

A handwritten signature in black ink, appearing to read "Bruce Cree". The signature is fluid and cursive, with a large initial "B" and "C".

Bruce Cree 4/5/2018

**University of California, San Francisco**  
**CURRICULUM VITAE**

**Name:** Bruce Anthony Campbell Cree, MD, PhD, MAS

**Position:** Associate Professor of Clinical Neurology, Step 3  
Professor of Clinical Neurology, Step 1 (effective July 1, 2018)

Neurology  
School of Medicine

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**EDUCATION**

1982 - 1987	Brown University, Providence R.I.	Sc.B.	Neurosciences, Magna Cum Laude	
1982 - 1987	Brown University, Providence R.I.	A.B.	Psychology	
1989 - 1995	University of California, San Francisco	Ph.D.	Biochemistry	Ira Herskowitz, PhD
1987 - 1997	University of California, San Francisco	M.D.	Medicine	
1997 - 1998	California Pacific Medical Center	Intern	Internal Medicine	
1998 - 2000	New York Presbyterian Hospital	Resident	Neurology	
2000 - 2001	New York Presbyterian Hospital	Chief Resident	Neurology	
2001 - 2004	University of California, San Francisco	Clinical Fellow	Multiple Sclerosis	
2002 - 2004	University of California, San Francisco	M.A.S.	Clinical Research	

**LICENSES, CERTIFICATION**

2000 New York Medical License #: 219283 (inactive)

2001 California Medical License #: A74576  
 2003 American Board of Psychiatry and Neurology, Certification in Neurology #: 52090  
 2013 American Board of Psychiatry and Neurology, Maintenance of Certification Examination, Decision=Pass

**PRINCIPAL POSITIONS HELD**

2004 - 2004	University of California, San Francisco	HS Clinical Instructor	Neurology
2004 - 2008	University of California, San Francisco	HS Assistant Clinical Professor	Neurology
2008 - 2012	University of California, San Francisco	Assistant Professor of Clinical Neurology	Neurology
2012 - present	University of California, San Francisco	Associate Professor of Clinical Neurology	Neurology

**OTHER POSITIONS HELD CONCURRENTLY**

2011 - present	University of California, San Francisco	Clinical Research Director	Multiple Sclerosis Center
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**HONORS AND AWARDS**

1987	Nomination to the Society of Sigma Xi (1987)	
1987	Symbolic Diploma Recipient	Brown University
1989	Subspecialty Award	Western Student Medical Research Forum
2006	Community Service Award	National Multiple Sclerosis Society Northern California Chapter
2009	The Robert B. Layzer Award for Resident Teaching	UCSF Department of Neurology

**KEYWORDS/AREAS OF INTEREST**

Multiple sclerosis, neuromyelitis optica spectrum disorder, transverse myelitis, optic neuritis, neuro-immunology, demyelinating disease, leukodystrophies, epidemiology, genetics, biostatistics, clinical trials, medical education

**CLINICAL ACTIVITIES SUMMARY**

I provide clinical care to patients with multiple sclerosis, neuromyelitis optica, transverse myelitis, myelopathy of unclear etiology, optic neuritis, neurosarcoidosis, auto-immune encephalitis, CNS vasculitis, and other auto-immune or infectious causes of central nervous system dysfunction 2 full days per week in an outpatient setting at the UCSF Multiple Sclerosis center. I also provide diagnostic services for patients with a wide variety of undiagnosed neurological conditions and who are referred for specialist opinion. I attend approximately 2 weeks each year on the Moffitt Hospital inpatient ward or consult service.

**CLINICAL SERVICES**

2001 - 2004	Clinical instructor, UCSF MS Center outpatient faculty practice	2 half-days per week
2004 - present	Attending neurologist, UCSF MS Center outpatient faculty practice	2 full-days per week
2004 - present	Ward or consult attending neurologist, Moffitt Hospital, UCSF	1 half-month per year

**MEMBERSHIPS**

1987 - 2010	Member, American Medical Association
1998 - present	Member, American Academy of Neurology
2009 - 2017	Member, American Neurological Association
2010 - present	Member, San Francisco Neurological Society
2017 - present	Fellow, American Academy of Neurology

**SERVICE TO PROFESSIONAL ORGANIZATIONS**

2008 - 2009	United Kingdom Medical Research Council	ad hoc grant reviewer
2009 - 2012	American Academy of Neurology, Demyelinating Diseases Work Group	chair
2008 - present	American Neurological Association Scientific Advisory Committee	member
2009 - present	Canadian Institutes of Health Research	ad hoc grant reviewer
2009 - present	National Multiple Sclerosis Society, Fast Forward	ad hoc grant reviewer
2010 - 2014	National Multiple Sclerosis Society	committee D grant reviewer
2010 - 2014	American Academy of Neurology, Scientific Review Committee	member

2010 - 2013	Board member, San Francisco Neurological Society	board member, scientific abstract reviewer
2013 - present	American Academy of Neurology, Education Committee	member
2013 - present	Grant for MS Innovation, EMD Serono	grant reviewer
2014 - 2014	American Academy of Neurology, United Council for Neurological Subspecialties Task Force	member
2014 - 2014	American Academy of Neurology, Dystel Prize subcommittee	member
2014 - 2014	American Academy of Neurology, Alliance Award subcommittee	member
2013 - present	American Committee for Treatment and Research in Multiple Sclerosis Advisory Committee	member
2014 - 2014	National Institute of Neurological Disease and Stroke	ad hoc grant reviewer
2015 - 2017	American Academy of Neurology, multiple sclerosis therapeutic guidelines subcommittee	member

### **SERVICE TO PROFESSIONAL PUBLICATIONS**

2010 - 2016	Annals of Neurology, Editorial Board Member
2012 - 2016	JAMA Neurology, Clinical Trials Board Member
2001 - present	Ad hoc reviewer for: Brain, Ethnicity & Disease, JAMA Neurology, Journal of Neuroimmunology, Journal of Neurology, Journal of Neurology, Neurosurgery and Psychiatry, Multiple Sclerosis Journal, Multiple Sclerosis and Related Diseases, Muscle and Nerve, Neurology, Tohoku Journal of Experimental Medicine

### **INVITED PRESENTATIONS - INTERNATIONAL**

2005	World Congress of Neurology, Sydney, Australia	speaker
2006	Serono Symposium International Foundation, Rome, Italy	speaker
2006	Serono Symposium International, Cannes, France	speaker
2006	IMPROVE Investigator Meeting, Madrid, Spain	speaker
2007	Serono Symposium International Foundation, Istanbul, Turkey	speaker
2007	Serono Symposium International Foundation, Prague, Czech Republic	speaker
2008	Congress of the Pan-Asian Committee for Treatment and Research in Multiple Sclerosis, Kuala Lumpur	speaker

2008	Serono Symposium International Foundation, Montreal, Canada	speaker
2009	Serono Symposium International Foundation, Düsseldorf, Germany	speaker
2009	Neuromyelitis Optica Symposium, Aweji, Japan	speaker
2009	Grand Rounds at Kyushu University, Fukuoka, Japan	speaker
2010	Serono Symposium International Foundation, Montreal, Canada	speaker
2011	Neuromyelitis Optica Symposium, Vancouver, Canada	speaker
2011	Canadian Neurological Sciences Foundation, Vancouver, Canada	speaker
2011	Pan-Asian Committee for Treatment and Research in Multiple Sclerosis, Singapore	speaker
2013	Multiple Sclerosis Days, Istanbul, Turkey	speaker
2014	Finnish Neurological Society Annual Meeting, Långvik, Finland	speaker
2014	European Committee for Treatment and Research in Multiple Sclerosis	speaker
2015	Multiple Sclerosis Days, Istanbul, Turkey	speaker
2016	Multiple Sclerosis Forum, Istanbul, Ankara and Ismir turkey	speaker
2017	European Committee for Treatment and Research in Multiple Sclerosis, Paris, France	speaker
2017	Multiple Sclerosis at the Limits, London, United Kingdom	speaker

#### **INVITED PRESENTATIONS - NATIONAL**

2005	Consortium of Multiple Sclerosis Centers, Orlando, FL	speaker
2005	Rituxan MS Advisory Board, San Diego, CA	speaker
2006	American Academy of Clinical Neurophysiology, New Orleans, LA	speaker
2008	American Academy of Neurology, Annual Meeting	speaker
2008	Consortium of Multiple Sclerosis Centers, Annual Meeting	speaker
2009	American Academy of Neurology, Annual Meeting	course director, speaker
2009	Consortium of Multiple Sclerosis Centers, Annual Meeting	speaker
2009	National Multiple Sclerosis Society, Arizona Chapter, Phoenix, AZ	speaker

