

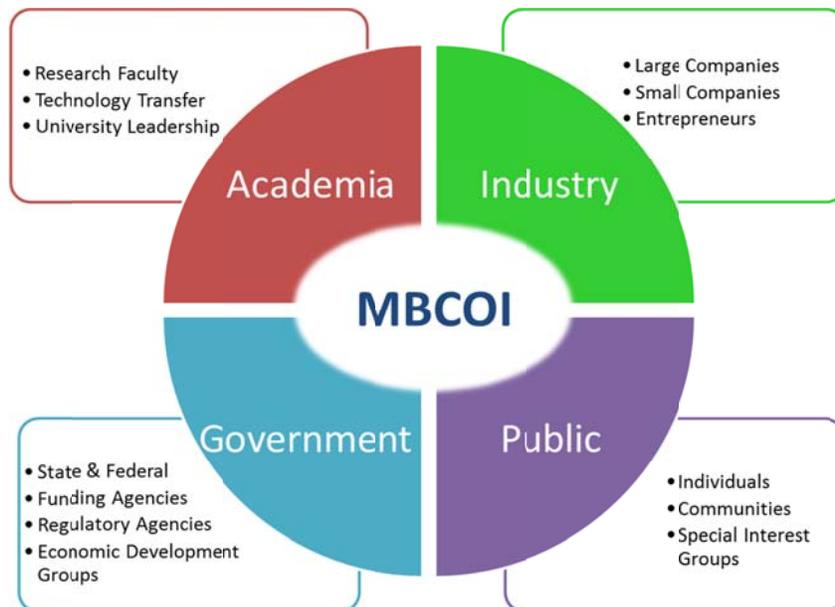
BACKGROUND

By 2030, the global population is expected to reach nine billion and will require 30% more water, 40% more energy, and 50% more food to survive ([Wharton report](#)). Recent advances in science and technology have spurred renewed interest in marine bio-resources as a sustainable, environmentally friendly means to address these global challenges ([Ritchie et al](#)).

Marine biotechnology, sometimes called blue biotechnology, can be described as the translation of basic marine science into products and services that impact living organisms for the benefit of society, the environment, or economic development. While some limit marine biotechnology to marine-based biochemicals, Marine Bio-Technologies Center of Innovation (MBCOI) takes a much broader view that includes diverse applications such as food, fuel, and diagnostics. Recently, the global market for marine biotechnologies was estimated to be as high as \$168 billion with significant areas for growth such as energy and aquaculture ([BioMarine 2013](#)).

INTRODUCTION

As a powerhouse in both marine science and biotechnology research, North Carolina is poised to become a global hub for marine biotechnology in the 21st century. The MBCOI was established in 2012 as an independent, non-profit 501(c)3 corporation to facilitate the translation of innovative marine-related discoveries into products and services to benefit North Carolina's economy. **By combining a regional focus with a global perspective, we strive to become the nexus for information, collaboration, and commercialization of marine biotechnologies among our stakeholders, both domestically and internationally.**



MBCOI serves as a central resource for academia to facilitate scientific collaborations, identify non-obvious commercial applications of ongoing research in adjacent fields, and establish academic-industry partnerships that can lead to commercial development of inventions and technologies. For industry, we provide small companies with connections or global reach to maximize value for their promising or cutting-edge technologies

or products. For large companies we are a trusted partner and source of expertise, new technologies and products needed to maintain healthy pipelines. In the government sector, we drive the promotion North Carolina's strengths in marine science to maximize our economic wellbeing through proper and responsible management of our marine bio-resources. Finally, MBCOI serves as the go-to resource for information on marine science in North Carolina and its partners.

MARINE ASSETS INVENTORY

MBCOI is creating a comprehensive inventory of marine assets, intellectual capital (e.g. faculty expertise, current areas of research) and intellectual property (e.g. know-how, trade secrets, invention disclosures, patents), from North Carolina and beyond as a tool to match researchers and resources with industry needs, identify technologies with the greatest potential for commercialization, and help build marine biotechnology related businesses. MBCOI's regional focus on NC allows us to leverage its marine science expertise to solve global issues.

