

## Curriculum Vitae

Aaron M. Carlson, MD  
Assistant Professor, Department of Neurology  
University of Colorado Denver, Anschutz Medical Campus  
University of Colorado Hospital

Date 5/19/2020

### Contact Information

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### EDUCATION

#### Degrees

2004-2007 University of Florida (Gainesville, FL)  
Bachelor of Science, Biochemistry, awarded Dec. 2007  
*summa cum laude*

2009-2013 Mayo Clinic School of Medicine (Rochester, MN)  
Medical Doctor (MD), awarded May 2013

#### Clinical Training

6/2013-6/2014 Cedars-Sinai Medical Center (Los Angeles, CA)  
Preliminary Resident, Department of Internal Medicine

7/2014-6/2017 UCLA Medical Center (Los Angeles, CA)  
Neurology Resident, Department of Neurology  
Director and mentor: Charles Flippen II, MD, FAAN

7/2017-6/2018 Stanford University Comprehensive Multiple Sclerosis Center  
Stanford University, Department of Neurology  
Clinical Fellow, Multiple Sclerosis and Neuroimmunology  
Directors: Jeffrey Dunn, MD, FAAN and Lucas Kipp, MD

### LICENSURE

2014-present Medical Board of California, License no. A134757 (*active-retired*)

2014-present US Department of Justice Drug Enforcement Administration  
Active, Controlled Substance Registration Certificate

2017-present State of Florida Department of Health, License no. ME136493

2020-present Colorado Medical Board, License no. DR.0063884

2020-present Wyoming Medical Board, License no. 12798A

### BOARD CERTIFICATION

2017-present Diplomate (Neurology), American Board of Psychiatry & Neurology  
(September 2017 - 2027)

### HOSPITAL AFFILIATIONS (Faculty)

2018-2020 University of Florida Health Shands Hospital (Gainesville, FL)

2020-present University of Colorado Hospital / UCHealth (Denver, CO)

## **PROFESSIONAL EXPERIENCE**

### **Academic Faculty Positions:**

- 7/2018-5/2020      Assistant Professor, Department of Neurology  
Multi-mission Track  
Fixel Center for Neurological Diseases at UF Health  
University of Florida, College of Medicine  
(Privileges at UFHealth/Shands)
- 5/2020-present      Assistant Professor, Department of Neurology  
University of Colorado Denver, Anschutz Medical Campus  
(Privileges at UCHealth Anschutz)

### **Attending Neurologist Positions/Clinical Service Responsibilities**

- 2018-2020      Assistant Professor, Department of Neurology, University of Florida
- Outpatient MS/neuroimmunology clinic (3-6 half-days/week)
  - Inpatient general neurology service coverage (8-10 weeks/year)
  - Fellow clinic attending (1 half-day/week)
  - Resident continuity clinic attending (1 half-day/week)
  - Inpatient neuroimmunology consult service
- 2020-present      Assistant Professor, Department of Neurology, University of Colorado
- Inpatient neurology service coverage, ~20 weeks per year, including: general, consult, stroke, and tele-stroke services
  - Hospital follow-up clinic, fellow clinic, approximately 1 half-day per week

### **Administrative Positions**

- 2018-2020      Director, Multiple Sclerosis and Neuroimmunology Conference  
University of Florida, Department of Neurology
- 2019-2020      Inpatient Consult Director  
University of Florida, Department of Neurology

## **HONORS AND AWARDS**

- 2007    Eta Sigma Phi (classics honors society)
- 2007    Phi Beta Kappa
- 2007    Summa cum laude, University of Florida
- 2013    American Academy of Neurology Medical Student Prize for Excellence
- 2016    Collin's Day Award  
UCLA, Department of Neurology  
Annual award for best resident presentation at the department research symposium
- 2017    Augustus S. Rose Award  
UCLA, Department of Neurology  
Annual resident teaching award given to one member of graduating class
- 2018    Teacher-Scholar Program  
University of Florida, College of Medicine  
Recruitment program providing salary support for junior faculty members which have demonstrated excellence in teaching
- 2020    Exemplary Teacher Award  
University of Florida, College of Medicine

