NRC FORM 313A (AUT) (07-31-2023) U. S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB: NO. 3150-0120 EXPIRES: 07/31/2026

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AUTHORIZED USER TRAINING, EXPERIENCE, AND PRECEPTOR ATTESTATION
(for uses defined under 35.300)
[10 CFR 35.57, 35.390, 35.392, 35.394, and 35.396]

Name of Proposed Authorized User	State or Territory Where Licensed
Aditya Halthore, M.D.	District of Columbia

Requested Authorization(s) *(check all that apply)*:

☐ 35.300 Use of unsealed byproduct material for which a written directive is required

OR

☐ 35.300 Oral administration of sodium iodide I-131 requiring a written directive in quantities less than or equal to 1.22 gigabecquerels (33 millicuries)

☐ 35.300 Oral administration of sodium iodide I-131 requiring a written directive in quantities greater than 1.22 gigabecquerels (33 millicuries)

☑ 35.300 Parenteral administration of any radioactive drug that contains a radionuclide that is primarily used for its electron emission, beta radiation characteristics, alpha radiation characteristics, or photon energy of less than 150 keV, for which a written directive is required.

PART I -- TRAINING AND EXPERIENCE
(Select one of the three methods below)

* Training and Experience, including board certification, must have been obtained within the 7 years preceding the date of application or the individual must have related continuing education and experience since the required training and experience was completed. Provide dates, duration, and description of continuing education and experience related to the uses checked above.

☐ **1. Board Certification**

a. Provide a copy of the board certification.

b. For 35.**390**, provide documentation on supervised case experience. The table in section 3.c. may be used to document this experience.

c. For 35.**396**, provide documentation on classroom and laboratory training, supervised work experience, and supervised clinical case experience. The tables in sections 3.a., 3.b., and 3.c. may be used to document this experience. Skip to and complete Part II Preceptor Attestation.

d. For a board certification issued on or before October 24, 2005 that is listed in 10 CFR 35.57(b)(2)(ii), provide the following:

(i) Documentation that the individual performed each use checked above on or before October 24, 2005.

(ii) Dates, duration, and description of continuing education and experience within the past seven years for each use checked above.

e. Stop here.

☑ **2. Current 35.300, 35.400, or 35.600 Authorized User Seeking Additional Authorization**

a. Authorized User on Materials License 08-07398-03 under the requirements below or equivalent Agreement State requirements *(check all that apply)*:

☐ 35.390 ☐ 35.392 ☐ 35.394 ☐ 35.490 ☑ 35.690

b. If currently authorized for a subset of clinical uses under 35.300, provide documentation on additional required supervised case experience. The table in section 3.c. may be used to document this experience. If board certified, provide a copy of the certificate and stop here. If not board certified then provide completed Part II Preceptor Attestation.

AUTHORIZED USER TRAINING, EXPERIENCE, AND PRECEPTOR ATTESTATION (for uses defined under 35.300) [10 CFR 35.57, 35.390, 35.392, 35.394, and 35.396] (continued)

c. If currently authorized under 35.490 or 35.690 and requesting authorization for 35.396, provide documentation on classroom and laboratory training, supervised work experience, and supervised clinical case experience. The tables in sections 3.a., 3.b., and 3.c. may be used to document this experience. Also provide completed Part II Preceptor Attestation.

☐ **3. Training and Experience for Proposed Authorized User**

a. Classroom and Laboratory Training ☑ 35.390 ☐ 35.392 ☐ 35.394 ☑ 35.396

Description of Training	Location of Training	Clock Hours	Dates of Training*
Radiation physics and instrumentation	Northwell Health	50	7/2012 - 6/2017
Radiation protection	Northwell Health	10	7/2012 - 6/2017
Mathematics pertaining to the use and measurement of radioactivity	Northwell Health	10	7/2012 - 6/2017
Chemistry of byproduct material for medical use	Northwell Health	10	7/2012 - 6/2017
Radiation biology	Northwell Health	100	7/2012 - 6/2017
	Total Hours of Training: 180		

b. Supervised Work Experience ☑ 35.390 ☐ 35.392 ☐ 35.394 ☑ 35.396

(If more than one supervising individual is necessary to document supervised training, provide multiple copies of this page.)

Supervised Work Experience	**Total Hours of Experience:** 30		
Description of Experience Must Include:	Location of Experience/License or Permit Number of Facility	Confirm	Dates of Experience*
Ordering, receiving, and unpacking radioactive materials safely and performing the related radiation surveys	Sibley Memorial Hospital NRC Radioactive Material License No. 08-07398-03	☑ Yes ☐ No	7/2020 - Present
Performing quality control procedures on instruments used to determine the activity of dosages and performing checks for proper operation of survey meters	Sibley Memorial Hospital NRC Radioactive Material License No. 08-07398-03	☑ Yes ☐ No	7/2020 - Present
Calculating, measuring, and safely preparing patient or human research subject dosages	Sibley Memorial Hospital NRC Radioactive Material License No. 08-07398-03	☑ Yes ☐ No	7/2020 - Present
Using administrative controls to prevent a medical event involving the use of unsealed byproduct material	Sibley Memorial Hospital NRC Radioactive Material License No. 08-07398-03	☑ Yes ☐ No	7/2020 - Present
Using procedures to contain spilled byproduct material safely and using proper decontamination procedures	Sibley Memorial Hospital NRC Radioactive Material License No. 08-07398-03	☑ Yes ☐ No	7/2020 - Present

AUTHORIZED USER TRAINING, EXPERIENCE, AND PRECEPTOR ATTESTATION (for uses defined under 35.300) [10 CFR 35.57, 35.390, 35.392, 35.394, and 35.396] (continued)

3. Training and Experience for Proposed Authorized User (continued)

b. Supervised Work Experience (continued)

Supervising Individual	License/Permit Number listing supervising individual as an authorized user
Curtiland Deville, Jr., M.D.	NRC Radioactive Material License No. 08-07398-03

Supervising individual meets the requirements below, or equivalent Agreement State requirements *(check all that apply)***:*

- ☑ 35.390
- ☐ 35.392
- ☐ 35.394
- ☑ 35.396
- ☐ 35.57

With experience administering dosages of:

- ☐ Oral NaI-131 requiring a written directive in quantities less than or equal to 1.22 gigabecquerels (33 millicuries)
- ☐ Oral NaI-131 in quantities greater than 1.22 gigabecquerels (33 millicuries)
- ☑ Parenteral administration of any radioactive drug that contains a radionuclide that is primarily used for its electron emission, beta radiation characteristics, alpha radiation characteristics, or photon energy of less than 150 keV, for which a written directive is required.

