

# AIM Core Newsletter

December, 2020

**Wishing you all a safe and lovely Holiday break!**

**Official UNM Winter closure Dec 23 ,2020 - Jan 3, 2021**

## **Automatic Dispenser on our Biotek Synergy Plate Reader**

Did you know our Biotek Plate reader can dispense up to 2 different solutions into specified wells automatically?

Purge & Prime the dispenser lines first (ask me how)

Here's a sample protocol:

1. Dispenser 1, 40uL (double clicking this step, you can specify whole plate or select wells)
2. Shake, 10s
3. Read Luminescence from top ("hole" emission setting)
4. Dispenser 2, 40uL
5. Shake, 10s
6. Read Luminescence from top ("hole" emission setting)

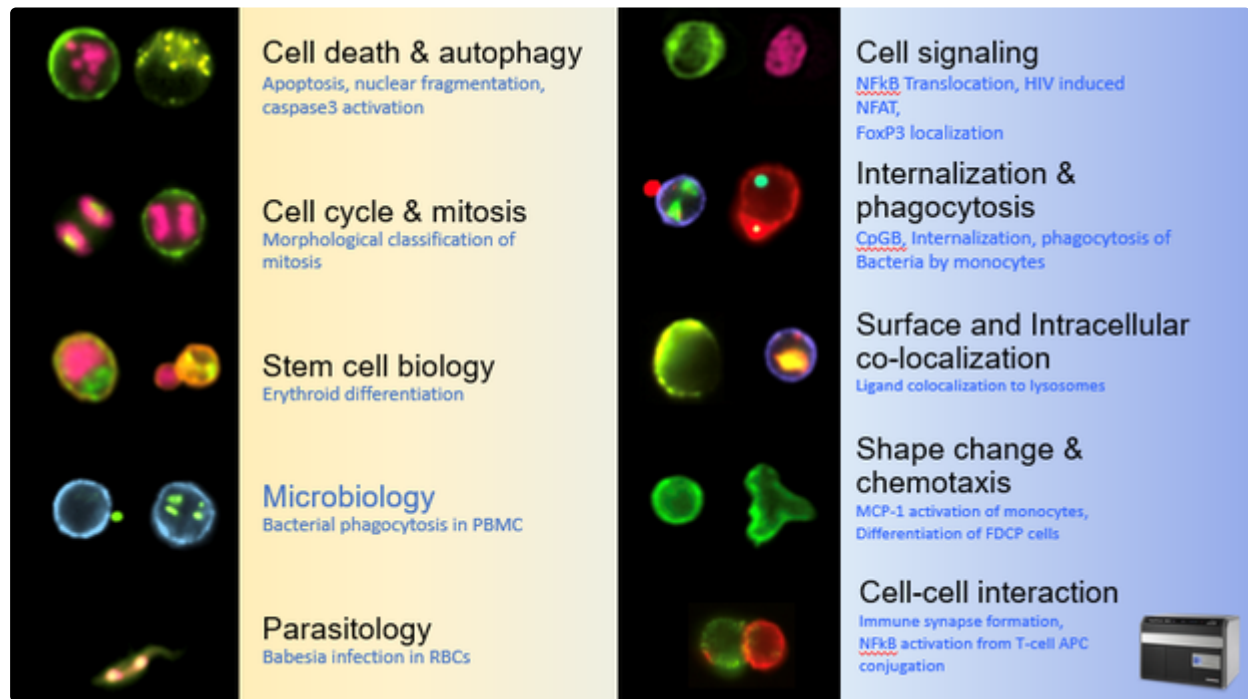


## **2020.11.11 Isoplexus Webinar by Terri Brown**

In case you missed the [Informational Webinar overviewing the Single Cell Proteomics Technology given by Terri Brown and Casey Kuenn on 11/11/2020, here is the link.](#)

This instrumentation is NOT currently available in the AIM Core but we strive to share information about technologies that could potentially complement the core's offerings. Please let us know if

you would like more information on this and if you think being able to access such technology would add value to your research.