## **PROFESSIONAL ACTIVITIES**

### Professional & Research Society Memberships

2013-present	Member, Mayo Clinic Alumni Association
2013-present	Member, American Academy of Neurology
2017-present	Section Member, American Academy of Neurology Multiple Sclerosis Autoimmune Neurology Neurohospitalist
2017-present	Member, Consortium of Multiple Sclerosis Centers
2019-2020	Board member, Florida Society of Neurology
2019-2020	Healthcare Provider Council, National Multiple Sclerosis Society

### Institutional Committees

#### University of California, Los Angeles

2014-2017	Program Evaluation Committee. Resident member of the review committee for the adult neurology residency program
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#### University of Florida College of Medicine

2018-present	Program Evaluation Committee. Faculty member of the review committee for the adult neurology residency program
2018-present	Clinical Competency Committee. Faculty member of the ACGME-required committee to evaluate performance and abilities of resident trainees
2019-present	Faculty Search Committee. Faculty member for the Department of Neurology

### Symposia

2020	Neurology on the Hill, American Academy of Neurology February 24 <sup>th</sup> -25 <sup>th</sup> , 2020
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## **EDITORIAL RESPONSIBILITIES**

### Editorial Positions

2019	<i>BMC Practical Neurology</i> . Chief medical editor for multiple sclerosis issue published February 2019
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### Journal ad-hoc reviewer

2019	Journal of Neurological Sciences
2019	eNeurologicalSci

## **TEACHING SERVICE / MENTORING**

### Teaching/mentorship provided to others during own training

2012	Pathology course teaching assistant Mayo Clinic, College of Medicine
2013	Neurology clerkship instructor Presented various 60-minute didactic lectures Mayo Clinic, College of Medicine
2016-2017	Resident assistant to the Neurology clerkship UCLA, Department of Neurology
2017-2018	Director and lecturer, Neuroimmunology division conference Stanford University, Department of Neurology

Teaching (didactic, clinical)

2018-2020 Assistant Professor  
University of Florida, Department of Neurology  
Responsible for the supervision and teaching of medical students, internal medicine residents, neurology residents, and neuroimmunology fellows on inpatient consults, inpatient wards, and outpatient clinic.

Audience	Teaching Roles/Lectures
Medical students	- Approach to Aphasia, monthly recurring lecture on clinical localization of aphasia - Clinical Lab Director, 2 <sup>nd</sup> year neuroscience course (BMS6020, 2018-present). Responsible for TA training, 2 lectures per block, 8 laboratory sessions, and development of 4 lesion localization sessions
Residents	- Emergency Medicine program, lectures on basics of demyelinating illnesses - Morning report, recurring for inpatient neurology teams on inpatient and outpatient case-based presentations - Neuroimmunology curriculum for resident education, recurring yearly didactics - Yearly neuroanatomy review, three-part series for resident noon conference
Fellows	Lectures on demonstrative cases for differential of demyelinating disease, journal clubs, and focused topics as part of a rotating didactic curriculum

General (non-research) mentoring

Assistant Professor, University of Florida, Department of Neurology

Formal fellowship mentorship

- Buse Sengul (2018-2019)
- Carlos Sollero (2018-2020)

Formal resident mentorship

- Torge Rempe (2018-2020)
- Amol Mehta (2019-2020)

Research mentor: students, residents, and other trainees

2019-present External member, PhD committee

- Alex Kwiatkowski

**ACTIVE RESEARCH SUPPORT**

2020-2021 Aaron M. Carlson (PI, 15% FTE)  
National Multiple Sclerosis Society Pilot Grant Program  
"Prevalence and Demographics of Multiple Sclerosis in the OneFlorida Data Trust"  
Amount: \$54312.50

**OTHER RESEARCH SUPPORT AND CLINICAL TRIALS**

2011-2012 Progranulin and Serum Leukocyte Protease Inhibitors as Biomarkers in Ovarian Cancer  
Mayo Clinic Medical Oncology Seed Grant  
Role: Investigator, Mayo Clinic College of Medicine

