

1. Instrument location: MR5-2205 (Thermo Scientific CryoStar NX50)
2. Training contacts: Sham, Cheryl, Kevin
3. Thermo Scientific 388149 Issue 9.0 User's Manual is available as a pdf file in the Janes Lab Manual.
4. Instrument Usage:
 - a. Instrument is ordinarily turned off after use unless needed again within days; however, it only takes 3 hours for the instruments to cool from room temperature to -24°C.
 - b. Turn ON procedure – Install a blade, Close the window, Turn on the power switch (back right). Expect that it will take 3 hours to reach operating temperature.
 - c. Turn OFF procedure – Run the defrost mode (option in menu) if frost has built up in the chamber (~1 hour), Turn off the the power switch, Leave the window open until all condensation has dried (the defrost mode does not remove all condensation).
 - d. Cold D option (main menu) – This is an integrated system that allows the user to disinfect the chamber with Sanosil (stabilized hydrogen peroxide plus silver, Fisher #S010). The window must be closed and all specimens should be removed from the chamber. The cycle takes ~1 hour. This can be done as soon as the chamber is below freezing after turning on and/or before use.
 - e. This cryostat is equipped with a Vacutome that can be used to aid in sectioning or as a tool for cleaning the chamber – refer to the manual for operation. There is a reservoir for the waste that needs to be replaced as needed (see periodic maintenance below).
 - f. The blade is removed using the magnetic utensil stored on top of the instrument.
5. [Frozen sectioning for laser-capture microdissection](#)
6. [Frozen sectioning of cryofixed 3D structures and tissue](#)
7. Periodic maintenance
 - a. Empty Defrosting and Cold D liquids by opening the door (bottom front), remove bottle, empty bottle into hazardous waste container under the sink in 2205 for Environmental Health & Safety to pick up. Add a small amount of Sanosil to the bottle after rinsing and return to the cryostat.
 - b. Fill disinfectant tank through filling inlet (top/right) with Sanosil using a funnel.
 - c. Check vacutome filter (in the chamber on the right). Replace the filter if it is more than half full. Replacement filters are in the drawer behind the cryostat (order more filters when there is one left, Fisher #281010-CN).