Curriculum Vitae

MARIA VALERIA CANTO-SOLER, PhD

Doni Solich Family Endowed Chair in Ocular Stem Cell Research
Director, *CellSight* – Ocular Stem Cell and Regeneration Research Program
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EDUCATION AND TRAINING

Undergraduate

1990	Undergraduate Research Internship Centro Regional de Investigaciones Cientificas y Tecnologicas (CRICYT), Mendoza, Argentina
1991 – 1996	Bachelor of Science in Biology University of Cordoba School of Natural Sciences, Cordoba, Argentina
1994 – 1995	Undergraduate Research Fellow Instituto de Investigaciones Medicas Mercedes y Martin Ferreyra (INIMEC), Cordoba, Argentina
1995 – 1996	Undergraduate Research Fellow Instituto de Neurobiologia, Buenos Aires, Argentina
1996 – 1997	Undergraduate Research Fellow Austral University School of Medicine, Buenos Aires, Argentina

Doctoral

1998 – 2002	PhD in Biomedical Sciences, *summa cum laude* Title: Neuromediators in Proliferative Vitreoretinopathy Austral University School of Medicine, Buenos Aires, Argentina Primary mentor: Dr. Angela Suburo; Co-mentor: Dr. Ricardo Dodds

Postdoctoral

2002 – 2006	Postdoctoral Fellow Retinal Degenerations Research Center, Department of Ophthalmology Johns Hopkins University School of Medicine, Baltimore, MD Primary mentor: Dr. Ruben Adler, MD

ACADEMIC APPOINTMENTS

2006 – 2008	Research Associate, Retinal Degenerations Research Center, Wilmer Eye Institute, Johns Hopkins University School of Medicine, Baltimore, MD
2008 – 2017	Assistant Professor, Department of Ophthalmology, Johns Hopkins University School of Medicine, Baltimore, MD

2008 – 2017	Director, Retinal Degenerations Research Center, Department of Ophthalmology, Johns Hopkins University School of Medicine, Baltimore, MD
2013 – 2017	Executive Committee, Stem Cell and Ocular Regenerative Medicine Center, Department of Ophthalmology, Johns Hopkins University School of Medicine, Baltimore, MD
2014 – 2017	Affiliated Faculty, Translational Tissue Engineering Center, Johns Hopkins University School of Medicine, Baltimore, MD
2017 – 2018	Adjunct Assistant Professor, Wilmer Eye Institute, Johns Hopkins University School of Medicine, Baltimore, MD
2017 –	Affiliated Faculty, Gates Center for Regenerative Medicine, University of Colorado School of Medicine, Aurora, CO
2017 –	Associate Professor, Department of Ophthalmology, University of Colorado School of Medicine, Aurora, CO
2017-	Director, *CellSight* – Ocular Stem Cell and Regeneration Research Program, Department of Ophthalmology, University of Colorado School of Medicine, Aurora, CO

RECOGNITION

Awards, Honors and other Recognitions

1990	Scientific Merit Award, undergraduate research project, Argentinean Regional Center for Scientific and Technological Research (CRICYT)
1999	Scientific Merit Award, XVI Congreso Argentino de Oftalmología
2002	Summa cum laude, PhD in Biomedical Sciences, Austral University School of Medicine, Buenos Aires, Argentina
2002	POEN Award for Best Research Study in Ophthalmology, Productos Oftalmológicos de Elaboración Nacional (POEN) Laboratories
2004	Pediatric Ophthalmology Research Fellowship, Knights Templar Eye Foundation
2012	Honorific Award, Asociación de Pacientes y Padres de Niños con Enfermedad de Stargardt (Stargardt APNES)
2012	"Outstanding Personality", Council of the Autonomous City of Buenos Aires, Argentina
2013	Young Investigator Award, Alcon Research Institute
2013	William & Mary Greve Special Scholar Award, Research to Prevent Blindness
2014	Most Promising Assistant Professor Award, Wilmer Eye Institute, Johns Hopkins University
2014	Keynote Speaker, National Honor Society Induction Ceremony, Oakcrest School, Washington, DC
2015	Commencement Speaker, Graduation Ceremony, Oakcrest School, Washington, DC
2016	The Helen Juanita Reed Award for Macular Degeneration Research, BrightFocus Foundation
2017	Doni Solich Family Endowed Chair in Ocular Stem Cell Research

2022 NEI AGI 3-D Retina Organoid Challenge (3-D ROC), First Prize: 3D Human Model of AMD in a dish - Team lead Investigator

2022 NEI AGI 3-D Retina Organoid Challenge (3-D ROC), Second Prize: Improved Fluorescent Reporter Quantification-Based 3D Retinal Organoid Paradigm for Drug Screening - Team Investigator

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

2001 – American Society for Cell Biology (ASCB)
2002 – Society for Neuroscience (SfN)
2003 – The Association for Research in Vision and Ophthalmology (ARVO)
2006 – International Society for Eye Research (ISER)
2013 – Asociacion para la Investigacion en Vision y Oftalmología (AIVO, an ARVO International Chapter Affiliate)

MAJOR COMMITTEE AND SERVICES RESPONSIBILITIES

Institutional appointments

Johns Hopkins University School of Medicine

2009 – 2017 Grant Review Study Section, Research Intramural Fund, Wilmer Eye Institute

2010 – 2011 Member, Wilmer-KKESH search committee for several research division chiefs, Wilmer Eye Institute, Johns Hopkins University & King Khaled Eye Specialist Hospital (KKESH), Saudi Arabia

2010 – 2017 Faculty member, Visual Neuroscience Training Program, Wilmer Eye Institute and Neuroscience Department

2012 – 2017 Member, Organizing Committee for Research Seminar Series, Wilmer Eye Institute

2013 Member, Junior Faculty Interview Group, search for SOM Vice Dean for Research, Johns Hopkins University School of Medicine

2013 – 2017 Executive Committee, Stem Cells Ocular Regenerative Medicine (StORM) Center, Wilmer Eye Institute

2015 Research Faculty Representative, Ophthalmology Department External Review meeting with JHM leadership and Reviewing Committee, Wilmer Eye Institute

2015 – 2017 Member, Mitchell Prize Committee, Wilmer Eye Institute

2015 – 2017 Research Advisory Committee, Wilmer Eye Institute

2016 – 2017 Chair, Grant Administration Overview Committee, Wilmer Eye Institute

University of Colorado School of Medicine

2017 – Director, *CellSight* – Stem Cell and Ocular Regeneration Research Program, Department of Ophthalmology, University of Colorado School of Medicine