** Supervising Authorized User must have experience in administering dosages in the same dosage category or categories as the individual requesting authorized user status.

c. Supervised Clinical Case Experience

If more than one supervising individual is necessary to document supervised work experience, provide multiple copies of this page.

Description of Experience	Number of Cases Involving Personal Participation	Location of Experience/License or Permit Number of Facility	Dates of Experience*
Oral administration of sodium iodide I-131 requiring a written directive in quantities less than or equal to 1.22 gigabecquerels (33 millicuries)			
Oral administration of sodium iodide I-131 requiring a written directive in quantities greater than 1.22 gigabecquerels (33 millicuries)			
Parenteral administration of any radioactive drug that contains a radionuclide that is primarily used for its electron emission, beta radiation characteristics, alpha radiation characteristics, or photon energy of less than 150 keV, for which a written directive is required.	4	Sibley Memorial Hospital NRC Radioactive Material License No. 08-07398-03	10/13/2022 10/13/2022 11/03/2022 07/13/2023

AUTHORIZED USER TRAINING, EXPERIENCE, AND PRECEPTOR ATTESTATION (for uses defined under 35.300) [10 CFR 35.57, 35.390, 35.392, 35.394, and 35.396] (continued)

3. Training and Experience for Proposed Authorized User (continued)

c. Supervised Clinical Case Experience (continued)

Supervising Individual	License/Permit Number listing supervising individual as an authorized user
Curtiland Deville, Jr., M.D.	NRC Radioactive Material License No. 08-07398-03

Supervising individual meets the requirements below, or equivalent Agreement State requirements *(check all that apply)***:*

☑ 35.390	With experience administering dosages of:
☐ 35.392	☐ Oral NaI-131 requiring a written directive in quantities less than or equal to 1.22 gigabecquerels (33 millicuries)
☐ 35.394	☐ Oral NaI-131 in quantities greater than 1.22 gigabecquerels (33 millicuries)
☑ 35.396	☑ Parenteral administration of any radioactive drug that contains a radionuclide that is primarily used for its electron emission, beta radiation characteristics, alpha radiation characteristics, or photon energy of less than 150 keV, for which a written directive is required.
☐ 35.57	

** Supervising Authorized User must have experience in administering dosages in the same dosage category or categories as the individual requesting authorized user status.

d. Provide completed Part II Preceptor Attestation.

PART II – PRECEPTOR ATTESTATION

Note: This part must be completed by the individual's preceptor. The preceptor does not have to be the supervising individual as long as the preceptor provides, directs, or verifies training and experience required. If more than one preceptor is necessary to document experience, obtain a separate preceptor statement from each.

By checking the boxes below, the preceptor is not attesting to the individual's "general clinical competency."

First Section
Check one of the following for the requested authorization:

For 35.390:

☑ I attest that Aditya Halthore, M.D. has satisfactorily completed the 700 hours of training
Name of Proposed Authorized User

and experience, including a minimum of 200 hours of classroom and laboratory training, as required by 10 CFR 35.390 (b)(1).

For 35.392:

☐ I attest that _____ has satisfactorily completed the 80 hours of classroom
Name of Proposed Authorized User

and laboratory training, as required by 10 CFR 35.392(c)(1), and the supervised work and clinical case experience required in 35.392(c)(2).

For 35.394:

☐ I attest that _____ has satisfactorily completed the 80 hours of classroom
Name of Proposed Authorized User

and laboratory training, as required by 10 CFR 35.394 (c)(1), and the supervised work and clinical case experience required in 35.394(c)(2).

AUTHORIZED USER TRAINING, EXPERIENCE, AND PRECEPTOR ATTESTATION (for uses defined under 35.300) [10 CFR 35.57, 35.390, 35.392, 35.394, and 35.396] (continued)

Second Section

☑ I attest that Aditya Halthore, M.D. has satisfactorily completed the required clinical case
Name of Proposed Authorized User

experience required in 35.390(b)(1)(ii)G listed below:

☐ Oral NaI-131 requiring a written directive in quantities less than or equal to 1.22 gigabecquerels (33 millicuries)

☐ Oral NaI-131 in quantities greater than 1.22 gigabecquerels (33 millicuries)

☑ Parenteral administration of any radioactive drug that contains a radionuclide that is primarily used for its electron emission, beta radiation characteristics, alpha radiation characteristics, or photon energy of less than 150 keV, for which a written directive is required.

Third Section

☑ I attest that Aditya Halthore, M.D. is able to independently fulfill the radiation safety-related
Name of Proposed Authorized User

duties as an authorized user for the medical uses authorized under 10 CFR 35.300 for:

☐ Oral NaI-131 requiring a written directive in quantities less than or equal to 1.22 gigabecquerels (33 millicuries)

☐ Oral NaI-131 in quantities greater than 1.22 gigabecquerels (33 millicuries)

☑ Parenteral administration of any radioactive drug that contains a radionuclide that is primarily used for its electron emission, beta radiation characteristics, alpha radiation characteristics, or photon energy of less than 150 keV, for which a written directive is required.

Fourth Section

For 35.396:

Current 35.490 or 35.690 authorized user:

☑ I attest that Aditya Halthore, M.D. is an authorized user under 10 CFR 35.490 or 35.690
Name of Proposed Authorized User

or equivalent Agreement State requirements, has satisfactorily completed the 80 hours of classroom and laboratory training, as required by 10 CFR 35.396 (b)(1), and the supervised work and clinical case experience required by 35.396(b)(2), and is able to independently fulfill the radiation safety-related duties as an authorized user under 10 CFR 35.300 for:

☑ Parenteral administration of any radioactive drug that contains a radionuclide that is primarily used for its electron emission, beta radiation characteristics, alpha radiation characteristics, or photon energy of less than 150 keV, for which a written directive is required.

