

## MILESTONES

Since 1996, the Bedford Research Foundation's cutting edge research has led to the development of several "firsts" in the fields of reproductive biology, infectious diseases, stem cell and other biomedical research.

**1996** - BRF scientists begin the first project to understand the difference between semen and blood transmission of HIV/AIDS

**1997** - The first infertility program for couples with infectious diseases, The Special Program of Assisted Reproduction (SPAR), is established

**1998** - The first baby conceived through the Foundation's Special Program of Assisted Reproduction, Baby Ryan, is born

**2000** - The Foundation establishes the country's first and only human egg donor program for stem cell research

**2000** - BRF scientists discover that HIV in semen is separate and unique from HIV in blood

**2001** - BRF scientists author first report on human parthenotes and human nuclear transplants

**2005** - Foundation scientists discover that reverse transcriptase activity is important to embryonic stem cell division

**2007** - Foundation scientists describe the first derivation of mouse parthenote stem cells without a feeder layer, which can be an impediment to applying the research to humans

**2007** - SPAR program presentation designated "Prize Paper" by American Society for Reproductive Medicine

**2008** - Using state-of-the-art molecular biology techniques, Foundation scientists develop the first comprehensive library of bacteria in semen

**2009** - BRF scientists discover that early human embryos may have their own circadian rhythm and supporting these rhythms in culture might be important for stem cell growth

**2010** - BRF scientists discover that early human embryos undergo cell growth and division by unique mechanisms which may be important to stem cell development

**2011** - BRF scientists discover that semen specimens from men with cancer have unique biomarkers to both diagnose and stage prostate cancer — study is ongoing

**2012** - BRF scientists develop methods for time-lapse videomicrography of the first five days of development of mouse embryos to further study the possible role of circadian rhythms in development

**2013** - Bedford Research spins off post-vasectomy testing as a new fee-for-service clinical assay that is far simpler for both the surgeon and the patient. Clinical testing is an important part of BRF funding for research overhead

**2014** - Number of SPAR babies hits 200 mark

**2014** - BRF scientists discover cytomegalovirus in semen is highly variable and not accurately predicted by blood tests

**2015** - Foundation moves to dedicated research facility in Bedford, MA

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