

RADIOACTIVE MATERIAL LICENSE

Pursuant to the California Code of Regulations, Division 1, Title 17, Chapter 5, Subchapter 4, Group 2, Licensing of Radioactive Material, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, use, possess, transfer, or dispose of radioactive material listed below; and to use such radioactive material for the purpose(s) and at the place(s) designated below. This license is subject to all applicable rules, regulations, and orders of the California Department of Public Health now or hereafter in effect and to any standard or specific condition specified in this license.

1. Licensee: Momentum Biosciences	3. License Number: 7762-19 Amendment Number 4
2. Address: 6162 Bristol Parkway Culver City, CA 90230	4. Expiration Date: March 9, 2019 (5)
Attention: Melissa Moore, Ph.D. Radiation Safety Officer	5. Inspection Agency: Los Angeles County Department of Public Health

In response to the letter dated March 15, 2016, signed by Melissa Moore, Ph.D., Director of Operations and Radiation Safety Officer, License Number 7762-19 is hereby amended as follows:

6. Nuclide	7. Form	8. Possession Limit
A. Germanium-68	A. Sealed Sources (Sealed Plane Flood, Isotope Products Laboratory, custom)	A. 4 sources not to exceed 18.5 megabecquerels (500 microcuries) each. Total not to exceed 74.0 megabecquerels (2 millicuries).
B. Germanium-68	B. Sealed Sources (Sealed Cylinder Flood, Isotope Products Laboratory, custom)	B. 4 sources not to exceed 18.5 megabecquerels (500 microcuries) each. Total not to exceed 74.0 megabecquerels (2 millicuries).
C. Germanium-68	C. Sealed Sources (Sealed Point Source, Isotope Products Laboratory, custom)	C. 4 sources not to exceed 925 kilobecquerels (25 microcuries) each. Total not to exceed 3.7 megabecquerels (100 microcuries).
D. Sodium-22	D. Sealed Sources (Sealed Point Source, Isotope Products Laboratory, custom)	D. 4 sources not to exceed 1.9 megabecquerels (50 microcuries). Total not to exceed 7.4 megabecquerels (200 microcuries). each.
E. Thallium-204	E. Sealed Sources (Sealed Point Source, Isotope Products Laboratory, custom)	E. 4 sources not to exceed 1.9 megabecquerels (50 microcuries). Total not to exceed 7.4 megabecquerels (200 microcuries). each.
F. Fluorine-18	F. Any	F. Total not to exceed 740 megabecquerels (20 millicuries).

9. Authorized Use

- A. - E. To be used for camera calibration process.
- F. To be used in **research and** development of preclinical PET imaging (GENISYS). Human use is not authorized.

RADIOACTIVE MATERIAL LICENSELicense Number: 7762-19Amendment Number: 4**LICENSE CONDITIONS**