OR

Board Certification:

☐ I attest that _____ has satisfactorily completed the board certification
Name of Proposed Authorized User

requirements of 35.396(a)(3), has satisfactorily completed the 80 hours of classroom and laboratory training required by 10 CFR 35.396 (b)(1) and the supervised work and clinical case experience required by 35.396(b)(2), and is able to independently fulfill the radiation safety-related duties as an authorized user under 10 CFR 35.300 for:

AUTHORIZED USER TRAINING, EXPERIENCE, AND PRECEPTOR ATTESTATION (for uses defined under 35.300) [10 CFR 35.57, 35.390, 35.392, 35.394, and 35.396] (continued)

Fifth Section

Complete one of the following for the attestation and signature:

☑ **Authorized User**

☑ I meet the requirements below, or equivalent Agreement State requirements, as an authorized user for:

☑ 35.390 ☐ 35.392 ☐ 35.394 ☐ 35.396 ☑ 35.57 for 35.300 uses

☑ I have experience administering dosages in the following categories for which the proposed Authorized User is requesting authorization:

☐ Oral NaI-131 requiring a written directive in quantities less than or equal to 1.22 gigabecquerels (33 millicuries)

☐ Oral NaI-131 in quantities greater than 1.22 gigabecquerels (33 millicuries)

☑ Parenteral administration of any radioactive drug that contains a radionuclide that is primarily used for its electron emission, beta radiation characteristics, alpha radiation characteristics, or photon energy of less than 150 keV, for which a written directive is required.

OR

☐ **Residency Program Director:**

☐ I affirm that the attestation represents the consensus of the residency program faculty where at least one faculty member is an authorized user who meets the requirements below or equivalent Agreement State requirements:

☐ 35.390 ☐ 35.392 ☐ 35.394 ☐ 35.396 ☐ 35.57 for 35.300 uses

☐ I affirm that this facility member has experience in administering dosages in the same dosage category or categories for which the individual is requesting authorized user status and concurs with the attestation I am providing as program director.

☐ I affirm that the residency training program is approved by the:

☐ Residency Review Committee of the Accreditation Council for Graduate Medical Education

☐ Royal College of Physicians and Surgeons of Canada

☐ Council on Post-Graduate Training of the American Osteopathic Association

☐ I affirm that the residency training program includes training and experience specified in:

☐ 35.390 ☐ 35.392 ☐ 35.394 ☐ 35.396

Name of Facility:	License/Permit Number:	
Sibley Memorial Hospital	NRC Radioactive Material License No. 08-07398-03	
Name of Preceptor or Residency Program Director (Typed or Printed)	Telephone Number	Date
Curtiland Deville, Jr., M.D.	(202) 537-4788	01/07/2024
Signature		

NRC FORM 313A (AUT) (07-31-2023) U. S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB: NO. 3150-0120 EXPIRES: 07/31/2026

AUTHORIZED USER TRAINING, EXPERIENCE, AND PRECEPTOR ATTESTATION
(for uses defined under 35.300)
[10 CFR 35.57, 35.390, 35.392, 35.394, and 35.396]

Name of Proposed Authorized User	State or Territory Where Licensed
Rachit Kumar, M.D.	District of Columbia

Requested Authorization(s) *(check all that apply)*:

☐ 35.300 Use of unsealed byproduct material for which a written directive is required

OR

☐ 35.300 Oral administration of sodium iodide I-131 requiring a written directive in quantities less than or equal to 1.22 gigabecquerels (33 millicuries)

☐ 35.300 Oral administration of sodium iodide I-131 requiring a written directive in quantities greater than 1.22 gigabecquerels (33 millicuries)

☑ 35.300 Parenteral administration of any radioactive drug that contains a radionuclide that is primarily used for its electron emission, beta radiation characteristics, alpha radiation characteristics, or photon energy of less than 150 keV, for which a written directive is required.

PART I -- TRAINING AND EXPERIENCE
(Select one of the three methods below)

* Training and Experience, including board certification, must have been obtained within the 7 years preceding the date of application or the individual must have related continuing education and experience since the required training and experience was completed. Provide dates, duration, and description of continuing education and experience related to the uses checked above.

☐ **1. Board Certification**

a. Provide a copy of the board certification.

b. For 35.**390**, provide documentation on supervised case experience. The table in section 3.c. may be used to document this experience.

c. For 35.**396**, provide documentation on classroom and laboratory training, supervised work experience, and supervised clinical case experience. The tables in sections 3.a., 3.b., and 3.c. may be used to document this experience. Skip to and complete Part II Preceptor Attestation.

d. For a board certification issued on or before October 24, 2005 that is listed in 10 CFR 35.57(b)(2)(ii), provide the following:

(i) Documentation that the individual performed each use checked above on or before October 24, 2005.

(ii) Dates, duration, and description of continuing education and experience within the past seven years for each use checked above.

e. Stop here.

☐ **2. Current 35.300, 35.400, or 35.600 Authorized User Seeking Additional Authorization**

a. Authorized User on Materials License 08-07398-03 under the requirements below or equivalent Agreement State requirements *(check all that apply)*:

☑ 35.390 ☐ 35.392 ☐ 35.394 ☐ 35.490 ☑ 35.690

b. If currently authorized for a subset of clinical uses under 35.300, provide documentation on additional required supervised case experience. The table in section 3.c. may be used to document this experience. If board certified, provide a copy of the certificate and stop here. If not board certified then provide completed Part II Preceptor Attestation.

AUTHORIZED USER TRAINING, EXPERIENCE, AND PRECEPTOR ATTESTATION (for uses defined under 35.300) [10 CFR 35.57, 35.390, 35.392, 35.394, and 35.396] (continued)

c. If currently authorized under 35.490 or 35.690 and requesting authorization for 35.396, provide documentation on classroom and laboratory training, supervised work experience, and supervised clinical case experience. The tables in sections 3.a., 3.b., and 3.c. may be used to document this experience. Also provide completed Part II Preceptor Attestation.

