



Alan J. Russell, PhD

Director, McGowan Institute for Regenerative Medicine

Dr. Alan Russell (Ph.D. in Biological Chemistry, 1987, Imperial College of Science and Technology, University of London) is a Distinguished University Professor of Surgery and the Founding Director of the McGowan Institute for Regenerative Medicine at the University of Pittsburgh. Further, he holds positions as the Executive Director of the Pittsburgh Tissue Engineering Initiative, Inc., as the Director of the National Tissue Engineering Center, as well as Professor in the Rehabilitation Science and Technology Department, Professor in the Bioengineering Department, and Professor in the Chemical Engineering Department. In addition to his appointments at the University, Dr. Russell consults for UPMC's (University of Pittsburgh Medical Center) International and Commercial Services Division to drive technology and

science-based synergies and partnerships. He has founded three biotechnology companies; ICX Agentase LLC, NanoSembly LLC, and O²Cyte LLC, and is also the Founding President of the 2,500-member Tissue Engineering and Regenerative Medicine International Society.

Within the scientific community, Dr. Russell currently sits on 25 advisory boards. Since the outset of his career, he has received numerous prestigious awards for his contributions to research, teaching and public service. These awards include R&D 100 Award – 2000 (*R&D Magazine*), three Carnegie Science Center Awards for Excellence – 2000 to 2006, sixteen consecutive appearances in *Who's Who in Science and Engineering* – 1992 through present, the Gilbreth lectureship from the National Academy of Engineering – 2004, and the Cockcroft Rutherford lectureship from the University of Manchester – 2007, the Outstanding Alumnus Award from the University of Manchester – 2008, and #32 in *Rolling Stone's* "Top 100 People who will change America" – 2009.

For the last 15 years, the Russell laboratory has been discovering what can be achieved by exploiting the rich interface of chemistry, biology and materials. Dr. Russell's work has impacted fields as diverse as chemical and polymer synthesis to tissue engineering and homeland defense. The work began with a detailed study of the structure-function-environment relationship of biological molecules in extreme environments. This work led to an exploration of the use of enzymes in supercritical and ionic fluids. Dr. Russell has pioneered how to make polymers from enzymes and how to incorporate enzymes into bulk polymers. In a series of discoveries Dr. Russell's laboratory has found how to meld the synthetic and biological worlds.

In 2008, Dr. Russell was appointed co-director of the Armed Forces Institute for Regenerative Medicine (AFIRM), an \$85 million program to use the science of regenerative medicine to develop new treatments for wounded soldiers. AFIRM is composed of two multi-institutional consortia, one lead by the McGowan Institute for Regenerative Medicine, University of Pittsburgh and the Wake Forest Institute for Regenerative Medicine, Wake Forest University. The other is led by Rutgers University and the Cleveland Clinic. The five areas of focus for the project are Compartment Syndrome, Functional Limb and Digit, Craniofacial Reconstruction, Wound Healing and Burn Repair.

To date, Dr. Russell has contributed significantly to the interface between the fields of chemistry, biology, and material science. He has published 135 articles in refereed journals, one book, and 10 book chapters. Dr. Russell holds 14 patents, with 23 additional pending patents. Dr. Russell has given more than 250 national and international invited lectures.

<http://www.termis.org/eu2010/keynote.php>