

How to be come an Academic Neuropathologist.

Definition:

An academic neuropathologist is a medical school faculty member who teaches medical students, residents and fellows, carries out the clinical specialty and participates in research. The exact distribution of time is based upon the revenue streams that support the neuropathologist and varies from institution to institution and within an institution.

While time and effort committed to teaching, clinical and research cover a broad spectrum, they can be artificially broken down into the following categories

Category	Teaching	Clinical service	Research
1	20	75	5
2	10	35	55
3	5	20	75

Category 1 Neuropathologists are faculty members with funded through clinical service who participate in teaching and research commensurate with their academic title.

Category 2 Neuropathologists are faculty who are active clinicians approximately a third of their time but who commit approximately half of their time to funded research projects and about 10% of their time to teaching. These individuals are half funded by clinical service and half by research grants where they serve as co-investigators

Category 3 Neuropathologists are faculty running their own laboratories but committing approximately a quarter of their time to teaching and clinical service. They derive three quarters of their salary from research grants where they are principal investigator and co-investigator. The remainder of their salary is derived from clinical revenues.

Career path

Category 1 and 2 Neuropathologists are usually MDs who committed 2 – 3 years to fellowship training after completing their anatomical pathology training. Category 3 Neuropathologists are usually MD/PhDs with similar fellowship training, or MDs who engaged in 1-2 additional years of formal investigational training. Faculty can move between categories as their career evolves.

To achieve a category 3 position requires substantial advance planning. A typical MD/PhD would have received their PhD in neuroscience, pathology or related disciplines. They might enter 3 years of anatomical pathology training at one institution and then chose a separate institution for 2 years of neuropathology training, however, equally frequently they will select a single 4 year program to accomplish both clinical training programs before being Board eligible in AP and NP. Regardless of which of these two pathways is selected, it is critical that the fellowship years be structured to permit definition and close collaboration with a research mentor. The mentor will assist the trainee in carving out an experimental problem and approach, provide laboratory

assistance and supplies to develop preliminary data and mentor the trainee through submission for grant support. The mentor will also assist the trainee in obtaining the appropriate institutional (Chair and Dean) support (start up funds) for their nascent career. Initial grant applications are most frequently career development awards (e.g. K08, K23, VA CDA) where 75% of the trainee's salary is covered in exchange for an equivalent amount of clinically protected time. Even with a funded career development award, the trainee will still need assistance from the mentor to establish a functional laboratory.

Straight MDs (without PhDs) can follow the same path described above for MD/PhDs except they usually need 1 -2 additional years in the laboratory to develop the experimental skills and approaches to be successfully funded through the career development awards. The new K99/R00 grants may assist such trainees in garnering 2 years of fellowship support followed by 3 years of junior faculty support.

One to 2 years after the career development award is funded, the trainee will seek independent support from private foundations or NIH (R03, R21, R01 ...). They may at this stage develop greater independence by going to a new institution that provides additional startup funds or new collaborations. Based upon the trainees success, they may decide to switch to a different category or obtain additional protected time through mid-career development awards (K24). With an established track record of scientific progress and funding the individual evolves to the role of mentor initially with students and later with residents and fellows.

Key elements to success in the different categories:

Category 1-

- Be a superb well read surgical pathologist
- Attend USCAP, CAP and AANP meetings
- Be active in your local and national professional associations
- Present cases and series at meetings
- Employ new technology in your clinical discipline
- Be a team player at your institution
- Work aggressively to be liked, avoid making enemies

Category 2

- Stay current on the research and clinical NP literature
- Be active in your national professional associations
- Be a team player at your institution
- Be an organized active member of the research teams you work with
- Attend AANP, SFN and other professional scientific meetings
- Work aggressively to be liked, avoid making enemies

Category 3

- Stay current on the research NP literature
- Work with your colleagues to keep on clinical NP literature

Be active in your national professional associations

Align with local, national and international research teams

Collaborate with investigators working at the cutting edge of their field

Use cross-disciplinary collaborations to retain scientific edge

Carefully commit time so that your lab and collaborative lab work moves forward

Attend AANP, SFN and other professional scientific meetings

Work aggressively to be liked, avoid making enemies