

Dungeons and Dendrites



Character Book

1: Mary Putnam Jacobi (1842-1906)

Arguably the 1st female (pediatric) neurologist, you attended meetings of the American Neurological Association and served as the first female chairperson of the Neurological section of the New York Academy of Medicine. About half of your many papers are on (pediatric) neurology.

DM: Let the **Hero** decide her Strongest Characteristic: Strength, Intelligence, Dexterity, Constitution, Charisma or Wisdom. Then assign the Villain.

Villain: S. Weir Mitchell (1829-1914)

Considered the first neurologist in America, you championed the “rest cure” for women with hysteria. Jacobi recommended intellectual stimulation for women instead. Notably both you and MPJ wrote fiction in your free time (MPJ published short stories and you wrote novels).

Battle will take place in: the American Neurological Association

What’s at stake: Putnam Jacobi is applying for formal election into the ANA with a thesis on Sphygmographic Experiments Upon a Human Brain Exposed By an Opening in the Cranium; Mitchell does not think she belongs.

Other characters can be:

William Hammond (1828-1900), the founder of the ANA; he is the first professor of neurology in the United States and the author of the first American textbook of neurology in 1871, but he doesn’t think women are capable of original thought;

Sarah McNutt (1839-1930), neuropathologist , the 1st woman elected to the ANA in 1884.

Disease Characters (See **Appendix** below).

2. Charles Bell (1774-1842)

You are a Scottish surgeon, anatomist, neurologist, and theologian, best known for your work on the motor paralysis of the 7th cranial nerve (Bell's palsy), but you were also an incredible artist who illustrated multiple anatomical atlases and four books on the anatomy of the hand. In 1811, you self-published a little treatise noting that anterior spinal nerve roots manage muscle movement (you would edit it later to add additional information).

DM: Let the **Hero** decide his Strongest Characteristic: Strength, Intelligence, Dexterity, Constitution, Charisma or Wisdom. Then assign the Villain.

Villain: François Magendie (1783-1855)

You are a French physiologist who published an article in 1822 – in your own journal – entitled “Experiments on the Functions of the Roots of the Spinal Nerves.” You determined that anterior roots were essential for movement and posterior roots were essential for sensation (through experiments with vivisection); and pointed out that Bell's studies were poorly done and ambiguous.

Battle will take place in: Surgeon's Hall, Edinburgh, Scotland

What's at stake: The Bell-Magendie Law states that the anterior (ventral) spinal nerve roots carry motor impulses away from the central nervous system, while the posterior (dorsal) roots carry sensory impulses toward it. Well, we'll see about that! Winner gets the whole law to themselves.

Other characters can be:

Bell's former student, Herbert Mayo (1796-1852), who wrote about the 5th and 7th cranial nerves before Bell did and also engaged in a bitter priority dispute with Bell;

George Hoggan (1837-1891), a physician who spoke out against vivisections like Magendie's (and had what was thought to be “Britain's first medical marriage” with physician Frances Morgan (1843-1927))

Disease Characters (See **Appendix** below).

3. Santiago Ramon y Cajal (1852-1934)

You are a Spanish neuroscientist, pathologist, neuroanatomist, avid chess player and artist who used a refined silver nitrate staining method to prove that the brain and nervous system are made up of individual, autonomous, and contiguous cells – neurons – that communicate across gaps.

DM: Let the **Hero** decide his Strongest Characteristic: Strength, Intelligence, Dexterity, Constitution, Charisma or Wisdom. Then assign the Villain.

Villain: Camillo Golgi (1843-1926)

You developed the silver nitrate stain Cajal used to stain his neurons, and together the two of you won the 1906 Nobel Prize in Physiology or Medicine for your foundational work on the nervous system. You used your Nobel Prize speech to denounce Cajal's Neuronal Doctrine and argue for your own Reticular Theory, maintaining that the nervous system forms a continuous, fused physical net or reticulum of fibers rather than distinct cellular units (you were wrong, but you didn't know it at the time).

Battle will take place in: Stockholm, Sweden

What's at stake: The Nobel Prize money in 1906 was 138,536 Swedish kroner, or approximately \$40,000 at the time. In the words of possibly the greatest Swedish band: the winner takes it all.

Other characters can be:

Manuela Serra (1900-1988), a technician in Cajal's lab who published a single-author paper; Cajal offered to pay for her to attend medical school, but her mother was against it, and she married and left the laboratory; she is the only technician without a degree mentioned in his autobiographies;

Ettore Marchiafava (1847-1935), an Italian neurologist who studied malaria with Golgi and was the first to observe Gram-negative diplococci in the cerebrospinal fluid of a case of meningitis in 1884.

