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## SNMMI Newsline: ABNM Support for Research During Training

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Three years of nuclear medicine training in an Accreditation Council for Graduate Medical Education (ACGME) – accredited residency program has been the traditional pathway leading to American Board of Nuclear Medicine (ABNM) certification. However, an increasing number of residents are combining nuclear medicine training with other specialty training, most commonly diagnostic radiology. The ABNM supports all pathways leading to dual certification by the ABNM and another member board of the American Board of Medical Specialties (ABMS). These pathways have been described previously in *The Journal of Nuclear Medicine* (1).

Combined training leading to dual certification results in highly skilled clinicians who are well prepared for practice that includes hybrid imaging (SPECT/CT, PET/CT, and PET/ MR), molecular imaging, and theragnostics. Combined training requires 1 year of preparatory clinical training (internship), plus a minimum of 4–5 years of residency training. This training is often followed by another year of subspecialty fellowship training. These training pathways have a strong clinical emphasis because of the formidable amount of knowledge and skills that must be acquired. Very little time is dedicated for research. Without young professionals trained in research, the United States will fall behind the rest of the world in making discoveries and developing new technologies that will advance nuclear medicine and molecular imaging. The ABNM is considering establishing a new research pathway to meet this challenge.

The ABMS includes 24 member boards. Ten of those boards currently support and encourage research during residency training. The training models differ but generally require that at least 25% of training time be spent in research. The American Board of Radiology (ABR) Holman Research Pathway in Radiation Oncology is an instructive model. Residents in this pathway must have 1 year of preparatory clinical training (PGY-1), which includes at least 9 months of direct patient care. During the next 4 years (PGY2-5), residents must have 27 months of clinical training, including 350 simulations, instead of the usual 36 months and 450 simulations. During these 4 years they are given 18–21 months of research time, with 20% of this time devoted to clinical training.

The ABNM is reviewing the research training models of other ABMS member boards and is developing a model for trainees who are primarily interested in an academic career in nuclear medicine and molecular imaging. One possibility is to give physicians with a doctorate degree (PhD or equivalent) in the physical or biological sciences 1 year of training credit, so that they may be eligible for ABNM certification with 2 years of nuclear medicine residency training. Another possibility, for physicians without a doctorate degree, would be to increase the amount of research time currently permitted during 3 years of ACGME accredited residency training from 6 months to 12 months, or to 18 months with 30% of this time devoted to clinical training. The number of trainees interested in a research pathway and the number of ACGME accredited nuclear medicine programs capable of offering this pathway are likely to be

small, but the ABNM believes that the number of trainees and programs interested in a research pathway would make it viable.

One of the challenges in developing a research pathway during nuclear medicine residency training is securing funding for trainees. The ABNM will work with the ACGME Nuclear Medicine Review Committee to develop a research pathway that would be an approved option for accredited programs, which could permit funding through the usual mechanisms. Other funding possibilities are available. The National Institutes of Health offer a funding opportunity called Stimulating Access to Research in Residency (R38). The program provides support to institutions for up to 2 years of research conducted by resident/ investigators in structured programs for clinician/investigators with defined program milestones. The overall goal of the program is to provide clinicians with in-depth research experiences early in their careers, in order to recruit, retain, and accelerate the independence of a pool of clinician/ investigators with both clinical and research experience necessary to perform basic, clinical, and/or translational research. Further information is available at <https://grants.nih.gov/grants/guide/rfa-files/RFA-HL-18-023.html> (2).

*The mission of the ABNM is to serve the public through assurance of high-quality patient care by establishing standards of training, initial certification, and continuing competence of physicians providing nuclear medicine diagnostic and therapeutic services. Support for a research pathway is an expansion of the mission, which will ensure that young professionals trained in the United States continue to make new discoveries and technological advances that will advance the specialty and ultimately benefit patients.*

## REFERENCES

1. Segall GM, Grady EE, Fair JR, Ghesani MV, Gordon L. Nuclear medicine training in the United States. *J Nucl Med.* 2017;58:1733–1734.
2. National Institutes of Health. Overview information. Stimulating Access to Research in Residency (StARR). (R38). Part One. Available at: <https://grants.nih.gov/grants/guide/rfa-files/RFA-HI-18-023.html>.