2010	American Academy of Neurology, Annual Meeting	course director, speaker
2011	American Academy of Neurology, Annual Meeting	course director, speaker
2012	American Academy of Neurology, Annual Meeting	course director, speaker
2013	American Academy of Neurology, Annual Meeting	course director, speaker
2014	American Academy of Neurology, Annual Meeting	course director, speaker
2014	Consortium of Multiple Sclerosis Centers, Annual Meeting	speaker
2015	American Academy of Neurology, Breakthroughs in Neurology	course director, speaker
2015	American Academy of Neurology, Annual Meeting	course director, speaker
2015	Consortium of Multiple Sclerosis Centers, Annual Meeting	speaker
2015	American Neurological Association, Annual Meeting	speaker
2016	American Academy of Neurology, Annual Meeting	course director, speaker
2016	American Academy of Neurology, Breakthroughs in Neurology	speaker
2017	American Academy of Neurology, Annual Meeting	course director, speaker
2017	American Academy of Neurology, Breakthroughs in Neurology	speaker

#### **INVITED PRESENTATIONS - REGIONAL AND OTHER INVITED PRESENTATIONS**

2001	National Multiple Sclerosis Society, Burlingame, CA	speaker
2002	Frontiers in Neurology (Grand Rounds at UCSF)	speaker
2002	Recent Advances in Neurology, San Francisco, CA	speaker
2003	National Multiple Sclerosis Society, Walnut Creek, CA	speaker
2003	Frontiers in Neurology (Grand Rounds at UCSF)	speaker
2004	Grand Rounds at California Pacific Medical Center, San Francisco	speaker
2004	National Multiple Sclerosis Society, Duluth, MN; Pleasanton, CA	speaker
2004	San Francisco Neurological Society, Sonoma, CA	speaker

2004	Grand Rounds at the Neurological Institute, New York Presbyterian Hospital, New York, NY	speaker
2004	Grand Rounds at Watsonville Community Hospital, Santa Cruz, CA	speaker
2005	Grand Rounds at Kaiser Permanente, Los Angeles, CA	speaker
2005	National Multiple Sclerosis Society, San Luis Obispo, CA; Monterey, CA	speaker
2005	California Institute for Regenerative Medicine, San Diego, CA	speaker
2006	Grand Rounds at University of Kansas Medical Center, Kansas City, MO	speaker
2006	Grand Rounds at Merced Medical Center, Merced, CA	speaker
2006	Grand Rounds at University of Nebraska Medical Center, Omaha, NE	speaker
2006	National Multiple Sclerosis Society, Stockton, Fresno, Palo Alto, Grass Valley and Eureka, CA	speaker
2007	Clinical Neurosciences Conference, Scripps Institute, La Jolla	speaker
2008	Grand Rounds at Northwestern University, Chicago, IL	speaker
2008	Oregon Health Science University and Foundation, MS: Hope and Healing Symposium, Portland, OR	speaker
2008	Grand Rounds at Washington University, St. Louis, MO	speaker
2009	Recent Advances in Neurology, San Francisco, CA	speaker
2010	Grand Rounds at UCSD, San Diego, CA	speaker
2011	Providence Hospital Grand Rounds, Portland, OR	speaker
2012	Recent Advances in Neurology, San Francisco, CA	speaker
2012	San Francisco Neurological Society, Sonoma, CA	speaker
2013	Recent Advances in Neurology, San Francisco, CA	speaker
2013	Multiple Sclerosis in a New Era, Alta Bates Summit Medical Center, Berkeley, CA	speaker
2013	Summit MS Symposium, Seattle, WA	speaker
2013	Grand Debates in Neurology, "To Treat or Not to Treat: Should Multiple Sclerosis Disease Modifying Therapies be Prescribed at Disease Onset?" UCSF, San Francisco, CA	speaker
2013	Recent Advances in Neurology, San Francisco, CA	speaker
2014	Recent Advances in Neurology, San Francisco, CA	speaker



2015	Recent Advances in Neurology, San Francisco, CA	speaker
2016	Recent Advances in Neurology, San Francisco, CA	speaker
2017	Recent Advances in Neurology, San Francisco, CA	speaker
2018	Recent Advances in Neurology, San Francisco, CA	speaker

### **CONTINUING EDUCATION AND PROFESSIONAL DEVELOPMENT ACTIVITIES**

2004	San Francisco Neurological Society. 8 CME credits, includes 1 hour of pain management
2005	American Academy of Neurology, annual meeting: 31 CME credits, includes 12 hours of CME on management of pain and migraine
2006	American Academy of Neurology, annual meeting: 6.5 CME credits
2006	University of Texas Southwestern, CMSC meeting: 2.0 CME credits
2006	UCSF, grand rounds: 20 CME credits
2007	American Academy of Neurology, winter course: 3.5 CME credits
2007	American Academy of Neurology, annual meeting: 30.75 CME credits
2007	American Neurological Association, annual meeting: 19.5 CME credits
2007	UCSF, grand rounds: 20 CME credits
2008	American Academy of Neurology, annual meeting: 33.25 CME credits
2008	World Congress on Treatment and Research in Multiple Sclerosis, 17 CME credits
2009	American Academy of Neurology, annual meeting: 33.75 CME credits
2009	Recent Advances in Neurology: 15.5 CME credits
2010	American Academy of Neurology, annual meeting: 33.75 CME credits
2011	American Academy of Neurology, annual meeting: 39 CME credits
2012	American Academy of Neurology, annual meeting: 35 CME credits
2012	San Francisco Neurological Association: 24 CME credits
2012	Cleveland Clinic Medical Foundation: 10.5 CME credits
2013	Consortium of Multiple Sclerosis Center: 3 CME credits
2013	American Academy of Neurology, annual meeting: 41.75 CME credits
2013	Summit, MS Symposium: 6.5 CME credits
2013	AIMS: Advances in Multiple Sclerosis: 3 CME credits
2014	San Francisco Neurological Society: 1 CME credit
2015	American Academy of Neurology: 22.25 CME credits

2016	American Academy of Neurology: 14 CME credits, 24 SAE credits
2016	JAMA Neurology: 3 CME credits
2017	American Academy of Neurology: Neuro PI- Patient Safety: Falls 20 CME credits
2017	American Academy of Neurology: 21.25 CME credits
2017	American Neurological Association: 5.74 CME credits
2017	European Committee for Treatment and Research in Multiple Sclerosis: 21 CME credits (from AMA)
2017	UCSF Bridges Faculty Development Course: MOC Part IV

### **GOVERNMENT AND OTHER PROFESSIONAL SERVICE**

2008 - 2009	United Kingdom Medical Research Council	Grant reviewer
2008 - present	American Neurological Association	Scientific Program Advisory Committee, member
2009 - 2010	Canadian Institutes of Health Research	Grant reviewer
2009 - 2014	National Multiple Sclerosis Society	Grant reviewer
2010 - 2014	American Academy of Neurology	Scientific Program Committee, member
2013 - present	American Academy of Neurology	Education Committee, member
2014 - 2014	Progressive Multiple Sclerosis Alliance	Grant reviewer
2014 - 2014	National Institute of Neurological Diseases and Stroke, National Institute of Health	Ad hoc grant reviewer
2015 - 2017	American Academy of Neurology, multiple sclerosis disease modifying therapy guidelines panel	Member

### **SERVICE ACTIVITIES SUMMARY**

I serve the department of neurology through supporting resident education through membership on the clinical competency committee and chairing the flexible residency clinical research committee as well as observing ACGME neurodegenerative patient examinations. I also serve on committees for the neurology clinical research unit at the Sandler Neuroscience Center. I serve the multiple sclerosis division as the Clinical Research Director and APEX subject matter expert having developed and updating smartsets used daily at the MS Center. I provide numerous lectures and open forum discussion to patient groups on multiple sclerosis, neuromyelitis optica and transverse myelitis.

### **DEPARTMENTAL SERVICE**

2011 - present	Multiple Sclerosis Center, Department of Neurology, UCSF Medical Center	APEX subject matter expert
2012 - present	Neurology Clinical Research Unit, Faculty Advisory Committee, UCSF	member
2013 - present	NCRU, Art Committee, UCSF	member
2014 - present	Clinical competency committee	member
2015 - present	Neurology flexible residency clinical research committee	chair

### **SERVICE AT OTHER UNIVERSITIES**

2017 - 2017	Ph.D. thesis examiner for doctoral candidate Sudarshini Ramanathan, University of Sydney	Sydney, Australia
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### **COMMUNITY AND PUBLIC SERVICE**

2001 - present	Speaker, patient education and support group programs, Northern California and Oregon Chapters of the National Multiple Sclerosis Society	Patient educator
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### **CONTRIBUTIONS TO DIVERSITY**

A substantial theme of my research is racial contributions to multiple sclerosis. Specifically, I have received grant support to study the manifestations of multiple sclerosis in African Americans and have published extensively on this topic. My work showed that, although African Americans are less likely to develop multiple sclerosis compared to their northern European descended counterparts, the clinical phenotype of MS in African Americans is more severe. Furthermore, there are genetic similarities and differences between persons of African descent and persons of European descent who are affected by MS and that these differences in part contribute to the multiple sclerosis phenotype. This work has helped shape the neurology community's understanding that: 1) persons of African Ancestry can become afflicted by MS and 2) that the diagnosis of MS is often delayed in this group due to the prior misconception that African Americans are not commonly affected by MS and that 3) higher efficacy treatments should be considered front-line due to the more severe phenotype in this at risk population.