☑ **3. Training and Experience for Proposed Authorized User**

a. Classroom and Laboratory Training ☑ 35.390 ☐ 35.392 ☐ 35.394 ☑ 35.396

Description of Training	Location of Training	Clock Hours	Dates of Training*
Radiation physics and instrumentation	Banner Health, Banner Desert Medical Center	30	8/2014-1/2023
Radiation protection	Banner Health, Banner Desert Medical Center	20	8/2014-1/2023
Mathematics pertaining to the use and measurement of radioactivity	Banner Health, Banner Desert Medical Center	40	8/2014-1/2023
Chemistry of byproduct material for medical use	Banner Health, Banner Desert Medical Center	20	8/2014-1/2023
Radiation biology	Banner Health, Banner Desert Medical Center	50	8/2014-1/2023
	Total Hours of Training: 160		

b. Supervised Work Experience ☑ 35.390 ☐ 35.392 ☐ 35.394 ☑ 35.396

(If more than one supervising individual is necessary to document supervised training, provide multiple copies of this page.)

Supervised Work Experience	**Total Hours of Experience:**		
Description of Experience Must Include:	Location of Experience/License or Permit Number of Facility	Confirm	Dates of Experience*
Ordering, receiving, and unpacking radioactive materials safely and performing the related radiation surveys	Banner Health, Banner Desert Medical Center Arizona, Radioactive Material License No. 07-176	☑ Yes ☐ No	8/2014 - 1/2023
Performing quality control procedures on instruments used to determine the activity of dosages and performing checks for proper operation of survey meters	Banner Health, Banner Desert Medical Center Arizona, Radioactive Material License No. 07-176	☑ Yes ☐ No	8/2014 - 1/2023
Calculating, measuring, and safely preparing patient or human research subject dosages	Banner Health, Banner Desert Medical Center Arizona, Radioactive Material License No. 07-176	☑ Yes ☐ No	8/2014 - 1/2023
Using administrative controls to prevent a medical event involving the use of unsealed byproduct material	Banner Health, Banner Desert Medical Center Arizona, Radioactive Material License No. 07-176	☑ Yes ☐ No	8/2014 - 1/2023
Using procedures to contain spilled byproduct material safely and using proper decontamination procedures	Banner Health, Banner Desert Medical Center Arizona, Radioactive Material License No. 07-176	☑ Yes ☐ No	8/2014 - 1/2023

AUTHORIZED USER TRAINING, EXPERIENCE, AND PRECEPTOR ATTESTATION (for uses defined under 35.300) [10 CFR 35.57, 35.390, 35.392, 35.394, and 35.396] (continued)

3. Training and Experience for Proposed Authorized User (continued)

b. Supervised Work Experience (continued)

Supervising Individual	License/Permit Number listing supervising individual as an authorized user
	Arizona, Radioactive Material License No. 07-176

Supervising individual meets the requirements below, or equivalent Agreement State requirements *(check all that apply)**:*

- ☑ 35.390
- ☐ 35.392
- ☐ 35.394
- ☑ 35.396
- ☐ 35.57

With experience administering dosages of:

- ☐ Oral NaI-131 requiring a written directive in quantities less than or equal to 1.22 gigabecquerels (33 millicuries)
- ☐ Oral NaI-131 in quantities greater than 1.22 gigabecquerels (33 millicuries)
- ☑ Parenteral administration of any radioactive drug that contains a radionuclide that is primarily used for its electron emission, beta radiation characteristics, alpha radiation characteristics, or photon energy of less than 150 keV, for which a written directive is required.

** Supervising Authorized User must have experience in administering dosages in the same dosage category or categories as the individual requesting authorized user status.

c. Supervised Clinical Case Experience

If more than one supervising individual is necessary to document supervised work experience, provide multiple copies of this page.

Description of Experience	Number of Cases Involving Personal Participation	Location of Experience/License or Permit Number of Facility	Dates of Experience*
Oral administration of sodium iodide I-131 requiring a written directive in quantities less than or equal to 1.22 gigabecquerels (33 millicuries)			
Oral administration of sodium iodide I-131 requiring a written directive in quantities greater than 1.22 gigabecquerels (33 millicuries)			
Parenteral administration of any radioactive drug that contains a radionuclide that is primarily used for its electron emission, beta radiation characteristics, alpha radiation characteristics, or photon energy of less than 150 keV, for which a written directive is required.	20	Banner Health, Banner Desert Medical Center, Arizona, Radioactive Material License No. 07-176	8/2014-1/2023

AUTHORIZED USER TRAINING, EXPERIENCE, AND PRECEPTOR ATTESTATION (for uses defined under 35.300) [10 CFR 35.57, 35.390, 35.392, 35.394, and 35.396] (continued)

3. Training and Experience for Proposed Authorized User (continued)

c. Supervised Clinical Case Experience (continued)

Supervising Individual	License/Permit Number listing supervising individual as an authorized user
Yerko Borghero, MD	Arizona, Radioactive Material License No. 07-176

Supervising individual meets the requirements below, or equivalent Agreement State requirements *(check all that apply)***:*

- ☑ 35.390
- ☐ 35.392
- ☐ 35.394
- ☑ 35.396
- ☐ 35.57

With experience administering dosages of:

- ☐ Oral NaI-131 requiring a written directive in quantities less than or equal to 1.22 gigabecquerels (33 millicuries)
- ☐ Oral NaI-131 in quantities greater than 1.22 gigabecquerels (33 millicuries)
- ☑ Parenteral administration of any radioactive drug that contains a radionuclide that is primarily used for its electron emission, beta radiation characteristics, alpha radiation characteristics, or photon energy of less than 150 keV, for which a written directive is required.

** Supervising Authorized User must have experience in administering dosages in the same dosage category or categories as the individual requesting authorized user status.

d. Provide completed Part II Preceptor Attestation.

PART II – PRECEPTOR ATTESTATION

Note: This part must be completed by the individual's preceptor. The preceptor does not have to be the supervising individual as long as the preceptor provides, directs, or verifies training and experience required. If more than one preceptor is necessary to document experience, obtain a separate preceptor statement from each.

By checking the boxes below, the preceptor is not attesting to the individual's "general clinical competency."