TECHNOLOGY TRANSLATION

Translational research is the process of turning basic science discoveries and ideas into real products and services. Depending on the type of product, the process can be very long, complex and expensive and may require the input of a large team with highly specialized expertise in many different facets of the process. The MBCOI mission is to use its expertise and network to facilitate these processes by collecting, synthesizing, and translating technologies in an effort to make connections between individual researchers, institutions and industry partners that would otherwise be missed.

Key to our success is the establishment of formal and informal agreements with stakeholders and institutions to enhance the commercialization of marine biotechnologies through education, market research, and business development activities. Such agreements would allow MBCOI to better match the needs of its industry partners with stakeholders' assets and intellectual capital. Similarly, MBCOI is also seeking to provide our stakeholder communities with access to new tools and research capabilities which would otherwise be unavailable to them on an individual basis. By acting as a central agent with industry partners, our stakeholders will be able to conduct innovative research and development, be more competitive for funding and enable new academic or industry collaborations.

MARKETING

Significant progress has been made in branding MBCOI and the preeminence of marine science research in North Carolina regionally, nationally, and internationally through speaking engagements, exhibitor showcases, meetings, websites, and newsletters. As a founding member of the BioMarine International Clusters Association (BICA), MBCOI will further increase its network of stakeholders and industry as well as serve as a conduit for the global exchange of ideas, perspectives, and collaboration on a range of projects and programs stemming from North Carolina's efforts. Going forward, MBCOI will target key meetings for maximal visibility such as BIO 2014, BioMarine 2014 in Portugal, and work with North Carolina stakeholders to make BioMarine 2015 in Wilmington, NC a showcase for the state's marine biotechnology.

GRANTS AND CONTRACTS

There is a clear need to identify funding opportunities to support researchers. As an umbrella organization for all the state of North Carolina's marine-focused researchers, MBCOI is uniquely positioned to help identify funding opportunities appropriate for faculty interests as listed in the Marine Assets Inventory including partnerships and multidisciplinary collaborations. More importantly, MBCOI will proactively seek to match faculty interests with industry partners' needs and promote joint submissions.

ABOUT MBCOI

The MBCOI team includes staff, advisors and consultants that combine scientific expertise in a broad range of life science research, with experience in commercial operations in large and small companies in biotechnology and other life science industry sectors. Thus, we have the ability and credibility to converse with researchers about technical details, whilst being able to see broader applications for technology or inventions into adjacent industry sectors.

Chief Executive Officer: Deborah A. Mosca, Ph.D.

With more than 33 years of experience in biotech research and commercial organizations, including microbiology and marine natural products, Dr. Mosca (Deb) has led numerous multi-disciplinary teams focused on preclinical development. As CEO, Deb oversees all MBCOI efforts from headquarters in Wilmington. dmosca@mbcoi.net

Senior Director Development: Royston E. Carter, Ph.D.

Dr. Carter (Roy) has over 25 years of diverse life science R&D and technology commercialization experience, including development of advanced molecular genetics and cell biology technologies used in cancer biology, agricultural biotechnology and bio-detection. He oversees two regional offices in Morehead City and RTP. rcarter@mbcoi.net

Program Coordinator/Executive Office Manager: Michelle P. Miller

Ms. Miller serves as the Project Coordinator and Executive Office Manager and is based at headquarters in Wilmington. She has 25 years of experience in the corporate sector, with the past 12 years in the pharmaceutical industry. mmiller@mbcoi.net

Headquartered within the Center for Marine Science (CMS) building at the CREST Research on the UNCW campus Wilmington, North Carolina, MBCOI has established two regional offices to better serve stakeholders along the coast as well as in areas more central to the state. The Morehead City office is located in the Center for Marine Sciences and Technology (CMAST) through the generous support of NC State University. The second regional office is located at First Flight Venture Center (FFVC), a technology incubator located in Research Triangle Park, providing easy access to main campuses, biotechnology, and services located in RTP.

CONTACT INFORMATION

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