

**Jeffrey L. Bennett, MD, PhD**  
*Curriculum Vitae*

**Current Position:** Professor of Neurology and Ophthalmology, Neuroscience  
University of Colorado School of Medicine (UCSOM)

**Work Address:** University of Colorado School of Medicine  
Department of Neurology  
12700 E. 19<sup>th</sup> Avenue, Mail Stop B-182  
Aurora, CO 80045  
Office: 303-724-4312  
Academic Fax: 303-724-4329  
**Clinic Fax: 720-848-5079**

**Education:**

1982-1986 BA Case Western Reserve University (Biochemistry, Philosophy) (*summa cum laude, with highest honors in Philosophy*)  
1986-1993 MD Stanford University Medical School  
1986-1993 PhD Stanford University Medical School

**Postgraduate Training:**

1993-1994 Internship, University of Colorado School of Medicine, Denver  
1994-1996 Residency (Neurology), University of Colorado School of Medicine, Denver  
Chief Resident, Department of Neurology (1996-1997)  
1996-1997 Postdoctoral Fellowship, Department of Molecular, Cellular & Developmental  
Biology, University of Colorado, Boulder  
1997-1998 Neuro-ophthalmology Fellow, Department of Neurology, University of  
Pennsylvania, Philadelphia

**Academic Appointments:**

1998-2005 Assistant Professor, Departments of Neurology and Ophthalmology,  
University of Colorado School of Medicine  
2005-2009 Associate Professor, Departments of Neurology and Ophthalmology,  
University of Colorado School of Medicine  
2009-Present Professor with Tenure, Departments of Neurology and Ophthalmology  
University of Colorado School of Medicine  
2011-2019 Associate Director, Translational Research, Center for NeuroScience (CNS),  
University of Colorado School of Medicine  
2011-Present Graduate Faculty, Neurosciences Programs, University of Colorado School of  
Medicine  
2017-Present Immunology Graduate Program, University of Colorado School of Medicine  
2017-Present Gertrude Gilden Professor for Neurodegenerative Disease Research, University  
of Colorado School of Medicine  
2019-2020 August-Wilhelm Scheer Visiting Professor, Technical University of Munich

**Honors, Special Recognitions and Awards:**

1982 National Merit Scholar  
1982 Western Scholar, Case Western Reserve University  
1982 Andrew Squires Scholar, Case Western Reserve University  
1985 Junior Award, Case Western Reserve University  
1985 Harriet Pullman Award, Case Western Reserve University

1985	Phi Beta Kappa Award, Case Western Reserve University
1985	Hardy Philosophical Prize, Case Western Reserve University
1985	Student Research Award, Society of Nuclear Medicine
1986	Mortar Board Society
1986	Phi Beta Kappa
1986	Medical Scientist Training Program Awardee, NIGM
1986	Scholarship for Residents, American Academy of Neurology
1999	Individual Investigator Award, Howard Hughes Medical Institute
2000	Basil O'Connor Starter Scholar Award, March of Dimes
2006	Stephen C. Reingold Research Award, National Multiple Sclerosis Society
2005-pres	Best Doctors of America
2011-pres	America's Top Physicians
2012-pres	US News and World Report Best Doctors
2013	CU Inventor of the Year

### **Membership in Professional Organizations:**

#### **Professional and Community Societies:**

- American Academy of Neurology (Active Member; Science Committee, 1996-2003; elected fellow 2010)
- North American Neuro-Ophthalmologic Society (elected fellow 2008; Research Committee Chairman, 2014-2020; Abstract Committee 2018-Present)
- Association for Research in Vision and Ophthalmology
- American Neurological Association (Fellow 2006; Membership Committee, 2009-2012)

#### **Scientific Meeting Committees:**

- American Neurologic Association Meeting (Abstract Committee), 2007
- Scientific Review Committee, World Congress on Treatment and Research in Multiple Sclerosis, 2008
- American Academy of Neurology (Neuro-ophthalmology and Multiple Sclerosis Abstract Committees), 2008-2019

### **Major Committee and Service Responsibilities:**

#### **Departmental:**

- Promotion Committee, Pilot Grant Committee, Mini-Sabbatical Committee

#### **University**

- Strategic Infrastructure for Research Initiatives Committee (12/2016-5/2019)
- Medical Scientist Training Program Admissions Committee (2017-2019)
- Medical Scientist Training Program Steering Committee (2018-2019)