2018 – Steering Committee – Organoid and Tissue Modeling Program, University of Colorado School of Medicine

2018 – Departmental Faculty Promotions Committee – Department of Ophthalmology, University of Colorado School of Medicine

2022 Search Committee - Department of Dermatology Chair, University of Colorado School of Medicine

Advisory Committees

National

2015 Invited Expert Participant, Workshop on Sight Restoration through Stem Cell Therapy, The Ocular Research Symposia Foundation, Inc. Santa Monica, CA

2015 Invited Expert Participant, NEI Audacious Goals Initiative Workshop: Photoreceptor Regeneration and Integration, NIH/NEI, Denver, CO

2016 Invited Expert Participant, NEI Planning Meeting: 3D Retina Organoid Challenge, NIH/NEI, Bethesda, MD

2016 Invited Expert participant, NEI Experts Workshop: Clinical Application of Stem Cell Therapies for Human Eye Disease: Current Progress, Next Steps & Moving Forward, NIH/NEI, Bethesda, MD

2018 Invited Expert participant, NEI AGI Regenerative Medicine Workshop: Pathways for Retinal Cell Replacement Therapies, NIH/NEI, Bethesda, MD

2018 – Glaucoma Research Foundation - Catalyst for a Cure Grant Award - Advisory Board Member

2020 NEI Strategic Planning 2020 Vision for the Future - Co-Chair of Regenerative Medicine Strategic Planning Panel

2020 NEI AGI Roadmapping Workshop - Invited Thought Leader

2022 NEI Workshop on Immune System Role in Transplantation and Regeneration in Support of the Audacious Goals Initiative (AGI) - Invited Thought Leader

Conference Organizer, Session Chair

International

2010 Session Moderator, Mechanisms of Retinal Development, The Association for Research in Vision and Ophthalmology (ARVO), Annual Meeting, Fort Lauderdale, FL

2012 Symposium Moderator, Cell Reprogramming in the Treatment of Ocular Diseases, The Association for Research in Vision and Ophthalmology (ARVO, Annual Meeting, Fort Lauderdale, FL, May 6. [session 117]

2012 Session Moderator, Stem Cells In Vivo and In Vitro: Fates and Functional Outcomes, The Association for Research in Vision and Ophthalmology (ARVO), Annual Meeting, Fort Lauderdale, FL, May 10. [session 521]

2014 Session Chair, Stem Cells from and for the Eyes, Visual System Development: Lessons across the Phyla, Gordon Research Conference, Lucca, Italy, May 29

2015 Session Moderator, Stem Cell Biology, The Association for Research in Vision and Ophthalmology (ARVO), Annual Meeting, Denver, CO

2016 Session Moderator, Stem Cells: Disease Models and Therapeutics I, The Association for Research in Vision and Ophthalmology (ARVO), Annual Meeting, Seattle, WA

2016 Session Chair, ES/iPS cell-based approaches to treating retinal dystrophies, International Society for Eye Research (ISER), Tokyo, Japan, September 29

2018 Session Moderator, Stem Cells: From retinal organoids to transplantation, The Association for Research in Vision and Ophthalmology (ARVO), Annual Meeting, Hawaii

2019 Session Moderator, Stem Cells and Retinal Organoids: Disease modeling, The Association for Research in Vision and Ophthalmology (ARVO), Annual Meeting, Vancouver, Canada

2022-2023. Steering Committee member: Solving Neurodegeneration Symposium, Glaucoma Research Foundation

INTELLECTUAL PROPERTY

Patents

1. **Canto-Soler MV**, Zhong X, inventors. The Johns Hopkins University, The Reagents of the University of Colorado, assignee. Methods for Forming Three-Dimensional Human Retinal Tissue In Vitro. U.S. Patent No. 10,435,667. Filed: 2015 January 16. Granted: 2019 October 8.
2. **Canto-Soler MV**, Flores Bellver M, Aparicio Domingo S, Li K. The Reagents of the University of Colorado, assignee. Stem Cell-Derived Cell Cultures, Stem Cell-Derived Three Dimensional Tissue Products, and Methods of making and using the same. International Application No. PCT/US2019/031442 Filed: 2019 May 9
3. **Canto-Soler MV**, Mathias M, Flores Bellver M, Aparicio Domingo S, Li K, Chen C. The Reagents of the University of Colorado, assignee. Cellular Transplant Carrier Devices and Methods of using the same. International Application No. PCT/US22/45569 Filed 2022 October 3

REVIEW AND REFEREE WORK

Grant Review and Study Sections

National

2009 Ad-hoc grant reviewer, National Science Foundation (USA)

2013 Grant Review Study Section Member, New York State Stem Cell Science (NYSTEM), New York State Department of Health and Empire State Stem Cell Board, Herndon, VA

2016 Grant Review Study Section Member, Department of Defense - Congressionally Directed Medical Research Programs (CDMRP): Vision Research Program, Technology/Therapeutic Development Award, Bethesda, MD

2018	Grant Review Study Section Member, National Center For Advancing Translational Sciences (NCATS - NIH) - Special Emphasis Panel/Scientific Review Group
2019	Ad-hoc grant reviewer, NEI Biology of the Visual System Study Section (BVS)
2021	Ad-hoc grant reviewer, NEI Audacious Goals Initiative: U24-Translation-Enabling Models to Evaluate Survival and Integration of Regenerated Neurons in the Visual System 2021/05 ZEY1 VSN (09)
2022	Ad-hoc grant reviewer, NEI Bespoke Gene Therapy Consortium (BGTC) - Disease Nomination review committee
2022	Ad-hoc grant reviewer, NEI Audacious Goals Initiative: U01- "Age-related Macular Degeneration (AMD) Integrative Biology Initiative: Discovery of AMD Pathobiology using Patient-Derived Induced Pluripotent Stem Cell (iPSC)-derived Retinal Pigment Epithelium (RPE) 2022/05 ZEY1 VSN (10)
2022	Ad Hoc Committee Member, Research to Prevent Blindness

International

2013	Ad-hoc grant reviewer, Regenerative Medicine Panel, UK Medical Research Council
2015	Ad-hoc grant reviewer, Action Medical Research (UK)
2016	Ad-hoc grant reviewer, Biomedical Innovation, French National Research Agency (ANR)
2017	Ad-hoc grant reviewer, Biomedical Innovation, French National Research Agency (ANR)
2022	Ad-hoc grant reviewer, Mitacs Accelerate, Canada.

