**Stefan Prokop, M.D.**

Assistant Professor, Department of Pathology, College of Medicine

Director, UF Neuromedicine Human Brain and Tissue Bank

1Florida ADRC Neuropathology Core Leader

LMU Munich

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**Education & Training**

Fellowship in Neuropathology, University of Pennsylvania, Philadelphia, PA 2017 - 2019
Residency in Anatomic Pathology, University of Pennsylvania, Philadelphia, PA 2015 - 2017
Residency in Neuropathology, Charite Medical University, Berlin, Germany 2008 - 2011

Residency in Neuropathology, University of Zurich, Zurich, Switzerland 2006 - 2008

Doctoral research degree (Summa cum laude), awarded 2006, LMU Munich 2002 - 2005

M.D., LMU Munich, Munich, Germany 1999 - 2005

# Academic, Administrative & Clinical Appointments

Assistant Professor 2019 - Present
Department of Pathology, College of Medicine
University of Florida

Gainesville, FL

Director, UF Neuromedicine Human Brain and Tissue Bank 2019 - Present

University of Florida

Gainesville, FL

Attending Physician in Neuropathology 2011 - 2015
Department of Neuropathology
Charite Medical University
Berlin, Germany

**Military Service**

Mandatory German Military Service, Medical division. 1998 - 1999

**Certification and Licensure**

*Diplomate, American Board of Pathology* 2019 - present *Pathology Anatomic*

*Neuropathology*

*Florida State medical license (active) 2019 – present*

*Pennsylvania State medical license (active) 2018 - present*

*ECFMG certification 2015*

*Neuropathology board certification, Swiss medical society (FMH) 2011*

**Honors and Awards**

*European Molecular Biology Organization (EMBO) Long-term Fellowship (Postdoctoral fellowship)* 2006-2007

Undergraduate stipend Molecular Medicine (FöFoLe, Ludwig-Maximilians-University of Munich) 2002-2003

**Research or Clinical Interests**

*Neurodegenerative disease*

*Alzheimer’s disease*

*Parkinson’s disease*

*Frontotemporal dementia*

**Grants and Contracts**

*Current*

*UF Health Pilot Studies in Lewy Body Dementia (Prokop, PI) 1/1/2020-31/12/2020*

*Mangurian Foundation*

*Profiling the innate immune response in Dementia with Lewy body brain samples*

*Role: PI*

*NIH-NIA P50 AG047266-03 (Golde, PI) 8/15/2015-5/31/2020*

*University of Florida - Mt. Sinai Medical Center AD Research Center*

*My role as neuropathology core leader in this ADRC is to provide neuropathological diagnosis for deceased ADRC subjects and oversee brain and tissue collection, storage and distribution.*

*Role: Neuropathology core leader*

*Pending*

*NIH-NIA P30 AG047266 (Golde PI) 6/1/2020-5/31/2025*

*University of Florida - Mt. Sinai Medical Center AD Research Center*

*I will continue my role as neuropathology core leader in this ADRC renewal is to provide neuropathological diagnosis for deceased ADRC subjects and oversee brain and tissue collection, storage and distribution.*

*Role: Neuropathology core leader*

*Score:23*

*Past*

Neuropathology Administrative Supplement to the Alzheimer’s Disease Core Center at the University of Pennsylvania (supplement to NIH/NIA P30 AG010124) 07/01/2017-06/30/2018

National institute on aging (NIA) $ 150,000 direct/year

*Comprehensive analysis of myeloid cells across neuropathological stages of Alzheimer’s disease (AD) and related dementias (RD)*

**Professional Memberships**

American Association of Neuropathologists2018 – present

College of American Pathologists 2015 – present

Society for Neuroscience 2015 – present

Swiss Medical Society (FMH) 2011 – present

German Medical Society (Deutsche Aerztekammer) 2005 – present

**Editorial Positions, Boards, & Peer-Review Services**

*Ad hoc peer reviewer for Acta Neuropathologica, Acta Neuropathologica communications, EMBO reports, Alzheimer’s research and therapy, Brain, Nature Neuroscience, JAMA Neurology, Molecular Neurodegeneration, Nature Neuroscience, Neuroscience, Plos One.*