### **TEACHING SUMMARY**

Continuing medical education: I am a course director for the American Academy of Neurology Annual meeting, and am an invited speaker for courses at the Consortium of Multiple Sclerosis Centers among many other local, national and international continuing medical education programs.

Multiple sclerosis fellowship: I served as the clinical neurology fellowship director for Dr. Timothy West. Dr. West completed his training in clinical neurology in June 2011, after which he became the director of the Multiple Sclerosis Center at the Cleveland Clinic Ruvo Center for Brain Health in Las Vegas, NV. Dr. West is now in a group private practice in Santa Barbara, CA. In conjunction with Dr. Ari Green, I co-mentored Dr. Jeffery Gelfand, a clinical research fellow who completed his training in 2012 and subsequently joined the neurology faculty at UCSF as an Assistant Professor. In conjunction with Dr. Emmanuelle Waubant, I co-mentored

Dr. Jacqueline Marcus for her MS clinical fellowship. Dr. Marcus joined Kaiser Permanente San Francisco in 2012 where she runs the MS clinical care center. I mentored Dr. Carolyn Bevan who for her multiple sclerosis clinical research fellowship in 2013. Dr. Bevan joined the UCSF Neurology faculty as an Assistant Professor in 2014. In 2015 I mentored Dr. Matt Tremblay who is now an Assistant Professor at U Conn Health where he serves as the MS Center director. I am currently the clinical mentor for two post-doctoral fellows: Dr. Arielle Greenfield and Dr. Joseph Sabatino. With Dr. Jeffrey Gelfand I mentor Dr. Valerie Block who is a post-doctoral research fellow. I provide lectures on multiple sclerosis, neuromyelitis optica and clinical research at the MS fellows lecture series.

Neurology residents: I perform the supervised neurodegenerative examination required of neurology residents by ABPN and ACGME. I supervise neurology residents in the outpatient multiples sclerosis center as the teaching attending. I was the faculty career development mentor for resident Daniel Pastula MD, MHS who is now a neurological infectious disease, post-doctoral fellow for the Centers for Disease Control. I was the faculty mentor for Ethan Brown, MD who is now a critical care fellow at Boston University. I also attend as a visiting professor for Neurology Professor Rounds at San Francisco General Hospital, Veterans Administration Medical Center and Moffitt Hospital and deliver lectures on multiple sclerosis, neuromyelitis optica and "neurojeopardy" at the housestaff conference.

Medical students: I am a small group leader for the brain, mind and behavior course for first year medical students. I supervise third year medical students in my outpatient neurology practice twice per month as part of their third year core curriculum in neurology and teach medical students on the neurology ward and consult services. I provide an introduction to return to the clinic for MD, PhD students who are completing their PhDs and getting ready to return to the 3rd year of medical school.

## FORMAL TEACHING

	Academic Yr	Course No. & Title	Teaching Contribution	School	Class Size
	2001 - 2001	Brain, Mind & Behavior	Preceptor	Medicine	
	2002 - 2002	Brain, Mind & Behavior	Preceptor	Medicine	
	2003 - 2003	Evidence-Based Medicine	Small Group Leader	Medicine	
	2003 - 2003	Molecular Methods in Epidemiology	Teaching Assistant	Medicine	
	2005 - 2005	Brain, Mind & Behavior	Preceptor	Medicine	

	Academic Yr	Course No. & Title	Teaching Contribution	School	Class Size
	2006 - 2006	2FC.001 Therapy in Neurology: "Multiple sclerosis therapeutics", American Academy of Neurology Annual Meeting, San Diego, CA	contributing faculty/lecturer		
	2007 - 2007	Multiple Sclerosis Update: "Neuromyelitis optica", American Academy of Neurology, winter session, Orlando, FL	contributing faculty/lecturer		
	2007 - 2007	2FC.005 Therapy in Neurology: "Multiple sclerosis" American Academy of Neurology annual meeting, Boston, MA	contributing faculty/lecturer		
	2007 - 2007	7TP.001 "Multiple sclerosis therapy", American Academy of Neurology annual meeting, Boston, MA	contributing faculty/lecturer		
	2008 - 2008	2FC.005 Therapy in Neurology: "Multiple sclerosis" American Academy of Neurology annual meeting, Chicago, IL	contributing faculty/lecturer		
	2008 - 2008	7TP.001 "Multiple sclerosis therapy", American Academy of Neurology annual meeting, Chicago, IL	contributing faculty/lecturer		

	Academic Yr	Course No. & Title	Teaching Contribution	School	Class Size
	2008 - 2008	"Multiple sclerosis genetics- Parts 1 and 2"; "Neuromyelitis Optica: natural history and treatment"; "B cell therapies in multiple sclerosis", Consortium of Multiple Sclerosis Centers annual meeting, Denver, CO	contributing faculty/lecturer		
	2009 - 2009	7TP.001 Multiple Sclerosis Therapy, American Academy of Neurology annual meeting, Seattle, WA	contributing faculty, speaker		
	2009 - 2009	7FC.001 Multiple Sclerosis Update, American Academy of Neurology annual meeting , Seattle, WA	course director, speaker		
	2009 - present	Multiple Sclerosis Preceptorship for Spanish Neurologists, Multiple Sclerosis Center, Department of Neurology, UCSF Medical Center	lecturer		
	2010 - 2010	Brain, Mind & Behavior	Small Group Leader	Medicine	
	2010 - present	PRIME education	course director, speaker		
	2010 - 2010	MS in Crossfire	panel discussant		

	Academic Yr	Course No. & Title	Teaching Contribution	School	Class Size
	2010 - 2010	2AC.003 Multiple Sclerosis Update Part 1: Basic Science 2PC.003 Multiple Sclerosis Update Part 2: Clinical, American Academy of Neurology annual meeting, Toronto, Ontario, Canada	course director		
	2011 - 2011	Brain, Mind & Behavior	small group leader	Medicine	
	2011 - 2011	2AC.003 Multiple Sclerosis Update Part 1: Basic Science 2PC.003 Multiple Sclerosis Update Part 2: Clinical, American Academy of Neurology annual meeting, Honolulu, HI	course director, speaker		
	2011 - 2011	MS in Crossfire	panel discussant		
	2011 - 2013	CMEducation Resources	course director, speaker		
	2012 - 2012	Brain, Mind & Behavior	gmall group leader	Medicine	10
	2012 - 2012	2AC.003 Multiple Sclerosis Overview Part 1: Basic Science 2PC.003 Multiple Sclerosis Overview Part 2: Clinical Research, American Academy of Neurology annual meeting, New Orleans, LA	course director, speaker		
	2012 - 2012	MS in Crossfire	panel discussant		

	Academic Yr	Course No. & Title	Teaching Contribution	School	Class Size
	2013 - 2013	1HC.002 Symptomatic Management in Multiple Sclerosis, American Academy of Neurology Annual Meeting, San Diego, CA	course director, speaker		
	2013 - 2103	MS in Crossfire	panel discussant		
	2013 - 2013	Advances in Multiple Sclerosis	speaker		
	2014 - 2014	Brain, Mind & Behavior	small group leader	Medicine	8
	2014 - 2014	C152 Symptomatic Management in Multiple Sclerosis, American Academy of Neurology Annual Meeting, Philadelphia, PA	course director, speaker		
	2014 - present	Medscape - MS treatment strategies: targeting disease pathology & clinical outcomes	steering committee member		
	2014 - 2014	MS in Crossfire	panel discussant		
	2015 - 2015	Brain, Mind & Behavior	small group leader	Medicine	6
	2015 - 2015	Diagnostic dilemmas in multiple sclerosis, Breakthroughs in Neurology, American Academy of Neurology, Phoenix AZ	course director		



