Advanced Training Elective in Translational Diagnostics

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About the Award
The Translational Diagnostics Training Elective offers pathologists-in-training hands-on exposure to how novel histopathology-based diagnostic assays are developed, from ideation to initial validation and development, concentrating on the role pathologists play in this process. **This training elective will take place in 2022**.

This four-week elective takes place in Tucson, Arizona, under the direction of Shalini Singh, MD, FCAP, Sr. Director of Pathology, at Ventana Medical Systems, and will focus on the process of translating the latest and most promising scientific discoveries and hypotheses in the fields of molecular pathology and oncology to routine diagnostic, prognostic, and companion diagnostic tests for anatomic pathologists around the world. The participant will also be exposed to the various roles pathologists can have in industry through direct interaction with the team of anatomic and molecular pathologists within the Ventana Medical & Scientific Affairs group. The overall goal is to create awareness of how pathologists, working in a product development environment, can significantly impact patient care on a global level through diagnostic innovations and personalized health care solutions.

Each elective is customized to the specific interests of the recipient based on a call with Dr. Singh prior to the start of the month. Based on these interests and also project timing and availability, a schedule is created to include exposure to several of the following Ventana functions, weighted according to the recipients' interests and focus areas:

- **Medical Innovation:** exposure to Ventana's medical and scientific team that collaborates with global academic investigators to explore, assess, and validate new biomarker concepts that may lead to medically valuable diagnostic, prognostic, and predictive assays that benefit clinical decision making. It can encompass direct involvement in ongoing projects, including work in the Medical Innovation laboratory.
- **Pathology group:** exposure to Ventana's core pathology team, consisting of multiple AP/CP/molecular pathologists working on various R&D programs across disease areas and technologies.
- **Digital Pathology group:** exposure to Ventana's digital pathology effort, including whole slide imaging hardware/software and development of algorithms for IHC and ISH assays (requires travel to Mountain View, California).
- **Companion diagnostics:** exposure to Ventana's effort to identify and develop companion diagnostic assays in collaboration with Genentech, Roche Pharma, and external pharmaceutical partners.
- **Scientific Affairs:** exposure to Ventana's team of pathologists and scientists who provide scientific and medical education and training to external pathologists.
- **Clinical Affairs:** exposure to Ventana's clinical trial function, including how FDA-level trials are designed and executed.
- **Tissue Sample Management:** exposure to Ventana's tissue bank function, including how availability of tissue blocks and forecasting of tissue needs are critical for a diagnostics organization such as Ventana.
- **Platform automation and instrumentation**: exposure to Ventana's instrumentation development effort, including hardware and software engineering and systems integration.

At the end of the elective, the recipient is expected to:

- Understand the overall process of, and challenges associated with, translating a scientific discovery/hypothesis into a validated assay for routine pathology use, including collaborations between academia and industry, technical validation, clinical validation, regulatory approval, and intellectual property issues.
- Have a better understanding of how in-vitro diagnostic assays in general are developed, from ideation to validation and FDA approval.
- Understand how pathologists can benefit diagnostic pathology and personalized health care through contributions to in-vitro assay development in an industry environment.

Award Amount
Up to $5,000 is awarded to a recipient to support travel and living expenses during the training period. **This training elective will take place in 2022**.

We expect the recipient's own institution to support the resident's attendance by authorizing permission to participate. If expenses exceed the award amount, we expect that a resident use his/her own travel funds or seek department funds to cover the balance of expenses.

Eligibility
The award is open to all pathology residents and fellows in training who are CAP Junior Members. All applicants must have at least completed their first year of either AP or AP/CP residency.

Selection Process
On behalf of the CAP Foundation Board of Directors, the CAP Foundation Grants Committee chooses the award recipient based on peer reviews. Factors considered include, but are not limited to:

- Merit of application
- Value of educational experience to the applicant
- Applicant background as it relates to pathology and molecular pathology
- Capacity and willingness to share information and experience with colleagues

Follow-up
Upon completion of this rotation, the awardee is expected to submit the following to the CAP Foundation within 30 days of concluding the experience:

- 500-700 word summary
- One photo of yourself and one photo of you with the host working together during the rotation
- Completed evaluation form