



Institute *for* Translational Medicine *and* Therapeutics

The Master of Science in Translational Research  
is pleased to announce the thesis defense of

**Mariana Cooke, MD, PhD**

*“Detection and characterization of genetic drivers in circulating  
tumor cells and in single cancer cells”*

Mentor: Jay F. Dorsey, MD-PhD

Friday, December 16, 2016

1:00 PM

8030 Maloney Building

ITMAT Classroom

**For more information:**

[http://www.itmat.upenn.edu/itmat/mtr/  
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