

COVID-19 Update: April 29, 2020

Dear Colleagues,

COVID-related Research

Yale Cancer Center members **Brett Lindenbach, PhD**, and **Farren Isaacs, PhD**, are building improved methods to dissect the life cycle of SARS-CoV-2 by using reverse genetics. The overall goal of their project is to make mutations within the SARS-CoV-2 genome and to examine their effects on viral replication and pathogenesis.

- The SARS-CoV-2 RNA genome has been propagated as a cDNA clone within a yeast artificial chromosome (YAC).
- Infectious SARS-CoV-2 has been recovered from RNA transcripts produced from the viral cDNA-containing YAC.
- Reporter viruses and non-infectious SARS-CoV-2 “replicons” are being made to simplify studies on SARS-CoV-2 replication mechanisms.
- This team is harnessing the “awesome power of yeast genetics” and specifically, a yeast genome-editing approach developed by Dr. Isaacs, to develop a mouse-adapted SARS-CoV-2 to study COVID-19 pathogenesis in collaboration with YCC member **Akiko Iwasaki, PhD**.

Specimen Runners

Each day, hundreds of COVID-19 test samples are taken and processed at Yale New Haven Hospital. Each sample needs to be hand-carried to our labs for processing by Specimen Runners, all of whom have been dependably available through Mobile Heartbeat, including from our Smilow Rapid Evaluation Clinic, which tests Smilow Cancer Hospital patients showing symptoms of COVID-19 daily on NP1.

- Thank you to **Art Elliot** and **Erin Wilson, RN**, for their daily coordination and management of this important service.
- Special appreciation and thanks to the following Runners, who have made the process of testing reliable and quicker for many of our patients: **John Murrone, Jodi Gerstenhaber, Austin Wagner, Gernard Eaddy, Chrystal Torres, Maurice Knox, Stan Myers, Kathy Fleming, and Cindy Poulin**.

Smilow Star

When our Apheresis Unit had to transition from NP 8 to NP 7 to clear cancer care off of NP 8, **Anna-Maria Milani, RN**, rose to the challenge and led the Apheresis team through the transition. Although her knowledge of the unit is unmatched, Anna-Maria was also stepping in for a recent vacancy due to a retirement and faced adversity head on to ensure her colleagues and our patients had what they needed. She helped prepare the team during the week leading up to the move, which facilitated a smooth 2-hour relocation over the course of an afternoon. The Apheresis Unit was transferred to a new space, minimizing interruption to patient care, all while maintaining quality care for our patients. Thank you, Anna-Maria!



Best regards,

**Charles S. Fuchs, MD,
MPH**

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