



### **A tribute to Dr. Marie T. Filbin from one who benefited**

On January 15 2014, Distinguished Professor of Biology Marie T. Filbin (1955-2014) died in her native Ireland surrounded by the love and support of her family and friends. Marie suffered in recent years from metastatic breast cancer but as a testament to her courage, commitment, and passion she continued to live her life, to work with her lab and mentor her students until her last days.

Marie was recruited to Hunter College in the early nineties having been the first to attribute a novel function to a key molecule of myelin that would turn out to be the corner stone of her successful career in neural regeneration. This molecule, myelin associated glycoprotein (MAG) was important because of the conceptual breakthrough in how spinal cord regeneration was perceived. Initially, the perception was that axons of neurons “can’t regrow”. However, seminal

work by Marie showed that axons can regrow, but that there were substances released after injury that prevented it.

Marie's scientific work contributed to our understanding of nerve regeneration after spinal cord injury and multiple sclerosis, knowledge that will be crucial for the development of effective therapies to treat these debilitating conditions. Her lab pursued inhibitors of nerve regeneration and activators of axonal growth. She was the first to identify MAG, as a potent inhibitor of nerve regeneration (Mukhopadhyay et al. 1994). Marie's research subsequently focused on finding ways to overcome this inhibition and promote endogenous regeneration. She identified key intracellular signaling pathways that act as potent activators of axonal growth and could be exploited as therapeutic targets (Cai et al. 2001). While spinal cord regeneration remains daunting, her discoveries have led to promising results in animal models of spinal cord injury (Pearse et al. 2004).

Marie could have achieved great success at any institution, but she enjoyed teaching at Hunter College, a public institution that serves a large population of minority and female students stemming from having been historically an all women's school. Hunter was previously known for educating two women undergraduates who went on to win the Nobel Prize in Physiology and Medicine (Rosalyn Yalow and Gertrude Elion). Marie was extremely proud of the work carried out by her students and postdocs at Hunter. Leading by example, she demonstrated that a successful scientific career and teaching at a large urban public institution were not incompatible outcomes. "Hunter is a great place for a researcher. My students are wonderful", she told The New York Times in 2004, and again in 2005 for a profile in Nature Medicine, where she stated that at Hunter she "succeeded beyond her wildest dreams."

Under Marie's guidance, sixteen students received their Ph.Ds; and at the time of her death she was the Director of the Specialized Neuroscience Research Program (SNRP) at Hunter. She was also the driving-force behind the Friends of Myelin Club meetings at Hunter Biology

Department, which promoted the exchange of ideas and collaborations among scientists working on myelination in the New York area. Marie was very active in numerous scientific organizations and was on the editorial board of a number of major scientific journals, including serving as senior and reviewing editor for the Journal of Neuroscience. During her outstanding career, Marie received many honors including the Javits Investigator Award from NIH, the Ameritec Prize for significant accomplishment towards a cure for paralysis, and she was inducted into the Hall of Fame of the National Multiple Sclerosis Society.

Marie was not only scientifically brilliant, but was also an extraordinary woman with a kind, caring and fun-loving personality. Generous with her time and resources, she instilled in her students and peers the importance of hard work, collaboration and collegiality. She was a devoted advocate for junior faculty and women scientists, mentoring those who like myself started their independent career at Hunter College. It was last October, during the celebration of Marie's last birthday, that we, a group of junior faculty sharing anecdotes and our favorite "Marie's story", asked her about the secret to her success: "Why did I succeed? Because I was able to recognize what was important and what wasn't" she told us. I think we all agree that Marie's wise discernment extended not only to her science, but also to how she lived her life. She recognized the importance of "others" and cared deeply about her family, friends, students, trainees and peers. Marie was and will continue to be an inspiration for all of us. We will miss her greatly and will forever look up to her as an example of kindness, bravery and passion for life. Cheers Marie! You will not be forgotten.

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## References

- Cai D, Qiu J, Cao Z, McAtee M, Bregman BS, Filbin MT. 2001. Neuronal cyclic AMP controls the developmental loss in ability of axons to regenerate. *The Journal of Neuroscience* 21(13):4731-4739.
- Mukhopadhyay G, Doherty P, Walsh FS, Crocker PR, Filbin MT. 1994. A novel role for myelin-associated glycoprotein as an inhibitor of axonal regeneration. *Neuron* 13(3):757-767.
- Pearse DD, Pereira FC, Marcillo AE, Bates ML, Berrocal YA, Filbin MT, Bunge MB. 2004. cAMP and Schwann cells promote axonal growth and functional recovery after spinal cord injury. *Nat Med* 10(6):610-616.

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