Alaa El-Din El-Husseini (1962–2007) Visionary Neurobiologist and Revered Mentor

On December 23, 2007, the neuroscience community lost one of its most popular and prolific young scientists when Alaa El-Din El-Husseini died suddenly in a water accident while vacationing in Cuba with his fiancé, Andrea Hadyu. Alaa's unique combination of scientific creativity, experimental genius, public service, and contagious optimism propelled Alaa to the crest of the international neurobiology scene. His sudden and untimely departure leaves a vacuous hole.

Alaa was born in Gaza, Palestine, on October 21, 1962, into a prominent family that had emigrated in 1948 from Jerusalem. When Alaa was 6 years old, Alaa's father died, and he was raised by his mother, Jamila Khalidi. At age 13, Alaa's family moved to Cairo, Egypt, where he completed secondary school and graduated with honors in Biochemistry at Ain Shams University in 1985. Always eager for change, Alaa moved to Abu Dhabi where he worked as a chemist for three years on an oil field analyzing samples. Ready for his next adventure, Alaa moved to Winnipeg, Canada, where his uncle Dr. Musa Khalidi was a professor of sociology at the University of Manitoba. Here, Alaa completed an MSc in Physiology and developed skills in molecular biology working with Robert Shui. Alaa then moved to Vancouver and obtained a Ph.D. in the Graduate Program in Neuroscience in 1997 from University of British Columbia (UBC). Working with Steven Vincent at UBC, Alaa developed his passion for neurobiology and published a series of papers on the nitric oxide-cGMP signal cascade.

Alaa came to University of California, San Francisco, for postdoctoral work after Tim Murphy introduced one of us (D.S.B.) to Alaa as the "hardest working graduate student at UBC." Alaa flourished at UCSF and made a series of fundamental discoveries regarding synapse development and plasticity. Perhaps most important was his seminal discovery that the postsynaptic density protein PSD-95 recruits AMPA receptors to synaptic sites. This unexpected finding has transformed our understanding of excitatory neurotransmission and plasticity. Furthermore, Alaa determined that synaptic transmission is controlled by dynamic palmitoylation of PSD-95.

Alaa El-Din El-Husseini

In 2001, Alaa returned to UBC as assistant professor in the Department of Psychiatry and the Brain Research Centre. Alaa's exciting science and charismatic magnetism quickly helped fill his lab with a talented group of graduate students and postdoctoral fellows. He instilled in these junior colleagues his own blend of passion, confidence, and humility. At international meetings, Alaa and his team were conspicuous at poster sessions or social events in their unrestrained enthusiasm for science and zest for life. Alaa's spirited lab made a series of important discoveries elucidating mechanisms for synapse formation and receptor trafficking. One theme involved identification of an enzyme that palmitoylates specific neuronal proteins, including PSD-95 and huntingtin. They found that palmitoylation of huntingtin plays a key role in the degeneration of striatal neurons in Huntington's disease and suggested new approaches for treatment. His group also determined that PSD-95 conspires with neuroligin to define the balance between excitatory and inhibitory synapses.

Synapses and Genes, the Building Blocks of Life, Alaa El-Husseini [2004]

Alaa's creative energies and altruism pervaded his being. As a self-taught artist, Alaa developed a flair for oil painting. Large-scale abstract canvas paintings that filled his high rise Vancouver apartment reflected the order and symmetry he saw in neuroscience. Alaa would often kick-off his scientific seminars by proudly showing a slide of a recent masterpiece and use it to help the audience understand the inner workings of his mind. Alaa's contributions to the international community

reached far beyond his ground breaking research discoveries. As a luminary Arab expatriate, Alaa was a founding member of the Qatar Foundation, which was commissioned by her highness Sheikha Mozah Bint Nasser Al-Missned. Guided by the vision of Alaa and his colleagues, this Foundation promotes biomedical research and health initiatives throughout Qatar and the Arab world.

Through his science, service, and mentorship, Alaa leaves an indelible legacy. Those who knew Alaa will all remember his scientific vision, personal generosity, "can do" philosophy, and simple advice: "work smart (and *hard*)."

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