**Clinical Activities & Quality Improvement Initiatives**

*Brain autopsy service*

 *I provide the brain autopsy service for in-house cases, and neuropathology consults from outside hospitals and the medical examiner’s office.*

*I also provide the brain autopsy service and full neuropathological workup for the 1Florida ADRC and the UF Neuromedicine Human brain and Tissue bank*

**Teaching**

*Teaching of medical students, graduate, undergraduate student, residents and fellows in weekly brain cutting sessions.*

*Supervising neuropathology fellows, pathology residents, rotating residents and medical students in microscope signout sessions.*

*BMS 6020 (Clinical Neuroscience) Lab teaching assistant Fall 2019*

*GMS 6705 (Functional Neuroanatomy) Neuropathology labs Fall 2019*

*GMS 7794 (Neurscience seminar) Neuroimmune interactions in neurodegenerative diseases 9/19/2019*

*GMS 6757 (Introduction to ADRD: Clinical and Mechanistic principles) Neuropathology of AD 10/1/2019*

*GMS 6757 (Introduction to ADRD: Clinical and Mechanistic principles) Spectrum of Neuropathology in ADRD (B. Giasson) 10/2/2019*

*GMS 6757 (Introduction to ADRD: Clinical and Mechanistic principles) Tau versus Abeta, conference 10/8/2019*

*Rheumatology grand rounds “Neuroimmune interactions in neurodegenerative disease” 11/15/19*

*Neurodegenerative disease part 1 lectures for Neurology residents 3/11/20*

*Neurodegenerative disease part 2 lecture for Neurology residents 3/27/20*

**Committee, Organizational & Volunteer Services**

*ADRC digital pathology working group – Working on implementing digital pathology in the workflow of Alzheimer’s disease research centers 2019 - present*

*Search committee Research assistant professor position in the Center for translational research in neurodegenerative disease (Chair: Jose Abisambra) 2020*

National Institute on Aging Genetics of Alzheimer's Disease Data Storage Site (NIAGADS) – Data use committee member 2020 - present

**Visiting Professorships, Seminars, and Extramural Invited Presentations**

Lectures by Invitation:

“Comprehensive analysis of innate immune responses in neurodegenerative diseases” PSP/Lewy body disorder think tank, University of Florida, Gainesville, FL April, 2019

“Impact of Trem2 risk variants on brain region specific immune activation and plaque microenvironment in Alzheimer’s disease patient brain samples” Biomarker meeting at Boston university, Boston, MA April, 2019

“Neuroimmune interactions in neurodegenerative diseases”, Neurology grand rounds, University of Florida, Gainesville, FL November, 2018

“Neuroimmune interactions in neurodegenerative diseases”, Mayo clinic, Jacksonville, FL August, 2018

“Neuroimmune interactions in neurodegenerative diseases”, Cognitive Neurology and Alzheimer’s disease center, Feinberg School of Medicine, Northwestern University, Chicago, IL June, 2018

“The New WHO Classification and the Role of Integrated Molecular Profiling in the Diagnosis of Malignant Gliomas”, Neuro-Oncology Symposium, Penn Medicine’s Abramson Cancer Center and The Penn Brain Tumor Center, Philadelphia, PA June, 2018

“Comprehensive analysis of myeloid cells across neuropathological stages of Alzheimer’s disease (AD) and related dementias (RD)” Presented at 2017 Fall ADC Meeting, Neuropathology core leaders meeting; San Diego, CA. October, 2017

“Neuroimmune interactions in neurodegenerative disease”, Institute for Neurodegenerative Diseases (IND), University of California San Francisco September, 2013

“Reducing Alzheimer’s disease β-amyloid and cognitive deficits by manipulating IL-12/IL-23 signaling” Meeting of the Society for Neuroscience, New Orleans, LA October, 2012

“Neuroimmune interactions in Alzheimer’s disease”, University of Florida, Gainesville, FL May, 2011