Disease Characters (See **Appendix** below).

4. Anna Louise Ellington Marsh (1932-1998)

Born in Birmingham, Alabama, you were one of the earliest Black female neurologists. You went to Oberlin College for undergraduate, were ranked first in your class at Meharry Medical College (AOA, class of 1957), interned at Detroit Receiving Hospital, and did your residency in neurology at the University of Minnesota. You then remained on staff at the University until 1983. You were never board certified and were never a member of the American Neurological Association, but you did join the American Academy of Neurology. You published on electroencephalography and vascular neurology, including in *Stroke* and *Neurology* (as A.L. Ellington).

DM: Let the **Hero** decide her Strongest Characteristic: Strength, Intelligence, Dexterity, Constitution, Charisma or Wisdom. Then assign the Villain.

Villain: Strom Thurmond (1902-2003)

Ok, she probably didn't directly fight you, but "intersectional racism" doesn't make for a fun villain. You are a senator (D-South Carolina) who wrote the first draft of the Southern Manifesto in 1956, actively opposing racial integration of public spaces like schools and hotels. In the 1950s and 1960s, when Ellington attended college, medical school and residency, not only was it hard to get into certain schools (Johns Hopkins admitted their first Black medical student in 1963), or get faculty jobs, but Black people couldn't stay in most hotels in the South, making it impossible to attend professional society meetings held in half the country. These limitations create dramatic effects on a career over time. Is it surprising that you've never heard Ellington's name before?

Battle will take place in: Minnesota, 1959

What's at stake: Strom Thurmond wants to shut down the integrated program at the University of Minnesota.

Other characters can be:

Calvin Calhoun (1927-2005), another early Black neurologist who did his residency at the University of Minnesota, starting shortly after Ellington and doing a chief year 1964-1965;

Audrey Penn (1934-), another early Black female neurologist who finished residency at Columbia in 1964 and was also the first Black and the first female President of the American Neurological Association.

Disease Characters (See **Appendix** below).

5: Mary Broadfoot Walker (1888-1974)

Born in Scotland, you managed to attend medical school despite serious restriction on women in the United Kingdom at the time. You joined the Royal Army Medical Corps in the first World War and then worked at St. Alfege's Hospital in Greenwich. In 1932, you successfully passed the test to join the Royal College of Physicians. You made various discoveries in your lifetime but you're best known for your letter to the Lancet in 1934, in which you describe treating a single patient with myasthenia gravis with an injection of physostigmine, which created a dramatic improvement. You wrote "it may be significant that physostigmine inhibits the action of esterase, which destroys acetylcholine" (it was in fact very significant).

DM: Let the **Hero** decide her Strongest Characteristic: Strength, Intelligence, Dexterity, Constitution, Charisma or Wisdom. Then assign the Villain.

Villain: Derek Denny-Brown (1901-1981)

You are a much-beloved neurologist who studied the peripheral nervous system. You opposed Walker's findings initially. Later, after Walker's death, you wrote a letter to another neurologist about her discovery. You said you were working with her, and she had never seen myasthenia gravis before, and you told her the disease mimicked curare poisoning. Her response was, you said, "Where did my patient get curare?" You explained that the patient didn't have curare poisoning - but she wanted to treat with the antidote, physostigmine, anyway. It's possible that this is exactly what happened, but given that Walker was already successful and accomplished by the time she worked with you, it's also possible that you diminished her intelligence in your memory (you also get the age of the patient wrong).

Battle will take place in: St. Alfege's Hospital

What's at stake: Walker is applying for an academic position (she never actually obtained one); Denny-Brown is opposed.

Other characters can be:

Harriet Edgeworth (1892-1971) who tested ephedrine for myasthenia gravis on herself;

Wilhelm Feldberg (1900-1993), who presented experimental evidence for acetylcholine acting at the neuromuscular junction with Sir Henry Dale (who would share the Nobel Prize with Otto Loewi in 1936) and later said that he also thought about trying physostigmine on patients.

Disease Characters (See **Appendix** below).

