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## BIOGRAPHICAL SKETCH

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NAME Clayton Alexander Wiley	POSITION TITLE Professor of Pathology Associate Dean, Director of MSTP		
eRA COMMONS USER NAME (credential, e.g., agency login) claytonwiley			
EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable.)			
INSTITUTION AND LOCATION	DEGREE (if applicable)	MM/YY	FIELD OF STUDY
University of Chicago, Chicago	A.B.	06/76	Biology
University of California, San Diego	M.D.	06/81	Medicine
University of California, San Diego	Ph.D.	06/81	Neuroscience
University of California, San Francisco		06/83	Anatomic Pathology
University of California, San Diego		06/85	Neuropathology

### A. Personal Statement

I am a board certified in Anatomical Pathology and subspecialty certified in Neuropathology. I served as Assistant, Associate and full Professor of Pathology and Neuroscience at UCSD between 1985 and 1993. In 1993 I moved to the University of Pittsburgh as Director of the Neuropathology Division in the Department of Pathology. In 1997 I was appointed Associate Dean, Director of the Medical Scientist Training Program. I am active in both graduate and post-graduate training of physician scientists. I served as President for the American Association of Neuropathologists, and Editor-in-Chief of **Brain Pathology**, the International Society of Neuropathology's official journal. Throughout my academic tenure, I have maintained active research and clinical programs, serving as PI and Co-I on research grants and directing or co-directing several pre-doctoral training programs. I have published over 200 peer-reviewed articles, book chapters and review articles. My research concentrates on the pathogenesis of neurodegenerative diseases and in particular on viral and age induced nervous system diseases. In recent years my studies have focused on central nervous system retroviral infections and have pioneered the use of molecular and imaging techniques to quantitatively assess viral burden. This same technology is now being applied to quantify neurological damage and the immune / neuroinflammatory response with specific attention focused on disruption of the extracellular matrix and how this leads to synaptic damage.

### B. Positions and Honors

#### Positions and Employment

1985-1988	Assistant Professor of Pathology in Residence, University of California, San Diego
1986-1990	Visiting Investigator, Scripps Clinic and Research Foundation,
1988-1989	Assistant Professor of Pathology -tenure track, University of California, San Diego
1989-1993	Associate Professor of Pathology and Neurosciences, University of California, San Diego
1993-1993	Professor of Pathology and Neurosciences, University of California, San Diego
1993-Present	Professor of Pathology, Director Division of Neuropathology, University of Pittsburgh
1996-Present	Associate Dean of Medical Scientist Training Program, University of Pittsburgh & CMU

#### Other Experience and Professional Memberships

Medical Board Certification: Anatomic and Neuropathology Boards, May 31, 1985  
Active Medical License: Pennsylvania MD 049318 L; Indiana 01066236A  
Inactive Medical License: California G49261

#### Honors

1997	Elected Fellow of American Association for Advancement of Science
1996-2000	Editor-in-Chief Brain Pathology
2002-2003	President, American Association of Neuropathologists
2008-2009	President, National MD/PhD Association Chair, MD/PhD Section of AAMC GREAT

### C. Selected Peer-reviewed Publications (selected from over 200 peer-reviewed publications)

#### Most relevant to the current application

1. Venneti S, Lopresti B, Wang G, Slagel S, Mathis C, Fischer M, Larsen NJ, Mortimer AD, Hastings TG, Smith AD, Zigmund MJ, Suhara T, Higuchi M, **Wiley CA**. (2007) A comparison of the high-affinity peripheral benzodiazepine receptor ligands DAA1106 and (R)-PK11195 in rat models of neuroinflammation: implications for PET imaging of microglial activation. *J Neurochemistry* 102:2118-2131. PMID: PMC1755551
2. Venneti S, Wang G and **Wiley CA**. (2008) The high affinity peripheral benzodiazepine receptor ligand DAA1106 binds to activated and infected brain macrophages in areas of synaptic degeneration: Implications for PET imaging of neuroinflammation in lentiviral encephalitis. *Neurobiology of Disease* 29:232-241. PMID: PMC2258458
3. Bissel SJ, Wang G, Bonneh-Barkay D, Starkey A, Trichel AM, Murphey-Corb, **Wiley CA**: (2008) Systemic and brain macrophage infections in relation to the development of simian immunodeficiency virus encephalitis. *Journal of Virology* 82:5031-5042. PMID: PMC2346725
4. Venneti S, Bonneh-Barkay D, Lopresti BJ, Bissel SJ, Wang W, Mathis CA, Piatak P, Lifson JD, Nyaundi JO, Murphey-Corb M, **Wiley CA**. (2008) Longitudinal assessment of lentiviral encephalitis with *in vivo* PET imaging of infected and activated brain macrophages correlates with peripheral and central markers of lentiviral encephalitis *American Journal of Pathology* 172:1603-1616. PMID: PMC2408420
5. Bonneh-Barkay D, Bissel SJ\*, Wang G, Fish KN, Nicholl GCB, Darko SW, Medina-Flores R, Murphey-Corb M, Rajakumar PA, Nyaundi J, Mellors J, Bowser R, **Wiley CA**. (2008) YKL-40 a marker of SIV encephalitis modulates the biological activity of basic fibroblast growth factor. *American Journal of Pathology* 173:157-170. PMID: PMC2438291
6. Venneti S, Lopresti BJ, Wang G, Hamilton RL, Mathis CA, Klunk WE, Apte UM, **Wiley CA**. (2009) PK11195 labels activated microglia in Alzheimer's disease and *in vivo* in a mouse model using PET. *Neurobiology of Aging*. 30:1217-1226. PMID: PMC2745919
7. **Wiley CA**, Lopresti BJ, Venneti S, Price J, Klunk WE, DeKosky S, Mathis CA. (2009) [<sup>11</sup>C]PIB and [<sup>11</sup>C](R)-PK11195 PET imaging in Alzheimer's disease. *Arch Neurol* 66: 60-67. PMID: PMC2666881