Journal peer-review activities

Select journals from past 5 years

1. Cell Stem Cell
2. Nature
3. Nature Communications
4. Proceedings of the National Academy of Sciences (PNAS)
5. The Journal of Neuroscience
6. Investigative Ophthalmology and Visual Science (IOVS)
7. Ophthalmology
8. eLife
9. Development
10. Developmental Biology
11. BMC Developmental Biology
12. Stem Cells and Development
13. Experimental Eye Research
14. Molecular and Cellular Neuroscience
15. Clinical and Experimental Ophthalmology

Invited Talks

National

1. "Development of 3D-retinal cups from human iPS cells". Session Speaker, Maryland Stem Cell Research Fund Annual Meeting, Annapolis, MD. October 2012.
2. "Building a functional retina with human iPS cells". Invited Speaker, Symposium on Ocular Regeneration: Cell Therapy and Regeneration in the Retina, Harvard Medical School, Department of Ophthalmology, Ocular Regenerative Medicine Institute, Boston, MA. October 2014.
3. "Building a human retina from human induced pluripotent stem cells". Invited Seminar, National Eye Institute, Bethesda, MD. November 2014.
4. "Building a functional retina with human iPS cells". Seminar Series, Center for Regenerative Medicine (CReM), Boston University School of Medicine, Boston MA. February 2015.
5. "3D retinal organoids: new frontiers for stem cell-based clinical applications". Vision Research Seminar Series, Department of Ophthalmology, University of Colorado School of Medicine, Aurora, CO. April 2016.
6. "3D retinal organoids: new frontiers for stem cell-based clinical applications". McKnight Vision Research Seminars, Bascom Palmer Eye Institute, University of Miami School of Medicine, FL. June 2016.
7. "A Retinal Organoid View into the Mechanisms of Human Eye Development". Developmental Biology Center Symposium: New approaches to old questions: Organoids and Development. University of Minnesota. October 2019

International

1. "Generation of neural retina-like tissue from human iPS cells in three-dimensional culture". Keynote Lecture. AIVO – ARVO International Chapter Affiliate, Buenos Aires, Argentina. November 2012.
2. "Building a functional retina with human iPS cells". Seminar Series, National Council of Research, Pisa, Italy. June 2014.
3. "3D retinal tissue from hiPS cells: perspectives on retina regeneration". Session Speaker, I Latin American –VIII Brazilian and I Argentine Congress of Stem Cells and Cell Therapy, Foz Iguazu, Brazil. October 2014.
4. "Building a functional retina with human iPS cells". Seminar Series, Catholic University of Valencia School of Medicine. December 2014.
5. "Building a functional retina with human iPS cells". Special Interest Group Speaker: Nanotechnology and Regenerative Medicine, ARVO annual meeting, Denver, CO, United States. May 2015.
6. "Dynamics of retinal progenitor cell differentiation in human iPSC-derived 3D retinas". Symposium Speaker, Fundamentals of ocular development: Building an eye through powerful connections and interactions, ARVO annual meeting, Denver, CO. May 2015.
7. "Generation of 3D retinal tissue from hiPS cells: perspectives for clinical applications". Named Lecture, CARVO – ARVO International Chapter Affiliate, Bogota, Colombia. August 2015.

8. “3D Mini-Retinas from Human iPS Cells: Perspectives for Clinical Applications”. Young Investigator Award Speaker, Alcon Research Institute Symposium, Harvard, MA. September 2015.
9. “Clinical application of iPS-based cell transplantation in retinal dystrophies”. Session Speaker, Regeneration – Degeneration, 15th EURETINA Congress of the European Society of Retina Specialists, Nice, France. September 2015.
10. “Building a functional retina with human iPS cells”. Minisymposium Speaker, 3D retinal organoids from human pluripotent stem cells - promise to alleviate blindness or better disease model? Society for Neuroscience Annual Meeting, Chicago, IL. October 21, 2015. [presentation 643.07]
11. “Mini Retinas Humanas a partir de Celulas iPS: Perspectivas para Aplicaciones Clínicas". Named Lecture, Sociedad Argentina de Investigación Clínica (SAIC) & Sociedad Argentina de Fisiología (SAFIS), Mar del Plata, Argentina. November 2015.
12. “3D mini-retinas and their use in pre-clinical studies”. Session Speaker, Pro Retina Research Colloquium, Potsdam, Germany. April 2016.
13. “Retinal organoids: challenges and opportunities for pre-clinical applications”. Session Speaker, Visual System Development: Circuits, Evolution and Disease in Visual System Development, Gordon Research Conference, West Dover, VT. August 9, 2016.
14. “Enabling high throughput screening in 3-D retinal organoids for drug discovery”. Session Speaker. International Society for Eye Research (ISER), Tokyo, Japan. September 29, 2016. [abstract 667]
15. “3D retinal organoids: new frontiers for stem cell-based clinical applications”. International Research Seminar Speaker. The Norwegian Center for Stem Cell Research, University of Oslo, Norway. October 2016.
16. “3D retinal organoids: new frontiers for stem cell-based clinical applications”. Neuro Seminar. Uppsala University. Uppsala, Sweden. April 2017.
17. “3D retinal organoids: new frontiers for stem cell-based clinical applications”. Symposium: Stem Cells and Neural Regeneration. AIVO-SAN joint meeting - October 24-26 2018, Cordoba, Argentina
18. “Transplantation of Photoreceptors generated from iPSCs: future prospects and challenges. Symposium: Stem cells - how close are we to application in Ophthalmology? Annual German Ophthalmological Society Meeting, Bonn, Germany. September 2018.
19. “A retinal organoid view into the mechanisms of human eye development and regeneration”. XIII National Meeting of the Mexican Society for Developmental Biology. Puebla, Mexico. October 2018.
20. “Human iPSC-derived retinal organoids and their potential for stem cell-based therapies for retinal degenerative diseases”. Minisymposium: Emerging cell-based therapies to tackle retinal diseases. ARVO annual meeting, Vancouver, Canada. May 2019.
21. “Human iPSC-derived retinal organoids for stem cell-based therapies for retinal degenerative diseases”. Session Speaker. The Biology & Chemistry of Vision FASEB Meeting. Steamboat Springs, Colorado. June 2019.
22. “A Retinal Organoid View into the Mechanisms of Human Eye Development and Regeneration”. Latina American Society for Developmental Biology. Buenos Aires, Argentina. October 2019.

