

**MATERIALS LICENSE**  
SUPPLEMENTARY SHEET

License number

24-00496-06

Docket or Reference number

030-02277

Amendment No. 53

V.A. Medical Center  
4801 Linwood Boulevard  
Kansas City, MO 64128

In accordance with letter dated April 10, 1985, License Number 24-00496-06 is amended as follows:

Items 6., 7., 8. and 9. are amended to add:

6. Byproduct, source,  
and/or special nuclear  
material

7. Chemical and/or  
physical form

8. Maximum amount that  
licensee may possess  
at any one time  
under this license

I.I. Cesium-137

I.I. Seeds that have been  
manufactured, labeled,  
packaged and distributed  
in accordance with a  
specific license issued  
pursuant to Section 32.74  
of 10 CFR Part 32 or a  
specific license issued to  
the manufacturer by an  
Agreement State pursuant to  
equivalent State regulations

I.I. 500 millicuries

9. Authorized Use

I.I. Interstitial treatment of cancer.

Conditions 12., 20. and 23. are amended to read:

12. Licensed material listed in Item 6 above is authorized for use by, or under the supervision of, the following individual(s) for the materials and uses indicated:

James W. Hamilton, Ph.D.

Items G. through A., EE. and FF.  
for non-human use

Raul Sostmann, M.D.

Groups I, II and III  
In vitro studies  
Xenon-133  
Americium-241 anatomical marker  
Research studies in humans as  
approved by a RDRC

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Luzviminda F. Sicat, M.D.

Groups I, II and III

In vitro studies

Iodine-131 for treatment of  
hyperthyroidism, cardiac  
dysfunction and thyroid carcinoma  
Americium-241 anatomical marker  
Research studies in humans as  
approved by a RDRC

Tatsuo Sato, M.D.

Licensed material of the types,  
quantities and forms specified  
in Sections 35.31(a) of 10 CFR 35  
and 31.11(a) of 10 CFR 31 to be  
used in accordance with the  
provisions of paragraphs (a) and  
(c) of Section 35.31, 10 CFR 35  
and paragraphs (a), (c) and (d)  
of Section 31.11, 10 CFR 31

K. K. Hsiao Fang Yen, M.D.

Groups I and II

In vitro studies

Iodine-131 as iodide for treatment  
of hyperthyroidism and cardiac  
dysfunction  
Xenon-133  
Americium-241 anatomical marker  
Research studies in humans as  
approved by a RDRC

Jayaprakasarao Konijeti, M.D.

Groups I and II

Xenon-133

In vitro studies

Iodine-131 as iodide for treatment  
of hyperthyroidism, cardiac  
dysfunction and thyroid carcinoma  
Phosphorus-32 as soluble phosphate  
for treatment of polycythemia  
vera, leukemia and bone metastases  
Americium-241 anatomical marker  
Research studies in humans as  
approved by a RDRC

Carlos A. Dujovne, M.D.

Use of carbon-14 for tracer studies  
in humans as approved by a RDRC

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Eashwer K. Reddy, M.D.

Iodine-125 seeds for interstitial  
treatment of cancer  
Iridium-192 seeds encased in nylon  
ribbons for interstitial treatment  
of cancer  
Cesium-137 seed for interstitial  
treatment of cancer

Carroll D. Hampleman

Cesium-137 for instrument  
calibration

Lawrence R. Bigongiari, M.D.

Groups I, II and III  
In vitro studies  
Xenon-133  
Iodine-131 as iodide for treatment  
of hyperthyroidism and cardiac  
dysfunction  
Americium-241 anatomical marker  
Research studies in humans as  
approved by a RDRC

Praharaju G. Shankar Giri, M.D.

Iodine-125 seeds and Iridium-192  
seeds in nylon ribbons for  
interstitial treatment of cancer

William C. Jensen, M.D.

Groups I, II and III  
In vitro studies  
Xenon-133  
Iodine-131 as iodide for treatment  
of hyperthyroidism and cardiac  
dysfunction  
Phosphorus-32 as soluble phosphate  
for treatment of polycythemia  
vera, leukemia and bone metastases  
Americium-241 anatomical marker  
Research studies in humans as  
approved by a RDRC

Joe R. Kimmel, M.D., Ph.D.

Subitems G. through Z., EE. and FF.  
for non-human use

20. Licensed material listed in Subitems A. through D., inclusive, and in Subitems GG. and HH. shall be used in accordance with the provisions of Section 35.14(b), (c), (e) and (f) of Title 10, Code of Federal Regulations, except that, notwithstanding the requirements of Section 35.14(b)(3) of Title 10, Code of Federal Regulations, the licensee may receive iridium-192 seeds in nylon ribbon, iodine-125 seeds and cesium-137 seeds from the University of Kansas Medical Center, Kansas City, Kansas.

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23. Except as specifically provided otherwise by this license, the licensee shall possess and use licensed material described in Items 6, 7, and 8 of this license in accordance with statements, representations, and procedures contained in applications dated April 20, 1978 and June 1, 1978; letters dated January 22, 1979, February 23, 1979, May 8, 1979, July 25, 1979, August 15, 1979, October 11, 1979, October 18, 1979, November 27, 1979, January 7, 1980, March 28, 1980, September 26, 1980, September 30, 1980, March 17, 1981, October 14, 1981, December 23, 1981, May 28, 1982, June 6, 1983, July 12, 1983, November 9, 1983, August 10, 1984, January 30, 1985, and April 10, 1985; ALARA Program submitted with letter dated September 26, 1980. The Nuclear Regulatory Commission's regulations shall govern the licensee's statements in applications or letters, unless the statements are more restrictive than the regulations.

Conditions 24. is added:

24. Patients containing Cobalt 60, Cesium 137 or Iridium 192 implants shall remain hospitalized until a source count and surveys made with an appropriate radiation detection instrument indicate that all implants have been removed. The results of these surveys shall be recorded and maintained for inspection by the Commission for five (5) years from the time the implants are removed.



For the U.S. Nuclear Regulatory Commission

Original Signed

By William J. Adam, Ph.D.

Materials Licensing Section, Region III

Date July 10, 1985

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