First Section
Check one of the following for the requested authorization:

For 35.390:

☑ I attest that Rachit Kumar, M.D. (Name of Proposed Authorized User) has satisfactorily completed the 700 hours of training and experience, including a minimum of 200 hours of classroom and laboratory training, as required by 10 CFR 35.390 (b)(1).

For 35.392:

☐ I attest that _____ (Name of Proposed Authorized User) has satisfactorily completed the 80 hours of classroom and laboratory training, as required by 10 CFR 35.392(c)(1), and the supervised work and clinical case experience required in 35.392(c)(2).

For 35.394:

☐ I attest that _____ (Name of Proposed Authorized User) has satisfactorily completed the 80 hours of classroom and laboratory training, as required by 10 CFR 35.394 (c)(1), and the supervised work and clinical case experience required in 35.394(c)(2).

AUTHORIZED USER TRAINING, EXPERIENCE, AND PRECEPTOR ATTESTATION (for uses defined under 35.300) [10 CFR 35.57, 35.390, 35.392, 35.394, and 35.396] (continued)

Second Section

☑ I attest that Rachit Kumar, M.D. has satisfactorily completed the required clinical case
Name of Proposed Authorized User

experience required in 35.390(b)(1)(ii)G listed below:

☐ Oral NaI-131 requiring a written directive in quantities less than or equal to 1.22 gigabecquerels (33 millicuries)

☐ Oral NaI-131 in quantities greater than 1.22 gigabecquerels (33 millicuries)

☑ Parenteral administration of any radioactive drug that contains a radionuclide that is primarily used for its electron emission, beta radiation characteristics, alpha radiation characteristics, or photon energy of less than 150 keV, for which a written directive is required.

Third Section

☑ I attest that Rachit Kumar, M.D. is able to independently fulfill the radiation safety-related
Name of Proposed Authorized User

duties as an authorized user for the medical uses authorized under 10 CFR 35.300 for:

☐ Oral NaI-131 requiring a written directive in quantities less than or equal to 1.22 gigabecquerels (33 millicuries)

☐ Oral NaI-131 in quantities greater than 1.22 gigabecquerels (33 millicuries)

☑ Parenteral administration of any radioactive drug that contains a radionuclide that is primarily used for its electron emission, beta radiation characteristics, alpha radiation characteristics, or photon energy of less than 150 keV, for which a written directive is required.

Fourth Section

For 35.396:

Current 35.490 or 35.690 authorized user:

☑ I attest that Rachit Kumar, M.D. is an authorized user under 10 CFR 35.490 or 35.690
Name of Proposed Authorized User

or equivalent Agreement State requirements, has satisfactorily completed the 80 hours of classroom and laboratory training, as required by 10 CFR 35.396 (b)(1), and the supervised work and clinical case experience required by 35.396(b)(2), and is able to independently fulfill the radiation safety-related duties as an authorized user under 10 CFR 35.300 for:

☑ Parenteral administration of any radioactive drug that contains a radionuclide that is primarily used for its electron emission, beta radiation characteristics, alpha radiation characteristics, or photon energy of less than 150 keV, for which a written directive is required.

OR

Board Certification:

☑ I attest that Rachit Kumar has satisfactorily completed the board certification
Name of Proposed Authorized User

requirements of 35.396(a)(3), has satisfactorily completed the 80 hours of classroom and laboratory training required by 10 CFR 35.396 (b)(1) and the supervised work and clinical case experience required by 35.396(b)(2), and is able to independently fulfill the radiation safety-related duties as an authorized user under 10 CFR 35.300 for:

AUTHORIZED USER TRAINING, EXPERIENCE, AND PRECEPTOR ATTESTATION (for uses defined under 35.300) [10 CFR 35.57, 35.390, 35.392, 35.394, and 35.396] (continued)

Fifth Section

Complete one of the following for the attestation and signature:

☑ **Authorized User**

☑ I meet the requirements below, or equivalent Agreement State requirements, as an authorized user for:

☑ 35.390 ☐ 35.392 ☐ 35.394 ☐ 35.396 ☑ 35.57 for 35.300 uses

☑ I have experience administering dosages in the following categories for which the proposed Authorized User is requesting authorization:

☐ Oral NaI-131 requiring a written directive in quantities less than or equal to 1.22 gigabecquerels (33 millicuries)

☐ Oral NaI-131 in quantities greater than 1.22 gigabecquerels (33 millicuries)

☑ Parenteral administration of any radioactive drug that contains a radionuclide that is primarily used for its electron emission, beta radiation characteristics, alpha radiation characteristics, or photon energy of less than 150 keV, for which a written directive is required.

OR

☐ **Residency Program Director:**

☐ I affirm that the attestation represents the consensus of the residency program faculty where at least one faculty member is an authorized user who meets the requirements below or equivalent Agreement State requirements:

☐ 35.390 ☐ 35.392 ☐ 35.394 ☐ 35.396 ☐ 35.57 for 35.300 uses

☐ I affirm that this facility member has experience in administering dosages in the same dosage category or categories for which the individual is requesting authorized user status and concurs with the attestation I am providing as program director.

☐ I affirm that the residency training program is approved by the:

☐ Residency Review Committee of the Accreditation Council for Graduate Medical Education

☐ Royal College of Physicians and Surgeons of Canada

☐ Council on Post-Graduate Training of the American Osteopathic Association

☐ I affirm that the residency training program includes training and experience specified in:

☐ 35.390 ☐ 35.392 ☐ 35.394 ☐ 35.396

Name of Facility:	License/Permit Number:	
Banner MD Anderson Cancer Center	Arizona, Radioactive Material License No. 07-176	
Name of Preceptor or Residency Program Director (Typed or Printed)	Telephone Number	Date
Yerko Berghero, MD	4802564500	1/12/2024
Signature		

The American Board of Radiology

Organized through the cooperation of the
American College of Radiology, the American Roentgen Ray Society,
the American Radium Society, the Radiological Society of North America,
the Section on Radiology of the American Medical Association,
the American Society for Radiation Oncology, the Association of University Radiologists,
the American Association of Physicists in Medicine, and the Society of Interventional Radiology,
the American Board of Radiology hereby certifies that

Aditya N. Halthore, MD

Has pursued an accepted course of graduate study and clinical work; has met certain standards and qualifications, including passing the examinations conducted under the authority of the American Board of Radiology, demonstrating to the satisfaction of the Board qualification to practice; and is therefore awarded the Board's certification in

Radiation Oncology

AM Eligible

Ongoing validity of this certificate is contingent upon meeting the requirements of Maintenance of Certification.

