PENNFLOW

The Penn Cytomics and Cell Sorting Laboratory Newsletter

Volume 18 September 2025

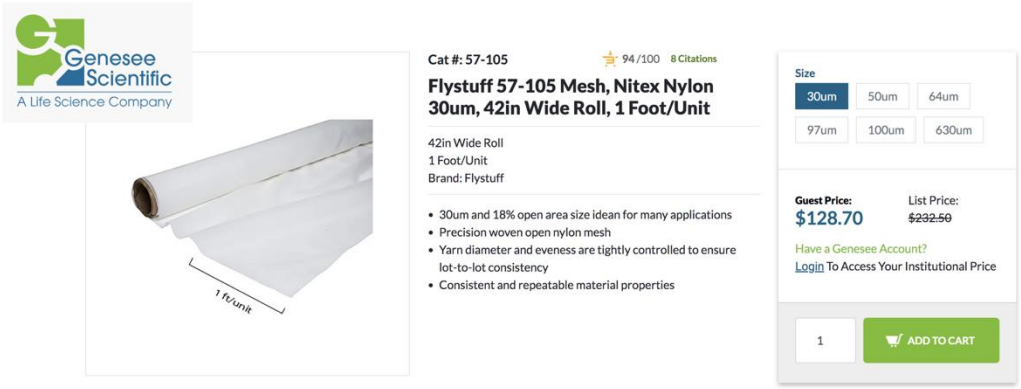
Announcements

***The Symphony A5 A (Moff Gideon) and the Fortessa D will be moving to the 3600 Civic Center Boulevard building in mid/late October.** Both cytometers will still be open for public use after the move, but please plan accordingly. You can check our Instruments/Access webpage for alternate cytometer options if desired.

Ask a Cytometrist (New!)

I know the flow core requires all users to filter their samples with a 30-35μm filter immediately before acquiring, but the blue-capped filter tubes are so expensive. Are there any cheaper alternatives?

Yes! This mesh roll is just as effective and at a fraction of the cost. You just need to cut out little squares for each sample:



If convenience is more important than cost, we recommend the blue-capped filter tubes:

https://www.fishersci.com/shop/products/falcon-tube-cell-strainer-cap/0877123

Available Now!

Our facility recently installed two Discover A8 analyzers in 231 John Morgan Building. Similar to the Discover S8 sorter, the A8 is a spectral and imaging cytometer, equipped with 78 APD detectors and new HTS technology!

- Discover A8 analyzer
  - Newly designed HTS that can run plates or tubes
- Discover S8 sorter
  - Nozzle sizes: 85μm (lymphocytes), 100μm (cell lines, tissues), 130μm (larger, more delicate cells)
  - Up to 6-way sorting

**For image detection, stain your cells or nanoparticles with a fluorochrome/dye excited off the blue laser!*

- Imaging bandpass filters: 534/46, 598/60, and 788/225

You must have completed our standard Analyzer Training course before requesting A8 training. We are offering an introductory "user operated" price of $45 an/hour for the 2025-2026 fiscal year! All instrument training requests need to be completed online from the Penn Cytomics website.

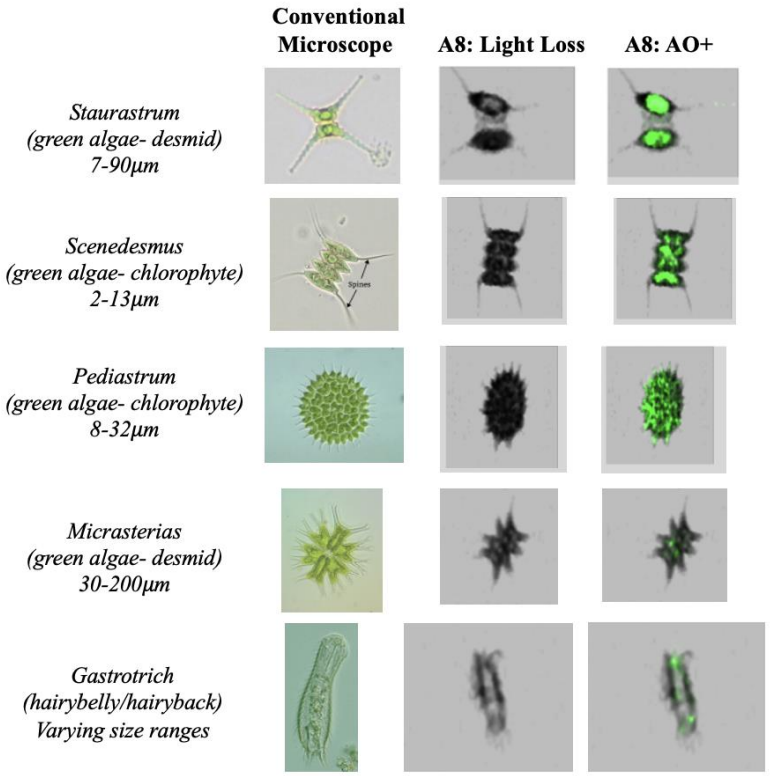
Imaging Applications: Cell-to-Cell Interactions, Cell Cycle Analysis, Doublet Discrimination, Pretty Pictures for Publication, and more!

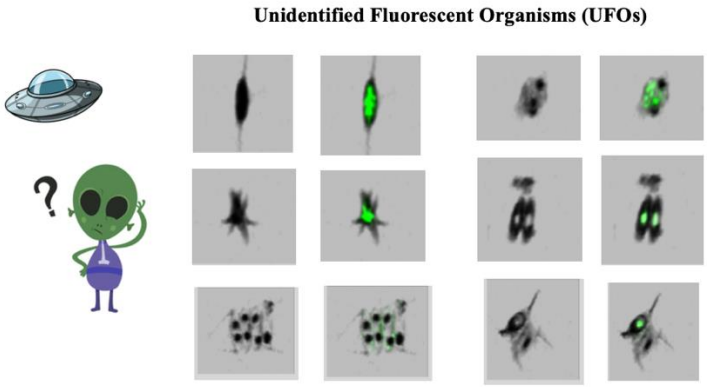
Look what's in our Biopond!

