



MLT Class of 2017

The Final Stretch

You've almost made it. One final semester remains before you leave the familiar classroom behind and are thrust into a real-life health care setting. For some, it could be the last time they set foot in another classroom again. Others may wish to continue the study of laboratory medicine with a further degree in **Medical Technology**. In that case, our article contrasting two popular **MT** programs in Ohio might be helpful.

But before we come to that, let's take stock of some of the progress we've made along the way.

MLT Bake Sale Grand Total: \$161.00

Lab week (4/23-4/29) is intended show appreciation to the lab people patients rarely see. To kick lab week off, we put on a bake sale to raise money for the MLT club. Special props to Andrea who brought real Brazilian chocolate and Amanda who made the first ever donut-kabobs!



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Paying a visit to Labcorp, Dublin.

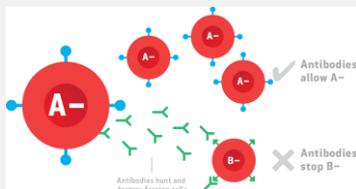
Challenge: How many Labcorp lanyards can you spot in this picture?

Answer: there are the square root of forty nine lanyards.

Entire class of 2017 during spring semester of 2017, following a tour of the laboratory facilities at Labcorp headquarters in Dublin, Ohio.

Preview: What exactly is immunohematology?

Immunohematology, more commonly known as blood banking, is a branch of hematology which studies antigen-antibody reactions and analogous phenomena as they relate to the pathogenesis and clinical manifestations of blood disorders. Source: Wikipedia



Making Connections

Lab week was off to a great start. Later in the week the class of 2017 took a break from classes and were given a guided tour of Labcorp, Dublin. Later that day, many students opted to attend the optional networking/lecture event at Children's Hospital in downtown Columbus. Each experience helped us narrow down our options for sites to being our clinical internship in the fall semester.

With all of our tours done and our classes winding down, the only thing left to do was to have a party!



Where should I get my MT degree?

Alumni from Ohio State and University of Cincinnati give you the inside scoop about their respective programs.



Stan Sinegar
MLS(ASCP)^{cm} –
Generalist at Mount
Carmel Grove City

Alicia Sheffield
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Pros:

- Had to attend lecture only, no labs
- Highly educated and challenging instructors
- Good opportunity to meet other current and prospective lab techs for friendship and networking
- Since it is a part of OSU, various employees/employers of the OSU medical center volunteered as guest speakers to offer further insight on work and career development for lab techs
- Course notes and materials could be downloaded and printed in the computer lab free of charge, textbooks largely unnecessary for most classes
- No clinical rotations

Cons:

- Prerequisites must be met before you can enroll in the program, but most of these can be taken at CSCC
- Lectures may take place during morning and afternoon hours. This may interfere with the work schedule of someone who has a full time job as an MLT. Attendance policies, depending on the professor, were sometimes strict.
- Since OSU is a big university, finding parking can be a challenge, and is not free

Words of wisdom: Although there was a four-year gap between my time at CSCC and when I started the OSU program, I didn't find it difficult to pick up where I left off. What helped immensely was keeping my notes from CSCC, since these were actually better organized than the OSU materials, in my personal opinion.

Pros:

- 100% online (great for working MLTs!)
- Good opportunity to meet lab techs from all over the country (not just Ohio!)
- If you currently work in certain areas of the lab, those departments count as "life credit" at the end of the program for clinical rotations (I.e. I worked as a generalist in hematology, blood bank, and chemistry. The only rotation I needed to cover for clinicals was microbiology.)
- All credits from CSCC transfer directly over to UC
- Lecture classes served as a good refresher for CSCC classes

Cons:

- Clinical rotations at the end of the program for any area of the lab that you do not have "life experience." (If you only have experience in hematology, then you would need to do clinical rotations in chemistry, blood bank, and microbiology.)
- You have to network to find your own clinical site. UC does NOT do this for you

Words of wisdom: I honestly could not come up with any more cons than those above for the UC program. The fact that I could transfer to their program effortlessly without having to take a ton of prerequisites, coupled with the fact that the entire program can be taken online was all that I needed as a full-time MLT (working 3rd shift!). It's a rigorous program, but absolutely 100% doable!

Despite working a full-time job at a pharmaceutical company during the night, Francis can usually be seen in class with a smile on his face. We were offered an exclusive interview with Francis to find out more about our fellow MLT-in-training.