**Interviews, Internet appearances, Panel Discussions, Media Events**

Comprehensive analysis of microglia across neuropathological stages of Alzheimer’s disease (AD) Nanostring Technologies Webinar (<https://www.nanostring.com/company/events-archive/comprehensive-analysis-microglia-across-neuropathological-stages-alzheimers-disease-ad>). September 2018

Q&A with Dr. Stefan Prokop – Alzheimer’s: From the Amyloid Hypothesis to the Cellular Phase and Beyond (<http://blog.nanostring.com/qa-with-dr-stefan-prokop-alzheimers-from-the-amyloid-hypothesis-to-the-cellular-phase-and-beyond/>)

**Hobbies and Other activities**

Cycling (Road), Literature (19th and 20th century)

**Bibliography**

Peer reviewed publications

1. Steiner H, Winkler E, Edbauer D, **Prokop S**, Basset G, Yamasaki A, Kostka M, Haass C (2002) PEN-2 is an integral component of the gamma-secretase complex required for coordinated expression of presenilin and nicastrin. *J Biol Chem* 277(42): 39062-39065

2. Shirotani K, Edbauer D, **Prokop S**, Haass C, Steiner H (2004) Identification of distinct gamma-secretase complexes with different APH-1 variants. *J Biol Chem* 279(40): 41340-41345

3. **Prokop S**, Shirotani K, Edbauer D, Haass C, Steiner H (2004) Requirement of PEN-2 for stabilization of the presenilin N-/C-terminal fragment heterodimer within the gamma-secretase complex. *J Biol Chem* 279(22): 23255-23261

4. Capell A, Beher D, **Prokop S**, Steiner H, Kaether C, Shearman MS, Haass C (2005) Gamma-secretase complex assembly within the early secretory pathway. *J Biol Chem* 280(8): 6471-6478

5. **Prokop S**, Haass C, Steiner H (2005) Length and overall sequence of the PEN-2 C-terminal domain determines its function in the stabilization of presenilin fragments. *J Neurochem* 94(1): 57-62

6. Aslund A, Sigurdson CJ, Klingstedt T, Grathwohl S, Bolmont T, Dickstein DL, Glimsdal E, **Prokop S**, Lindgren M, Konradsson P, Holtzman DM, Hof PR, Heppner FL, Gandy S, Jucker M, Aguzzi A, Hammarstrom P, Nilsson KP (2009) Novel pentameric thiophene derivatives for in vitro and in vivo optical imaging of a plethora of protein aggregates in cerebral amyloidoses. *ACS Chem Biol* 4(8): 673-684

7. Grathwohl SA, Kalin RE, Bolmont T, **Prokop S**, Winkelmann G, Kaeser SA, Odenthal J, Radde R, Eldh T, Gandy S, Aguzzi A, Staufenbiel M, Mathews PM, Wolburg H, Heppner FL, Jucker M (2009) Formation and maintenance of Alzheimer's disease beta-amyloid plaques in the absence of microglia. *Nature Neurosci* 12(11): 1361-1363

8. Stenzel W, **Prokop S**, Kress W, Huppmann S, Loui A, Sarioglu NM, Laing NG, Sparrow JC, Heppner FL, Goebel HH (2010) Fetal akinesia caused by a novel actin filament aggregate myopathy skeletal muscle actin gene (ACTA1) mutation. *Neuromuscul Disord* 20: 531-533

9. Schipke CG, Jessen F, Teipel S, Luckhaus C, Wiltfang J, Esselmann H, Frolich L, Maier W, Ruther E, Heppner FL, **Prokop S**, Heuser I, Peters O (2011) Long-term stability of Alzheimer's disease biomarker proteins in cerebrospinal fluid. *J Alzheimers Dis* 26: 255-262

10. Schipke CG, **Prokop S**, Heppner FL, Heuser I, Peters O (2011b) Comparison of immunosorbent assays for the quantification of biomarkers for Alzheimer's disease in human cerebrospinal fluid. *Dement Geriatr Cogn Disord* 31: 139-145

11. **Prokop S**, Heppner FL, Goebel HH, Stenzel W (2011) M2 polarized macrophages and giant cells contribute to myofibrosis in neuromuscular sarcoidosis. *Am J Pathol* 178: 1279-1286