10. Radioactive material shall be used only at the following location:
 - (a) **6162 Bristol Parkway, Culver City, CA.**
11. This license is subject to an annual fee for sources of radioactive material authorized to be possessed at any one time as specified in Items 6, 7, 8 and 9 of this license. The annual fee for this license is required by and computed in accordance with Title 17, California Code of Regulations, Sections 30230-30232 and is also subject to an annual cost-of-living adjustment pursuant to Section 100425 of the California Health and Safety Code.
12. Radioactive material shall be used by, or under the supervision of, the following individuals:
 - (a) **Melissa Moore, Ph.D.**
 - (b) Nam T. Vu, Ph.D.
 - (c) **Christopher Richard Drake, Ph.D.**
 - (d) **Artem Lebedev, Ph.D.**
 - (e) **Aaron Funk, Ph.D.**
 - (f) **Brandon Maraglia**
13. Except as specifically provided otherwise by this license, the licensee shall possess and use radioactive material described in Items 6, 7, 8 and 9 of this license in accordance with the statements, representations, and procedures contained in the documents listed below. The Department's regulations shall govern unless the statements, representations, and procedures in the licensee's application and correspondence are more restrictive than the regulations.
 - (a) The radioactive materials license application, with attachments thereto, dated November 28, 2008, signed by Christian Behrenbruch, Ph.D., Chief Business Officer, as modified by the letters with attachments, dated December 29, 2008 and January 13, 2009, both signed by Hyeseung Lee, Ph.D., Associate and Facilities Manager.
 - (b) The letters dated March 24, 2009, signed by Hyeseung Lee, Ph.D., Regulatory and Safety Affairs and the letter dated March 31, 2009, with attachments, signed by Christian Behrenbruch, Ph.D., Managing Member/Chief Business Officer, in regards to detailed facility diagram of the new operational location at 6160 Bristol Parkway, Culver City, CA and the release of 6140 Bristol Parkway for unrestricted use.
 - (c) The letters with attachments dated August 27, 2009, December 21, 2009, and February 2, 2010, all signed by **Philipp Czernin, CFO and COO**, regarding updated facility diagram and duties and responsibilities of Radiation Safety Officer and delegation of authority and commitment of semi-annual leak test.
14. The **Radiation Safety Officer** in this program shall be **Melissa Moore, Ph.D.**
15. **Sealed sources possessed under this license shall be tested for leakage and/or contamination as required by Title 17, California Code of Regulations, Section 30275 (c).**
16. Records of leak test results shall be kept in units of microcuries and maintained for inspection. Records may be disposed of following Department inspection. Any leak test revealing the presence of 0.005 microcuries or more of removable radioactive material shall be reported to the California Department of Public Health, Radiologic Health Branch MS 7610, P.O. Box 997414, Sacramento, CA 95899-7414, within five days of the test. This report shall include a description of the defective source or device, the results of the test, and the corrective action taken.
17. The licensee shall monitor occupational exposures to radiation and shall supply and require the use of individual monitoring devices by personnel as required by Title 10, Code of Federal Regulations, Part 20, Section 20.1502 (a).

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18. Radioactive materials shall be used by occupational workers in such a manner that the dose limits specified in Title 10, Code of Federal Regulations, Part 20, Subpart C, Sections 20.1201 through 20.1208 are not exceeded.
19. The licensee shall monitor occupational intakes of radioactive material by, and assess the committed effective dose equivalent to, individuals who may have exceeded or are likely to exceed, the limits specified in Title 10, Code of Federal Regulations, Part 20, Section 20.1502 (b). Suitable and timely measurements used for determination of such internal exposures shall be performed as specified by Section 20.1204.
20. The licensee is authorized to hold radioactive materials with a physical half-life of less than 90 days for decay in storage before disposal in ordinary trash provided:
- (a) Radioactive waste to be disposed of in this manner shall be held for decay in storage for at least 10 half-lives.
 - (b) Before disposal as normal waste, radioactive waste shall be surveyed to determine that its radioactivity cannot be distinguished from background. All radiation labels shall be removed or obliterated.
 - (c) Records shall be maintained of the disposal of licensed materials made by decay in storage. These records shall be sufficient to demonstrate compliance with this license condition and shall be retained for 3 years after the record is made.
21. The licensee will provide the Low Level Radioactive Waste (LLRW) reports specified in the California Health and Safety Code section 115000.1(h) to the California Department of Public Health (CDPH) on an annual basis for both shipped and stored LLRW. Alternatively, LLRW shipment information may be provided on a per shipment basis. LLRW shipment information and annual reports shall be mailed to:
- Attn: LLRW Tracking Program
California Department of Public Health
Radiologic Health Branch MS 7610
P.O. Box 997414
Sacramento, CA 95899-7414
22. At least 30 days prior to vacating any address of use listed in Condition 10 of this license, the licensee shall provide written notification of intent to vacate to the California Department of Public Health, in accordance with Title 17, California Code of Regulations, Section 30256 (b). Control of all licensed areas must be maintained until such areas are released by the Department for unrestricted use or the license is terminated, in accordance with Title 17, California Code of Regulations, Section 30256 (j).
23. A copy of this license and a copy of all records and documents pertaining to this license shall be maintained available for inspection at 6162 Bristol Parkway, Culver City, CA.

Issued for the California Department of Public HealthDate June 30, 2016By: 

Ronald Rogus
Senior Health Physicist
Radiologic Health Branch
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