6. Paul Broca (1824-1880)

You are a French neurologist, neuroanatomist and physiological anthropologist, who studied the size, structure and shape of the human brain to defend the conclusion that European men were superior to the rest of the humanity (you were still vocally opposed to slavery and anti-Semitic politics, so there's that). In 1865 you published a paper claiming that the faculty of language was asymmetric and located to the foot of the 3rd frontal convolution of the anterior lobe of the left hemisphere, based on a study of the brain of Louis Victor Leborgne, who died in 1861 and could only make the sound "tan." Now you're famous – not for your disproven racist and sexist ideas about the structures of the brain, but for the eponymous Broca's area.

DM: Let the **Hero** decide his Strongest Characteristic: Strength, Intelligence, Dexterity, Constitution, Charisma or Wisdom. Then assign the Villain.

Villain: Gustave Dax (1815-1893)

Your dad, Marc Dax, wrote a paper in 1836 indicating that language arose from the left hemisphere of the brain, shortly before he died in 1837. You tried to publish his work in 1863, then finally published it in 1865 – 6 weeks before Broca published his paper. When this was pointed out, Broca was dismissive of your father's work, and said 'I do not like dealing with the questions of priority concerning myself. That is the reason why I did not mention the name of Dax in my paper.' Is this a problem with eponyms, or is this kind of controversy the only way we get history papers published? You decide.

Battle will take place in: the University of Paris (Broca gets the home court advantage)

What's at stake: If Dax wins, we're changing the eponym: it's Dax's Law from now on, even if no one knows what you're talking about.

Other characters can be:

Jules Baillarger (1809-1890), who argued in favor of naming Dax's Law at the Imperial Academy of Medicine, Paris, in 1865 (9 days before Broca's publication);

Jean-Baptiste Bouillaud (1796-1881), president of the Académie de Médecine, who argued that since the rest of the body was symmetric, language should also be symmetric, so why would language be on one side of the brain anyway?

Disease Characters (See **Appendix** below).

7. Jean Martin Charcot (1825-1893)

Appointed the first chair of Clinique des Maladies du Systeme Nerveux in 1882, you are charismatic and popular. You became known as the Father of Neurology for your incredible descriptions of clinical neurology, including multiple sclerosis and Parkinson's disease, using photography and drawings to better describe clinical disorders.

DM: Let the **Hero** decide his Strongest Characteristic: Strength, Intelligence, Dexterity, Constitution, Charisma or Wisdom. Then assign the Villain.

Villain: Axel Munthe (1857-1949)

You are a psychiatrist from Sweden who published an autobiographical novel in 1929, *The Story of San Michele*, claiming to be Charcot's assistant and painting him as a condescending, harsh doctor. In fact you were one of many medical students who studied under him, and others disagreed with your portrayal. Apparently you also once took a young female patient from the hospital to come live in your home, to help her escape from Charcot's ward. (Charcot threatened to involve the police but then just had you expelled.) Your book would change Charcot's legacy for generations.

Battle will take place in: the Salpêtrière

What's at stake: Munthe has written a new book further spreading falsehoods about Charcot, who has received an advance copy (despite being dead) and intends to stop the publication.

Other characters can be:

Alfred Vulpian (1826-1887) Dean of Medicine and Charcot's collaborator. Charcot was the best man at his wedding and spoke at his funeral – but their students were vicious rivals;

Gilles de la Tourette (1857-1904) (student of Charcot), who published cases of *maladie des tics* in 1885. In 1893, he was shot in the neck by a former patient who claimed she was hypnotized against her will.

Disease Characters (See **Appendix** below).

8. Solomon Carter Fuller (1872-1953)

Although sometimes claimed for psychiatry, you were the first Black neurologist in the United States. You worked with Alzheimer in Munich in 1903 and were promoted to Associate Professor of Neurology in 1921 (never appointed in psychiatry). You were acting Chair of Neurology for 5 years, but retired in 1933 after 34 years at Boston University when Nathan Garrick, a White man, was promoted from Assistant Professor to full Professor over you just so he could be Chair. You would later say “with the sort of work that I have done, I might have gone farther and reached a higher plane had it not been for my color.”

DM: Let the **Hero** decide his Strongest Characteristic: Strength, Intelligence, Dexterity, Constitution, Charisma or Wisdom. Then assign the Villain.

Villain: Nathan H. Garrick (1885-1952)

There’s not much information out there about you. You worked at the University Health Center. You didn’t publish significant papers. It’s not necessarily your fault you were made chair in this circumstance, but now you’re the Villain in our story. That’s how it works.

Battle will take place in: Boston University

What’s at stake: The administration of Boston University is reassessing their decision to promote Garrick. It’s finally Fuller’s chance.