12. **Prokop S**\*, Polymenidou M\*, Jung HH, Hewer E, Peretz D, Moos R, Tolnay M, Aguzzi A (2011) Atypical prion protein conformation in familial prion disease with PRNP P105T mutation. *Brain Pathol* 21: 209-214 [\*equal contribution]

13. Opitz E, Koch A, Klingel K, Schmidt F, **Prokop S**, Rahnefeld A, Sauter M, Heppner FL, Volker U, Kandolf R, Kuckelkorn U, Stangl K, Kruger E, Kloetzel PM, Voigt A (2011) Impairment of immunoproteasome function by beta5i/LMP7 subunit deficiency results in severe enterovirus myocarditis. *PLoS Pathog* 7: e1002233

14. **Prokop S**\*, vom Berg J\*,Miller KR, Obst J, Kälin RE, Lopategui-Cabezas I, Wegner A, Mair F, Becher B and Heppner FL (2012) Inhibition of IL-12/IL-23 signaling reduces Alzheimer's disease-like pathology and cognitive decline. *Nature Medicine* 18 (12): 1812-1819 [\*equal contribution]

15. Klingstedt T, Blechschmidt C, Nogalska A, **Prokop S**, Haggqvist B, Danielsson O, Engel WK, Askanas V, Heppner FL, and Nilsson KP (2013). Luminescent Conjugated Oligothiophenes for Sensitive Fluorescent Assignment of Protein Inclusion Bodies. *Chembiochem: a European journal of chemical biology* 14, 607-616.

16. Arja K, Sjolander D, Aslund A, **Prokop S**, Heppner FL, Konradsson P, Lindgren M, Hammarstrom P, Aslund KO, Nilsson KP (2013) Enhanced fluorescent assignment of protein aggregates by an oligothiophene-porphyrin-based amyloid ligand. *Macromolecular rapid communications* 34: 723-730

17. Nystrom S, Psonka-Antonczyk KM, Ellingsen PG, Johansson LB, Reitan N, Handrick S, **Prokop S**, Heppner FL, Wegenast-Braun BM, Jucker M, Lindgren M, Stokke BT, Hammarstrom P, Nilsson KP (2013) Evidence for Age-Dependent in Vivo Conformational Rearrangement within Abeta Amyloid Deposits. *ACS Chem Biol*

18. Zimmermann M, Otto C, Gonzalez JB, **Prokop S**, Ruprecht K (2013) Cellular origin and diagnostic significance of high-fluorescent cells in cerebrospinal fluid detected by the XE-5000 hematology analyzer. *International journal of laboratory hematology* 35: 580-588

19. Krabbe G, Halle A, Matyash V, Rinnenthal JL, Eom GD, Bernhardt U, Miller KR, **Prokop S**, Kettenmann H, Heppner FL (2013) Functional impairment of microglia coincides with Beta-amyloid deposition in mice with Alzheimer-like pathology. *PloS one* 8: e60921

20. Schroder NW, Grieben U, **Prokop S**, Dekomien G, Epplen JT, Heppner FL, Goebel HH, Stenzel W (2014) Novel gamma-sarcoglycan-mutation affects cardiac function and N-terminal dystrophin expression. *Muscle & nerve* 49: 144-145

21. Barucker C, Harmeier A, Weiske J, Fauler B, Albring KF, **Prokop S**, Hildebrand P, Lurz R, Heppner FL, Huber O, Multhaup G (2014) Nuclear translocation uncovers the amyloid Peptide aβ42 as a regulator of gene transcription. *J Biol Chem*. 2014 Jul 18;289(29):20182-91

22. Johansson LB, Simon R, Bergström G, Eriksson M, **Prokop S**, Mandenius CF, Heppner FL, Aslund AK, Nilsson KP (2015) An azide functionalized oligothiophene ligand - A versatile tool for multimodal detection of disease associated protein aggregates. *Biosens Bioelectron*. 2015 Jan 15;63:204-11

23. Hoffmann O, Rung O, Held J, Boettcher C, **Prokop S**, Stenzel W, Priller J (2015) Lympocytes modulate innate immune responses and neuronal damage in experimental meningitis *Infect Immun.* 2015 Jan;83(1):259-67. doi: 10.1128/IAI.02682-14. Epub 2014 Oct 27.

