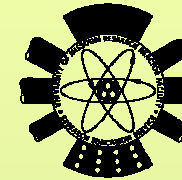


University of Missouri Research Reactor Center

Building on the Past, Investing in the Future

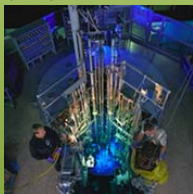


—Selected MURR Milestones—

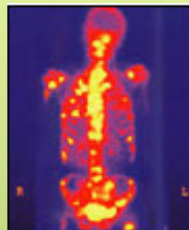


1959: University President Elmer Ellis proposes a research reactor, understanding that the many fields of research to benefit from nuclear science "are a part of the University of Missouri's educational responsibilities to our youth and to all our citizens."

1966: MURR goes online, begins operating at 5 megawatts (MW) in 1967



1976: Ir-192 first produced at MURR for fighting breast cancer. Ground-breaking cancer research continues today



Rob Hill photo

1986: The first experiments are performed that lead to developing Quadramet® and TheraSphere®, helping cancer victims in the fight against bone and liver cancer

1997: FDA approves the cancer fighting radiopharmaceuticals Quadramet® Samarium-153 EDTMP (for bone cancer pain) and Yttrium-90 TheraSpheres® (for treating liver cancer), developed at the University in corporate collaborations

1999: MU founds Radiopharmaceutical Sciences Institute, enhancing collaborative efforts among MU and MURR faculty

1980: First Small Angle Neutron Scattering (SANS) spectrometer in the US is installed, one of many unique instruments designed and fabricated for cutting edge research at MURR

1974: MURR begins operating at 10 MW, making it the highest powered US university reactor

1970: MURR scientist Dr. George Leddicotte gives the first courtroom testimony on murder trial evidence using Neutron Activation Analysis. Verdict: **Guilty**



2000--2007: Systematic upgrades, renovation and renewal to MURR facilities and instrumentation in preparation for the next 20 years of licensed operation

2002: 6,000 sq ft building addition opens way for expansion into cGMP scale-up of isotopes

2006: MURR submits 20-year license extension



2006: Groundbreaking begins on 25,000 sq ft addition to house laboratories, classrooms, offices and a cyclotron to advance interdisciplinary research, education and treatment of patients

2026: Additional license extension OR decommissioning

20-yr license extension

40-yr reactor operating license period

NRC estimates 2-3 years for relicensing process, during which **MURR** operates as normal