



Vital Legacy of BER Medical Sciences

50-Year Commitment to Improved

1929 1930 1940 1946 1950 1951 1952 1953 1958

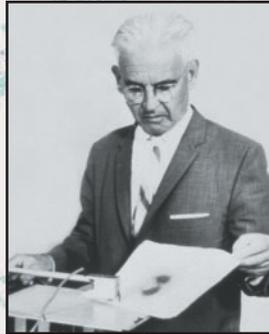
Ernest O. Lawrence invents cyclotron

At the University of California's Radiation Laboratory in Berkeley (later to become Lawrence Berkeley National Laboratory), the cyclotron will soon produce the first medically useful radionuclides (iodine-131, thallium-201, technetium-99m, carbon-14, and gallium-67). For this invention, Lawrence will receive the Nobel Prize in Physics in 1939.



First delivery of a medical radionuclide to a hospital

Reactor-produced radionuclides from Oak Ridge now become available for medical research. Eugene P. Wigner (in dark suit), director of BER research and development at Oak Ridge, delivers lead-lined container of carbon-14 to Barnard Free Skin and Cancer Hospital in St. Louis. Wigner will receive the Nobel Prize in 1963 for his research on the structure of the atom and its nucleus.



Benedict Cassen invents rectilinear scanner

Cassen and other BER scientists at UCLA build a scanner that provides images of a thyroid gland based on distribution of an iodine radiotracer, the start of imaging in nuclear medicine.



Hal Anger invents gamma camera

In Berkeley, California, Anger and his BER colleagues introduce a revolutionary new technique for radionuclide imaging. The gamma camera will become the "workhorse" of nuclear medicine for the next 50 years.

Birth of positron imaging

Gordon Brownell at MIT constructs the first detector device to exploit positron-electron annihilation as an imaging tool, creating a precursor of future PET scanners.



Technetium-99m generator invented

BER scientists at Brookhaven (Walter Tucker, Powell Richards, and colleagues) invent a generator system that will make Tc-99m the most widely used radionuclide in hospitals worldwide for millions of nuclear medicine patients each year.