

Twenty centuries ago the city of Paris was established on a site where small islands facilitate the crossing of the Seine River. Between the 12th and 14th centuries, the Cathedral of Notre Dame was built on one of them. During this period, a very active university, founded by Robert de Sorbon in 1227, developed on the left bank of the river, in an area called **B** because of the language spoken by the erudite of the period - the Latin Quarter.

This area was to become the cradle of radioactivity where even today numerous institutions of major scientific importance are to be found.

The **l**Institut de France[®], of which the French Academy of Sciences (established in 1666) is a part, publishes all scientific advances in its weekly Minutes (**l**comptes rendus[®]).

In 1881 Pierre Curie and his brother Jacques presented their discovery of quartz piezo-electricity. This discovery led Pierre to invent a very sensitive electrometer that proved to be critical to the isolation of polonium and of radium.

The Physics Laboratory at the Museum of Natural History is where, for three generations, Becquerel had been studying the fluorescence of uranium. On Sunday, March 2, 1898, Henri Becquerel discovered **l**uranic rays[®], the natural radioactivity of uranium.

The Paris School of Physics and Chemistry was founded in 1882; Pierre Curie taught physics there. Henri Becquerel recommended Marie Sklodowska, a Polish graduate in both physics and chemistry, to Curie (who married her in 1895) as an assistant. They published the discovery of polonium on July 18th and radium on December 26, 1898.

These three institutions define what the author calls the **l**triangle of radioactivity[®] where other major related scientific establishments are also located.

The Sorbonne University Faculty of Sciences was the first institution of higher education in France to employ a woman professor: Marie Curie succeeded her husband as professor of physics there after his accidental death in 1906.

At the **l**Collège de France[®] (founded in 1530) Irène Curie, their daughter, with her husband, Frédéric Joliot, published the discovery of artificial radioactivity in December, 1934.

At the **l**Institut du Radium[®], established in 1909, Marie Curie devoted herself to the study of radioactivity until her death from aplastic anemia in 1934. The Foundation Curie, for several decades the major comprehensive cancer treatment center in France, was established there in 1921.

The contributions of the Curie family are not limited to the strictly academic domain. Irène Joliot-Curie became the first woman member of the French Cabinet when she was appointed Under-Secretary for Science (1936). Frédéric Joliot-Curie served as the first president of the French Atomic Energy Commission (1946-1950).

The author describes the legacy - both civilian and military - left by the French scientists instrumental in the development of radioactivity. A radiation oncologist, he outlines how places where radium needles and tubes were found early in this century have become the core of the French cancer treatment network.

Educational Objectives:

1. Radiation Dosimetry
 2. Brachytherapy Technique
 3. Cancer Centers
- History of Radioactivity