24. Nunes JC, Radbruch H, Walz R, Lin K, Stenzel W, **Prokop S**, Koch A, Heppner FL (2015) The most fulminant course of the Marburg variant of multiple sclerosis-autopsy findings. *Mult Scler.* 2015 Apr;21(4):485-7. doi: 10.1177/1352458514537366. Epub 2014 Jun 2.

25. Naumann RK, Ray S, **Prokop S**, Las L, Heppner FL, Brecht M (2015) Conserved size and periodicity of pyramidal patches in layer 2 of medial/caudal entorhinal cortex. *J Comp Neurol.* 2015 Jul 30. doi: 10.1002/cne.23865. [Epub ahead of print]

26. **Prokop S\***, Miller KR\*, Drost N, Handrick S, Mathur V, Luo J, Wegner A, Wyss-Coray T, Heppner FL (2015) Impact of peripheral myeloid cells on amyloid-β pathology in Alzheimer's disease-like mice. *J Exp Med.* 2015 Oct 19;212(11):1811-8. doi: 10.1084/jem.20150479. Epub 2015 Oct 12. [\* equal contribution]

27. Baufeld C, Osterloh A, **Prokop S**, Miller KR, Heppner FL (2016) High-fat diet-induced brain region-specific phenotypic spectrum of CNS resident microglia. *Acta Neuropathol.* 2016 Sep;132(3):361-75. doi: 10.1007/s00401-016-1595-4. Epub 2016 Jul 8.

28. Wagner LK, Gilling KE, Schormann E, Kloetzel PM, Heppner FL\*, Krüger E\*, **Prokop S\***(2017) Immunoproteasome deficiency alters microglial cytokine response and improves cognitive deficits in Alzheimer's disease-like APPPS1 mice. *Acta Neuropathol Commun.* 2017 Jun 24;5(1):52. doi: 10.1186/s40478-017-0453-5. [\* equal contribution]

29. Mpambani F, Åslund AKO, Lerouge F., Nyström S, Reitan N, Huuse EM, Widerøe M, Chaput F, Monnereau C, Andraud C, Lecouvey M, Handrick S, **Prokop S**, Heppner FL, Nilsson P, Hammarström P, Lindgren M, Parola S (2018) Two-Photon Fluorescence and Magnetic Resonance Specific Imaging of Aβ Amyloid Using Hybrid Nano-GdF3 Contrast Media *ACS Appl. Bio Mater.*, 2018, 1 (2), pp 462–472, doi:10.1021/acsabm.8b00191

30. **Prokop S\***, Miller KR\*, Labra SR, Pitkin RM, Hoxha K, Narasimhan S, Changolkar L, Rosenbloom A, Lee VM, Trojanowski JQ. (2019) Impact of TREM2 risk variants on brain region-specific immune activation and plaque microenvironment in Alzheimer's disease patient brain samples *Acta Neuropathol. 2019 Oct;138(4):613-630. doi: 10.1007/s00401-019-02048-2. Epub 2019 Jul 26.* [\* equal contribution]

31. Sacino AN, **Prokop S\***, Walsh MA, Adamson J, Subramony SH, Krans A, Todd PK, Giasson BI, Yachnis AT. (2019) Fragile X-associated tremor ataxia syndrome with co-occurrent progressive supranuclear palsy-like neuropathology. *Acta Neuropathol Commun. 2019 Oct 30;7(1):158. doi: 10.1186/s40478-019-0818-z.*

[\* corresponding author]

32. Jacob F, Salinas RD, Zhang DY, Nguyen PTT, Schnoll JG, Wong SZH, Thokala R, Sheikh S, Saxena D, **Prokop S**, Liu DA, Qian X, Petrov D, Lucas T, Chen HI, Dorsey JF, Christian KM, Binder ZA, Nasrallah M, Brem S, O'Rourke DM, Ming GL, Song H. (2019) A Patient-Derived Glioblastoma Organoid Model and Biobank Recapitulates Inter- and Intra-tumoral Heterogeneity. *Cell. 2020;180(1):188–204.e22. doi:10.1016/j.cell.2019.11.036*

