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Ethnobotanist Paul Alan Cox Unravels Medical Mysteries March 12

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DURHAM, N.H. - Paul Alan Cox, the ethnobotanist widely credited with discovering the link between high rates of neurodegenerative illness in Guam natives and a toxin they ingested in food, will speak about his medical detective work Thursday, March 12, 2009, at the University of New Hampshire at 1 p.m. in Kingsbury Hall Room S145. The talk is free and open to the public.

Cox made history - and controversy - in 2003, when he published a paper in the Proceedings of the National Academy of Science that linked the high rates of neurodegenerative diseases like Alzheimer's, Parkinsons, and amyotrophic lateral sclerosis (ALS, or Lou Gehrig's disease) in the native Chamorro people of Guam to the toxin BMAA, caused by a cyanobacteria. Others before Cox had theorized that the high incidences of these diseases was linked to the BMAA in cycads, palm-like trees whose seeds the Chamorro detoxified before making flour from their pulp. Cox linked the toxin to Pacific fruit bats, a delicacy to the Chamorros, which ate the cycad seeds then concentrated the neurotoxins.

Cox will relate his untangling of this mystery at the UNH talk. "There's no one who can tell the story like him, because it's his story," says James Haney, UNH professor of freshwater biology in the department of biological sciences. Haney has been working in collaboration with the ALS Clinic at Dartmouth-Hitchcock Medical Center and Cox's laboratory to determine whether there's a link between clusters of ALS patients and water quality in New Hampshire lakes.

"No one's ever shown that ALS is caused by BMAA, but physicians have found BMAA in brain tissue of people with ALS," says Haney. "There is a connection, but we don't know exactly what it is yet."

Cox spent three decades searching the rain forests of the Pacific Islands and Southeast Asia for new medicines, winning prizes and accolades for his discovery of the anti-AIDS drug candidate prostratin and for his efforts to preserve island rain forests. His current research at the Institute of Ethnomedicine in Jackson Hole, Wyo., where he is executive director, is focused on fighting and finding the causes of neurodegenerative illness. He has broadened his investigations of neurodegenerative disease and BMAA to include studies in other parts of the world, including North America.

Cox's talk is sponsored by the UNH Class of 1954 Academic Enrichment Fund and the department of biological sciences at UNH.

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UNH is the state's flagship public institution, enrolling 11,800 undergraduate and 2,400 graduate students.