	Academic Yr	Course No. & Title	Teaching Contribution	School	Class Size
	2015 - 2015	Risk stratification in multiple sclerosis, Breakthroughs in Neurology, American Academy of Neurology, Phoenix AZ	speaker		
	2015 - 2015	C151: Multiple Sclerosis Therapies, American Academy of Neurology Annual Meeting, Washington, D.C.	course director, speaker		
	2015 - 2015	Peer View Institute, "Customizing disease-modifying therapy for MS in an era of multiple drug delivery modalities and mechanisms of action: how can we optimize treatment selection?"	program chair		
	2015 - 2015	Post-Graduate Institute for Medicine, "MS Think Tank: putting it all together-understanding treatment options and individualizing therapy in MS"	faculty		
	2016 - 2016	Brain, Mind & Behavior	small group leader	Medicine	
	2016 - 2016	C181: Multiple Sclerosis Therapies: Disease-modifying Treatment I", American Academy of Neurology Annual Meeting, Vancouver, B.C. 2016	course director and speaker		

	Academic Yr	Course No. & Title	Teaching Contribution	School	Class Size
	2016 - 2016	C194: Multiple Sclerosis Therapies: Disease-modifying Treatment II, American Academy of Neurology Annual Meeting, Vancouver, B.C. 2016	course director and speaker		
	2017 - 2017	"Emerging Multiple Sclerosis Therapies", Breakthroughs in Neurology, American Academy of Neurology, Phoenix, AZ	speaker		>200
	2017 - 2017	PC36: "Multiple Sclerosis: Disease Modifying Treatment Part 1", American Academy of Neurology Annual Meeting, Boston, MA 2017	course director		>800
	2017 - 2017	C34: "Multiple Sclerosis: Disease Modifying Treatment Part 2" American Academy of Neurology Annual Meeting, Boston, MA 2017"	course director and speaker		>800
	2017 - 2017	C224: "Controversies in Multiple Sclerosis"	speaker		>200
	2017 - 2017	Inflammatory diseases of the spinal cord Differential diagnosis of myelitis American Neurological Association Annual Meeting San Diego, CA 2017	co-chair invited speaker		>100

	Academic Yr	Course No. & Title	Teaching Contribution	School	Class Size
	2017 - 2017	Progressive multiple sclerosis: who to treat, with what and for how long? ECTRIMS, Paris, France	chair		20
	2017 - 2017	New horizons in progressive multiple sclerosis. New classification and challenges in progressive MS. ECTRIMS, Paris, France	invited speaker		>800
	2017 - 2017	Emerging landscape of the next generation of MS therapies: current efforts in remyelination and neurorestoration. Recent insights from progressive MS clinical trials: what will a neurorestoration study look like?	co-chair, invited speaker		>800
	2017 - 2018	Understanding the Role of the Immune System in Multiple Sclerosis and Other Autoimmune Diseases. UT Southwestern Medical Center.	speaker		>800

### INFORMAL TEACHING

- 2004 - present Teaching attending, Multiple Sclerosis Clinic: neurology resident supervision, including ACGME neurodegenerative examination observer, ~160 hours/year
- 2004 - 2004 Designing Clinical Research, UCSF Dept of Epidemiology and Biostatistics, 16 hours/week
- 2005 - 2008 Teaching attending, Neurology Service: 21 hours/week

- 2008 - present Observed neurodegenerative exam for ACGME requirements of neurology residents, 16-20 hours/year
- 2008 - 2014 Teaching attending, Neurology Ward Service: 3rd year medical student education, 21 hours/week
- 2009 - 2014 Attending, Neurology Consult Service: 3rd year medical student education, 21 hours/week
- 2009 - present Neurology Professor Rounds, SFGH, VAMC and Moffitt Hospital 8-16 hours/year
- 2009 - present Housestaff Teaching Conference: 8 hours/year
- 2010 - present Neurology outpatient teaching attending: 3rd year medical student rotation, 4 hours/week

### MENTORING SUMMARY

I have served as a mentor for residents, fellows and junior faculty at the UCSF MS Center. Specifically, I have been responsible for helping in the post-doctoral training of multiple physicians who have achieved expertise in the clinical care of multiple sclerosis patients. All fellows who I have mentored have either continued to specialize in multiple sclerosis and related disorders at various academic institutions or have developed their own MS specialty practices. I also was the faculty mentor for neurology residents who successfully completed their residencies and now are either faculty or are in post-doctoral fellowships. I also serve as the neurology flexible residency clinical research chair and have helped guide multiple neurology residents through this program making sure that their proposed projects are feasible and that there is goodness of fit with the proposed mentor. Currently, I am mentoring a clinical research post-doctoral fellow Valerie Block, DPTSc and am a clinical mentor for three basic science research fellows Ariele Greenfield MD, Joseph Sabatino MD, PhD and Xiaoming Jia, MD, MEng and two clinical fellows: Andrew Romeo, MD and Kristen Krysko, MD

### POSTDOCTORAL FELLOWS AND RESIDENTS MENTORED

Dates	Name	Fellow	Mentor Role	Faculty Role	Current Position
2008 - 2009	Jacqueline Wei-Lu Chan, MD	Neurology resident	Co-Mentor/Clinical Mentor	Mentor	Neurologist, SGMF Stockton Medical Plaza, Stockton, CA
2007 - 2009	Christine Fox, MD	Neurology resident	Career Mentor	Mentor	Assistant Professor of Pediatric Neurology, UCSF

Dates	Name	Fellow	Mentor Role	Faculty Role	Current Position
2010 - 2011	Timothy West, MD	MS clinical fellow	Research/Scholarly Mentor, Co-Mentor/Clinical Mentor	Mentor	Director, MS Program, Sansum Clinic, Santa Barbara, CA
2010 - 2012	Jeffery Gelfand, MD	MS clinical research fellow	Research/Scholarly Mentor, Co-Mentor/Clinical Mentor	Co-Mentor	Assistant Professor of Clinical Neurology, UCSF
2011 - 2012	Jaqueline Marcus, MD	MS clinical fellow	Co-Mentor/Clinical Mentor	Co-Mentor	Staff Neurologist, Kaiser Permanente
2010 - 2012	Daniel Pastula, MD, MHS	Neurology resident	Career Mentor	Mentor	Postdoctoral Fellow, CDC
2013 - 2016	Ethan Brown, MD	Neurology resident	Career Mentor	Mentor	Critical Care Fellow, Boston University, MA
2015 - 2015	Carolyn Crooms, MD	Neurology resident	Career Mentor	Flexible residency program mentor	Neurology resident, UCSF
2015 - 2015	Kevin Keenen, MD	Neurology resident	Career Mentor	Flexible residency program mentor	Neurology resident, UCSF
2015 - 2015	John Kleen, MD, PhD	Neurology resident	Career Mentor	Flexible residency program mentor	Neurology resident, UCSF
2016 - present	Sara LaHue, MD	Neurology resident	Career Mentor	Flexible residency program mentor	Neurology resident, UCSF
2016 - present	Sharon Wietstock, MD, MSc	Neurology resident	Career Mentor	Flexible residency program mentor	Neurology resident, UCSF
2016 - present	Julian Thomas, MD	Neurology resident	Career Mentor	Flexible residency program mentor	Neurology resident, UCSF

Dates	Name	Fellow	Mentor Role	Faculty Role	Current Position
2016 - present	Mark Terrelonge, MD, MPH	Neurology resident	Career Mentor	Flexible residency program mentor	Neurology resident, UCSF
2016 - present	Jessamyn Conell-Price	Neurology resident	Career Mentor	Mentor	Neurology resident UCSF
2014 - 2015	Carolyn Bevan, MD, MS	MS clinical fellow	Research/Scholarly Mentor, Co-Mentor/Clinical Mentor	Mentor	Assistant Professor of Neurology, UCSF
2015 - 2016	Matthew Tremblay, MD, PhD	MS clinical fellow	Research/Scholarly Mentor, Co-Mentor/Clinical Mentor	Mentor	Assistant Professor of Neurology, University of Connecticut
2016 - present	Valerie Block, DPTSc	MS clinical research fellow	Research/Scholarly Mentor	Mentor	Post-doctoral research fellow, UCSF
2016 - present	Ariele Greenfield, MD	MS research fellow	Co-Mentor/Clinical Mentor	Clinical mentor	Clinical Instructor, UCSF
2016 - present	Joseph Sabatino, MD, PhD	MS research fellow	Co-Mentor/Clinical Mentor	Clinical mentor	Clinical Instructor, UCSF
2017 - present	Xiaoming Jia, MD, MEng	MS research fellow	Research/Scholarly Mentor, Co-Mentor/Clinical Mentor	Clinical and Research Mentor	Clinical Instructor, UCSF
2017 - present	Andrew Romeo, MD	MS clinical fellow	Co-Mentor/Clinical Mentor	Clinical mentor	Clinical Instructor, UCSF

**FACULTY MENTORING**

Dates	Name	Position while Mentored	Mentor Type	Mentoring Role	Current Position
2006 - 2007	Elizabeth Crabtree-Hartman, MD	Visiting Clinical Fellow	Co-Mentor/Clinical Mentor	Mentor	Associate Professor of Neurology, Tulane School of Medicine
2018 - present	Nina Riggins, MD, PhD	HS Assistant Professor of Neurology	Career Mentor	Mentor	HS Assistant Professor of Neurology

