

## AsMA and UHMS ... from Sea to Air to Space

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As a longtime member of both the Aerospace Medical Association (AsMA) and the Undersea & Hyperbaric Medical Society (UHMS), I have always enjoyed the challenges of human physiology and medicine across the “pressure spectrum from sea to air to space”. This includes the scope of preventive medicine and human performance aspects of caring for individuals working in those environments.

AsMA and UHMS have organizational paths that have intertwined over the decades. I wish to share with you an initiative the leadership of AsMA and UHMS have been thoughtfully, and methodically, examining regarding potential future interactions between these professional organizations.

The *Undersea Medical Society* (UMS) was initially formed in 1967 as a Constituent group of AsMA by a cadre primarily of U.S. Navy undersea medical physicians. Over time UMS expanded to include additional members who were not necessarily part of the aeromedical community and, subsequently, left AsMA to become an independent organization in 1974. With the ongoing advancement of clinical hyperbaric medicine in the 1970s and 1980s, UMS continued to grow and was renamed the *Undersea and Hyperbaric Medical Society* (UHMS) in 1986. A number of AsMA members have historically belonged to both organizations.

In 1998, AsMA and UHMS held a Joint Annual Scientific Meeting in Seattle which was truly a wonderful opportunity to engage in professional exchange. It was not until 2022 that AsMA and UHMS again combined forces for a Joint Annual Scientific Meeting upon the encouragement of members crossing both communities. Most meeting attendees in Reno were *not even trained or working 24 years prior* when the organizations met, so it was incumbent upon the Scientific Program Committee to develop program tracks specific to each organization's interests as well as areas of common interest. The program included a number of panels and sessions pertinent to members of both groups, such as extravehicular activities (EVA), new generation spacesuits, exploration atmospheres, decompression sickness and treatment, and a variety of other barophysiology topics. The Tuesday morning Reinartz Panel was entitled, “Overcoming Barriers on the Pressure Spectrum: From the Past to the Future.” I was honored



to host an outstanding panel with expertise across the barophysiology arena. The format consisted of brief formal presentations by panelists and a moderated discussion, and included; Dr. Jay Dean (Physiological barriers encountered in WWII aviation that drove advancements in decompression physiology and oxygen toxicity); Dr. Richard Moon (Physiological barriers of deep-sea commercial diving using data about oxygen toxicity and decompression to break depth records); Dr. Jonathan Clark (Physiological barriers of high-altitude parachute operations required solutions informed by both diving and aviation), and former NASA Astronaut Dr. Michael Gernhardt (Knowledge from diving decompression drove solutions for astronaut EVA protocols, and



commercial diving technology led to innovations for working in microgravity). The feedback received throughout the 2022 Annual Meeting and through post-meeting surveys was truly excellent and very complimentary of the combined meeting approach. A strong desire to establish further such meetings was conveyed. Subsequently, both organizations decided to hold the next Joint meeting in Atlanta in 2025, with a further decision by AsMA and UHMS to schedule combined meetings for the foreseeable future after 2025. What a wonderful opportunity for members of both organizations to share science, knowledge, and establish collegial connections.

As directed by the AsMA Executive Committee, our Executive Director (ED) Jeff Sventek has been actively engaging with the UHMS ED John Peters to address various aspects of enhanced collaboration and integration. Of note, both AsMA and UHMS are international non-profit organizations, maintain membership levels over 2000, and are similar in their financial profiles. The organizations currently have a shared services agreement whereby UHMS delivers CME accreditation and electronic poster capability to AsMA. The November 2023 AsMA Council was supportive of exploring further cooperation.

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The February 2024 Executive Committee meeting held in Texas included an additional day entirely dedicated to an AsMA/UHMS Collaboration Meeting, which included the in-

person participation of UHMS ED John Peters and President-Elect Dr. Owen O'Neill. The agenda included exploring issues such as combined services, operations, governance, policies and procedures, and joint membership. *Careful thought and consideration were given to identifying and maintaining the cultural and historic aspects of each organization.* Possible future interactions range the spectrum from expanded shared services, creation of a formal Alliance to share staff and other resources, to further levels of integration. A formal debrief and recommendations resulting from the Executive Committee discussions in February will be presented at the May Council meeting and in future correspondences.

During Astronaut-Physician Kjell Lindgren's greeting, sent from the International Space Station, at the beginning of the

2022 Reinartz Panel (discussed above), he stated to the audience, "Thank you for your incredible dedication to the health, safety, and performance of all humans that operate in the aviation, space, undersea, and hyperbaric environments. Without your professional expertise, I would not be speaking to you today from the International Space Station."

Dr. Lindgren's comments reinforced what colleagues holding membership in both AsMA and UHMS have known all along ... that we are indeed complementary professional organizations, with a historical connection, and with much overlap of scientific knowledge and technical challenges.

*We are optimistically, yet cautiously and thoughtfully, keeping an open-minded approach to see where future collaboration may lead us!*

*Keep 'em Flying...and Full Steam Ahead.*