## Amnis ImageStream: Overview and Applications Seminar

In case you missed it. . .

here are links to the [Webinar on 11/18/2020 by Dr. Matthew Rodrigues highlighting the various capabilities and applications possible on the AMNIS](#),

and the corresponding [PowerPoint](#).

Both of these can also be found in iLabs under the AMNIS Calendar

It is a top priority of the AIM Core to support interest and usage of this technology. We plan to start a focus group for a limited time to help foster ideas, communication, troubleshooting, protocol development, acquisition and analysis training for the AMNIS. Please don't hesitate to let me know if you would like to be a part of this technology focus group.  
More info to come soon.

## AMNIS Focus Group Starting in January

In an effort to improve (past and future) user experience on the AMNIS imaging flow cytometer in the AIM core, we are developing a focus group to offer support to previous and future users, with the following goals:

- 1) Improve understanding of this technique and its potential applications
- 2) Help investigators develop/improve their experimental plans
- 3) Help previous investigators analyze their data



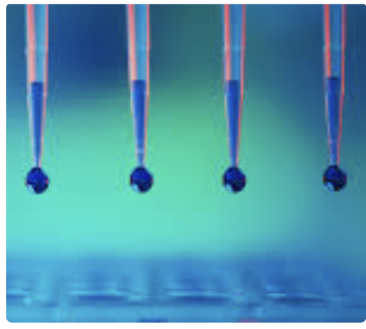


This group will meet (once or twice a month) and be led by Larry Sklar starting in Jan (potentially 1/12/21) at 3PM). The first meeting we will ask the participants to discuss their experiences and goals for the instrumentation and then develop a meeting structure to address that input. If interested, please contact both Sharina Desai ([spdesai@salud.unm.edu](mailto:spdesai@salud.unm.edu)) and Larry Sklar ([lsklar@salud.unm.edu](mailto:lsklar@salud.unm.edu))

**Click here to watch the 12/01/2020 Webinar on Seahorse:  
Activated T cells, 3D samples, & Tissue Punches**

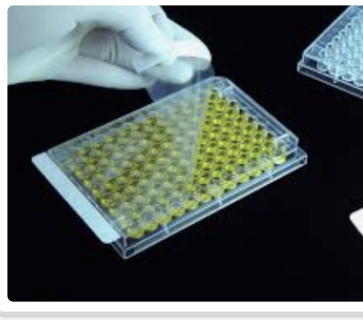


**Normalize your Seahorse data on the CX7**



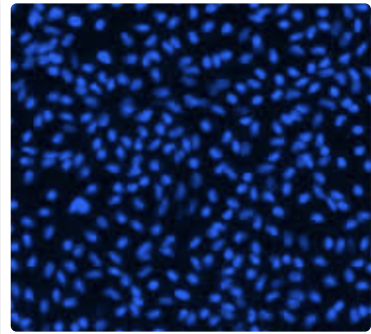
### **Add 20uM of Hoescht in the (last step) port of your Seahorse protocol**

This gets diluted to 2uM on your cells. Unexcited Hoescht and Dapi are not cytotoxic to cells. But after imaging & exciting them in a sample, it can harm cells with phototoxicity especially if left to build up in the liquid of a sample.



### **When your 96 well Seahorse plate is done**

When your Seahorse run is done, cover your seahorse plate with clear film and count cell events on a CX7 (ex: Target activation bioapplication). ex. protocol: Target Activation Seahorse 96 10X Hoescht SPD2



### **Count you cells at 10x to normalize you Seahorse values**

To calculate the total cell number in your well, you can multiply the raw cell count of all possible 10x fields by a conversion factor (1.64 for 96well @ 10x) & (1.013 for a 24 well @10x)

## **Guide to Instrument maintenance: Scheduled shut down / restarts**

### **Gel Doc:**

Gets turned off daily at the end of each business day.  
If you use it after 4:40 pm, please turn it off when you're done.