This diplomate of the American Board of Radiology is permitted to use the **DABR** *mark to signify this certification.*

DABR

THE AMERICAN BOARD OF RADIOLOGY INCORPORATED IN THE DISTRICT OF COLUMBIA 1934

President

Secretary-Treasurer

Executive Director

AMERICAN BOARD 1933 OF MEDICAL SPECIALTIES EXCELLENCE ETHICS HONOR TIES OPIBUSQUE

Certificate No. 70854

Effective: May 18, 2018

ARIZONA DEPARTMENT OF HEALTH SERVICES
BUREAU OF RADIATION CONTROL

RADIOACTIVE MATERIAL LICENSE

Pursuant to Chapter 4, Title 30, Arizona Revised Statutes, and Title 9, Chapter 7 of the Arizona Administrative Code, and in reliance on statements and representations made to the Department by the licensee, a license is hereby issued authorizing the acquisition, reception, possession, use and transfer of the radioactive material listed in this license for the purposes and at the places specified. This license is subject to all applicable rules and Department orders now or hereafter in effect and to the conditions specified. **In accordance with application dated September 1, 2022, signed by R. Fowler, License Number 07-176 is hereby renewed in its entirety to read as follows: ALL CHANGES ARE IN BOLD**

LICENSEE

1. **NAME:** Banner Health d/b/a
Banner Desert Medical Center

2. **ADDRESS:** 1400 South Dobson Road
Mesa, Arizona 85202

3. a. **LICENSE NUMBER:** 07-176
b. **AMENDMENT NO.:** **71**

4. **EXPIRATION DATE:** **September 30, 2027**

5. **CATEGORY:** B2 - MEDICAL MATERIALS
CLASS A

6. Radioactive material (element and mass number)	7. Chemical or physical form	8. Maximum quantity licensee may possess at any time
A. Any radioactive material listed in Group 100 of Exhibit A, Arizona Administrative Code, Title 9, Chapter 7, Article 7.	A. Any FDA approved radiopharmaceutical authorized in Group 100 of Exhibit A, Arizona Administrative Code, Title 9, Chapter 7, Article 7. Not to include investigational new drugs (IND).	A. 92.5 GBq (2,500 millicuries)
B. Any radioactive material listed in Group 200 of Exhibit A, Arizona Administrative Code, Title 9, Chapter 7, Article 7.	B. Any FDA approved radiopharmaceutical authorized in Group 200 of Exhibit A, Arizona Administrative Code, Title 9, Chapter 7, Article 7. Not to include investigational new drugs (IND).	B. 92.5 GBq (2,500 millicuries)
C. Any radioactive material listed in Group 300 of Exhibit A, Arizona Administrative Code, Title 9, Chapter 7, Article 7.	C. Any FDA approved radiopharmaceutical authorized in Group 300 of Exhibit A, Arizona Administrative Code, Title 9, Chapter 7, Article 7. Not to include investigational new drugs (IND).	C. 37 GBq (1,000 millicuries)
D. Xenon-133	D. Gas or gas in saline	D. 11.4 GBq (300 millicuries)

POST IN ACCORDANCE WITH R9-7-1002

ARIZONA DEPARTMENT OF HEALTH SERVICES
BUREAU OF RADIATION CONTROL

RADIOACTIVE MATERIAL LICENSE

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6, 7, and 8 Cont.

E. Technetium-99m	E. Technetium Pertechnetate in saline	E. 18.5 GBq (500 millicuries)
F. Thallium-201	F. Thallium Chloride	F. 1.11 GBq (30 millicuries)
G. Yttrium-90	G. Yttrium labeled radiotherapeutic antibody (Zevalin)	G. 1.11 GBq (30 millicuries)
H. Radium-223	H. Ra-223 Chloride	H. 370 MBq (10 millicuries)
I. Cesium-131	I. Sealed Source	I. 111 GBq (3 curies)
J. Iodine-125	J. Sealed Source (Approved for medical use in the Sealed Source and Device Registry)	J. 7.4 GBq (200 millicuries)
K. Iridium-192	K. Sealed Source (Alpha Omega, Drawing No. C100A-01 or equivalent)	K. 11.1 GBq (300 millicuries)
L. Palladium-103	L. Sealed Source	L. 14.8 GBq (400 millicuries)
M. Yttrium-90	M. Yttrium-90 microspheres (Australian Isotopes Sir-spheres)	M. 111 GBq (3 curies)

9. Authorized Use:

A. For diagnostic studies involving measurements of uptake, dilution and excretion, not requiring a written directive, authorized in Group 100 of Exhibit A, Arizona Administrative Code, Title 9, Chapter 7, Article 7.

B. For diagnostic studies involving imaging and localizations, not requiring a written directive, authorized in Group 200 of Exhibit A, Arizona Administrative Code, Title 9, Chapter 7, Article 7. PET radiopharmaceuticals may be used if the licensee has demonstrated to the Department that the requirements in A.A.C. R9-7-716 have been met.

C. For medical uses requiring a written directive, as authorized in Group 300 of Exhibit A, Arizona Administrative Code, Title 9, Chapter 7, Article 7.

D. For blood flow and pulmonary function studies.

E. For use in cardiac studies only.

F. For use in cardiac studies only.

POST IN ACCORDANCE WITH R9-7-1002

ARIZONA DEPARTMENT OF HEALTH SERVICES
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9. Cont.

G. & H.	Intravenous injection for the treatment of cancer.
I.	Interstitial implants for treatment of cancer.
J, K. and L.	Interstitial implants for treatment of cancer.
M.	For delivery of radiation therapy to malignant hepatic tumors in device/set box manufactured by Sirex Medical Limited and distributed by AEA Technology QSA, Inc.

CONDITIONS

10. Radioactive material listed under sub items A through M of Items 6, 7 and 8 may be possessed and used only at the licensee's address stated in Item 2 above.

