Commentary on “Radioactive Iodine: A Living History”

TO THE EDITOR: An article was recently published in Thyroid to commemorate the discovery and use of radioiodine for the management of patients with thyroid disease (1). Although “Radioactive Iodine: A Living History” is overall an excellent review, there are some errors of fact in the historical record that we would like to correct. The reason for these errors is unclear, as is the reason the editors of the journal did not feel the need to correct them or provide an erratum. When selling great art, it is important to know the provenance of that art. Ideally, you want a paper trail them or provide an erratum. When selling great art, it is important to know the provenance of that art. Ideally, you want a paper trail from the artist to the present owner. In medicine, that provenance is normally provided by a series of published papers available on search engines such as PubMed. However, the attestation of a particular idea may not be fully provided in scientific papers alone. Thus, to identify the provenance of radioiodine and ensure the correct attestation of ideas, it may be necessary to look at sources other than just published papers. We now have access to primary-source data are consulted, it is evident that the article contains several factual errors, particularly in the attestation of the genesis and implementation of the use of radioiodine. In this letter, we aim to identify and correct these errors.

The first use of $^{131}$I to treat hyperthyroidism (Graves disease) was on March 31, 1941, not in January 1941. In honor of this first radioiodine therapy, we now celebrate Saul Hertz World Theranostics Day on March 31 (2).

On Nov. 12, 1936, Karl Compton, president of the Massachusetts Institute of Technology, presented a guest lecture entitled, “What Physics Can Do for Biology and Medicine,” as part of a weekly luncheon lecture series at the Massachusetts General Hospital. At the end of the lecture, Saul Hertz solely conceived and spontaneously asked the seminal question “Could iodine be made radioactive artificially?” Compton was uncertain and said he would look into it. He wrote to Hertz on December 15, 1936, apologizing for the delayed response and replying that “iodine can be made artificially radioactive.” In fact, Enrico Fermi had produced $^{129}$I in 1934. Letters between Hertz and Compton make it clear that the idea of using radioactive isotopes to study metabolism came from Hertz (2–5). The fact that it was solely Hertz who conceived and asked the question was confirmed by James Means, chief of medicine at the Massachusetts General Hospital, in a letter to the Markle Foundation (Fig. 3 in (3)) in which he stated “… when it became apparent that there might be radioactive isotopes of iodine, it at once occurred to Hertz that we might make use of them to solve a problem we were already working on.”

The summary at the beginning of the article in Thyroid states, “In 1936, Karl Compton … in a lecture attended by Massachusetts General Hospital physicians, suggested that artificially radioactive isotopes might be useful for studying metabolism.” (1). On page 2, it is stated that Robley Evans suggested discussing “artificially radioactive isotopes” and their potential for studying metabolism. We think it highly unlikely that either Evans or Compton, who were physicists, made that suggestion. This idea actually was conceived by Hertz.

The Thyroid article erroneously states, “Hertz and Evans demonstrated uptake of iodine in rabbit thyroids …” (1). However, the evidence supports that it was Hertz and Roberts who demonstrated uptake of iodine in rabbit thyroids (4,5). Actually, Evans, who was chief of medical physics at the Massachusetts Institute of Technology, never participated in any of the studies, according to a letter by Arthur Roberts to John Stanbury in 1991 (6). However, Evans demanded credit (i.e., as a coauthor) because of his supervisory position.

REFERENCES
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4. Fahey FH, Grant FD, Thrall JH. Saul Hertz, MD, and the birth of radionuclide ther-

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