### **Licensure and Board Certification:**

- American Board of Psychiatry and Neurology (Neurology, 1998)  
Maintenance of Certification (2008-2028)
- State of Colorado

**Inventions, Intellectual Property and Patents:**

Compositions and Methods for the Treatment of Neuromyelitis Optica

Patent: 10,654,916

Issue Date: May 19, 2020

Jeffrey L. Bennett, Gregory P. Owens and Alan S. Verkman

**Review and Referee Work:**

- Annals of Neurology, Journal of Neurology, JAMA Neurology, Neurology
- JAMA Ophthalmology, Ophthalmology, British Journal of Ophthalmology
- Journal of Neuroimmunology, Journal of Neuroinflammation
- Science
- Nature Reviews, Nature Scientific Reports
- Journal of Neuro-Ophthalmology; Editorial Board, 2010-
- Multiple Sclerosis Journal; Editorial Board, 2012-
- Neurology: Neuroimmunology & Neuroinflammation; Editorial Board 2015-

**Public Advisory Committees:**

2004	Ad-hoc Reviewer, Institute of Neurology, Medical Research Council, United Kingdom
2006-2008	Ad-hoc Reviewer, National Multiple Sclerosis Society
2007	Ad-hoc Reviewer, Neurological Foundation of New Zealand
2007-2009	Ad-hoc Reviewer, Fight for Sight
2008	National Multiple Sclerosis Society Scientific Peer Review Committee B
2008-2010	American Institute of Biological Sciences (AIBS), MS Peer Review Panel
2009	Ad-hoc Reviewer, NINDS, ZNS1 SRB-M
2009-2010	ZRG1 BDCN-T (58), RFA-OD-09-003 Challenge Grant Panel 11
2009-2011	National Multiple Sclerosis Society Scientific Peer Review Committee A
2009-2010	Ad-hoc Reviewer, AED Study Section, National Eye Institute (NEI)
2010	Chairman, MS2 Pathogenesis/Etiology Panel, AIBS
2011	Ad-hoc Reviewer, Austrian Science Fund (FWF)
2011-2014	National Multiple Sclerosis Society Scientific Peer Review Committee D
2013-2016	Ad-hoc Reviewer, DPVS Study Section, NEI
2017-	Permanent member, DPVS Study Section, NEI

**Invited Extramural Lectures, Presentations and Visiting Professorships:**

**Local:**

- Wise Women Presents Headaches and Migraines, University of Colorado Hospital. *The Diagnosis and Treatment of Common and Emergency Headache Disorders*. Aurora, CO. September 23, 2003.
- National Multiple Sclerosis Society. *Visual Symptoms in Multiple Sclerosis*. Denver, CO. December 2, 2004.
- Grand Rounds, Ohio State University. *Neuromyelitis Optica: The Other Demyelinating Disease*. Columbus, OH. September 18, 2007.
- Grand Rounds, University of Pennsylvania. *Antigen Identification in Human CNS Demyelinating Diseases*. Philadelphia, PA. October 16, 2009.
- Center for Neurological Diseases, Rocky Mountain MS Center Seminar – Research in MS: Hope Versus Hype. *What Causes MS? New Thoughts on Immunology & Pathology*. Aurora, CO. December 12, 2009.