We sampled some pond water from the Penn Biopond and put it through a 35μm filter.

We stained it with acridine orange (AO), a DNA dye that is excited off the blue laser.

We ran the sample on the Discover A8 with image detection. Several microorganisms are staining positive for the dye!





Coming Soon!

Two new Cytek Auroras are being installed on the 12th floor of the 3600 Civic Center Boulevard (CCB) building. The Aurora is a full spectrum cytometer, equipped with 64 channels for fluorescent detection over the full emission spectra. It has a user-friendly platform and a high throughput system (HTS) for running plates. Stay tuned for training details!

A new Symphony S6 SE cell sorter is being installed on the 12th floor of the 3600 Civic Center Boulevard (CCB) building. The S6 SE is a 48-color spectral-enabled cytometer that can do up to 6-way sorting. It has a 70μm and 100μm nozzle configuration. Stay tuned by checking our online Scheduler for availability.

Upcoming Events

The International Clinical Cytometry Society (ICCS) annual conference will be held in Philadelphia this year! The conference is broken up into 2 parts:

The annual course from 9/26/25 – 9/28/25
The annual meeting from 9/28/25 – 9/30/25

You can register for either one or both here:
https://www.cytometry.org/2025/registration-hybrid.php

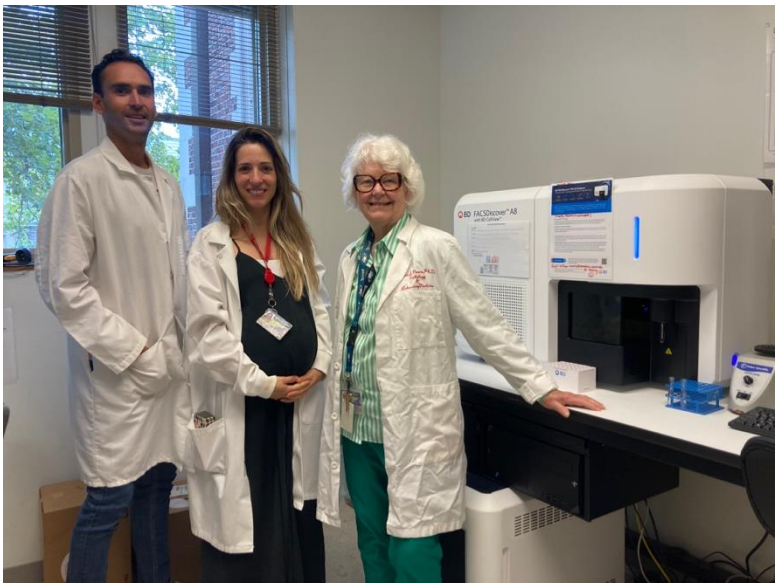
BD Biosciences will be hosting its annual BD Horizon Tour on Tuesday, 10/14/25 in the BRB auditorium from 10am-3pm. Breakfast and lunch will be provided. Register here:

https://www.bdbiosciences.com/en-us/learn/campaigns/bd-horizon-philadelphia

10am – 10:30am	*Registration*
10:30am – 11:45 am	*Identify & Design: The Power of Choice & Performance* Learn how to identify the best fluorochromes for your experiments and understand how those choices impact panel performance. You will see the differences between fluorescent reagents and discover why selecting fluorochromes based on attributes such as brightness, spillover, stability under various conditions, and background is beneficial. This knowledge will help you design panels that deliver strong resolution of cell populations, whether you're working with small or complex panels.
11:45 am – 12:45 pm	*Networking Lunch – Lunch will be provided*
12:45 pm – 1:45 pm	*Discover* The power of possibilities. Learn how innovation expands possibilities. You will explore with us how a well-performing panel built with intentional fluorochrome selections is applied to an experiment that combines samples in a barcoded staining approach using spectral flow.
1:45pm – 2:45pm	*Reveal* The power of dimensions. Learn how spatial information can reveal hidden biology. You will see how the added dimensions provided by image-derived parameters were used to find more cell subsets in a 12-color T-cell panel built for a real time imaging, spectral flow cytometer.
2:45pm – 3:00pm	*Q&A*

Annual Course in Cytometry

Maria (Betina) Pampena and Hongen (Solomon) Wang had a great time learning at the Annual Course in Cytometry! The intensive 5-day course was held at Drexel University this summer. Betina is one of our core facility's superusers. She received a full scholarship to attend. Solomon is one of our staff members. He has been working for the core for several years as a cell sorter operator. We are thrilled to hear they enjoyed the course. The 2026 annual course will be held in San Diego, CA. Registration opens in February. Stay tuned for dates and more details!



Flowbituary

Samantha Pearson, our resource technologist, will be leaving our "flow family" as she prepares to move to Ithaca, NY. Sam started off in our facility as a summer intern from the Jefferson Biotechnology program and has been an integral part of our facility for 3+ years. She has been a huge help with assisting users in their cell sorting experiments, collaborating with the PBR team in developing applications for our user base, answering phones, and much more! She has also been a key player on our research and development team, most notably in mitochondrial panel development. Her last day at Penn will be on 9/26/25, but she will be helping us out remotely after her move. Sam enjoys rock climbing, camping, and spending time with her cat. We wish Sam the very best in her dream home in Ithaca and enjoying nature.