Solving Scientific Mysteries

Nova Southeastern University research is achieving results to further science.

Nova Southeastern University's scientists are engaged in exciting interdisciplinary research projects to make discoveries and produce new knowledge in health care, biotechnology, life sciences, environment and social sciences. NSU faculty are using more than $76 million in externally provided funding to work on projects that advance the university's mission of research, academic excellence and public service. They are working on more than 205 basic, applied and clinical research projects to improve patient care, make new drug discoveries, reduce mental health disorders, and examine the forces that impact our oceans. NSU recently opened the $40-million Center for Excellence for Coral Reef Ecosystems Science Research Facility. Funded by the National Institute of Standards and Technology, America's largest coral reef research center is solely dedicated to coral reef ecosystem research.

Profiles

Chronic Fatigue Syndrome

Chronic fatigue syndrome/myalgic encephalomyelitis (CFS/ME) is a debilitating immune disorder that affects more than one million Americans. A majority of CFS/ME sufferers are women, who remain mostly untreated. The disease damages the patient's immune system and causes symptoms such as extreme fatigue unabated by sleep, faintness, widespread muscle and joint pain, etc. NSU's Institute for Neuro-Immune Medicine — led by NSU College of Osteopathic Medicine professor Nancy Klimas, M.D., one of the world's leading CFS/ME and Gulf War Illness (GWI) researchers — is studying these and other neuro-inflammatory disorders. The Institute uses the integration of research, training and clinical care to advance the needs of patients suffering from CFS/ME and GWI. By bringing together some of the best scientific minds in the world, the facility acts as both a think tank and a working institute for research, training new clinicians, and providing diagnostic and therapeutic clinical care.

Coral Reef Biodiversity

Scientists are asked frequently asked about which coral reefs are important in terms of biodiversity — the number of species that inhabit them. NSU Oceanographic Center professor James Darwin Thomas, Ph.D., is investigating small species of crustaceans that tell the evolutionary history of how the species impacted the reefs. He's currently organizing a team of scientists to investigate the Medang Lagoon off Papua New Guinea's north coast. This small lagoon is the most diverse reef system ever documented, and it’s in danger from impact caused by mankind. Thomas' research mission is timely because a multinational mining corporation has received permission to dump thousands of tons of mining waste in a river that drains into the lagoon. Thomas and his team of scientists will document certain groups of indicator species in the lagoon before the mining operation commences. Any adverse impacts from mining can then be measured.

Prescription Drug Abuse

Florida has been at the center of the nation’s prescription drug epidemic for the past decade, experiencing tremendous increases in prescription drug-related overdoses and mortality. NSU’s Center for Applied Research on Substance Use and Health: Dispartec is a national leader in confronting this alarming public health problem by investigating prescription drug abuse and diversion. Center Co-Directors Steven P. Kurtz, Ph.D., and Hilary L. Surratt, Ph.D., are currently conducting four large research projects to stem this crisis: 1) A national survey of law enforcement investigators that monitors the incidence of prescription drug diversion; 2) A study of more than 1,500 prescription drug abusers that tracks drug-related health consequences and sources of abused medications; 3) A project that examines the emerging black market in medications to treat HIV infection, and 4) A clinical trial testing the effectiveness of brief interventions to reduce prescription drug abuse among South Florida's young adults.

NSU College of Osteopathic Medicine professor Nancy Klimas, M.D., one of the world's leading chronic fatigue syndrome/myalgic encephalomyelitis (CFS/ME) and Gulf War Illness (GWI) researchers, examines a patient.