



Coastal Marine Biolabs Receives an Education Innovation Award From the National Science Foundation to Engage High School Students in the International Barcode of Life Project

VENTURA HARBOR, Calif., June 7, 2011 /PRNewswire-USNewswire/ -- Coastal Marine Biolabs (CMB) today announced an award from the National Science Foundation to launch the *Barcoding Life's Matrix Project*. Funded through the Innovative Technology Experiences for Students and Teachers program, the three-year project seeks to address science education reform agenda by enlisting the participation of high school students in building a reference DNA barcode library of fish and invertebrate species that inhabit the kelp forests of California's northern Channel Islands (sometimes called the *North American Galapagos* because they are home to over 150 endemic or unique species).

Over the last two years, CMB students representing 20 California cities and four states have helped biologists at the Channel Islands National Park (CINP) create the first DNA record of species diversity in any U.S. National Park. They have also generated and submitted reference DNA barcodes for marine indicator species monitored by CINP biologists, including rockfish, echinoderms, gastropods, and hydrocorals. The *Barcoding Life's Matrix Project* will broaden student engagement in these efforts through interdisciplinary residential experiences hosted at CMB's harbor-based biosciences lab, and a comprehensive professional development program for high school science teachers. Through these experiences, students will receive authorship for their generation and submission of DNA barcode data to the Barcode of Life Data Systems (BOLD), a public access workbench and data repository. In doing so, they join a global community of scientists in their efforts to create a digital genetic encyclopedia of Earth's estimated 10 million eukaryotic species. In addition to addressing basic issues in taxonomy research and accelerating the discovery of new species, a resource of this kind promises to be a valuable new tool to address a variety of important environmental problems, including protecting endangered species, controlling agricultural pests, stopping disease vectors, managing and sustaining our coastal marine resources, and monitoring ecosystem change through time.

The project also involves the creation of technology resources for educational audiences that integrate with BOLD. New tools to capture and manage specimen metadata, streamline the sequence editing process, and validate student-generated data are currently under development through an ongoing collaboration between CMB and the BOLD informatics team at the Biodiversity Institute of Ontario.

About DNA Barcoding and the International Barcode of Life Project (iBOL)

DNA barcoding is a digital identification system that uses a short segment of a mitochondrial reference gene to distinguish animal species. iBOL is a multinational alliance of scientists and institutions that have cataloged approximately 1.2 million DNA barcode records for approximately 100,000 species in BOLD. Formally launched in September 2010, iBOL seeks to expand the registry and assemble 5 million barcode records from 500,000 species by 2015.

About CMB

Based in Ventura, CA, CMB is a private educational organization that was founded by academic research scientists to address key recommendations for science education reform. CMB's life science curricula immerse high school students in active research that connects them to relevant, real-world issues that affect their everyday lives. To learn more, visit www.coastalmarinebiolabs.org.

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