**RESEARCH AND CREATIVE ACTIVITIES SUMMARY**

I am the clinical director of the Environment, Proteomics, Imaging and Genetics (EPIC) observational cohort study at UCSF that seeks to integrate genomic, imaging, proteomic and clinical data into predictive models for MS disease severity. In addition, I am a clinical investigator in an international study that seeks to identify genetic susceptibility and modifier alleles for multiple sclerosis and is conducted by the Multiple Sclerosis Genetic Group whose principal investigators are Stephen Hauser and Jorge Oksenberg. I am the clinical research director at the UCSF MS Center and oversee the majority of the clinical trials conducted at the UCSF MS Center. I am leading two global phase III clinical trials in which I led efforts in study design and execution: N-Momentum (inebilizumab in neuromyelitis optica) and SPI2 (MD1003 in progressive multiple sclerosis). With Jeffrey Gelfand, MD I created the StepsCore program for remote activity monitoring using FitBit technology in multiple sclerosis. This core facility provides daily step count data acquisition and analysis for observational studies and clinical trials. I was/am an investigator in the following clinical trials/observational studies:

Current Studies

1. Environment, Proteomics, Imaging and Genetics (EPIC) observational cohort study Co-PI with Stephen Hauser, MD (study active).
2. B-cell immunology of multiple sclerosis. Co-investigator with Michael Wilson, MD (study active).
3. MS study evaluating safety and efficacy of two doses of fingolimod versus Copaxone (ASSESS). Steering committee chair (study active).
4. A Multinational, Multicenter, Randomized, Double-Blind, Parallel-Group, Placebo-Controlled Study to Evaluate the Efficacy, Safety, and Tolerability of Once Daily Oral Administration of Laquinimod (0.6 or 1.5 mg) in Patients with Primary Progressive Multiple Sclerosis (ARPEGGIO). Steering committee member (study active).
5. A Phase 2/3, Double-masked, Active-controlled Study to Evaluate the Safety and Efficacy of MEDI-551 in Adult Subjects with Aquaporin-4 Antibody positive Neuromyelitis Optica and Neuromyelitis Optica Spectrum Disorders (N-Momentum). Steering committee chair (study active).
6. A phase 2/3, multi-center, randomized, double-masked, placebo-controlled (part A) and double-blind, double dummy, active-controlled (part B), parallel group study to evaluate the efficacy and safety of RPC1063 administered orally to relapsing multiple sclerosis patients (RADIANCE). Steering committee member (study active)

7. A multi-site, open label extension trial of oral RPC1063 in relapsing multiple sclerosis (DAYBREAK). Steering committee member (study active)
8. An open label extension study to evaluate the safety and efficacy of ocrelizumab in patients who were previously randomized to either interferon beta-1a (Rebif®) or ocrelizumab in WA21092B. Site PI (study active).
9. A double-blind, placebo-controlled, single ascending dose intravenous infusion study of rHIgM22 in subjects with multiple sclerosis immediately following a relapse. Site PI (study active).
10. An international, double-blind, randomized, placebo-controlled phase IIb trial to assess the efficacy, safety, and pharmacokinetics of GNBAC1 in patients with relapsing remitting multiple sclerosis. Steering committee member (study active)
11. Effect of MD1003 in progressive multiple sclerosis: a pivotal randomized double blind placebo controlled study. Lead investigator and steering committee member (study active)
12. A Phase I, multicenter, randomized 12-week open-label study to evaluate the multiple dose pharmacokinetics and pharmacodynamics of RPC1063 in patients with relapsing multiple sclerosis Overall study and Site principal investigator (study active).

#### Completed Studies

1. A phase II trial of mitoxantrone in patients with primary progressive multiple Sclerosis. Co-investigator (study concluded, 6/2003)
2. A pilot multi-center, open label, assessor blinded, prospective profiling study in MS subjects treated with Avonex, MS subjects naïve to treatment, and healthy control subjects. Co-investigator (study concluded, 11/2004)
3. A randomized, double-blind, placebo-controlled, parallel-group, multicenter study to determine the safety and efficacy of Natalizumab, when added to Avonex (Interferon Beta-1a), in subjects with relapsing-remitting multiple sclerosis- Co-investigator (study concluded, 4/2005)
4. Phase II open-label multi-center safety and efficacy study of oral recombinant ovine interferon tau (roIFN $\tau$ ) administered daily in patients with relapsing-remitting multiple sclerosis. Co-investigator (study concluded, 8/2005)
5. A randomized, rater-blinded, multicenter, parallel-group randomized study comparing the efficacy and safety of Betaseron 250 $\mu$ g subcutaneously every other day with Avonex 30  $\mu$ g intramuscularly once per week in relapsing-remitting multiple sclerosis patients previously treated with Avonex. Co-investigator (study concluded, 10/2005)
6. International, randomized, multicenter, phase III study in patients with relapsing-remitting multiple sclerosis comparing over a treatment period of 104 weeks: 1) double-blinded the safety tolerability and efficacy of Betaseron 250 $\mu$ g (8 MIU) and Betaseron 500 $\mu$ g (16 MIU), both given subcutaneously every other day and 2) rater-blinded the safety, tolerability, and efficacy of Betaseron subcutaneously every other day with Copaxone 20 mg subcutaneously once daily. Co-investigator (study concluded, 8/2007)
7. A phase II/III, randomized, double-blinded, parallel-group, placebo-controlled, multicenter study to evaluate the safety and efficacy of Rituximab (Mabthera/Rituxan) in adults with primary progressive multiple sclerosis. Site PI- (study concluded, 10/2007)
8. A randomized placebo-controlled, parallel-group study, crossover-design of the effects of low dose naltrexone on the multiple sclerosis quality of life inventory (MSQLI54). PI- (study concluded, 11/2007)
9. A double-blind, placebo controlled multi-center study to evaluate the efficacy and safety of MBP8298 in subjects with Secondary Progressive Multiple Sclerosis. Steering committee member and site PI- (study terminated, 7/2009)
10. A randomized, partially placebo-controlled study to evaluate the effect of a 24-week interruption in natalizumab treatment on immune parameters and MS disease activity, which



compares continued natalizumab treatment with placebo or with switching to interferon beta-1a (IFNB-1a), glatiramer acetate (GA), or methylprednisolone (MP) as alternative immunomodulatory therapy (RESTORE) Steering committee member and site PI- (study concluded 11/2011)

11. JCV antibody program, STRATIFY-2. Site PI (2010-2011)

12. Randomized treatment interruption of natalizumab. Steering committee member and site PI (study concluded 11/2011)

13. Open label study of safety and tolerability of rituximab in neuromyelitis optica, recurrent transverse myelitis and recurrent bilateral optic neuritis. (study concluded 6/2012)

14. Oral Cladribine in Early Multiple Sclerosis (MS) (ORACLE MS). Steering Committee Member. (study concluded 6/2012)

15. Anti-inflammatory type II monocyte induction by glatiramer acetate (Copaxone®) treatment of multiple sclerosis. Co-I with Scott Zamvil, MD, PhD (study concluded 7/2012)

16. EMD Serono, A two-arm, randomized, double-blind, control group-compared, multicenter, phase IIIb study with monthly MRI and biomarker assessments to evaluate the efficacy, safety, and tolerability of Rebif New Formulation (IFN-beta-1a) in subjects with relapsing remitting multiple sclerosis. Principal Investigator of the Biomarker Analysis (study concluded 6/2012)

17. A phase 2, double-blind, randomized, placebo-controlled, four-arm, multicenter, dose-finding study to assess the safety and efficacy of three dose levels of AVP-923 (dextromethorphan/quinine) in the treatment of central neuropathic pain in patients with multiple sclerosis. 11-AVR-130 amendment 2. Advisory board member and site PI (study concluded 12/2013)

18. T-cell recognition of CNS auto-antigens in neuromyelitis optica. Co-investigator with Scott Zamvil, MD, PhD (study concluded 12/2014).

19. FTY720 in patients with primary progressive multiple sclerosis. Steering committee member (INFORMS). Steering committee member (study concluded 5/2015).

20. A randomized, double-blind, double-dummy, parallel-group, study to evaluate the efficacy and safety of ocrelizumab in comparison to interferon beta-1a (Rebif®) in patients with relapsing multiple sclerosis WA21092B. Site PI (study concluded 4/2015).

21. Evaluation of patient retention of fingolimod vs. currently approved disease modifying therapy in patients with relapsing remitting multiple sclerosis (PREFERMS). Steering committee chair and site PI. (study concluded 6/2015).