Aaron M. Carlson, MD

- 2017-2018 NCT02688985. Study to Explore the Mechanism of Action of Ocrelizumab and B-Cell Biology in Participants With Relapsing Multiple Sclerosis or Primary Progressive Multiple Sclerosis (OBOE)  
Role: Sub-investigator, Stanford University
- 2017-2018 NCT02792218. Efficacy and Safety of Ofatumumab Compared to Teriflunomide in Patients With Relapsing Multiple Sclerosis (ASCLEPIOS I)  
Role: Sub-investigator, Stanford University
- 2018 NCT01412333. A Study of Ocrelizumab in Comparison to Interferon Beta-1a (Rebif) in Participants with Relapsing Multiple Sclerosis (OPERA II)  
Role: Sub-investigator, Stanford University
- 2018-2020 NCT03500328. Traditional Versus Early Aggressive Therapy for Multiple Sclerosis Trial (TREAT-MS)  
Role: Sub-investigator
- 2018-2020 The North American Registry for Care and Research in Multiple Sclerosis (NARCRMS). A physician/clinician-based registry and longitudinal database of clinical records and patient-centered outcomes. Additionally tracks radiographic data and includes a biorepository.  
Role: Site principal investigator, University of Florida
- 2018-2020 NCT02792218. Efficacy and Safety of Ofatumumab Compared to Teriflunomide in Patients With Relapsing Multiple Sclerosis (ASCLEPIOS I)  
Role: Site principal investigator, University of Florida

## **PROGRAM FACULTY, LECTURES AND PRESENTATIONS**

### *Invited presentations at external university grand rounds/symposia*

1. University of Florida, Department of Neurology Invited Speaker, "High-Dimensional Assays for Immunophenotyping in Multiple Sclerosis" (2018)
2. American College of Life Insurers Invited Speaker, "Updates in Multiple Sclerosis" (2019)
3. Florida Society of Neurology Annual Meeting, "New Treatments in Multiple Sclerosis and Neuromyelitis Optica Spectrum Disorder" (2019)

### *Invited presentations at local courses/grand rounds*

#### *Residency/fellowship presentations:*

1. Stanford University, Department of Neurology, Neuroimmunology Divisional Conference "Neurological Consequences of Cobalt Toxicity" (2017).
2. Stanford University, Department of Neurology, Neuroimmunology Divisional Conference "Neurobrucellosis" (2017)
3. Stanford University, Department of Neurology, Neuroimmunology Divisional Conference "Primary Angiitis of the Central Nervous System" (2017)
4. Stanford University, Division of Physical Medicine and Rehabilitation, Resident Lecture Series "Introduction to Multiple Sclerosis" (2017)
5. Stanford University, Department of Neurology, Neuroimmunology Divisional Conference "Use of Low-Dose Naltrexone in Multiple Sclerosis" (2018)
6. Stanford University, Department of Neurology, Neuroimmunology Divisional Conference "HTLV-1 Associated Myelitis" (2018)
7. Stanford University, Department of Neurology, Neuroimmunology Divisional Conference "Updates in Multiple Sclerosis" (2018)
8. Stanford University, Departments of Neurology, Neurosurgery, and Neuroscience Annual Neuroscience forum "Immunophenotypic Signature Revealed by Cytometry by Time of Flight (CyTOF) in Patients Treated with Dimethyl Fumarate" (2018)

9. University of Florida, Department of Neurology, Neuroimmunology Divisional Conference. "Review of Clinical Trial Data for Cladribine, Eculizumab, and Siponimod" (2019)

Invited presentations for patients and lay groups

1. "Multiple Sclerosis Town Hall". Presenter at MS Focus patient education series, a monthly dinner and lecture funded by the Multiple Sclerosis Foundation. July 21, 2018.
2. "Oral Therapies in Multiple Sclerosis". Presented with and supervised fellow Buse Sengul. Presented at MS Focus patient education series, funded by the Multiple Sclerosis Foundation. October 16, 2018.
3. "Infusion Therapies in Multiple Sclerosis". Presented at MS Focus patient education series, funded by the Multiple Sclerosis Foundation. November 12, 2018.
4. "Pathways to a Cure". Presented at a National Multiple Sclerosis Society patient outreach event. July 21, 2019.