- Grand Rounds, University of Illinois. *Neuromyelitis Optica: The Other White Matter Disease*. Chicago, IL. March 25, 2010.
- Invited Lecturer. University of Colorado School of Medicine – Yesterday, Today and Tomorrow: Understanding the Pathophysiology and Treatment of Neurologic Disease. *The Yin and Yang of Antigen Identification in CNS Demyelinating Disease: Neuromyelitis Optica*. Aurora, CO. May 21, 2010.
- 57<sup>th</sup> Family Medicine Review. *Headache*. University of Colorado School of Medicine. Aurora, CO. June 21, 2010 and November 1, 2010.
- Neurosurgery Grand Rounds, University of Colorado School of Medicine. 3<sup>rd</sup>, 4<sup>th</sup>, and 6<sup>th</sup> *Nerve Palsies*. Aurora, CO. October 8, 2013.
- Neurosurgery Grand Rounds, University of Colorado School of Medicine. *Optic Nerve Disorders and OCT*. Aurora, CO. November 4, 2014.
- Grand Rounds, Wayne State University. *DeMStifying Neuromyelitis Optica*. Detroit, MI. December 5, 2014.
- Grand Rounds, University of Colorado School of Medicine. *Double Vision*. Aurora, CO. January 28, 2015.
- Grand Rounds, University of Colorado School of Medicine. *Ischemic Optic Neuropathy and Giant Cell Arteritis: New Perspectives*. Aurora, CO. February 3, 2016.
- Grand Rounds, University of Colorado School of Medicine. *Autoantibodies and CNS Demyelination: A New Era in Diagnosis and Management*. Aurora, CO. January 17, 2018.
- Grand Rounds, University of Colorado School of Medicine. *The Evolving Spectrum of Optic Neuritis*. Aurora, CO. January 16, 2019.

#### **Regional:**

- Joint Commission on Allied Health Personnel Ophthalmology (JCAHPO), Western Regional Education Program. *Visual Pathways and Associated Field Defects*. May 17, 2003.
- Optic Nerve/Multiple Sclerosis Workshop, Cumming Foundation-University of Utah. *Antigen Identification in Optic Neuritis*. Salt Lake City, UT. November 12-14, 2004.
- The University of Utah Center for Advanced Medical Technologies - Role of Immunoglobulins and B Cells in MS: New Ideas On the Pathogenesis and Treatment of Multiple Sclerosis. *The B Cell Response in MS: Lessons from CSF Repertoire Analyses*. Salt Lake City, UT. June 6, 2008.
- Keynote Address, Research Symposium, Greater Illinois Chapter, National Multiple Sclerosis Society. *B Cells and Antibodies in Multiple Sclerosis*. Chicago, IL. October 18, 2008.
- CMBD Lecture Series, University of New Mexico School of Medicine. *Autoimmune Antibodies in Neuromyelitis Optica: Origin, Access, and Injury*. Albuquerque, NM. March 23, 2018.
- Neurology Grand Rounds, Mayo Clinic. *The Evolving Spectrum of Optic Neuritis*. Rochester, MN. September 24, 2018.
- Center for MS & Autoimmune Neurology Lecture, Mayo Clinic. *Neuromyelitis Optica: Lessons on Auto-antibody Pathology*. Rochester, MN. September 25, 2018.
- Ophthalmology Grand Rounds, University of Michigan Kellogg Eye Center. *The Evolving Spectrum of Optic Neuritis*. Ann Arbor, MI. December 13, 2018.
- Ophthalmology Grand Rounds, University of Michigan Kellogg Eye Center. *The Evolving Spectrum of Optic Neuritis*. Ann Arbor, MI. December 13, 2018.
- Research Seminar, University of Michigan Kellogg Eye Center. *Neuromyelitis Optica: Unraveling the Nature of Relapses*. Ann Arbor, MI. December 13, 2018.

