

## A Record of "World Firsts"

Achievements of WFIRM scientists include engineering replacement tissues and organs in all four categories: flat structures, tubular tissue and hollow and solid organs.

- ▶ First to engineer functional experimental solid organs (mini-livers and penile erectile tissue) using a strategy to recycle donor organs, with potential applications to other solid organs, such as the kidney and pancreas. (2010)
- ▶ Selected to co-lead the Armed Forces Institute of Regenerative Medicine, an \$85 million, federally funded effort to apply regenerative medicine to battlefield injuries. (2008)
- ▶ Identified and characterized a new source of stem cells derived from amniotic fluid and placenta, which show promise for the treatment of many diseases. (2007)
- ▶ Founded the Regenerative Medicine Foundation, a non-profit dedicated to the advancement of regenerative medicine treatments and therapies. (2005)
- ▶ Led the first team to engineer tubular organs (urine conduits) and implant them in patients. (2004)
- ▶ First to create a functional solid organ experimentally, a miniature kidney that secretes urine. (2003)
- ▶ First to engineer functional blood vessels that were implanted pre-clinically and survived long term. (2001)
- ▶ First to create a laboratory-grown organ — engineered bladder tissue (a hollow organ) that was successfully implanted in patients. (1999)
- ▶ First to use biomaterials alone, without the addition of cells, in patients for the regeneration of tissues. (1996)
- ▶ Developed the first tissue-engineered product to go to the U.S. Food and Drug Administration for approval for clinical applications, consisting of cells and biomaterials for injectable therapy. (1995)
- ▶ First to demonstrate that complex tissue structures can be engineered using cells. (1994)

## The Industry Pathways Program

Wake Forest Institute for  
Regenerative Medicine



The Wake Forest Institute for Regenerative Medicine (WFIRM) is a leader in translating scientific discovery into clinical therapies.

Physicians and scientists at WFIRM were the first in the world to engineer laboratory-grown organs that were successfully implanted into humans. Today, this interdisciplinary team is working to engineer more than 30 different replacement tissues and organs and to develop healing cell therapies—all with the goal of restoring function and potentially curing disease, rather than merely treating symptoms.



Through its **Industry Pathways Program**, Wake Forest Institute for Regenerative Medicine provides partnering opportunities to biotech and pharmaceutical companies to develop, support and commercialize novel regenerative medicine technologies.

**The Institute is internationally recognized for its cutting-edge translational programs in:**

- ▶ Biomaterials
- ▶ Enabling technologies
- ▶ Organogenesis
- ▶ Stem cell therapies
- ▶ Tissue engineering

**Benefits of the Industry Pathways Program include:**

- ▶ Membership on a rotating Advisory Council
- ▶ Participation in WFIRM-sponsored workshops, conferences and seminars
- ▶ Access to students and postdocs for internships and recruiting
- ▶ Early knowledge of WFIRM research



**Additional partnership options include:**

- ▶ Pre-clinical studies
- ▶ Clinical studies
- ▶ GMP Manufacturing
- ▶ Technology licensing
- ▶ Sponsored research agreement
- ▶ Equipment support-donations
- ▶ Faculty sponsorship
- ▶ Fellowships for students and post-docs

To learn how your company can benefit from a partnership with the Wake Forest Institute for Regenerative Medicine, contact us at 336-713-7293 or [regenmed@wakehealth.edu](mailto:regenmed@wakehealth.edu)