11. The licensee shall comply with the provisions of Title 9, Chapter 7, Arizona Administrative Code; Article 3, "Radioactive Material Licensing"; Article 4, "Standards for Protection Against Ionizing Radiation"; Article 7, "Medical Uses of Radioactive Material"; and Article 10, "Notices, Instructions, and Reports to Radiation Workers; Inspections".

12. A. Radioactive material listed under sub items A, B, C, G and H of Items 6, 7, and 8 shall be used by or under the supervision of:

Craig E. Hancock, M.D.	Robert Hanna, M.D.	Stephen Y. Hu, M.D.
William T. Jacoby, M.D.	Penny Bowen, M.D.	James B. Lyons, M.D.
Mark Allen Madsen, M.D.	Steven R. Maxfield, M.D.	Andrew M. Pohl, M.D.
Tobias Schifter, M.D.	Mark W. Slepian, M.D.	Joseph Edmond Wagner, M.D.

B. Radioactive materials listed under sub items A, B, C, D, G and H of Items 6, 7 and 8 shall be used by, or under the supervision of:

Mark Hoffman, M.D.	Amal Jabra, M.D.	Stephanie Wang, M.D.

C. Radioactive materials listed under sub items A, B and D of Items 6, 7 and 8 shall be used by or under the supervision of:

Marvin Kai-Hing Tam, M.D.

D. Radioactive materials listed under sub items E and F of Items 6, 7 and 8 shall be used by or under the supervision of:

Rajiv Ashar, M.D.	Marc Berkowitz, M.D.	Jean Chatham, M.D.
Joshua Cohen, M.D.	Ziad Elghoul, M.D.	Robert J. Hamburg, M.D.

ARIZONA DEPARTMENT OF HEALTH SERVICES
BUREAU OF RADIATION CONTROL

RADIOACTIVE MATERIAL LICENSE
SUPPLEMENTARY SHEET

License Number: 07-176
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12. D. Cont.

Duane W. Heinrichs, M.D. David Kassel, M.D. Daniel Klee, M.D.

Suntharo Ly, M.D. Mehul Shah, M.D. Jon Stevenson, M.D.

Arman Talle, M.D.

E. Radioactive materials listed under sub items A, B, C, D, E and F of Items 6, 7 and 8 shall be used by or under the supervision of:

John J. McGill, M.D. Thuyngoc T. Vo, M.D.

F. Radioactive material listed under sub items C, G and H of Items 6, 7 and 8 shall be used by or under the supervision of:

Yerko O. Borghero, M.D. Emily Grade, M.D. Terrence Roberts, M.D.

G. Radioactive material listed under sub items A, B and C (limited to I-131only) shall be used by or under the supervision of:

Bradley C. Davis, M.D. Douglas S. Lewis, M.D.

H. Radioactive material listed under sub items I through M of Items 6, 7, and 8, shall be used by, or under the supervision of:

Yerko Borghero, M.D. Emily Grade, M.D. Rachit Kumar, M.D.

Jeffrey Richmond, M.D. Terrence Roberts, M.D.

I. Radioactive material listed under sub item M of Items 6, 7, and 8, shall be used by, or under the supervision of:

Robert Hanna, M.D. Douglas S. Lewis, M.D. Stephanie Wang, M.D.

J. Radioactive material listed under sub items I through L of Items 6, 7 and 8 shall be used by or under the supervision of:

Ravinder Clayton, M.D. Uma Goyal, M.D. Mohammed Khan, M.D.

Ying Li, M.D. Sarah Nicholas, M.D. Joshua Niska, M.D.

Arti Sangave, M.D. Michael Samuels, M.D. Gary Walker, M.D.

K. Radioactive material listed under sub item H of Items 6, 7 and 8 shall be used by or under the supervision of:

Ravinder Clayton, M.D. Rachit Kumar, M.D.

ARIZONA DEPARTMENT OF HEALTH SERVICES
BUREAU OF RADIATION CONTROL

RADIOACTIVE MATERIAL LICENSE
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License Number: 07-176
Amendment Number: **71**

12. Cont.

L. The Authorized Medical Physicists for this license are:

Mickie Baca, DHSc	Thomas Bista, M.S.	Mary E. Braswell, M.S.
Hua Deng, Ph.D.	Derek Fetters, D.M.P.	Paul Hanny, Ph.D.
Nicholas Marsh, M.S.	Amir Sadeghi, Ph.D.	Stephen Sapareto, Ph.D.
Thaddeus Sokolowski, M.S.	Steven Sutlief, Ph.D., DABR	

M. The Radiation Safety Officer for this license is: Robert Hanna, M.D.

N. The Associate Radiation Safety Officer(s) are: Paul Hanny, Ph.D., Amir Sadeghi, Ph.D. and Erica Harrison. The Associate Radiation Safety Officer shall administer the Radiation Safety Program under the policy and procedure guidance of the Radiation Safety Officer.

13. The licensee is authorized to release a patient in accordance with A.A.C. R9-7-717 and NUREG 1556, Volume 9.

14. The licensee may transport radioactive material or deliver material to a carrier for transport in accordance with the provisions of Title 9, Chapter 7, Article 15.

15. A. The licensee shall ensure, in accordance with A.A.C. R9-7-419(C), that an individual participates in a radioiodine bioassay if the individual:

1. Is likely to receive an annual intake in excess 0.1 of the Annual Limits of Intake (ALI) specified in Table 1, Columns 1 and 2 of Appendix B in 9 A.A.C. 7, Article 4;

2. Is a minor or declared pregnant woman likely to receive an annual committed effective dose equivalent in excess of 50 mRem, or

3. Has been involved is a spill, an incident, or other occurrence during which radioiodine may have been taken into the body either by inhalation, ingestion, or by absorption through the skin or a wound.

B. The licensee shall ensure that an individual who is directly involved in a radioiodine therapy, the handling of radioiodine stock solutions, or is involved in iodination's, and meets, as a minimum, any one of the three criteria in Part A above, participates in a bioassay between 6 and 72 hours following the exposure to radioiodine. With Department approval, the licensee may perform I-131 bioassays up to 12 weeks following radioiodine exposure.

