational lecture for spinal cord injured patient population, *Stem Cells and Spinal Injury Update*. Spinal Cord forum, Salt Lake City, UT,
- 9/2014 Plenary Speaker, "The beginning and end of life: An organismal definition." Diocese of Salt Lake Annual Congress, Park City, UT.
- 9/2014 Keynote Speaker. *Stem cells and medicine*. Catholic Medical Association and Diocese of Salt Lake. Salt Lake City, UT. (CME)
- 10/2014 Keynote Speaker. The beginning and end of life. Diocese of Salt Lake annual convocation. Park City, UT.
- 1/2015 Keynote Speaker. Human embryology and the politics of human value. in: Roe v. Wade: 42 Years of Abortion-on-Demand Colloquium. Brigham Young University, School of Law. Provo, UT.
- 4/2015 Invited educational lecture for spinal cord injured patient population, *Stem Cells and Spinal Injury Update*. Spinal Cord forum, Salt Lake City, UT.
- 4/2015 Invited lecture, Leadership Development Program. *Principles of Ombudsman Practice and Informal Dispute Resolution*. Human Resources, University of Utah. Salt Lake City, UT.
- 4/2016 Invited educational lecture for spinal cord injured patient population, Stem Cells and Spinal Cord forum. Salt Lake City, UT.

**Invited Visiting Professor Presentations**

- 1/1996 Columbia University, Department of Pathology. New York, NY.
- 2/1996 University of Maryland, Biology Department. College Park, MD.
- 3/1996 University of Minnesota, Genetics and Cell Biology. Minneapolis, MN.
- 4/1996 Mount Sinai School of Medicine, Brookdale Center for Molecular Biology. New York, NY.
- 5/1996 University of Minnesota, Department of Cell Biology and Neuroanatomy. Minneapolis, MN.
- 11/1996 University of Utah, Department of Neurobiology and Anatomy. Salt Lake City, UT.
- 2/1997 University of Illinois at Chicago, Department of Anatomy and Cell Biology Department of Biochemistry. Joint-Departmental seminar speaker. Chicago, IL.
- 4/1997 University of Texas, Southwestern Medical Center, Department of Neurobiology. Dallas, TX.
- 5/2000 University of Virginia, Department of Cell Biology. Charlottesville, VA.
- 10/2000 Case Western Reserve University, Department of Neuroscience. Cleveland, OH.
- 12/2000 University of Kentucky, Anatomy and Neurobiology. Lexington, KY.
- 4/2001 University of Rochester, Aab Institute of Biomedical Sciences. Center for Human Genetics and Molecular Pediatric Disease. Rochester, NY.

- 1/2002 University of Washington, Seattle. Graduate student invited seminar speaker. Program in Neurobiology and Behavior. Seattle, WA.
- 3/2002 University of Arizona, Tucson. Department of Cell Biology. Tucson, AZ.
- 10/2003 University of Utah, Departmental Seminar. *The role of adaptive motility in sensory neuron development*. Department of Neurobiology. Salt Lake City, UT. 11/2004 Michigan State University. *Integrin function in sensory development and regeneration*. Neuroscience Program and Department of Physiology, East Lansing, MI.
- 12/2004 Medical College of Ohio, *Control of cell motility and guidance in neural development*. Molecular and Cellular Neuroscience Program. Toledo, OH.
- 9/2005 University of Iowa. *Mechanisms of integrin dependent growth cone motility*. Biology Department Seminar speaker. Iowa City, IA
- 1/2006 Expert witness; Missouriian's against human cloning. Challenge to wording of Amendment 2 ballot title. Jefferson City, MO.
- 4/2007 Invited speaker. *Conceptualizing conception*. Graduate Student invited seminar speaker. Phi Sigma Tau, The University of St. Thomas. Houston, TX.
- 4/2007 University of Utah, Departmental Seminar, *Alternative sources of pluripotent stem cells*. Department of Neurobiology and Anatomy. Salt Lake City, UT.

- 6/2007 University of Utah, Departmental Seminar. *Mechanisms of integrin dependent growth cone motility*. Dept. of Neurobiology and Anatomy. Salt Lake City, UT.
- 10/2008 Invited speaker. *Stem cells and human health*. St. Monica Parish. Diocese of Kalamazoo. Kalamazoo, MI.
- 1/2009 Invited speaker. Departmental seminar series. Department of Philosophy. Notre Dame University. South Bend, IN.
- 1/2009 Invited speaker. Departmental seminar series. *Mechanisms of motility in neural development*. Department of Biology. Notre Dame University. South Bend, IN.
- 10/2009 Invited speaker. Office of the Vice President and Department of Biology. *Science policy*. Colorado State University. Boulder, Co.
- 6/2011 Invited Visiting Professor (six lectures). Human embryology, stem cell research, beginning of life, end of life and definition of an embryo. Notre Dame University, South Bend, IN.
- 2/2012 Invited Speaker. Amniotic Stem cells and congenital heart disease. Belmont Abbey College, Belmont, NC.
- 3/2012 Invited speaker. Stem cell research; ethics and science. Vanderbilt University and the Catholic Diocese of Nashville. Nashville, TN.
- 3/2012 Invited speaker. When does life begin? Vanderbilt University, Department of Pharmacology. Nashville, TN.
- 6/2012 Invited Visiting Professor (six lectures). Human embryology, stem cell research, beginning of life, end of life and definition of