### **Seahorses:**

Leave these machines on ALL the time. Core Director will restart controller 1/wk on Fridays. These have to remain on because it takes a long time to equilibrate the temperature.

### **Biotek Plate Reader:**

Please turn off plate reader after each use.

**Ultracentrifuge:** Gets turned off after each use. Trained users only!!!

**Amnis:** Trained users only. Fluidics check done just prior to each use or at least 1x/wk by Core Director

**Guava:** is operational by "dry" stored and off until needed.



**I have a very particular set of requirements  
for start up  
depending on my Windows version**



## **The CX7's have a very specific order of Shut down / Restart**

**CX7 Cellomics:** Both stations will get shut down on Fridays by Core Director.

The **proper order** of Start up and Shut down is posted at both CX7 stations.

Feel free to leave the machine ON after use or start it up on weekends or the beginning of the week.

*CX7 Pro tip: If you have an important experiment to do, Close HCS program and restart the computer just before starting your data acquisition.*

### **START UP For "Spotty" (Windows 7).**

*CX7 Start up sequence (If you're the first one to use it over the weekend or Monday a.m.)*

- 1) Instrument "On" (switch is in the back, lower right of the instrument) wait 2 minutes
- 2) Computer "On" **after instrument**
- 3) Launch HCS software

### **START UP For "Odysseus" (Windows 10).**

*CX7 Start up sequence (If you're the first one to use it over the weekend or Monday a.m.)*

- 1) Computer "On" **prior to instrument**
- 2) Instrument "On" (switch is in the back, lower right of the instrument) wait 2 minutes
- 3) Launch HCS software

### **SHUT DOWN sequence for both**

- 1) Close HCS Software
- 2) Computer "Shut down"
- 3) Instrument off (On Fridays only - by Core Director)

## **\*\*\*KIOSK (QR/online log in) records are separate from COVID TRACING (QR/Paper log)\*\*\***

### **Please remember to use the KIOSK (even with a reservation)**

Just a quick reminder that when you visit the AIM Core to use equipment,  
to please use the KIOSK to start and end your sessions,  
EVEN if you have a reservation.  
Otherwise you are marked as a “no show” or worse, not logged at all.



- Use your phone (Scanning the kiosk QR code)
- Use the laptop next to the gel doc (open a browser window – the KIOSK is in the favorites bar),
- Use the Seahorse monitors (ONLY if they are not running an experiment) (also, just launch an internet browser)

Underreporting our times on equipment hurts our reporting when we reapply for funding.  
The more we are utilized as a core, the better our chances for funding.  
Conversely, if our core is underutilized/underreported, reapplying for funding becomes harder.

Logging in needs your whole email: \_\_\_\_\_@[salud.unm.edu](mailto:salud.unm.edu)

Please remember your password and if you forget, please take steps to reset your password

Lastly, if something is just not working, like the kiosk, or if you simply forgot, please just send me an email ([spdesasi@salud.unm.edu](mailto:spdesasi@salud.unm.edu)) with the date and time and which equipment you used.



### **Interlocks are now installed (but we're fixing bugs)**

Interlocks have been installed on several workstations.  
This means the monitors will not power ON unless you have actively started a kiosk session.  
If your kiosk session runs out of time the monitor will turn off until you start a new valid session.  
While this should not affect data acquisition,  
please note that interlocks are meant to encourage proper use of the KIOSK system.

WE are still working out some bugs, so please let me know if the monitor behavior on the BIOTEK, CX7s, or AMNIS do not behave according to this interlock expectation.

Thank you for your cooperation.





## Connect with the AIM Core on Linked In

Help build our Linked In network! Send me announcements, publications, job postings and I'll be happy to share them on the AIM Core Linked in page!

<http://www.linkedin.com/in/aimcoreunm>

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