**National:**

- 28<sup>th</sup> Annual North American Neuro-Ophthalmology Society (NANOS) Meeting *Developmental Neurogenetics: A Clinical Survey*. Copper Mountain Resort, CO. February 9-14, 2002.
- 30<sup>th</sup> Annual North American Neuro-Ophthalmology Society (NANOS) Meeting. *Occult Chorioretinopathies: Autoimmunity vs. Infection*. Orlando, FL. March 29, 2004.
- National Multiple Sclerosis Society Education Day. *Multiple Sclerosis: Update on Current Therapy and Research*. October 16, 2004.
- American Uveitis Society, Winter Symposium. *Connecting the Dots: Antigen Identification in Inflammatory Disorders of the Retina and Optic Nerve*. January 16, 2005.
- 33<sup>rd</sup> Annual North American Neuro-Ophthalmology Society (NANOS) Meeting. *The Humoral Immune Response in Optic Neuritis and Multiple Sclerosis*. Snowbird, UT. February 10-15, 2007.
- Federation of Clinical Immunology Societies (FOCIS) Meeting - Ocular Inflammation: Hot Topics for 2007. *Identification of Serum Autoantibodies in Chorioretinal Disorders*. June 7, 2007.
- 22<sup>nd</sup> Annual Meeting of the Consortium of Multiple Sclerosis Centers – John Whitaker Research Track. *The Humoral Immune Response in Multiple Sclerosis*. May 30, 2008.
- Grand Rounds, University of Minnesota. *Antigen Identification in Human Demyelinating Diseases*. Minneapolis, MN. January 20, 2011.
- Grand Rounds, University of Rochester. *Antigen Identification in Human Demyelinating Diseases*. Rochester, NY. January 28, 2011.
- Invited Lecturer. Lerner Research Institute, Cleveland Clinic. *De-MS-tifying Neuromyelitis Optica*. Cleveland, OH. May 4, 2011.
- 26<sup>th</sup> Annual Meeting of the Consortium of Multiple Sclerosis Centers – Update - Neuromyelitis Optica (NMO). *Pathogenesis of Neuromyelitis Optica: Implications for Treatment*. San Diego, CA. May 31, 2012.
- Novartis Pharmaceuticals Grand Rounds. *B Cells, Antibodies, and Antigens in Human Demyelinating Disease*. September 21, 2012.
- Neurosurgery Grand Rounds, University of Colorado School of Medicine. *Neurosurgical Neuro-ophthalmology*. Aurora, CO. November 6, 2012.
- Grand Rounds, University of Pennsylvania. *Neuromyelitis Optica: A B-Cell Mediated Astrocytopathy*. Philadelphia, PA. January 24, 2013.
- Neuroimmunology Seminar Series, Johns Hopkins University. *Neuromyelitis Optica: Translating from Antigen-Specific Pathology to Therapy*. Baltimore, MD. April 30, 2013.
- Myelin Interest Group, New York University Medical School. *Neuromyelitis Optica: A Unique Demyelinating Disorder*. New York, NY. July 29, 2013.
- 2014 Cooperative Meeting of CMSC & ACTRIMS – Neuromyelitis Optica (NMO) Update. *Pathogenesis of Neuromyelitis Optica: Implications for Treatment*. Dallas, TX. May 30, 2014.
- 2014 Cooperative Meeting of CMSC & ACTRIMS – ACTRIMS Program. *Antibodies: Role in MS and Relationship to Triggers*. Dallas, TX. May 30, 2014.
- 10<sup>th</sup> Annual Wayne State MS Symposium. *Immunology of Multiple Sclerosis: B-cells and Clinical Implications*. Detroit, MI. December 6, 2014.
- Invited Speaker, Department of Neurology, University of California, San Francisco, *Neuromyelitis Optica IgG: Dissecting a Complex Autoantibody Response*, December 22, 2016.
- WAEPS Speaker Series, *The Evolving Spectrum of Optic Neuritis*. Seattle, WA, February 15, 2017.
- WAEPS Speaker Series, *New Perspectives on Giant Cell Arteritis*. Seattle, WA, February 15, 2017.

- Grand Rounds, University of Washington. *Neuromyelitis Optica*. Seattle, WA. February 16, 2017.
- Invited Speaker, Spring Brain Symposium. *A Novel Autoantibody Target on Brain Microvascular Endothelial Cells May Contribute to CNS Autoimmunity*. March 16, 2017.
- Invited Speaker, 142<sup>nd</sup> Annual Meeting of the American Neurological Association, Multiple Sclerosis Special Interest Group, *B Cells, Autoantibodies and Demyelinating Disease*, San Diego, CA, October 15, 2017.
- 44<sup>th</sup> Annual North American Neuro-Ophthalmology Society (NANOS) Meeting. *A Rational Approach to Treating Inflammatory Optic Neuropathies: Which Treatment and Why*. Big Island, HI. March 5, 2018.
- Invited Speaker, ACTRIMS 2019 Forum. *Immune profiling in demyelinating disease: setting new goals for precision diagnosis and treatment*. Dallas, TX. March 1, 2019.
- Invited Speaker, Neurosciences in the Clinic, American Academy of Neurology 2019. *Neuromyelitis Optica Spectrum Disorders: Immunotherapies Derived from Neuroscience*. Philadelphia, PA. May 8, 2019.