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- an embryo. Notre Dame University, South Bend, IN.
- 9/2012 Invited speaker. Medical embryology. Texas A&M University, School of Medicine, College Station, TX.
- 10/2012 Invited Speaker. Why does the embryo matter? Office of Undergraduate Activities. Princeton University, Princeton, NJ.
- 3/2013 Invited Speaker. Stem cell research and Ethics. Arizona State University, Sandra Day O'Connor School of Law. Phoenix, AZ,
- 6/2013 Invited Visiting Professor (six lectures). Human embryology, stem cell research, beginning of life, end of life and definition of an embryo. Notre Dame University, South Bend, IN.
- 10/2013 Invited Speaker. Aristotelian Embryology. The Pontifical Gregorian University. Rome, Italy.
- 10/2013 Invited Visiting Professor. Stem cell research and ethics. St. John's University. Rome, Italy.
- 11/2013 Invited Visiting Professor (four lectures). Organismal criteria for the beginning and the end of life. The Catholic University of America. Washington, DC.
- 11/2013 Invited Panel Participant. The brain death criteria. The Catholic University of America. Washington, DC.
- 6/2014 Invited Visiting Professor (five lectures). Human embryology, stem cell research, beginning of life, end of life and definition of an embryo. Notre Dame University, South Bend, IN.

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- 4/2015 Invited Visiting Professor. University of Texas, Austin. Coalition of student groups. Human embryology and ethics. Austin, TX.
- 6/2015 Invited Visiting Professor (four lectures). Human embryology, stem cell research, beginning of life, end of life and definition of an embryo. Notre Dame University, South Bend, IN.

### **Grand Rounds Presentations**

- 12/1996 Baylor College of Medicine, Department of Surgery, Houston, TX.
- 11/1998 University of Utah, Grand Rounds seminar. *Stem cells in Pediatrics Medicine*. Department of Pediatrics. Salt Lake City, UT.
- 4/2001 University of Utah, Grand Rounds seminar. *Integrins in sensory neuron development and regeneration*. Department of Pediatrics. Salt Lake City, UT.

### **Outreach and Public Education**

- 1998-02 Science Fair Judge; Middle school, Salt Lake City, UT. Interviews with students and evaluation of science fair projects.
- 2005 Science Fair Judge; Junior High School, Salt Lake City, UT. Interviews with students, evaluation and ranking of science fair projects.
- 2007 Interview; Catherine Caine, Undergraduate student, Brigham Young University UT. Regenerative medicine.
- 2007 Interview; Maria Stone, Undergraduate student, Carlton College MN. Regenerative medicine.

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- 2007 Interview; Heather Borck, HS student, Nashville, TN. Stem cell therapies.
- 2007 Lecture; Junior High School, Salt Lake City, UT. Presentation to 7th and 8th grade students about the scientific method.
- 2008 Interview; Jessica Rump, Nashville, TN. High School AP honors paper. Induced Pluripotent Stem Cells.
- 2010 Interview; Iris Xu, Leal Elementary, Cerritos, CA, 6th grade. Neuroscience careers.
- 2012 Interview, Cierra Pieper, Dakota State University, Madison, SD. Scientific evidence regarding early human development.
- 2013 Interview (email), James McTavish, Manila, Philippines. Early embryo death; medical evidence.
- 2013 Interview (email), Maria Wanchc, Bismark, North Dakota. Scientific evidence on when life begins.
- 2013 Interview (email), Maddalena Togliani, Italy. ALS clinical research.
- 2013 Interview (email). Ismael Hernandez, Executive Director, Freedom & Virtue Institute, Fort Myers, FL. Scientific evidence on when life begins.
- 2013 Interview (email), Rose Hershenov, Niagra University, Niagra NY. Scientific definition of the zygote.
- 2014 Interview (email), Sri Talla, University California, Los Angeles. Human embryology.
- 2014 Interview (email), Paulina Knobloch, Jagiellonian University, Kraków, Poland. STAP cells and totipotency.

- 2014 Interview, Dennis M. Sullivan, Cedarville University, Cedarville, OH. Human embryology.
- 2014 Interview (email), Rita K. Vaughn, Minot, ND. Fetal pain.
- 2014 Interview (email), Eric Andre, Saskatoon Sk, Canada. Scientific evidence for when life begins.
- 2014 Interview (email). Erika Bachiochi, Boston, MA. Abortion and contraception.
- 2014 Interview (email). Ashlen Sandoz, Louisiana. High School anatomy project. Brain circuitry and fetal pain.
- 2015 Interview (email). Ernie Ramos. When does life begin? Juneau Douglas High School, Juneau, AK.

LIST OF CASES IN WHICH DR. MAUREEN L. CONDIC HAS TESTIFIED AS AN EXPERT AT TRIAL OR BY DEPOSITION IN LAST FOUR YEARS

1. *Susan Elderkin, et al. v. Maurice J. Mahoney, et al.*, NNH-CV-15-6056191-S (Superior Court of Connecticut, Judicial District of New Haven) (Deposition)
2. *Amy Bryant et al. v. Jim Woodall, et al.*, Civil Action No. 1:16-cv-01368-UA-LPA (U.S. District Court M.D.N.C) (Deposition)