33. Eede P, Obst J, Benke E, Yvon-Durocher G, Richard BC, Gimber N, Schmoranzer J, Böddrich A, Wanker EE, Heppner FL\*, **Prokop S**.\* (2020) Interleukin-12/23 deficiency differentially affects pathology in male and female Alzheimer's disease-like mice. *EMBO Rep.* 2020 Jan 30:e48530. doi: 10.15252/embr.201948530. [Epub ahead of print] [\* shared senior authorship]

34. Trejo-Lopez JA, Sorrentino ZA, Riffe CJ, **Prokop S**, Dickson DW, Yachnis AT, Giasson BI. (2020) Generation and Characterization of Novel Monoclonal Antibodies Targeting p62/sequestosome-1 Across Human Neurodegenerative Diseases. *J Neuropathol Exp Neurol.* 2020 Feb 3. pii: nlaa007. doi: 10.1093/jnen/nlaa007. [Epub ahead of print]

35. Lloyd GM, Trejo-Lopez JA, Xia Y, McFarland KN, Lincoln SJ, Ertekin-Taner N, Giasson BI, Yachnis AT, **Prokop S**. (2020) Prominent amyloid plaque pathology and cerebral amyloid angiopathy in APP V717I (London) carrier – phenotypic variability in autosomal dominant Alzheimer’s disease. *Acta Neuropathologica Communications.* 2020 Mar 12;8(1):31. doi: 10.1186/s40478-020-0891-3.

36. Drost N, Houtman J, Cseresnyés Z, Niesner R, Rinnenthal JL, Miller KR, Heppner FL\*, **Prokop S**\*. (2020) [The Amyloid-beta rich CNS environment alters myeloid cell functionality independent of their origin.](https://www.ncbi.nlm.nih.gov/pubmed/32346002) *Sci Rep.* 2020 Apr 28;10(1):7152. doi: 10.1038/s41598-020-63989-3. [\* shared senior authorship]

37. Xia Y, **Prokop S**, Gorion KM, Kim JD, Sorrentino ZA, Bell BM, Manaois AN, Chakrabarty P, Davies P, Giasson BI. (2020) Tau Ser208 phosphorylation promotes aggregation and reveals neuropathologic diversity in Alzheimer's disease and other tauopathies. *Acta Neuropathol Commun.* 2020 Jun 22;8(1):88. doi: 10.1186/s40478-020-00967-w.

38. Trejo-Lopez JA, Sorrentino ZA, Riffe CJ, Lloyd GM, Labuzan SA, Dickson DW, Yachnis AT,**Prokop S**, Giasson BI. (2020) Novel Monoclonal Antibodies Targeting the RRM2 domain of Human TDP-43 Protein *Neurosci Lett.* 2020 Sep 6:135353. doi: 10.1016/j.neulet.2020.135353. Online ahead of print. PMID: 32905837

Reviews (peer reviewed)

1. **Prokop S**, Stenzel W, Goebel HH, Heppner FL (2009) [Amyloidoses in neuropathology]. *Pathologe* 30(3): 193-196

2. **Prokop S**, Miller KR, Heppner FL (2013) Microglia actions in Alzheimer's disease. *Acta neuropathologica* 126: 461-477

Book chapters

1. Miller KR, **Prokop S**, Heppner FL (2012) Chapter 49: Roles of activated microglia, in Kettenmann, Ransom (Ed.) *Neuroglia Third edition* (pp. 626 -637)

2. **Prokop S**, Lee VMY, Trojanowski JQ (2019) Neuroimmune interactions in Alzheimer's disease-New frontier with old challenges? *Prog Mol Biol Transl Sci. 2019;168:183–201. doi:10.1016/bs.pmbts.2019.10.002*

Complete List of published articles also available in My Bibliography: <https://www.ncbi.nlm.nih.gov/myncbi/1T7ZbjbgCHGAG/bibliography/public/>