#### **International:**

- 23<sup>rd</sup> Congress of the European Committee for Treatment and Research in Multiple Sclerosis - Ocular Inflammation: Hot Topics in MS 2: B cells and Antibodies in MS. *B Cell Repertoire Analysis in Multiple Sclerosis*. October 12, 2007.
- World Congress on Treatment and Research in Multiple Sclerosis – Antibodies: From Pathogenesis to Treatment. *What is the evidence in humans that auto-antibodies to CNS antigens are pathogenic?* September 18, 2008.
- Invited Speaker, MS Montreal. *The B Cell Response in MS: Lessons from CSF Repertoire Analyses*, Montreal, Quebec, Canada. October 21, 2008. MS Montreal, Montreal Neurologic Institute. *The B Cell Response in MS: Lessons from CSF Repertoire Analyses*. Montreal, Canada. October 21, 2008.
- Invited Lecturer. Neurologische Klinik der Technischen Universität München. *B-cells in the Pathogenesis of Multiple Sclerosis and Neuromyelitis Optica*. Munich, Germany. September 30, 2009.
- Vienna, Focus Workshop: Epstein-Barr Virus in the Multiple Sclerosis Brain. *Persistent Epstein-Barr Virus Expression in the MS Brain: The Denver Experience*. Vienna, Austria. July 15-17, 2010.
- Grand Rounds, University of Göttingen. *Neuromyelitis Optica: The Other White Matter Disease*. Göttingen, Germany. October 25, 2010.
- 37<sup>th</sup> Annual North American Neuro-Ophthalmology Society (NANOS) Meeting. *Stem Cells, Gene Therapy, and the Neuro-Ophthalmologist*. Vancouver, BC, Canada. February 7, 2011.
- 37<sup>th</sup> Annual North American Neuro-Ophthalmology Society (NANOS) Meeting. *Emerging Therapies of Multiple Sclerosis*. Vancouver, BC, Canada. February 9, 2011.
- 25<sup>th</sup> Annual Meeting of the Consortium of Multiple Sclerosis Centers – Antibodies in Multiple Sclerosis. *Autoantibodies in MS and NMO*. Montreal, Quebec. June 4, 2011.
- Invited Speaker, Oktoberfest Symposium, Technischen Universität München. *B cells in multiple sclerosis and neuromyelitis optica*. Munich, Germany. September 19, 2014.
- Invited Lecturer. Neurologische Klinik der Technischen Universität München. *Understanding NMO Pathogenesis*. Munich, Germany. September 22, 2014.
- Invited Lecturer, MS Norway Workshop, University of Oslo – From Genes to Pathogenesis of MS. *B Cells in Human Demyelinating Disorders*. Oslo, Norway. August 15-19, 2010.

- Invited Lecturer, European School of Neuroimmunology – *Human Antibody and CNS Demyelination, new methods for analyzing antibody specificities*, Prague, Czech Republic, June 1-4, 2015.
- Invited Speaker, MS Xchange. *NMO Pathogenesis and Therapy*. Montreal, Quebec, Canada. November 6, 2015.
- Invited Speaker, Atlantic Eye Symposium, *Diagnosis and Management of Acute Optic Neuritis*. Halifax, Nova Scotia, Canada, September 9-10, 2016.
- Invited Speaker, Atlantic Eye Symposium, *Acute Oculomotor Palsies*. Halifax, Nova Scotia, Canada, September 9-10, 2016.
- Invited Speaker, Atlantic Eye Symposium, *Going Viral: New Perspective on Giant Cell Arteritis*. Halifax, Nova Scotia, Canada, September 9-10, 2016.
- Invited Speaker, Innsbruck University, *Neuromyelitis Optica IgG: Dissecting a Complex Autoantibody Response*, December 20, 2016.
- Invited Speaker, Wien University, *Neuromyelitis Optica IgG: Dissecting a Complex Autoantibody Response*, December 22, 2016.
- Invited speaker, Tianjin Medical University, *Neuromyelitis Optica and Multiple Sclerosis: A Tale of Two Disorders*. Tianjin, China, September 11, 2017.
- Invited speaker, 22<sup>nd</sup> Congress of Chinese Ophthalmological Society, *The Multiple Faces of Optic Neuritis*, Fuzhou, China, September 14, 2017.
- Invited Speaker, 35<sup>th</sup> Congress of the European Committee for Treatment and Research in Multiple Sclerosis (ECTRIMS), *Antibody-mediated pathogenesis in central and peripheral neuroinflammatory disorders*, Session: Antibodies and complement in MS spectrum disorders, Stockholm, Sweden, September 11-13, 2019.
- Invited Speaker. Neurologische Klinik der Technischen Universität München. *The Evolving Spectrum of Optic Neuritis*. Munich, Germany. October 2, 2019.
- Invited Speaker. Ludwig Maximilian University Biomedical Center. *Neuromyelitis Optica: Unraveling Auto-Antibody Pathology*. Munich, Germany. November 14, 2019.
- Invited Speaker. Neuro-immunological Colloquium, Charité-Universitätsmedizin Berlin. *Neuromyelitis Optica: Pathogenic and Therapeutic Antibodies*. Berlin, Germany. December 9, 2019.
- Invited Speaker. Roche Pharmaceuticals. *The Evolving Landscape of Neuromyelitis Optica*. Basel, Switzerland. January 8, 2020.
- Invited Speaker. European NMO Meeting. *NMO: Future Study Design*. Berlin, Germany. February 15, 2020.
- Invited Speaker. University Hospital of Basel. *Neuromyelitis Optica: Pathogenic and Therapeutic Antibodies*. Basel, Switzerland. February 18, 2020.
- Invited Speaker. University of Bern. *Neuromyelitis Optica: Pathogenic and Therapeutic Antibodies*. Bern, Switzerland. February 19, 2020.
- Invited Speaker. Ruhr Universität Bochum. *Autoantibodies in CNS Demyelinating Disorders: From Antigenic Targets to Pathogenicity*. Bochum, Germany. March 2, 2020.