#### Additional recent publications of importance to the field (in chronological order)

1. Bissel SJ, Wang G, Trichel AM, Murphey-Corb, **Wiley CA**. (2006) Longitudinal Analysis of Monocyte/Macrophage Infection in Simian Immunodeficiency Virus Infected, CD8<sup>+</sup> T Cell Depleted Macaques that Develop Lentiviral Encephalitis. *Amer J Pathol* 168: 1553-1569. PMID: PMC1457021
2. Bissel SJ, Wang G, Trichel AM, Murphey-Corb, **Wiley CA**. (2006) Longitudinal Analysis of Activation Markers on Monocyte Subsets During the Development of Simian Immunodeficiency Virus Encephalitis. *Journal of Neuroimmunology* 177: 85-98. PMID: PMC2561894
3. **Wiley CA**, Lopresti BJ, Becker JT, Boada F, Lopez OL, Mellors J, Meltzer CC, Wisniewski SR, Mathis CA. (2006) PET imaging of peripheral benzodiazepine receptor binding in HIV-infected subjects with and without cognitive impairment. *J Neurovirology* 12: 262- 271. PMID: PMC16966217
4. Venneti S, Wagner AK, Wang G, Slagel SL, Chen X, Lopresti BJ, Mathis CA, **Wiley CA**. (2007) The high affinity peripheral benzodiazepine receptor ligand DAA1106 binds specifically to microglia in a rat model of traumatic brain injury: Implications for PET imaging. *Experimental Neurology* 207:118-127. PMID: PMC2042945
5. Armah HB, Wang W, Omalu BI, Tesh RB, Gyure KA, Chute DJ, Smith RD, Dulai P, Vinters HV, Kleinschmidt-DeMasters BK, **Wiley CA**. (2007) Systemic distribution of west Nile virus during

encephalitis: postmortem immunohistochemical study of 6 cases. Brain Pathology 17; 354-362. PMID: PMC17610522

6. Horbinski C, Fine JL, Medina-Flores R, Yagi Y, **Wiley CA**. (2007) Telepathology for Intra-Operative Neuropathological Consultations at an Academic Medical Center: A Six-Year Report. Journal of Neuropathology and Experimental Neurology 66:750-759. PMID: PMC17882019
7. Venneti S, Wagner AK, Wang G, Slagel SL, Chen X, Lopresti BJ, Mathis CA, **Wiley CA**. (2007) The high affinity peripheral benzodiazepine receptor ligand DAA1106 binds specifically to microglia in a rat model of traumatic brain injury: Implications for PET imaging. Experimental Neurology 207:118-127. PMID: PMC2042945
8. Venneti S, Wang G and **Wiley CA**. (2007) Activated macrophages in a macaque model of HIV encephalitis show increased [<sup>3</sup>H](R)-PK11195 binding in a PI3-kinase dependent manner. Neuroscience Letters 426:11-122. PMID: PMC2083646
9. Brass LF, Akabas MH, Burnley LD, Engman DM, **Wiley CA**, Andersen OS. (2010) An analysis of career choices made by graduates of 24 MD-PhD programs. Academic Medicine In Press
10. Venneti S. **Wiley CA**, Kofler J; Imaging microglial activation during inflammation and Alzheimer's disease. J. Neuroimmune Pharmacology, 4:227-243, 2009 PMID: PMC2682630

#### **D. Research Support**

##### **Ongoing Research Support**

- |   |                      |                  |
|---|----------------------|------------------|
| K24 MH01717-09<br>Midcareer Investigator Award<br>This award provides salary support for Dr. Wiley's mentorship and research activities.<br>Role: PI  | Wiley (PI)           | 7/1/99-3/31/10   |
| T32 GM08208-14<br>Medical Scientist Training Program<br>This training grant provides stipend and tuition support for 16 students in the Pittsburgh MSTP.<br>Role: PI  | Wiley (PI)           | 7/1/87 - 6/30/12 |
| RO1 MH071151<br>SIV Encephalitis and Disease Progression<br>This grant uses PET to study the time course of monocyte trafficking into brains of SIV infected macaques.  | Wiley (PI)           | 4/15/05-4/30/10  |
| NIH HHSN266200500027C<br>West Nile Virus Contract<br>This contract is assessing changes in the immune system with aging that are associated with infection by the West Nile Virus.<br>Role: PI on subcontract | Nikolich-Zugich (PI) | 7/1/05 – 6/31/09 |
| U01AI077771-01<br>Virus-Like Particle Vaccines for Pandemic Influenza<br>This grant is developing a vaccine to protect against pandemic influenza.<br>Role: Co-I  | Ted Ross (PI)        | 3/1/08 – 2/28/11 |

##### **Completed Research Support**

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| PO1AG025204-03S1<br>In Vivo PIB PET amyloid imaging: Normals, MCI & Dementia:<br>PET assessment of immunized aged non-human primates | William Klunk (PI) | 05/15/05-04/30/10 |
|--|--------------------|-------------------|

This grant studies the utility of the peripheral benzodiazepine receptor ligand PK111195 in monitoring microglial activation and amyloid deposition in aged non-human primates using PET amyloid ligand Pittsburgh compound-B and microglial ligand PK11195.

Role: Project PI

R21 MH073429 Robert Bowser (PI)  
Proteomic profiling of CSF during SIV Infection

2004-2006

Role: Co-I

R21 AG025829 Clayton Wiley (PI)  
PET Imaging of Macrophages and Amyloid in AD

2005-2007

Role: PI