23. “Mini Retinas derivadas de celulas madre pluripotentes inducidas y su potencial aplicacion en terapias regenerativas de la retina”. Invited Speaker. Ateneo en Oftalmologia. Hospital de Clinicas, Universidad Nacional de Buenos Aires. June 2020
24. “Human iPSC-derived 3D retinal tissue for stem cell-based therapies for retinal degenerative diseases”. Opening Lecture. Symposium on Retinal Degeneration. Universidad Catolica de Valencia. October 2020.
25. “Applying stem cell theranostic platforms for retinal regenerative therapies”. Multidisciplinary Opthalmic Imaging Group - In vivo theranostic platforms for monitoring and activation of ocular therapies. ARVO annual meeting, Virtual. May 2021
26. “Human iPSC-derived 3D retinal tissue for stem cell-based therapies for retinal degenerative diseases”. Keynote Lecture. XIX International Symposium on Retinal Degeneration. Nashville, TN. October 2021
27. “Human iPSC-derived 3D retinal tissue for stem cell-based therapies for retinal degenerative diseases”. NEI AGI seminar Series in Neurodegeneration. Virtual. November 2021
28. “3D retinal tissue from human iPS cells: new frontiers for stem cell-based clinical applications”. Minisymposium: Advances and insights into retinal disease, therapy and development using human retinal organoids. ARVO annual meeting, Denver, USA. May 2022.
29. “Building a functional retina from human induced pluripotent stem cells for modeling and regenerative strategies”. Symposium: Retinal cell biology entering human era. ARVO annual meeting, Denver, USA. May 2022.

EDUCATIONAL ACTIVITIES

Teaching

Classroom instruction

1992	Undergraduate Teaching Assistant, first year undergrad students, General and Inorganic Chemistry, University of Cordoba School of Natural Sciences, Cordoba, Argentina
1996 – 2002	Instructor, first year medical students, Cell Biology and Histology, Austral University School of Medicine, Buenos Aires, Argentina
1996 – 2002	Instructor, first year medical students, Human Embryology, Austral University School of Medicine, Buenos Aires, Argentina
2008 – 2017	Co-Director and Lecturer, PhD students, postdoctoral fellows and staff, Cellular and Molecular Biology of Photoreceptors in Health and Disease, Wilmer Eye Institute and Neuroscience Department, Johns Hopkins University School of Medicine
2012 – 2017	Lecturer and Group Discussion Leader, last year medical students, Topics in Interdisciplinary Medicine (TIME) Intersession: Regenerative Medicine, Johns Hopkins University School of Medicine
2013 – 2017	Lecturer, undergraduate students, Tissue Engineering Course, Biomedical Engineering, Johns Hopkins University School of Medicine

2022 – Instructor, Biology of the Eye Course (OPHT 5610 and NRSC-7618), elective course directed to medical and graduate students, University of Colorado School of Medicine

Workshops/seminars

National

8/2008 Invited Speaker, American Council of the Blind - Midatlantic Convention, Washington, DC. "Stem Cells and Gene therapy in the treatment of Retinal Degenerations"

5/2009 Invited Speaker, Foundation Fighting Blindness, Baltimore, MD. "Stem Cells and the treatment of Retinal Degenerations"

10/2013 Invited Speaker, National Eye Institute, Focus on Fellows, hosted by the NEI's Office of the Scientific Director, Bethesda MD. "Building a retina from human iPS cells"

6/2015 Invited Speaker, Patient Education Session. Visions 2015, Foundation Fighting Blindness' national conference, Baltimore, MD

International

10/2014 Invited Speaker, Workshop on hopes, challenges and realities on stem cell therapies, Leloir Institute, Buenos Aires, Argentina. "Perspective on retinal regeneration"

10/2014 Invited Speaker, "Neuroftalmologica XXII" Annual Meeting. Buenos Aires, Argentina. "Human mini retinas from iPS cells"

5/6/2017 Invited Speaker, Stem cells and organoids as models of tissue differentiation and eye diseases, ARVO Educational Course. Baltimore, MD. "A retinal organoid view into the mechanisms of human eye development and regeneration"

10/2021 Invited Speaker, Sociedad Argentina de Neurociencias. e-Social. Navigating the Gray Areas to do Neuroscience. Virtual.

11/2022 Keynote Speaker: Institute of Medical Translational Research, PhD Graduate Program, Austral University, Argentina.

Research Educational Program Building / Leadership

2010 – 2017 Director and Developer, Biomedical Research Training Program for Johns Hopkins Undergraduate Students

I established this training program with a two-fold goal in mind:

i) providing undergraduate students with the opportunity to get deeply involved in research projects, and
ii) providing postdoctoral fellows and staff members with an opportunity to develop their own mentorship/leadership skills

Students participating in this program co-authored papers, presented their research at meetings, and accrued credits for their academic degree. Graduates of the program are currently doing research or pursuing MD studies at renowned institutions. In my capacity as director of the program, I was responsible for

interviewing and selecting undergraduate students to enter the program, assign mentors to them, meet regularly with the students and their mentors to discuss their research projects, review and approve the students' research reports, evaluate students' performance and report to their college advisors.

Graduates of the Biomedical Research Training Program for Johns Hopkins Undergraduate Students, selected from the last 5 years:

2010 – 2012 Hui Yang, Bachelor of Sciences in Cellular and Molecular Biology & Bachelor of Arts in Mathematics, Johns Hopkins University.
Currently MD student at Albert Einstein College of Medicine.
Recipient of the Fall 2011 Provost Undergraduate Research award. First authored abstract presented at the Johns Hopkins University Provost's Undergraduate Research Awards Ceremony.
B.S. with Honors, 2012

2010 – 2012 Simon Pan, Bachelor of Science in Cellular and Molecular Biology.
Currently Research Technician, Department of Neuroscience, Johns Hopkins University.
Recipient of the Fall 2011 Provost Undergraduate Research award. First authored abstract presented at the Johns Hopkins University Provost's Undergraduate Research Awards Ceremony.
B.S. with Honors, 2013

2010 – 2012 Laura Weber, Bachelor of Arts in Economics, Pre-Medical Track, Johns Hopkins University.
Currently MD student at New York University.
First authored abstracts presented at the Johns Hopkins 3rd Annual Conference in Public Health (April 2012), and the Johns Hopkins 6th Annual Nano-Bio Symposium (May 2012)