### Teaching Activity:

#### Classroom Activities

- |           |   |
|-----------|---|
| 1999-2007 | <i>Headache</i> . IDPT6004. University of Colorado School of Medicine (UCSOM) |
| July 2002 | <i>“Sympathetic Nervous System</i> . Molecular Endocrinology. UCSOM           |
| 2003-2004 | Foundations of Doctoring, Steven Zeiler, MSIII                                |

- 2006 *Visual Fields: Bringing Neuroanatomy to the Bedside.* Neurology Core UCSOM
- 2007 *Headache.* Neurology Core. UCSOM
- 2012-present *Molecules to Medicine.* UCSOM
- April 2014 *B cells and Antigen Identification in Human Demyelinating Diseases.* NRSC7670: The Neuro-Immune Interface

### **Graduate Students**

August 2016 John Soltys, Medical Scientist Training Program, Neuroscience

### **Graduate Student Thesis Committees**

Kun-Che Chang, Toxicology Program  
Jared T. Ahrendsen, Medical Scientist Training Program  
Scott Wemlinger, Immunology Program  
Melissa Delcont, Medical Scientist Training Program (discontinued)  
Alison Hixson, Medical Scientist Training Program  
Jeffrey Chung, Immunology Program  
Laura Nettles, Neuroscience Program

### **Clinical and Research Fellows**

Kurt Haubold, PhD, Postdoctoral Fellow (Research)  
Anna Sargsyan, PhD, Postdoctoral Fellow (Research)  
Matthew West, MD, Multiple Sclerosis Fellow  
Teri Schreiner, MD, Multiple Sclerosis Fellow  
Lindsey Horton, MD, Multiple Sclerosis Fellow  
Alaa Bou Ghannam, Neuro-ophthalmology Fellow  
Markus Kowarik, MD, Postdoctoral Research Fellow  
Yosbelkys Martin-Paez, MD, Neuro-ophthalmology Fellow  
Anna Shah, MD, Multiple Sclerosis Fellow

### **Ward and Clinic Service:**

- Residency Education, Department of Ophthalmology, University of Colorado School of Medicine, Department of Neurology

### **Current Grant Support:**

#### **Principal Investigator:**

- NIH/NEI - 2R01EY022936 (Bennett) 1/1/13–3/31/23  
Humoral Immunity, Astrocyte Injury, and Demyelination in Neuromyelitis Optica
- Mallinckrodt Pharmaceuticals (Bennett) 1/2/13-12/31/18  
A Phase IV Trial of Neuroprotection with ACTH in Acute Optic Neuritis
- Guthy-Jackson Foundation Research Grant (Bennett) 4/1/14-5/31/20  
Collaborative International Research in Clinical and Longitudinal Experience for Neuromyelitis Optica (NMO) Studies (CIRCLES)
- Novartis Pharma AG (Bennett) 3/1/20-2/28/21  
Modulation of Sphingosine-1-Phosphate Signaling to Promote Remyelination
- NIH/NINDS- 1R01NS115488 (MackIn/Bennett) 7/1/20–6/30/25  
Impact of Microglia on Remyelination