C. For any individual whose cumulative annual intake is likely to exceed 0.1 ALI, the licensee shall perform a dosimetric determination based on the results of the bioassay performed under Part B. To assist in determining the total dose equivalent for the individual, the licensee shall add the obtained dose information to the committed dose equivalent information for the exposed individual. For the exposed individual whose bioassay exceeds 0.25 ALI, the licensee shall restrict the exposed individual from further radioiodine exposure until a bioassay indicated the individual's exposure has dropped below 0.1 ALI.

ARIZONA DEPARTMENT OF HEALTH SERVICES
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15. Cont.

D. For bioassays exceeding 0.1 ALI, the licensee shall investigate the circumstances surrounding the exposed individual's uptake. Records of the investigation and all bioassay measurements shall be maintained as part of the licensee's personnel dosimetry records and shall be available for inspection by the Department.

16. The licensee shall not use F-18 radiopharmaceuticals until the Department has approved the licensee's procedures, equipment, and facilities for its use, and amended this license for F-18 use.

17. A. In lieu of weekly wipe surveys the licensee may perform daily contamination surveys in all radiation use areas. The licensee shall perform the survey using a survey instrument and probe that can easily detect contamination levels that are commonly observed when performing wipe survey in contaminated work areas.

B. To facilitate the contamination survey, the licensee shall establish survey action level appropriate for the chosen survey instrument and probe in Part (A).

C. The licensee shall perform a wipe survey following:

1. Any known incident involving spilled radioactive material that may result in contamination of work areas.

2. Contamination surveys that exceed the licensee's contamination survey action level established under Part (B).

18. All Y-90 microsphere waste shall be monitored at the surface prior to disposal to determine that its radioactivity cannot be distinguished from the background radiation level with an appropriate radiation detection survey meter. If the waste is determined to contain impurities with a physical half-life of greater than 120 days that can be distinguished from the background radiation level, the licensee shall dispose of the waste by:

1. Returning the Y-90 microspheres to the manufacturer, if the manufacturer is authorized to receive Y-90 microspheres; or

2. Transfer the Y-90 microspheres to an authorized recipient pursuant to the requirements in A.A.C. R9-7-434(A).

19. For purposes of ending the principal activities authorized under this radioactive material license:

A. The license stays in effect beyond the license expiration date. Beyond the expiration date the licensee shall store radioactive material only, until the Department authorizes its use by license amendment, or the Department notifies the licensee in writing that the license is terminated.

B. The licensee shall ensure the timeliness of decommissioning of facilities where principal activities are conducted under this license in accordance with Department requirements.

C. The licensee shall continue to control public access into restricted areas and pay the annual licensing fee until the license is terminated.

ARIZONA DEPARTMENT OF HEALTH SERVICES
BUREAU OF RADIATION CONTROL

RADIOACTIVE MATERIAL LICENSE
SUPPLEMENTARY SHEET

License Number: 07-176
Amendment Number: **71**

20. Except as specifically provided otherwise by this license, the licensee shall possess and use the radioactive material described in Items 6, 7 and 8 of this license in accordance with the statements, representations and procedures contained in:

1. Application dated September 1, 2022, signed by R. Fowler.

The most recent statements, representations, and procedures shall govern if they conflict with previously submitted documents, unless otherwise specified by a license condition; and the Department's rules shall govern the licensee's statements in applications or letters.

BRIAN D. GORETZKI, BUREAU CHIEF

TOM SALOW, ASSISTANT DIRECTOR

DATE ISSUED: NOV 2 2 2022
PRK:BDG:gd

POST IN ACCORDANCE WITH R9-7-1002

Sibley Memorial Hospital
5255 Loughboro Road NW
Washington, DC 20016
202-537-4680

January 16, 2024

Licensing Assistance Team
USNRC Region I DNMS
475 Allendale Road, Suite 102
King of Prussia, PA 19406-1415

RE: Amendment Request for Sibley Memorial Hospital, License # 08-07398-03

Dear License Reviewer:

Please accept this letter as a request to add the following change to License # 08-07398-03:

Rachit Kumar, M.D. and Aditya Halthore, M.D. are current Authorized Users seeking additional authorization.

Authorized User (AU):

Rachit Kumar, M.D.: add AU privileges for 10 CFR 35.300. Dr. Kumar is board certified by The American Board of Radiology, he is current Authorized User for 10 CFR 35.600 under Sibley Memorial Hospital License # 08-07398-03.
Dr. Kumar was listed for 10 CFR 35.300 privileges on Arizona Department of Health Services, Bureau of Radiation Control, Radioactive Material License No. 07-176 (Banner Desert Medical Center). Supporting information is provided in enclosure.

Authorized User (AU):

Aditya Halthore, M.D.: add AU privileges for 10 CFR 35.300. Dr. Halthore is board certified by The American Board of Radiology, he is current Authorized User for 10 CFR 35.600 under Sibley Memorial Hospital License # 08-07398-03.

Any questions regarding the above matter should be directed to the undersigned at 202-660-7777 or to the Radiation Safety Officer, Momodou Dibba, at 202-660-5156.

Sincerely,

Caroline Shafa.
Vice President of Operations

The American Board of Radiology

Organized through the cooperation of the
American College of Radiology, the American Roentgen Ray Society,
the American Radium Society, the Radiological Society of North America,
the Section on Radiology of the American Medical Association,
the American Society for Radiation Oncology, the Association of University Radiologists,
the American Association of Physicists in Medicine, and the Society of Interventional Radiology,
the American Board of Radiology hereby certifies that

Rachit Kumar, MD

Has pursued an accepted course of graduate study and clinical work; has met certain standards and qualifications, including passing the examinations conducted under the authority of the American Board of Radiology, demonstrating to the satisfaction of the Board qualification to practice; and is therefore awarded the Board's certification in

Radiation Oncology

AM Eligible

Ongoing validity of this certificate is contingent upon meeting the requirements of Maintenance of Certification.

This diplomate of the American Board of Radiology is permitted to use the **DABR** *mark to signify this certification.*

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1934

Milton J. Dilberteau, 2nd
President

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Executive Director

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Certificate No. 65410

Effective: May 14, 2015