Other characters can be:

Meta Warrick Fuller (1877-1968), Fuller’s wife, a famous sculptor in the Harlem Renaissance;

Myrtelle Canavan (1879-1953), neuropathologist who described Canavan disease, also professionally leapfrogged by Nathan Garrick and never promoted above Associate Professor.

Disease Characters (See **Appendix** below).

9. Augusta Déjerine-Klumpke (1859-1927)

Born in San Francisco, one of 4 incredibly accomplished sisters, you attended medical school in Paris. Your thesis describing lower brachial plexus palsy with pupillary involvement – later named after you – won the Godard Prize of the Academy of Medicine in 1886. You married Jules Déjerine in 1888, and the two of you worked together to study neuroanatomy. You published 56 works yourself and contributed significantly to your husband's work in both illustrations and concepts.

DM: Let the **Hero** decide her Strongest Characteristic: Strength, Intelligence, Dexterity, Constitution, Charisma or Wisdom. Then assign the Villain.

Villain: Pierre Marie (1853-1940)

Both Déjerine and Déjerine-Klumpke were students of Alfred Vulpian. You were a student of Jean Martin Charcot, and you and Déjerine were bitter rivals. At one point, Déjerine challenged you to a duel, with pistols, over the definition of sensory ataxia (the duel was dropped). When Déjerine died, you became Chair and kicked his wife, Déjerine-Klumpke, out of the hospital. You never liked her anyway.

Battle will take place in: the Salpêtrière

What's at stake: Déjerine-Klumpke moved her husband's papers to the pathology department and took a job at another hospital, caring for veterans. But now it's Déjerine-Klumpke's chance. If she loses this, she loses everything – all the papers, Déjerine's whole legacy - but if she wins, she becomes Chair and Marie is out.

Other characters can be:

Anna Klumpke (1856-1942), Augusta's older sister and famous painter;

Howard Henry Tooth (1856-1925), British neurologist who independently described Charcot-Marie-Tooth neuropathy in his 1886 thesis at Cambridge.

Disease Characters (See **Appendix** below).

10. Isabelle Rapin (1927-2017)

Born in Switzerland, you were one of the first women to do both a pediatrics and a neurology residency in the United States. You were one of the first physicians board-certified with Special Qualifications in Child Neurology, and were a founding member of the Child Neurology Society and the International Child Neurology Association. You researched autistic spectrum disorder and were referred to as the “doyenne of autism” in your obituary.

DM: Let the **Hero** decide her Strongest Characteristic: Strength, Intelligence, Dexterity, Constitution, Charisma or Wisdom. Then assign the Villain.

Villain: Andrew Wakefield (1956-)

You were involved in a fraudulent *Lancet* report in 1998 that claimed a link between the measles, mumps and rubella vaccine and autism. Multiple other studies failed to reproduce these findings. Many of your co-authors withdrew their support for the article’s conclusions. *The Lancet* retracted the publication fully in 2010 after the British General Medical Council found the research dishonest. A decline in vaccinations and an increase in outbreaks in measles has continued to this day.

Battle will take place in: online peer review

What’s at stake: Wakefield has a new publication in the works, under a pseudonym, and only Rapin can stop him (with science)!

Other characters can be:

Oliver Sacks (1933-2015), Rapin’s friend, neurologist and writer of *The Man who Mistook His Wife for a Hat*, with possible falsifications;

Joseph French (1928-1999), likely the first Black child neurologist, also Rapin’s friend (she wrote his obituary), and an advocate for civil rights.

Disease Characters (See **Appendix** below).

Appendix: Disease Characters

If you have more people, other members of the party can roll a D20 to determine which **Neurological Disease** they are. You can have as many **Neurological Diseases** as you choose:

1. Ischemic Stroke
2. Migraine
3. Childhood Absence Epilepsy
4. Alzheimer's Disease
5. Amyotrophic Lateral Sclerosis
6. Infantile Spasms
7. Traumatic Brain Injury
8. Tourette Syndrome
9. Multiple Sclerosis
10. Duchenne Muscular Dystrophy
11. Myasthenia Gravis
12. Parkinson's Disease
13. Guillain-Barre Syndrome
14. Focal Epilepsy
15. Bacterial Meningitis
16. Neurofibromatosis
17. Hypoxic Ischemic Encephalopathy
18. Transverse Myelitis
19. Dystonia
20. Glioblastoma Multiforme

Each player should tell the party something about their Neurological Disease (they can look it up if needed).