

San Diego Center of Excellence in Diving

“Healthy Divers in Healthy Oceans”

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Background

- Human health and oceans are of increasing global importance
- There exists nowhere an academic center forming the bridge between diving medicine and marine science
- San Diego: critical mass of diving medicine specialists, marine researchers, manufacturers, divers, and expedient ocean access

San Diego...OCEAN!

UCSD Dept. Emergency Medicine

- 16 MDs Board-certified in undersea and hyperbaric medicine

UCSD Hyperbaric Chamber (1984-2013)

- 548 dive accident Pts seen; 568 Tx performed

UCSD Dive Clinic (3 faculty plus fellows)

- 288 divers/yr

Scripps Institution of Oceanography

- Facilities and Dive Program
- CMBB, CMBC

San Diego County Diver Death Committee (97 since 1969)

- 13 since 2008 revised committee established.

San Diego: DEMA, DUI, Scubapro, U.S. Navy, National University, Phoenix Holdings International, OxyHeal, Ocean Enterprises....



SDCED

- Unique and global,
- Research focused,
- Education oriented,
- Collaborative partnership,
- Integrating the expertise of the interdisciplinary diving physiology and medicine fields with the marine science and conservation communities to promote “*Healthy Divers in Healthy Oceans.*”



SDCED

Purpose:

To create knowledge and competencies in recreational, scientific, commercial, military and public safety diving through diving research, education, and ocean conservation.

Mission:

In support of “Healthy Divers in Healthy Oceans” SDCED aims to advance collaborative research, education and training throughout the world’s oceans for the benefit of all divers.

Vision:

To provide global leadership as a Center of Excellence with a research and education focus on emerging topics at the intersection of diving medicine and ocean health.

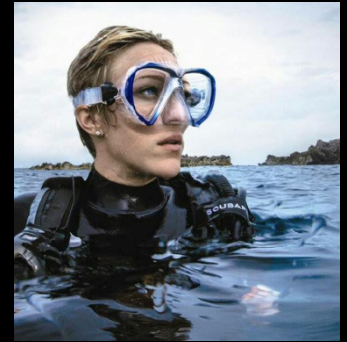
Goals

- To serve as an academic center of excellence to provide practical evidence-based information to the global diving communities (recreational, scientific, commercial, military, and public safety) through research, education, and training.
- Advance an international agenda to pursue cutting-edge, innovative research in diving physiology and medicine and ocean conservation, building a complimentary bridge between the diving medical and marine research communities.
- Promote ‘Healthy Divers in Healthy Oceans’ as a combinatorial effect towards improving diver health and fitness and the ocean environment they are diving in.

Strategic Planning

Convening of a strategic planning workshop with key opinion leaders and experts:

- diving physiology and medicine
- ocean health



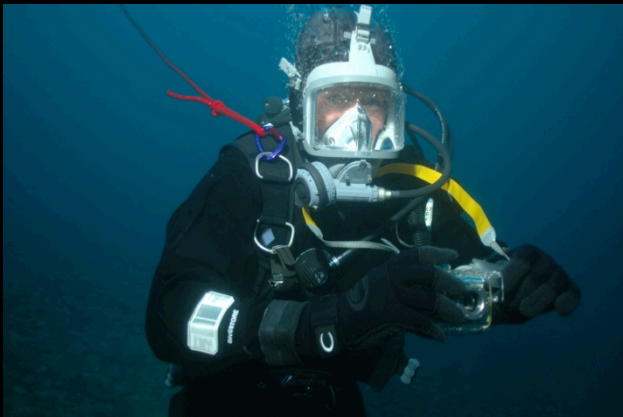
Output of collective deliberation is leveraged in establishing the prioritized direction for the next 3-5 years and the determination of strategic high-priority projects



Preliminary Interests



- Investigation of breath-hold diving physiology through comparative analyses of diving adaptations of marine mammals and birds and its application to human medicine;
- Diver protection: Evaluations of new thermal protection technologies and life support breathing equipment for work in extreme polar environments;



Preliminary Interests

- Human health research in further understanding mechanisms of severe DCS in indigenous diving fishermen of Ecuador's Galapagos Islands and the Honduran/Nicaraguan Miskito Coast;
- **Acute and chronic health effects of contaminated water diving by public safety divers;** and,
- Effects of changing water quality on diver health in tropical, temperate and polar regions;

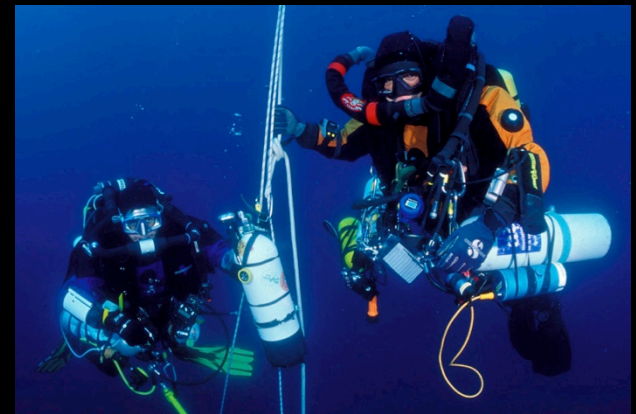


Citizen Science



Coordination of projects of numerous divers throughout San Diego and globally to monitor 'Healthy Divers in Healthy Oceans'

- Monitoring of marine protected areas;
- Water quality monitoring and impact on diver health;
- Public safety diver acute and long-term health surveillance;
- Thermal protection and diving equipment performance evaluations; and,
- **Rebreather database (CALiT2)**



UC San Diego

HEALTH SCIENCES