- NIH/NEI- 1R01EY031461 (Park) 5/1/20–4/30/24  
Engineered multi-therapeutic agents delivery system towards retinal ganglion cell axon regeneration

**Primary Clinical Investigator:**

- Merck-Serono 28156 (07/01/08)  
Atacept in Optic Neuritis (28156, Phase II) – Steering Committee
- Teva PM030 (02/05/09)  
Optical Coherence Tomography Assessment of Glatiramer Acetate on Retinal Nerve Fiber Layer
- EMD-Serono Phase III 28821 (05/01/09)  
Oral Cladribine in Early MS
- EMD-Serono Independent Investigator Supplement (05/01/09)  
Effects of Oral Cladribine on Intrathecal B Cell Lineages and Antigen Presenting Cells in Patients with Clinically Isolated Syndrome
- NEI/NIH/DHHS IIHTT (2/11/10)  
A Multi-Center, Double-Blind, Randomized, Placebo-Controlled Study of Weight Reduction and/or Low-Sodium Diet Plus Acetazolamide vs. Diet Plus Placebo in Subjects with Idiopathic Intracranial Hypertension with Mild Visual Loss. (Phase III)
- Quark QRK007 (5/11/10)  
A Phase I Open Label, Dose Escalation Trial of QPI-1007 Delivered by a Single Intravitreal Injection to Patients with Optic Nerve Atrophy (Stratum I) and Acute Non-Arteritic Anterior Ischemic Optic Neuropathy (NAION) (Stratum II) (20244 Phase I)
- UPenn Study (5/18/10)  
Prospective Study to Determine the Proportion of Patients with Isolated Third, Fourth, and Sixth Nerve Palsies of Microvascular Versus Non-Microvascular Etiology.
- Novartis FTY720D2402 ADON (3/1/13)  
A 48-week, Double-blind, Randomized, Multi-center, Parallel-group Study Comparing Structural Changes in the Retina and Evolution of Visual Function After Immediate Versus Delayed Treatment With Fingolimod in Patients With Acute Demyelinating Optic Neuritis
- Chugai Pharmaceuticals SA-309JG (8/26/14)  
A multicenter, randomized, double-blind, placebo-controlled, phase 3 study to evaluate the efficacy and safety of SA237 as monotherapy in patients with neuromyelitis optica (NMO) and neuromyelitis optica spectrum disorder (NMOSD)
- MedImmune CD-IA-MEDI-551-1155 (12/3/14)  
A Double-masked, Placebo-controlled Study with Open-Label Period to Evaluate the Efficacy and Safety of MEDI-551 in Adult Subjects with Neuromyelitis Optica and Neuromyelitis Optica Spectrum Disorders
- Quark QRK207 (3/7/17)  
A Phase 2/3, Randomized, Double-Masked, Sham-Controlled Trial of Qpi-1007 Delivered by Single or Multi-Dose Intravitreal Injection(S) to Subjects with Acute Nonarteritic Anterior Ischemic Optic Neuropathy (NAION)
- Alexion CHAMPION ALXN1210-NMO-307 (5/12/20)  
A Phase 3, External Placebo-Controlled, Open-Label, Multicenter Study to Evaluate the Efficacy and Safety of Ravulizumab in Adult Patients with Neuromyelitis Optica Spectrum Disorder (NMOSD)