22. Gastrointestinal Microbiome in Neuromyelitis Optica. Co-I with Scott Zamvil, MD, PhD (Study concluded 2/2016).

23. Exploring the efficacy and safety of siponimod in patients with secondary progressive multiple sclerosis (EXPAND). Steering committee member (study completed 9/2016).

24. A phase 2/3, multi-center, randomized, double-masked, double dummy, active-controlled, parallel group study to evaluate the efficacy and safety of RPC1063 administered orally to relapsing multiple sclerosis patients (SUNBEAM). Steering committee member (study completed 2/2017).

## RESEARCH AWARDS - CURRENT

1. A118669	Principal investigator	0 % effort	Cree (PI)
Hoffman La Roche		11/20/2012	2/28/2017
A randomized, double-blind, double-dummy, parallel-group, study to evaluate the efficacy and safety of ocrelizumab in comparison to interferon beta-1a (Rebif®) in patients with relapsing multiple sclerosis WA21092B		\$ 181,768.00 direct/yr 1	\$ 1,230,288.00 total
Randomized controlled trial of ocrelizumab versus Rebif in relapsing multiple sclerosis			

Principal investigator for the UCSF site.

2. A124667	Principal Investigator	13 % effort	Cree (PI)
MedImmune		12/17/2014	1/31/2017
A Phase 2/3, Double-masked, Active-controlled Study to Evaluate the Safety and Efficacy of MEDI-551 in Adult Subjects with Aquaporin-4 Antibody positive Neuromyelitis Optica and Neuromyelitis Optica Spectrum Disorders (N-MOMENTUM)			\$ 725,584.00 total
This is the first phase III clinical trial of a B cell depleting monoclonal antibody (anti-CD19) in neuromyelitis optica.			
Global principal investigator, steering committee chair			
3. A126842	Co-PI	5% % effort	Cree (PI)
Department of Defense		4/1/2016	3/31/2018
A multidisciplinary approach to study the role of the gut microbiome in relapsing and progressive MS		\$ 224,700.00 direct/yr 1	\$ 689,100.00 total
This is a cross sectional study of the gut microbiome assayed by !6S microarray in subjects with relapsing and progressive MS and household controls.			
I am the clinical principal investigator for this study and am responsible for subject recruitment and all clinical data ascertainment.			
4. A127965	Principal Investigator	2.14% % effort	Cree (PI)
Receptos		7/28/2016	7/27/2022
A multi-site, open label extension trial of oral RPC1063 in relapsing multiple sclerosis-protocol #RPC01-3001 (DAYBREAK)		\$ 175,000.00 direct/yr 1	\$ 1,075,000.00 total
This is an open label extension study of RPC 1063 (ozanimod) in relapsing Ms subjects. Subjects are recruited from the RADIANCE and PK-PD clinical trial. A total of 10 subjects are expected to be recruited (6 thus far)			
I am the clinical principal investigator for this study and am responsible for subject recruitment and all clinical data ascertainment.			
5. A128358	Principal Investigator	5 % effort	Cree (PI)
MedDay		8/16/2016	12/31/2019
A clinical service agreement to provide web-based infrastructure and data acquisition for remote physical activity monitoring using Fitbit technology for the clinical trial: Effect of MD1003 in progressive multiple sclerosis: a randomized double blind, placebo controlled study (Protocol MD1003CT2016-01MS-SPI2)		\$ 236,225.00 direct/yr 1	\$ 689,752.00 total
This is a service agreement with StepsCore, a UCSF department of neurology facility that provides Fitbit data for clinical trials.			
I am the principal investigator for StepsCore and am the global lead investigator for the SPI2 trial.			
6. A129112	Principal Investigator	0 % effort	Cree (PI)

MedDay	5/1/2017	12/31/2020
Effect of MD1003 in progressive multiple sclerosis: a randomized double blind, placebo controlled study (Protocol MD1003CT2016-01MS-SPI2)		\$ 1,118,379 total

This study will evaluate the efficacy and safety of MD1003 (biotin 300 mg/day) in patients with progressive MS.

I am the site principal investigator and the study global lead investigator.

7.	Principal Investigator	5 % effort	Cree (PI)
	Weill Institute's Award Program in Neuroscience Innovation	10/01/2017	9/30/2018
	Role of the gut microbiome in NMO pathogenesis	\$ 150,000 direct/yr 1	\$ 150,000 total

This study will test the hypothesis that intestinal bacteria from NMO patients, including C. perfringens, contribute to a murine model of NMO pathogenesis.

Establishment of the UCSF neuromyelitis optica spectrum disorder bio-repository.

### RESEARCH AWARDS - PAST

1.	NS07219	Post-doctoral research fellow	Prusiner (PI)
	National Institute of Health	07/01/2001	06/30/2003
	T32 National Institute of Health training grant	\$ 32,000 direct/yr 1	\$ 96,000 total

This is a post-doctoral fellowship training award for research in neurodegenerative disease.

2.	FP 1430A1	Post-doctoral research fellow	Cree (PI)
	National Multiple Sclerosis Society	07/01/2002	06/30/2005
	Sylvia Lawry Fellowship	\$ 40,000 direct/yr 1	\$ 120,000 total

This is a post-doctoral fellowship award for research in multiple sclerosis clinical trials.

3.	A103850	Principal Investigator	Cree (PI)
	Genentech, Inc.	08/15/2004	02/28/2010
	Rituximab in myelitis and opticospinal multiple sclerosis	\$ 70,000 direct/yr 1	\$ 317,545 total

This is an open label study of the safety and tolerability of rituximab in neuromyelitis optica, recurrent transverse myelitis and recurrent bilateral simultaneous optic neuritis.

4.	K23 048869-01 A1	Principal Investigator	Cree (PI)
	National Institute of Health	08/19/2005	05/31/2010
	Correlating multiple sclerosis phenotypes with genotypes	\$ 149,500 direct/yr 1	\$ 747,500 total

The major goal of this project is to develop well characterized cohorts of African American and whites with multiple sclerosis that will be used to make phenotype-genotype correlations.

5.	RG 3060C8	Co-investigator		Oksenberg (PI)
	National Multiple Sclerosis Society		10/01/2006	09/30/2009
	Family-based genetic studies in ethnically distinct populations		\$ 59,391 direct/yr 1	\$ 178,174 total
	The objective of this grant is to perform association studies of disease candidate genes in MS families from different ethnic groups in the US.			
6.	MBP8298-SP-03	Principal Investigator		Cree (PI)
	Bio-MS/Lilly		08/29/2007	04/30/2009
	A double blind, placebo controlled, multi center study to evaluate the efficacy and safety of MBP8298 in subjects with secondary progressive multiple sclerosis.		\$ 123,6867 direct/yr 1	\$ 247,372 total
	This is a randomized, blinded, placebo controlled study to investigate the efficacy with respect to disability progression and safety of MBP8298, a peptide of the native myelin basic protein from amino acids 82 to 98, in secondary progressive multiple sclerosis patients.			
7.	A43498	Principal Investigator		Cree (PI)
	EMD Serono		07/01/2008	07/31/2010
	Immunological Biomarkers		\$ 199,912 direct/yr 1	\$ 426,597 total
	A two-arm, randomized, double-blind, control group-compared, multicenter, phase IIIb study with monthly MRI and biomarker assessments to evaluate the efficacy, safety, and tolerability of Rebif New Formulation (IFN-beta-1a) in subjects with relapsing remitting multiple sclerosis.			
8.	Biogen Idec 10152609	Principal Investigator		Cree (PI)
	Biogen Idec		08/17/2010	08/31/2012
	Randomized treatment interruption of natalizumab		\$ 79,801 direct/yr 1	\$ 79,801 total
	The objective of this study is to determine whether a 24 week interruption of natalizumab dosing is sufficient to restore lymphocyte trafficking in multiple sclerosis.			
9.	Biogen Idec 10152474	Principal Investigator		Cree (PI)
	Biogen Idec		10/21/2010	10/20/2012
	JCV antibody program in patients with relapsing multiple sclerosis receiving or considering treatment with Tysabri: STRATIFY-2		\$ 68,506 direct/yr 1	\$ 187,936 total

The objective of this study is to determine the predictive value of testing for antibodies against the JC virus for development of progressive multifocal leukoencephalopathy in multiple sclerosis patients receiving or considering treatment with Tysabri.