**PUBLICATIONS/BIBLIOGRAPHY**

Peer-Reviewed Journal Articles:

1. Berger Z, Roder H, Hanna A, **Carlson AM**, Rangachari V, Yue M, Wszolek Z, Ashe K, Knight J, Dickson D, Andorfer C, Rosenberry TL, Lewis J, Hutton M, Janus C. Accumulation of Pathological Tau Species and Memory Loss in a Conditional Model of Tauopathy. *The Journal of Neuroscience*. 2007;27:3650-62.
2. Dormann D, Capell A, **Carlson AM**, Shankaran SS, Rodde R, Neumann M, Kremmer E, Matsuwaki T, Yamanouchi K, Nishihara M, Haass C. Proteolytic processing of TAR DNA binding protein-43 by caspases produces C-terminal fragments with disease defining properties independent of progranulin. *Journal of Neurochemistry*. 2009;110:1082-94.
3. Capell A, Liebscher S, Fellerer K, Brouwers N, Willem M, Lammich S, Gijssels I, Bittner T, **Carlson AM**, Sasse F, Kunze B, Steinmetz H, Jansen R, Dormann D, Sleegers K, Cruts M, Herms J, Van Broeckhoven C, Haass C. Rescue of Progranulin Deficiency Associated with Frontotemporal Lobar Degeneration by Alkalizing Reagents and Inhibition of Vacuolar ATPase. *The Journal of Neuroscience*. 2011;31:1885-94.
4. Rising AC, Xu J, **Carlson A**, Napoli VV, Denovan-Wright EM, Mandel RJ. Longitudinal behavioral, cross-sectional transcriptional and histopathological characterization of a knock-in mouse model of Huntington's disease with 140 CAG repeats. *Experimental Neurology*. 2011;228:173-82.
5. **Carlson AM**, Lindor NM, Litzow MR. Therapy-related myelodysplasia in a patient with Rothmund–Thomson syndrome. *European Journal of Haematology*. 2011;86:536-40.
6. **Carlson AM**, Thomas KB, Kirmani S, Lindor NM. Chronic Tibial Nonunion in a Rothmund-Thomson Syndrome Patient. *Am J Med Genet A*. 2012 Sep;158A(9):2250-3.
7. **Carlson AM**, Maurer MJ, Goergen KM, Kalli KR, Erskine CL, Behrens MD, Knutson KL, Block MS. Progranulin and Serum Leukocyte Protease Inhibitor as Biomarkers in Epithelial Ovarian Cancer. *Cancer Epidemiol Biomarkers Prev*. 2013 Oct;22(10):1730-5
8. **Carlson AM**, McPhail ED, Rodriguez V, Schroeder G, Wolanskyj AP. A Prospective, Randomized Crossover Study Comparing Direct Inspection by Light Microscopy Versus Projected Images for Teaching of Hematopathology to Medical Students. *Anat Sci Educ*. 2014 Mar-Apr;7(2):130-4.
9. **Carlson AM**, Young J, and Avidan A. Frightening Spells at Night. *J Clin Sleep Med*. 2016. Jun 15;12(6):925-7.
10. Tomczak A, Su E, Tugizova M, **Carlson AM**, Kipp L, Feng H, Han M. A case of GFAP-astroglial autoimmunity presenting with reversible parkinsonism. *Multiple Sclerosis and Related Disorders*. 2020. 39:101900.
11. Wong JK, Yu J, Patterson A, **Carlson AM**, Shukla AW. Clinical and imaging features of newly recognized Kelch-like protein 11 paraneoplastic syndrome. (accepted)

Aaron M. Carlson, MD

12. **Carlson AM**, Huffnagel IC, Verrips A, van der Knaap M, Engelen M, Van Haren K. A Relapsing-Remitting Course for Three Men with Cerebral Demyelinating Adrenoleukodystrophy. (submitted)
13. Case R, Valentin R, **Carlson A**, Alnauimat H, Patel DC. Extrapulmonary recurrence of sarcoidosis after lung transplantation presenting as neurosarcoidosis. (submitted)
14. Rempe T, Soller CE, Rodriguez E, Viswanathan V, **Carlson A**, Rees J, Tuna I, Kresak J, Gyang V. Corticosteroids lead to short-term improvement in cerebral amyloid angiopathy with inflammation. (submitted)