### Past Extramural Support

- NIH (Bennett) 5/1/14-4/30/19  
Colorado Autoimmunity Center of Excellence  
Autoimmunity Centers of Excellence, Clinical Research Program
- Guthy-Jackson Charitable Foundation Award (Bennett) 8/1/14–8/31/19  
Production of AQP4-Specific Recombinant Monoclonal Antibodies for NMO  
Collaborative Studies.
- Guthy-Jackson Charitable Foundation Award (Tedder) 6/1/14–5/30/16  
Identifying the Microbial and Self Antigenomes of NMOSD
- Guthy-Jackson Foundation Research Grant 11/1/14-10/31/16  
Monitoring Humoral Immunity and Complement Injury In Neuromyelitis Optica (NMO)
- Novartis Pharmaceuticals Corporation, 4/1/13-12/21/14  
Analysis of B cell Trafficking in Multiple Sclerosis Patients Receiving Tysabri®  
(natalizumab) and Gilenya® (fingolimod) Immunomodulatory Therapy
- Guthy Jackson Foundation Research Grant, 7/1/12 – 12/31/14  
AQP4 Autoantibodies and Disease Pathogenesis in Neuromyelitis Optica (NMO)
- Guthy Jackson Foundation Research Grant, 7/15/12 – 7/14/13  
Second-Generation Aquaporin Antibodies And NMO Superantibodies for NMO Research And  
Therapy
- National Multiple Sclerosis Society – Research Grant RG4320, 11/01/09 – 10/30/12  
Humoral Immunity and Immunopathogenesis in Neuromyelitis Optica
- Guthy-Jackson Foundation Research Grant  
AQP4-Specific Immunotherapy in Neuromyelitis Optica, 6/1/10 – 5/31/12
- Charlotte White Foundation  
Antigen Identification in Longitudinally-Extensive Transverse Myelitis, 4/1/10 – 3/31/12
- National Multiple Sclerosis Society – Research Grant RG3908, 10/01/06 – 09/30/09  
Characterization of the Humoral Immune Response in Isolated Optic Neuritis
- Serono-Pfizer – Research Grant, 07/01/05 – 12/31/09  
Longitudinal Evaluation of the IgG Repertoire in Treated and Untreated Multiple  
Sclerosis
- NIH/NEI – RO3EY014573, 04/01/04 – 03/31/07  
Antigen Identification in Occult Chorioretinopathies
- March of Dimes – 5-FY99-773, 02/01/00 – 01/31/02  
Neurotrophin Function in the Retinal Pigment Epithelium and Cornea
- NIH/NEI – KO8EY00397, 07/01/98 – 06/30/03  
Growth Factors in Mammalian Eye Development

### Bibliography:

#### Peer Reviewed Publications:

1. Johnson VG, Schlom J, Paterson AJ, **Bennett J**, Magnani JL, Colcher D. Analysis of a human tumor-associated glycoprotein (TAG-72) identified by monoclonal antibody B72.3. *Cancer Res* 46:850-7, 1986.
2. Paterson AJ, Schlom J, Sears HF, **Bennett J**, Colcher D. A radioimmunoassay for the detection of a human tumor-associated glycoprotein (TAG-72) using monoclonal antibody B72.3. *Int J Cancerr* 37:659-66, 1986.
3. **Bennett JL**, Clayton DA. Efficient site-specific cleavage by RNase MRP requires interaction with two evolutionarily conserved mitochondrial RNA sequences. *Mol Cell Biol* 10:2191-201, 1990.

4. Hess JF, Parisi MA, **Bennett JL**, Clayton DA. Impairment of mitochondrial transcription termination by a point mutation associated with the MELAS subgroup of mitochondrial encephalomyopathies. *Nature* 351:236-9, 1991.
5. Karwan R, **Bennett JL**, Clayton DA. Nuclear RNase MRP processes RNA at multiple discrete sites: interaction with an upstream G box is required for subsequent downstream cleavages. *Genes Dev* 5:1264-76, 1991.
6. Topper JN, **Bennett JL**, Clayton DA. A role for RNAase MRP in mitochondrial RNA processing. *Cell* 70:16-20, 1992.
7. **Bennett JL**, Jeong-Yu S, Clayton DA. Characterization of a *Xenopus laevis* ribonucleoprotein endoribonuclease. Isolation of the RNA component and its expression during development. *J Biol Chem* 267:21765-72, 1992.
8. Schmitt ME, **Bennett JL**, Dairaghi DJ, Clayton DA. Secondary structure of RNase MRP RNA as predicted by phylogenetic comparison. *FASEB J* 7:208-13, 1993.
9. **Bennett JL**, Gilden DH. The molecular genetics of herpes simplex virus latency and pathogenesis: a puzzle with many pieces still missing. *J Neurovirol* 2:225-9, 1996.
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