10. P0044017	Co-investigator		Von Budingen (PI)
Pfizer		09/01/2011	08/31/2013
Translation Research Program in MS Immunology		\$ 323,035 direct/yr 1	\$ 973,677 total
Using nextgen sequencing and high throughout array technology, this project is aimed at identifying characteristics of immune cells and immune repertoires specific to MS for development of biomarkers and therapeutic targets.			
11. R01NS063008	Co-investigator		Zamvil (PI)
National Institute of Health		7/1/2009	6/30/2014
Regulatory monocytes in CNS autoimmune disease		\$ 177,625 direct/yr 1	\$ 1,358,257 total
12. A12222264	Principal Investigator		Cree (PI)
Acorda		5/22/2013	7/30/2014
Double-blind, placebo-controlled, single ascending intravenous infusion study of rHIgM22 in patients with multiple sclerosis		\$ 407,204 direct/yr 1	\$ 407,204 total
First in human, randomized trial of a IgM monoclonal antibody that promotes remyelination in an animal model of multiple sclerosis			
13. A121435	Principal Investigator		Cree (PI)
Novartis		5/22/2013	6/30/2015
A 12 month, prospective, randomized, active-controlled, open-label study to evaluate the patient retention of fingolimod versus approved first-line disease modifying therapies in adults who are in early stages of treatment for relapsing multiple sclerosis (PREFERMS)		\$ 248,842 direct/yr 1	\$ 476,016 total
14. A120571	Principal Investigator		Cree (PI)
Hoffman La Roche		8/20/2012	12/31/2014
Sub-study of brain and spinal cord MRI in multiple sclerosis patients participating in the OPERA clinical trial		\$ 89,078.00 direct/yr 1	\$ 178,555.00 total

High field imaging the brain and spinal cord at 3T and 7T for study subjects in the OPERA clinical trial (ocrelizumab versus Rebif in relapsing MS)

15.	Principal investigator		Cree (PI)
	Receptos	6/1/2015	12/31/2017
	A phase 3, multi-center, randomized, double-masked, double-blind, double dummy, active-controlled, parallel group study to evaluate the efficacy and safety of RPC1063 administered orally to relapsing multiple sclerosis patients (SUNBEAM)	\$ 174,825 direct/yr 1	\$ 349,650 total
	This is a phase III trial of ozanimod, a next-generation S1P1 receptor modulator, in relapsing MS.		
16. A1222734	Principal Investigator	19 % effort	Cree (PI)
	Receptos	1/1/2014	3/31/2017
	A phase 2/3, multi-center, randomized, double-masked, placebo-controlled (part A) and double-blind, double dummy, active-controlled (part B), parallel group study to evaluate the efficacy and safety of RPC1063 administered orally to relapsing multiple sclerosis patients (RADIANCE)		\$ 231,771.00 total
	This is the first phase II/III clinical trial of ozanimod, a next-generation S1P1 specific receptor modulator, in relapsing MS.		
	Principal investigator for the UCSF site.		
17. A124987	Principal Investigator	0 % effort	Cree (PI)
	Teva	6/1/2015	4/30/2017
	A multi-national, multicenter, randomized, double-blind, parallel-group, placebo-controlled study to evaluate the efficacy, safety and tolerability of once daily oral administration of laquinimod (0.6 mg or 1.5 mg) in patients with primary progressive multiple sclerosis (ARPEGGIO)	\$ 69,930 direct/yr 1	\$ 157,517 total
	This is a phase II RCT of laquinimod in primary progressive MS, a disease state that has no known treatment.		
	Principal investigator for the UCSF site, steering committee member.		
18. A125404	Principal Investigator	5 % effort	Cree (PI)
	Acorda	8/15/2013	2/28/2017
	A double blind, placebo-controlled, single ascending dose intravenous infusion study of rHlgM22a in subjects with multiple sclerosis immediately following a relapse	\$ 77,569 direct/yr 1	\$ 103,150.00 total
	This is a phase II RCT of rHlgM22a in multiple sclerosis patients experiencing an acute relapse.		
	Principal investigator at the UCSF site		
19. 126842	Principal investigator	0 % effort	Cree (PI)

EMD Serono		9/30/2015	4/30/2016
Improve study: further analysis		\$ 84,056.00 direct/yr 1	\$ 84,056.00 total
Biomarker analysis from the IMPROVE clinical trial			
Principal investigator			
20. 125014A	Co-investigator	0.86 % effort	Baranzini (PI)
National MS Society			
NMSS Microbiome Consortium		\$ 40,000 direct/yr 1	\$ 40,000 total
Role of gut micro biome in multiple sclerosis susceptibility and disease course			
I am responsible for identification of study subjects and ascertainment of clinical information and biological samples. I am also involved in the analysis and interpretation of data.			
21. A127788	Principal Investigator	8 % effort	Cree (PI)
Receptos		6/3/2016	5/31/2017
A phase I, multicenter, randomized, 12 week, open-label, study to evaluate the multiple-dose pharmacokinetics and pharmacodynamics of RPC1063 in patients with relapsing multiple sclerosis, protocol #RPC01-1001		\$ 251,000.00 direct/yr 1	\$ 470,434.00 total
This is a phase 1 study that characterizes the PK and PD of RPC1063 in patients with relapsing MS			
I am the clinical principal investigator for this study and am responsible for subject recruitment and all clinical data ascertainment.			
22. A120571	Principal investigator	4 % effort	Cree (PI)
Hoffman La Roche		8/30/2012	2/28/2017
MRI subsidy within OPERA			\$ 479,923.00 total
High field MRI sub-study of the OPERA clinical trial.			
Principal investigator.			

## PEER REVIEWED PUBLICATIONS

1. **Cree BC**, Hays AP, Lowe G and Bernardini GL. A fatal case of coxsackie B4 encephalitis. Arch Neurol. 2003; 60:107-112. PMID: 12533096
2. Oksenberg J, Barcellos L, **Cree B**, Baranzini S, Bugawan T, Khan O, Goodin D, Lincoln R, Swerdlin A, Mignot E, Lin L, Erlich H, Schmidt S, Thomson G, Reich D, Pericak-Vance M, Haines J, and Hauser S for the Multiple Sclerosis Genetics Group. Mapping multiple sclerosis susceptibility to the HLA-DR locus in African Americans. Am J Human Genet. 2004;74:160-167. PMID: 14669136
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7. **Cree B**, Lamb S, Morgan K, Chen A, Waubant E, Genain C. An open label study of the effects of rituximab in neuromyelitis optica. *Neurology*. 2005;64:1270-1272. PMID: 15824362
8. Menge T, Lalive P, von Bundingen H-C, **Cree B**, Hauser SL, Genain CP. Antibody responses against galactocerebroside as diagnostic and stage-specific biomarkers in multiple sclerosis. *J Clin Allergy Immunol*. 2005;116:453-459. PMID: 16083805
9. **Cree B**, Al-Sabbagh A, Bennett R, Goodin D. Response to interferon beta-1a treatment in African American multiple sclerosis patients. *Arch Neurol*. 2005;62:1681-1683. PMID: 16286540
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15. The International Multiple Sclerosis Genetics Consortium. Hafler DA, Compston A, Sawcer S, Lander ES, Daly MJ, DeJager PL, de Bakker PIW, Gabriel SB, Mirel DB, Ivinson AJ, Pericak-Vance MA, Gregory SG, Rioux JD, McCauley JL, Haines JL, Barcellos LF, **Cree B**, Oksenberg JR, Hauser SL. Risk alleles for multiple sclerosis identified by a genomewide study. *N Engl J Med*. 2007;357:851-862. PMID: 17660530
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## PATENTS ISSUED OR PENDING