Non-Peer-Reviewed Journal Articles:

1. Steinman L, **Carlson AM**. Monoclonal antibody treatments in multiple sclerosis. BMC Practical Neurology. 2018.

Abstracts:

1. Rising A, **Carlson A**, Lewin A, Mandel R. Behavioral characterization of a knock-in mouse model of Huntington's disease. Presented at: Society for Neuroscience, 37<sup>th</sup> annual meeting. San Diego, California, November 3-7, 2007.
2. Dormann D, Capell A, **Carlson A**, Shankaran S, Schmid B, Nishihara M, Neumann M, Haass C. Proteolytic Processing and Aggregation of TAR DNA Binding Protein-43 After Caspase Activation. Presented at: 9<sup>th</sup> International Conference on Alzheimer's Disease and Parkinson's Disease. Prague, Czech Republic, March 11-15, 2009.
3. **Carlson AM**, Schneider P, Hampel H, Fellerer K, Buerger K, Haass C, and Capell A. Progranulin as a Potential Biomarker for Alzheimer's Disease and Related Disorders. Presented at: 9<sup>th</sup> International Conference on Alzheimer's disease and Parkinson's disease. Prague, Czech Republic, March 11-15, 2009.
4. **Carlson AM**, Thomas K, Kirmani M, NM Lindor. Chronic Tibial Nonunion in a Rothmund Thomson Syndrome Patient. Presented at: The 12<sup>th</sup> International Congress on Human Genetics. Montreal, Canada, October 11-15, 2011.
5. **Carlson AM**, McPhail ED, Rodriguez V, Wolanskyj AP. Content retention of hematopathologic findings is similar after direct inspection by microscope versus projected images: a prospective, randomized crossover study of Mayo Clinic medical students. Presented at: Association for Medical Education in Europe. Lyon, France, August 25-29, 2012.
6. **Carlson AM**, Sicotte NL, Salamon N, Yoo B. The Imaging Differential Diagnosis of Demyelination. Presented at: The American Society of Neuroradiology Annual Meeting. Washington D.C., USA. May 23-26, 2016.
7. **Carlson AM**, Huffnagel IC, Engelen M, Van Haren K. Arresting and Relapsing Cerebral Adrenoleukodystrophy: A Treatable Mimic of Multiple Sclerosis. Presented at: America's Committee for Treatment and Research in Multiple Sclerosis (ACTRIMS). Orlando, Florida. February 23-25, 2017.
8. **Carlson AM**, Bozinov N, Kipp L, Dunn J, Lock C. Autoimmune Hepatitis During Treatment of Multiple Sclerosis with Alemtuzumab. Presented at: American Academy of Neurology Annual Meeting. Los Angeles, California. April 21, 2018.
9. Ajami B, **Carlson AM** (presenting author), Ho P, Nolan G, Steinman L. Immunophenotypic Signature Revealed by Cytometry by Time of Flight (CyTOF) in Patients Treated with Dimethyl Fumarate. Presented at: European Committee for Treatment and Research in Multiple Sclerosis (ECTRIMS) Annual Conference. Berlin, Germany. October 12-14, 2018.
10. Rammohan, KW, Li D, Halper J, Murphy SM, Patton L, Berger J, **Carlson AM**, Chinae A, Cohan S, Cross A, Dunn J, Fox EJ, Gupta A, Kamin S, Mao-Draayer Y, Mayer L, Repovic P, Ruiz JA, Rus H, Samudralwar R, Subei A, Thomas F. The North American Registry for Care

and Research in Multiple Sclerosis. Presented at: Americas Committee for Treatment and Research in Multiple Sclerosis Annual Meeting. Dallas, Texas. February 28, 2019.

11. Sengul B, Gyang T, **Carlson A**. Chronic Lymphocytic Inflammation with Pontine Perivascular Enhancement not Responsive to Steroids–Management Decisions in a Situation of Diagnostic Uncertainty. Presented at: American Academy of Neurology Annual Meeting. Philadelphia, Pennsylvania. April 16, 2019.