2010 – 2013 Riukang Liu, Bachelor of Science in Neuroscience & Psychology, Johns Hopkins University.
Currently MD student at Penn State College of Medicine

2010 – 2014 Christopher Hampton, Bachelor in Neuroscience, Pre-Medical Track, Johns Hopkins University. Currently MD student at University of Connecticut.
Accepted into Combined BA/MS program at Johns Hopkins University, 2013-2014.
B.S. with Honors, 2014

2014 – 2017 Julian Hurtado, Bachelor in Chemical and Biomolecular Engineering, Johns Hopkins University

2014 – 2017 Kathleen Krantzlin, Bachelor in Global Environmental Change and Stability and Behavioral Biology, Johns Hopkins University

2015 – 2017 Pablo Palacios, Bachelor in Biophysics, Johns Hopkins University

Mentoring

Post-doctoral Advisees

2009 – 2015 Maria Natalia Vergara, PhD. Currently Assistant Professor of Ophthalmology, University of Colorado School of Medicine

2010 – 2014 Xiufeng Zhong, MD, PhD. Currently Professor, Sun Yat-Sen University, Zhongshan Ophthalmic Center, China

2015 – 2020 Miguel Flores-Bellver, PhD, Postdoctoral Fellow, University of Colorado SOM. Currently Assistant Professor of Ophthalmology, University of Colorado School of Medicine

2017 – 2022 Kang Li, MD, PhD, Postdoctoral Fellow, University of Colorado SOM. Currently Postdoctoral Fellow, Wilmer Eye Institute, Johns Hopkins University

2019 – Carson Petrash, MD, Postdoctoral Fellow, University of Colorado SOM

Master and PhD students

2012 – 2013 Lam Phuong, M.S. Research intern. Currently PhD student at Miami University

2013 – 2014 Christopher Hampton, Master Thesis Research Project for Combined BA/MS program, Johns Hopkins University. Summa cum laude. Currently MD student at University of Connecticut

2013 Miguel Flores, PhD student at Catholic University of Valencia, Spain. Required training abroad. Currently postdoctoral fellow in Dr. Canto-Soler's lab, University of Colorado SOM

2018 – 2021 International PhD mentor for Patricia Berber, PhD student at the Department of Human Genetics, University of Regensburg, Germany. PhD director: Dr. Bernard Weber.

Pre-Med & Medical Students

2011 Emily Silverman, MD student, Johns Hopkins University School of Medicine. Summer Internship. Currently Resident Physician, University of California San Francisco School of Medicine, CA

2011 Karina Mnatsakanyan, B.S in Psychology, Neuroscience and Pre-med, University of Maryland College Park. Summer internship. Currently Physician Assistant, MedStar Franklin Square Medical Center, Baltimore, MD

2018 – 2020 Rhianna Rubner, MD student, University of Colorado School of Medicine. MSA student. Currently matched for residency at Montefiore Medical Center, Albert Einstein College of Medicine, NY

2018 – 2022 Conan Chen, MD student, University of Colorado School of Medicine. Research fellow.

The Gates Summer Internship Program (GSIP), University of Colorado School of Medicine

2022 Francisca Rocha, Sophomore, Bates College

Thesis Committees

2009	Gillian Shaw, PhD Molecular and Comparative Pathobiology, Johns Hopkins University, Board Oral exam member
2014	Christopher Hampton, Master Thesis for Combined BA/MS program, Johns Hopkins University. Dissertation committee member
2014	Miguel Flores-Bellver, PhD School of Medicine and Dentistry, Catholic University of Valencia, Spain. Dissertation committee member
2017	Jing Zhou, PhD Biology, Lehman College, New York. Dissertation committee member
2021 –	Omar Ochoa-Olmos, PhD Comprehensive Examination and Thesis Committee member. Cell Biology, Stem Cells, and Development Graduate Program, University of Colorado

Thesis Opponent

2017	Maria Blixt, PhD Developmental Neuroscience, Uppsala University, Sweden

Training Grant Participation

2009 – 2017	Visual Neuroscience Training Program, Johns Hopkins University SOM NIH/NEI (T32) Role: Faculty Member

GRANT SUPPORT

Research Extramural Funding

Active Grants:

07/01/17-	*CellSight* Development Fund Unrestricted funds to pursue innovative stem cell-based technology for the treatment of retinal degenerative diseases Role: PI
2/01/18 – 1/31/24	Patterning Genes in Retinal Development 5R01 NIH/NEI PI: Stenkamp Role: Co-Investigator
4/01/20 – 3/31/25	Elucidating the cis-regulatory grammar of human photoreceptors 1R01EY030075 NIH/NEI Role: Co-I

Previous Grants:

08/15/20-08/14/22	3D Retinal Transplants Derived from Human Induced Pluripotent Stem Cells to Treat Combat Laser-Induced Blindness VR190095 DoD PI: Canto-Soler
09/01/20-07/31/21	Advanced biomaterial systems for stem cell-derived retinal transplants Colorado Office of Economics Development & International Trade PI: Canto-Soler
03/01/18-02/28/21	Stem cell-derived retinal transplant to treat dry AMD Gates Family Foundation - Grubstake Grant Role: PI
7/1/12 – 6/30/19	Mechanisms of retinal cell differentiation R01EY022631 NIH/NEI Role: PI
7/1/16 – 6/30/19	A novel 3D human mini-retina model for early age-related macular degeneration (AMD) BrightFocus Foundation Role: PI
7/1/15 – 6/30/18	Intrabody-dependent activation of cell-specific gene expression in CNS 1U01MH109102 NIH/BRAIN Initiative PD/PI: Blackshaw, S (JHU) Role: Co-I
7/1/15 – 6/30/18	Preventing and repairing combat-related proliferative vitreoretinopathy: Using 3D Engineered Eye Tissue Derived from Human Induced Pluripotent Stem Cells Department of Defense (DoD) PI: Bharti, K (NEI) Role: Co-I
7/1/09 – 6/30/12	Visual Neurons--Development and Regeneration In Vitro 3R01EY004859 NIH/NEI Role: PI
7/1/09 – 6/30/12	Wilmer Center for the Study of Retinal Degenerations and AMD Foundation Fighting Blindness Module VI PI: Campochiaro Role: Module Co-PI