1. Aquaporin peptides, compositions and methods of use

## CONFERENCE ABSTRACTS

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15. Green A, Hauser S, **Cree B**. Fundoscopic and optical coherence tomography findings in neuromyelitis optica compared to multiple sclerosis. S52.004, AAN
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18. **Cree B**, Ross M, Violich I, Berry B, Beheshtian A, Kornyeveva E, Goodin D. A single center, randomized, placebo-controlled, double crossover study of the effects of low dose naltrexone on multiple sclerosis quality of life. P02.151, AAN
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21. Baranzini SE, Madireddy LR, De Stefano N, Caillier S, Stromillo ML, Battaglini M, Monnet E, Cromer A, D'Antonio M, Farmer P, Lehr L, Beelke M, **Cree BAC**. Association of targeted blood biomarkers with interferon beta-1a treatment administration, magnetic resonance imaging activity and treatment response. P1126, ECTRIMS
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23. Leist T, Comi G, **Cree BAC**, Coyle PK, Freedman MS, Hartung H-P, Vermersch P, Orejudos A, Lachenal N, Scaramozza M; on behalf of the ORACLE MS (ORAI Cladribine for Early MS) Study Group. Oral cladribine delays time to conversion to clinically definite MS in patients with a first demyelinating event: top-line results from the phase III ORACLE MS study. P07.114 AAN 2013
24. **Cree B**, De Sèze J, Fox R, Gold R, Hartung H-P, Jeffery D, Kappos L, Kaufman M, Montalbán X, Weinstock-Guttman B, Woodworth J, Plavina T, Duda P. Natalizumab Effects during a 6-Month Dose Interruption: Relationship of Pharmacokinetic (PK), Pharmacodynamic (PD), and MRI Measurements. 6SS.041.003 AAN 2013
25. **Cree B**, Cohen J, Chin P, Ritter S, Piani Meier D, von Rosenstiel P, and Kappos L. Four-year Expanded Disability Status Scale (EDSS) Outcomes in Patients Treated with Fingolimod in the Phase 3 and Extension Trial Program. P3.185 AAN 2014
26. Sand I, Baranzini S, Knight R, Farber R, Benscome Y, Kanner R, Gomez R, Mazmanian S, Casaccia P, **Cree B**. The MS Microbiome Consortium (MSMC): An Academic Multi-disciplinary Collaborative Effort to Elucidate the Role of the Gut Microbiome in MS. P205 AAN 2015
27. **Cree BAC**, Wynn D, Cascione M, Meng X, Schofield L, Tenenbaum N on behalf of the PREFERMS investigators Key results from PREFERMS: real-world patient retention and outcomes on fingolimod versus platform injectable disease-modifying therapies in early relapsing–remitting multiple sclerosis. P115 AAN 2016
28. University of California, San Francisco MS-EPIC Team: **Cree BAC**, Hollenbach JA, Bevan C, Kirkish G, Zhu A, Bischof A, Sacco S, Gelfand JM, Goodin DS, Graves J, Green AJ, Zamvil SS, Zhao C, Gomez R, Santaniello A, Stern WA, Oksenberg JR, Baranzini S, Henry RG, Hauser SL. Long Term Disease Progression in Disease Activity-Free Relapsing MS. P1859 ECTRIMS 2017

## OTHER CREATIVE ACTIVITIES

1. Steering committee member: ORACLE clinical trial (oral cladribine versus placebo in clinically isolated syndrome suggestive of MS)  
Study sponsor: EMD Serono
2. Steering committee member, RESTORE clinical trial (randomized dosage interruption in Tysabri treated relapsing MS patients)  
Study sponsor: Biogen Idec
3. Steering committee member. FTY720 in patients with primary progressive multiple sclerosis. (INFORMS) clinical trial.  
Study sponsor: Novartis



4. Global principal investigator and steering committee member: MS study evaluating safety and efficacy of two doses of fingolimod versus Copaxone (ASSESS) clinical trial  
Study sponsor: Novartis
5. Global principal investigator and steering committee member: Evaluation of patient retention of fingolimod vs. currently approved disease modifying therapy in patients with relapsing remitting multiple sclerosis (PREFERMS) clinical trial  
Study sponsor: Novartis
6. Steering committee member: Exploring the efficacy and safety of siponimod in patients with secondary progressive multiple sclerosis (EXPAND) clinical trial  
Study sponsor: Novartis
7. Global principal investigator and steering committee chair: A Phase 2/3, Double-masked, Active-controlled Study to Evaluate the Safety and Efficacy of MEDI-551 in Adult Subjects with Aquaporin-4 Antibody positive Neuromyelitis Optica and Neuromyelitis Optica Spectrum Disorders (N-MOMENTUM)  
Study sponsor: MedImmune
8. Steering committee member: A phase 2/3, multi-center, randomized, double-masked, placebo-controlled (part A) and double-blind, double dummy, active-controlled (part B), parallel group study to evaluate the efficacy and safety of RPC1063 administered orally to relapsing multiple sclerosis patients (RADIANCE).  
Study sponsor: Receptos
9. Steering committee member: A Multinational, Multicenter, Randomized, Double-Blind, Parallel-Group, Placebo-Controlled Study to Evaluate the Efficacy, Safety, and Tolerability of Once Daily Oral Administration of Laquinimod (0.6 or 1.5 mg) in Patients with Primary Progressive Multiple Sclerosis (ARPEGGIO).  
Study sponsor: Teva
10. Steering committee member. A phase 2/3, multi-center, randomized, double-masked, double dummy, active-controlled, parallel group study to evaluate the efficacy and safety of RPC1063 administered orally to relapsing multiple sclerosis patients (RADIANCE, SUNBEAM and DAYBREAK).  
Study sponsor: Receptos
11. Steering committee member. A multi center phase 2b study of GNBAC1 in multiple sclerosis.  
Study sponsor: GeNeuro SA
12. Global principal investigator and steering committee member. Effect of MD1003 in progressive multiple sclerosis: a randomized double blind placebo controlled study.  
Study sponsor: MedDay
13. Progressive multifocal leukoencephalopathy expert panel. Study sponsor: Novartis
14. Steering committee member. Investigating immune phenotype biomarker changes in patients with relapsing MS treated with fingolimod 0.5 mg/day: the FLUENT study.  
Study Sponsor: Novartis
15. Data safety monitoring committee member. A Randomized, Double Blind, Placebo Controlled Phase II Study of M2951 (evobrutinib) With A Parallel, Open-Label, Active Control Group (Tecfidera), in Patients With Relapsing Multiple Sclerosis to Evaluate

Efficacy, Safety, Tolerability, Pharmacokinetics, and Biological Activity.  
Study Sponsor: EMD Serono

## 16. CURRICULUM DEVELOPMENT

Contributing faculty, Emerging treatment options: Advancing strategies for multiple sclerosis. Interactive Network for Continuing Education, 2005  
Steering Committee, A multi-site think tank on the challenges of multiple sclerosis, 2007  
Projects In Knowledge, online CME program (The advanced certificate program: multiple sclerosis management), 2008-2009  
Chair and contributing faculty, Optimizing neurotherapy in multiple sclerosis, CME Education Resources, 2010  
Contributing faculty, Update on MS fromECTRIMS, PRIME Education 2010-2011  
Chair, Update on MS from the American Academy of Neurology, PRIME Education 2013  
Medscape steering committee member, MS Treatment Strategies: Targeting Disease Pathology & Clinical Outcomes, 2014  
Peer View Institute, program chair, 2015

17. Various lectures to local physician groups, hospitals, and national groups totaling 10 over the last 12 months (2006)  
Contributing faculty, 2FC.001: Therapy in Neurology-Multiple Sclerosis Therapeutics, AAN Annual Meeting, San Diego (2006)  
Contributing faculty, Multiple Sclerosis Update: Neuromyelitis optica, AAN Winter Session, Orlando, FL (2007)  
Contributing faculty, 2FC.005: Therapy in Neurology-Multiple Sclerosis Therapeutics and 7TP.001: Multiple Sclerosis Therapy, AAN Annual Meeting Boston, MA (2007)  
Contributing faculty, 2FC.005: Therapy in Neurology-Multiple Sclerosis Therapeutics and 7TP.001: Multiple Sclerosis Therapy, AAN Annual Meeting Chicago, MA (2008)  
Contributing faculty, Multiple sclerosis genetics Parts 1&2, Neuromyelitis optica: natural history and treatment and B cells therapies in multiple sclerosis, Consortium of Multiple Sclerosis Centers Annual Meeting Denver, CO (2008)  
Contributing faculty, 7TP.001: Multiple Sclerosis Therapy, AAN Annual Meeting Seattle, WA (2009)  
Course director, 7FC.001: Multiple Sclerosis Update, AAN Annual Meeting Seattle, WA (2009)  
Course director, 2AC.003: Multiple Sclerosis Update Parts 1&2, Toronto, Canada (2010)  
Course director, 7AC.003: Multiple Sclerosis Update Part 1&2, AAN Annual Meeting Honolulu, HI (2011)  
Course director, 3AC.003, 3PC.002: Multiple Sclerosis Update Part 1&2, AAN Annual Meeting New Orleans, LA (2012)  
Course director, 1HC.002: Symptomatic Management in Multiple Sclerosis, AAN Annual Meeting San Diego, CA (2013)  
Course director, C152: Symptomatic Management in Multiple Sclerosis, AAN Annual Meeting Philadelphia, PA (2014)  
Course director, Diagnostic Dilemmas in Multiple Sclerosis, Breakthroughs in Neurology, AAN Phoenix, AZ (2015)  
Course director, C151: Multiple Sclerosis Therapies, AAN Annual Meeting Washington, DC (2015)  
Course director, C181: Multiple Sclerosis Therapies Part 1, AAN Annual Meeting Vancouver, British Columbia, Canada (2016)  
Course director, C194: Multiple Sclerosis Therapies Part 2, AAN Annual Meeting

Vancouver, British Columbia, Canada (2016)

Course director, PC36: Multiple Sclerosis Therapies Part 1, AAN Annual Meeting Boston MA (2017)

Course director, C34: Multiple Sclerosis Therapies Part 2, AAN Annual Meeting Boston MA (2017)

Faculty Lecturer, C224: Controversies in Neurology, AAN Annual Meeting Boston, MA (2017)