

Barbara D. Boyan, Ph.D.

Alice T. and William H. Goodwin Jr. Dean, College of Engineering at VCU College of Engineering
Engineering West Hall, Room 331A, Richmond, VA, US

Dean Boyan specializes in cell and tissue engineering

Biography

Barbara D. Boyan, Ph.D., the Alice T. and William H. Goodwin Jr. Dean of VCU's College of Engineering, is a nationally acclaimed researcher and entrepreneur. Her laboratory is focused on research in all aspects of bone and cartilage biology, from basic science studies on steroid hormone signaling to the use of cells for regenerative medicine strategies, focusing on how cells interact with biomaterial surfaces. Her work in the bone and cartilage field began with studies to understand the underlying mechanisms of mineralized tissue formation. Dean Boyan's recent research developments include novel technologies for controlling nanotexture on metal and polymer surfaces in order to study cell responses, as well as microCT imaging technologies using a contrast agent that specifically targets the vasculature.

An industry leader and proponent of improving quality of life around the world, Dean Boyan is the co-founder of four companies:

SpherIngenics, Inc., (cell-based therapies) as Director and Chief Scientific Officer

Orthonics, Inc., (medical devices) as Chief Scientific Officer

OsteoBiologics, Inc., (tissue engineered medical products) as Chairman and CEO, Board of Directors

Biomedical Development Corporation, (innovative medical technologies) Chief Scientific Officer

Also serving on the Board of Directors for six other companies, Dean Boyan's influence has helped shape many scientific advancements. These companies are:

Carticept Medical, Inc., (innovative injection devices) Independent Director, Board of Directors, and Chief Scientific Officer

Cartiva, Inc. (Cartilage repair technologies) Independent Director, Board of Directors, and Chief Scientific Officer

Commonwealth Center for Advanced Logistics Systems (CCALS), Chair of the Board

IsoTis, Inc., (Bone graft material) Independent Director, Board of Directors, and Chief Scientific Officer

IsoTis SA, (Bone graft material) Independent Director, Board of Directors

ArthroCare, Inc., (Medical devices) Independent Director, Board of Directors

She was previously associate dean for research and innovation at the Georgia Institute of Technology's College of Engineering. Dean Boyan received her B.A., M.A. and Ph.D. while studying biology at Rice University, and holds many scholarly and national awards. In 2012, she was elected to the National Academy of Engineering. She is an active proponent of collaboration and interdisciplinary studies within the university.

Industry Expertise

Education/Learning, Research, Medical Devices

Areas of Expertise

Cell and Tissue Engineering, Response of Cells to Biomaterials, Mechanisms of Action of Hormones and Growth Factors in Cartilage and Bone, Normal and Pathological Calcification, Stem Cell Delivery Technologies

Affiliations

National Academy of Engineering (Member), American Association for the Advancement of Science (Fellow), American Institute for Mechanical and Biological Engineering (Fellow), International Team for Implantology (Fellow), American Academy of Orthopaedic Surgeons (Member)

Education

Rice University

Ph.D. Comparative Biochemistry and Physiology

Rice University

M.A. Comparative Biochemistry and Physiology

Rice University

B.A. Biology

Accomplishments

Rice University's Distinguished Bioengineering Alumna Award for 2017

The award recognizes Rice alumni whose scholarship, mentorship and innovations have made significant contributions to their professions and communities.

Fellow, National Academy of Inventors

2016

Fellow, American Institute of Mechanical and Biological Engineering

2006

Atlanta Woman of the Year (Science)

2005

The Birnberg Research Award, Columbia University School of Dental and Oral Surgery

2003

Fellow, American Association for the Advancement of Science

2002

Society for Biomaterials Clemson Award for Contributions to the Literature
2001

Albert-Hoffa-Prize (with Drs CH Lohmann, Z Schwartz, Y Liu, H Guerkov, B Simon, BD Boyan), Die Norddeutsche Orthop denvereinigung e.V (North German Orthopaedic Society) Research Prize
2001

American Academy of Periodontology, R. Earl Robinson Regeneration Award (with Drs Z Schwartz, DD Dean, CH Lohmann, D Andreacchio, TC Weesner, DL Carnes, DL Cochran)
October 2001

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