7/1/09 – 6/30/12 Development of iPS technology for the treatment of retinal degeneration
Maryland Stem Cell Research Fund
Role: PI

7/1/12 – 6/30/14 Development of 3D-culture systems of hiPSC derived-retinal cells for clinical applications
Maryland Stem Cell Research Fund
Role: PI

7/1/14 – 6/30/15 Development of 3D-nanoscaffold culture systems of hiPSC-derived photoreceptors for drug discovery
Alcon Research Institute, Young Investigator Grant
Role: PI

1/1/15 – 12/31/15 Human iPS Cell-Derived Mini-Retina Disease Modeling System - Optimization for drug discovery
The Falk Medical Research Trust, Catalyst Research Program
Role: PI

3/1/14 – 3/3/17 Development of human iPS cell based-in vitro systems for disease modeling and drug discovery for Retinitis Pigmentosa
William and Ella Medical Research Foundation
Role: PI

7/1/13 – 6/30/17 Research to Prevent Blindness
William and Mary Greve Special Scholar Award
Role: PI

7/1/14 – 6/30/17 Ground State Naïve Human iPSC Banks for Vascular Regenerative Medicine
Maryland Stem Cell Research Fund
PI: Zambidis, E (JHU)
Role: Co-I

3/1/15 – 2/28/17 Functional vascular progenitors from naïve human iPSC
5R01HD082098
NIH/NICHD R01
PI: Zambidis, E (JHU)
Role: Co-I

<u>Other Extramural, non-competitive Funding</u>:

3/01/11 – 2/28/14 Development of 3D nanofiber scaffold systems to improve differentiation of human iPS cells into photoreceptor progenitor cells
William and Ella Medical Research Foundation
Role: PI

7/1/12 – 6/30/15 Development of iPS technology for the treatment of retinal degeneration
The J. Willard & Alice S. Marriott Foundations
Role: PI

Intramural Competitive Funding:

2009 Generation of photoreceptor progenitors from induced pluripotent stem (iPS) cells
Wilmer Pooled Professor Research Fund, Johns Hopkins University
Role: PI

2012 Mechanisms of Retinal Cell Differentiation
Wilmer Pooled Professor Research Fund, Johns Hopkins University
Role: PI

PUBLICATIONS

Peer Reviewed Journals: *Corresponding author / mentees

1. **Cantó Soler MV**, Suburo AM. Innervation of blood vessels in the vomeronasal complex of the rat. Brain Res. 1998 Nov 16;811(1-2):47-56. PubMed PMID: 9804888.
2. Lascano C, **Cantó Soler MV**, Ornstein A, Suburo AM. Structural specializations of the eye in the vizcacha (Lagostomus maximus maximus). Anat Rec. 1999 May 1;255(1):34-43. PubMed PMID: 10321991.
3. Suburo AM, Chiocchio SR, **Cantó Soler MV**, Nieponice A, Tramezzani JH. Peptidergic innervation of blood vessels and interstitial cells in the testis of the cat. J Androl. 2002 Jan-Feb;23(1):121-34. PubMed PMID: 11783440.
4. **Cantó Soler MV**, Gallo JE, Dodds RA, Hökfelt T, Villar MJ, Suburo AM. Y1 receptor of neuropeptide Y as a glial marker in proliferative vitreoretinopathy and diseased human retina. Glia. 2002 Sep;39(3):320-4. PubMed PMID: 12203398.
5. **Cantó Soler MV**, Gallo JE, Dodds RA, Suburo AM. A mouse model of proliferative vitreoretinopathy induced by dispase. Exp Eye Res. 2002 Nov;75(5):491-504. PubMed PMID: 12457862.
6. **Canto-Soler MV**, Adler R. Optic cup and lens development requires Pax6 expression in the early optic vesicle during a narrow time window. Dev Biol. 2006 Jun 1;294(1):119-32. Epub 2006 Mar 27. PubMed PMID: 16564518.
7. Iribarne M, **Canto-Soler MV**, Torbidoni V, Suburo AM. Controlling retinal pigment epithelium injury after experimental detachment of the retina. Invest Ophthalmol Vis Sci. 2007 Mar;48(3):1348-54. PubMed PMID: 17325183.
8. Adler R, **Canto-Soler MV**. Molecular mechanisms of optic vesicle development: complexities, ambiguities and controversies. Dev Biol. 2007 May 1;305(1):1-13. Epub 2007 Feb 7. Review. PubMed PMID: 17335797; PubMed Central PMCID: PMC1927083.
9. **Canto-Soler MV***, Huang H, Romero MS, Adler R. Transcription factors CTCF and Pax6 are segregated to different cell types during retinal cell differentiation. Dev Dyn. 2008 Mar;237(3):758-67. doi: 10.1002/dvdy.21420. PubMed PMID: 18224715; PubMed Central PMCID: PMC2443865.
10. McNally MM, Wahlin KJ, **Canto-Soler MV***. Endogenous expression of ASLV viral proteins in specific pathogen free chicken embryos: relevance for the developmental

biology research field. BMC Dev Biol. 2010 Oct 18;10:106. doi: 10.1186/1471-213X-10-106. PubMed PMID: 20955591; PubMed Central PMCID: PMC2973938.

