

Etienne Lasfargues, D.V.M.
Emeritus Member
AACR Member Since 1959

There is not really much to say about my career in Cancer Research. Its high point came in 1958 when I joined the Microbiology Department of Columbia University Medical School. Our project was to study the mammary tumors that developed in mice following their infection with the “Bittner virus”. The rationale was that if a virus is really responsible for mouse mammary tumors, then a comparable etiology might be expected for human breast cancer. All that remained to do was therefore to grow human tumor cells *in vitro*, isolate the hypothetical virus and make a “vaccine” according to the current procedures of biological sciences.

Our first problem arose when unlike the mouse experience, human breast tumor cells did not migrate spontaneously out of *in vitro* explants. Those cells were encased in a thick matrix of fibrous tissues and fat that totally opposed all migratory growth. This was solved in collaboration with the Biochemistry Department who developed a highly purified, non-toxic collagenase. Following treatment with that enzyme the breast explants released the tumor cells that spilled and expanded forming clear epithelial monolayers.

The next disappointment came from the complete absence of a budding virus. On the assumption that a virus might disappear after infecting a cell, hundreds of human breast tumors supplied by two local hospitals were set in culture. Several cell lines resulted from that effort. The first one ever obtained was BT20 followed by several others that are now available for research. However, no budding virus comparable to that of the mouse was found.

This was a bitter disappointment after years of hard work and hopes. The isolated human cells could nevertheless be experimentally infected with the mouse virus that clearly budded in the same way from their peripheral membrane. This observation was therefore considered evidence that human breast cancer could not be of viral origin.

Hoping this short story will be of some help to you and perhaps to young colleagues who happen to hear about it.