11. Vergara MN, de la Rosa EJ and **Canto-Soler MV***. Focus on molecules: proinsulin in the eye: precursor or pioneer? Exp Eye Res. 2012 Aug;101:109-10. doi: 10.1016/j.exer.2010.11.012. Epub 2010 Dec 7. PMID: 21144848; PMCID: PMC3061247.
12. Gutierrez C, McNally M, **Canto-Soler MV***. Cytoskeleton proteins previously considered exclusive to ganglion cells are transiently expressed by all retinal neuronal precursors. BMC Dev Biol. 2011 Jul 22;11:46. doi: 10.1186/1471-213X-11-46. PubMed PMID: 21781303; PubMed Central PMCID: PMC3161946. *This article has been highlighted on the BMC Dev Biol website and on the Biomedical Picture of the Day website, managed by the MRC London Institute of Medical Sciences. http://bpod.mrc.ac.uk/archive/2012/2/23*.
13. Phillips MJ, Wallace KA, Dickerson SJ, Miller MJ, Verhoeven AD, Martin JM, Wright LS, Shen W, Capowski EE, Percin EF, Perez ET, Zhong X, Canto-Soler MV, Gamm DM. Blood-derived human iPS cells generate optic vesicle-like structures with the capacity to form retinal laminae and develop synapses. Invest Ophthalmol Vis Sci. 2012 Apr 18;53(4):2007-19. doi: 10.1167/iovs.11-9313. PubMed PMID: 22410558; PubMed Central PMCID: PMC3648343. *Second-last senior author. Ranked in the 97th percentile of tracked articles of a similar age and source, and 73rd percentile of all articles of a similar age in all journals.*
14. Vergara MN, **Canto-Soler MV***. Rediscovering the chick embryo as a model to study retinal development. Neural Dev. 2012 Jun 27;7:22. doi: 10.1186/1749-8104-7-22. Review. PubMed PMID: 22738172; PubMed Central PMCID: PMC3541172. *This article has been flagged as "Highly accessed". Ranked in the 87th percentile of tracked articles of a similar age and source.*
15. Vergara MN, Gutierrez C, O'Brien DR, **Canto-Soler MV***. Ex vivo electroporation of retinal cells: a novel, high efficiency method for functional studies in primary retinal cultures. Exp Eye Res. 2013 Apr;109:40-50. doi: 10.1016/j.exer.2013.01.010. Epub 2013 Jan 28. PubMed PMID: 23370269; PubMed Central PMCID: PMC3615050.
16. Moshiri A, Scholl HP, **Canto-Soler MV**, Goldberg MF. Morphogenetic model for radial streaking in the fundus of the carrier state of X-linked albinism. JAMA Ophthalmol. 2013 May;131(5):691-3. doi: 10.1001/jamaophthalmol.2013.39. PubMed PMID: 23519542; PubMed Central PMCID: PMC4940029.
17. Zhong X, Gutierrez C, Xue T, Hampton C, Vergara MN, Cao LH, Peters A, Park TS, Zambidis ET, Meyer JS, Gamm DM, Yau KW, **Canto-Soler MV***. Generation of three-dimensional retinal tissue with functional photoreceptors from human iPSCs. Nat Commun. 2014 Jun 10;5:4047. doi: 10.1038/ncomms5047. PubMed PMID: 24915161; PubMed Central PMCID: PMC4370190. *Ranked in the 99 percentile of tracked articles of a similar age in all journals; and in the 94 percentile of tracked articles of a similar age in Nature Communications. Highlighted among the top-ten Hopkins research breakthroughs of 2014.*
18. Vergara MN, Gutierrez C, **Canto-Soler MV***. Efficient Gene Transfer in Chick Retinas for Primary Cell Culture Studies: An Ex-ovo Electroporation Approach. J Vis Exp. 2015

Nov 2;(105):e52002. doi: 10.3791/52002. PubMed PMID: 26556302; PubMed Central PMCID: PMC4692687.

19. Zimmerlin L, Park TS, Huo JS, Verma K, Pather SR, Talbot CC Jr, Agarwal J, Steppan D, Zhang YW, Considine M, Guo H, Zhong X, Gutierrez C, Cope L, **Canto-Soler MV**, Friedman AD, Baylin SB, Zambidis ET. Tankyrase inhibition promotes a stable human naïve pluripotent state with improved functionality. Development. 2016 Dec 1;143(23):4368-4380. Epub 2016 Sep 22. PubMed PMID: 27660325; PubMed Central PMCID: PMC5201042.
20. Vergara MN*, Flores-Bellver M, Aparicio-Domingo S, McNally M, Wahlin KJ, Saxena MT, Mumm JS, **Canto-Soler MV***. Three-dimensional automated reporter quantification (3D-ARQ) technology enables quantitative screening in retinal organoids. Development. 2017 Oct 15;144(20):3698-3705. doi: 10.1242/dev.146290. Epub 2017 Sep 4. PubMed PMID: 28870990.
21. Zhou J, Benito-Martin A, Mighty J, Chang L, Ghoroghi S, Wu H, Wong M, Guariglia S, Baranov P, Young M, Gharbaran R, Emerson M, Mark MT, Molina H, **Canto-Soler MV**, Selgas HP, Redenti S. Retinal progenitor cells release extracellular vesicles containing developmental transcription factors, microRNA and membrane proteins. Sci Rep. 2018 Feb 12;8(1):2823. doi: 10.1038/s41598-018-20421-1
22. Bell WR, Meeker AK, Rizzo A, Rajpara S, Rosenthal IM, Flores Bellver M, Aparicio Domingo S, Zhong X, Barber JR, Joshu CE, **Canto-Soler MV**, Eberhart CG, Heaphy CM. A unique telomere DNA expansion phenotype in human retinal rod photoreceptors associated with aging and disease. Brain Pathol. 2018 Apr 18. doi: 10.1111/bpa.12618.
23. Singh MS, Park SS, Albini TA, **Canto-Soler MV**, Klassen H, MacLaren RE, Takahashi M, Nagiel A, Schwartz SD, Bharti K. Retinal stem cell transplantation: Balancing safety and potential. Prog Retin Eye Res. 2019 Sep 5:100779. doi:10.1016/j.preteyeres.2019.100779.
24. Petrash CC, Palestine AG, **Canto-Soler MV**. Immunologic Rejection of Transplanted Retinal Pigmented Epithelium: Mechanisms and Strategies for Prevention. Front Immunol. 2021 May 12;12:621007. doi: 10.3389/fimmu.2021.621007. eCollection 2021.
25. Zhang J, Qin Y, Martinez M, Flores-Bellver M, Rodrigues M, Dinabandhu A, Cao X, Deshpande M, Qin Y, Aparicio-Domingo S, Rui Y, Tzeng SY, Salman S, Yuan J, Scott AW, Green JJ, **Canto-Soler MV**, Semenza GL, Montaner S, Sodhi A. HIF-1α and HIF-2α redundantly promote retinal neovascularization in patients with ischemic retinal disease.J Clin Invest. 2021 Jun 15;131(12):e139202. doi: 10.1172/JCI139202.
26. Cobb H, Aparicio-Domingo S, Canto-Soler MV. Transitioning into GMP-Compliance: Alternative Methods for Producing Retinal Organoids for Transplantation. Transl Vis Sci Technol. 2021 Aug 12;10(10):9. doi: 10.1167/tvst.10.10.9. PubMed PMID: 34383873; PubMed Central PMCID: PMC8362632.
27. Zhou J, Flores-Bellver M, Pan J, Benito-Martin A, Shi C, Onwumere O, Mighty J, Qian J, Zhong X, Hogue T, Amponsah-Antwi B, Einbond L, Gharbaran R, Wu H, Chen BJ, Zheng Z, Tchaikovskaya T, Zhang X, Peinado H, **Canto-Soler MV**, Redenti S. Human retinal organoids release extracellular vesicles that regulate gene expression in target human retinal progenitor cells. Sci Rep. 2021 Oct 26;11(1):21128. PubMed PMID: 34702879

28. Flores-Bellver M, Mighty J, Aparicio-Domingo S, Li KV, Shi C, Zhou J, Cobb H, McGrath P, Michelis G, Lenhart P, Bilousova G, Heissel S, Rudy MJ, Coughlan C, Goodspeed AE, Becerra SP, Redenti S, **Canto-Soler MV**. Extracellular vesicles released by human retinal pigment epithelium mediate increased polarised secretion of drusen proteins in response to AMD stressors. J Extracell Vesicles. 2021 Nov;10(13):e12165. PubMed PMID: 34750957. *Journal IF 25.8 / Article metrics: 95th percentile*
29. Rubner R, Li KV, **Canto-Soler MV**. Progress of clinical therapies for dry age-related macular degeneration. Int J Ophthalmol. 2022;15(1):157-166. doi: 10.18240/ijo.2022.01.23. eCollection 2022. Review. PubMed PMID: 35047371; PubMed Central PMCID: PMC8720345.
30. Li KV, Flores-Bellver M, Aparicio-Domingo S, Petrash C, Cobb H, Chen C, **Canto-Soler MV**, Mathias MT. A Surgical Kit for Stem Cell-Derived Retinal Pigment Epithelium Transplants: Collection, Transportation, and Subretinal Delivery. Front Cell Dev Biol. 2022;10:813538. doi: 10.3389/fcell.2022.813538. eCollection 2022. PubMed PMID: 35252183; PubMed Central PMCID: PMC8895272.
31. Carlson M, Kim S, Aparicio-Domingo S, Li KV, Puig B, Batabyal S, **Canto-Soler MV**, Mohanty S. OCT guided micro-focal ERG system with multiple stimulation wavelengths for characterization of ocular health. Sci Rep. 2022 Mar 7;12(1):4009. doi: 10.1038/s41598-022-07622-5. PubMed PMID: 35256656; PubMed Central PMCID: PMC8901822.
32. Wareham LK, Liddelow SA, Temple S, Benowitz LI, Di Polo A, Wellington C, Goldberg JL, He Z, Duan X, Bu G, Davis AA, Shekhar K, Torre A, Chan DC, **Canto-Soler MV**, Flanagan JG, Subramanian P, Rossi S, Brunner T, Bovenkamp DE, Calkins DJ. Solving neurodegeneration: common mechanisms and strategies for new treatments. Mol Neurodegener. 2022 Mar 21;17(1):23. doi: 10.1186/s13024-022-00524-0. Review. PubMed PMID: 35313950; PubMed Central PMCID: PMC8935795.
33. Qin Y, Zhang J, Babapoor-Farrokhran S, Applewhite B, Deshpande M, Megarity H, Flores-Bellver M, Aparicio-Domingo S, Ma T, Rui Y, Tzeng SY, Green JJ, **Canto-Soler MV**, Montaner S, and Sodhi A. PAI-1 is a Vascular Cell-Specific HIF-2-Dependent Angiogenic Factor that Promotes Retinal Neovascularization in Diabetic Patients. Science Advances. Sci Adv. 2022 Mar 4;8(9):eabm1896. doi: 10.1126/sciadv.abm1896. Epub 2022 Mar 2. PubMed PMID: 35235351; PubMed Central PMCID: PMC8890718.
34. Guo C, Deshpande M, Niu Y, Kachwala I, Flores-Bellver M, Megarity H, Nuse T, Babapoor-Farrokhran S, Ramada M, Sanchez J, Inamdar N, Johnson TV, **Canto-Soler MV**, Montaner S, Sodhi A. HIF-1a accumulation in response to transient hypoglycemia may worsen diabetic eye disease. Cell Rep. 2023 Jan 10;42(1):111976. [Epub ahead of print] PubMed PMID: 36640318

White Papers / Expert Reports

1. Gamm DM, Wong R; and the AGI Workshop Panelists (**Canto-Soler MV**, et al). Report on the National Eye Institute Audacious Goals Initiative: Photoreceptor Regeneration and Integration Workshop. Transl Vis Sci Technol. 2015 Nov 17;4(6):2. eCollection 2015 Nov. PubMed PMID: 26629398; PubMed Central PMCID: PMC4654223.

2. **Canto-Soler MV***, Flores-Bellver M, Vergara MN. Stem Cell Sources and Their Potential for the Treatment of Retinal Degenerations. Invest Ophthalmol Vis Sci. 2016 Apr 1;57(5):ORSFd1-9 Special Issue. doi: 10.1167/iovs.16-19127. Review. PubMed PMID: 27116661. *Ranked in the 87th percentile of tracked articles of a similar age and source.*

Book Chapters, Monographs

1. Suburo AM, Gallo JE, Torbidoni VE, **Canto-Soler MV**. Neuromediators in AMD: role of nitric oxide and neurokinins in an experimental model of choroidal neovascularization. Buenos Aires, Argentina: Anales de la Fundación Alberto Roemmers; 2004. Vol XV, 499-503.
2. Asla M, **Canto-Soler MV**. Why is reductionism a recurrent problem in biology? Vanney C, Franck JF, editors. ¿Determinism or indeterminism? Big questions from the sciences to philosophy. Rosario, Argentina: Logos-Universidad Austral; 2016. ISBN 978-950-893-900-5. *This book was awarded the international prize "Razon Abierta" in 2017.*
3. Aparicio-Domingo, S. et al. (2023). Generation of Three-Dimensional Retinal Tissue with Physiologically Competent, Light-Sensitive Photoreceptors from Human-Induced Pluripotent Stem Cells. In: Gopalakrishnan, J. (eds) Brain Organoid Research. Neuromethods, vol 189. Humana, New York, NY. https://doi.org/10.1007/978-1-0716-2720-4_6

Non-Peer reviewed Expert Opinions

1. **Canto-Soler MV**. Stem Cells and the treatment of retinal degeneration: hopes and reality. Vision Access. Published by the Council of Citizens with Low Vision International, a not-for-profit organization affiliated with the American Council of the Blind. Arlington, VA. 2009; 16(2).