Student Profile: Francis Oduro



Francis is calm under pressure as he seeks to identify an unknown organism.

1. What is your educational background?

I was in my final year of university when I got the chance to come to the States.

2. What made you start thinking about a career as an MLT?

I wanted to be among those people who can help alleviate sickness throughout the world.

3. Where are you from originally, and was it difficult taking classes in English?

I'm originally from Ghana. English is my primary language, so taking classes in English was of course not an issue.

4. What do you like to do for fun?

I enjoy watching films or soccer matches.

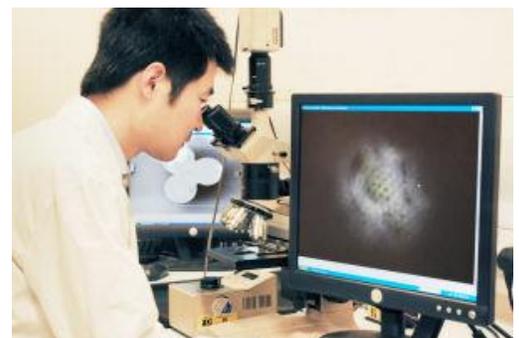
5. Do you plan on continuing your education after earning your MLT degree?

I would like to go on to earn a master's degree eventually.

1 March 2011

Microscope could 'solve the cause of viral diseases'

University of Manchester scientists have produced the world's most powerful optical microscope, which could help understand the causes of many viruses and diseases.



Writing in the journal *Nature Communications*, the team have created a microscope which shatters the record for the smallest object the eye can see, breaking the theoretical limit of optical microscopes.

Previously, the standard optical microscope can only see items around one micrometer – 0.001 millimeters – clearly.

But now, by combining an optical microscope with a transparent microsphere, dubbed the ‘microsphere nanoscope’, the Manchester researchers can see 20 times smaller – 50 nanometers ($5 \times 10^{-8}\text{m}$) – under normal lights. This is beyond the theoretical limit of optical microscopy.

This hugely-increased capacity means the scientists, led by Professor Lin Li and Dr Zengbo Wang, could potentially examine the inside of human cells, and examine live viruses for the first time to potentially see what causes them.

The existing microscopes which have the capacity to examine tiny items – electron microscopes – can only see the surface of a cell rather than examining its structure and there is no tool to see a live virus visually.

The scientists, from the School of Mechanical, Aerospace and Civil Engineering, now believe they can use the microscope to detect far smaller images in the future. The new method has no theoretical limit in the size of feature that can be seen.

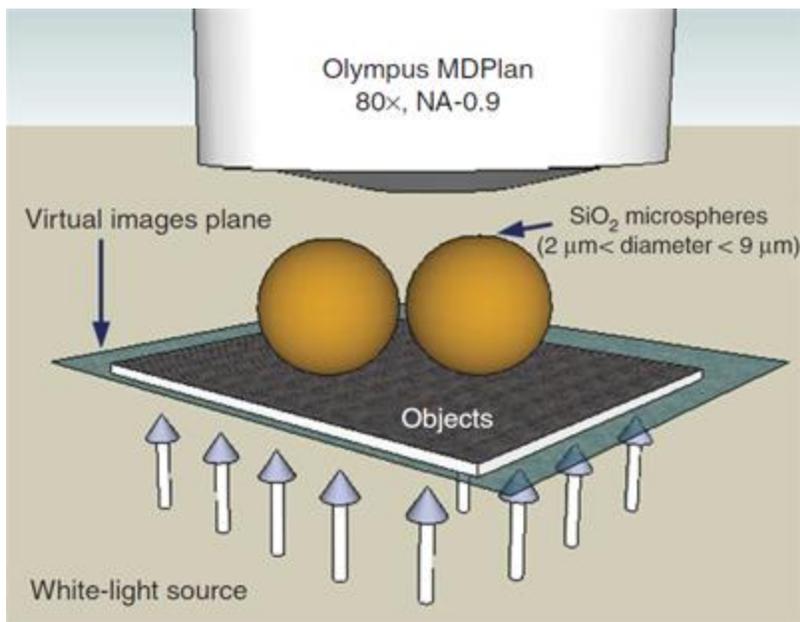


Image: Nature Publishing

The new nano-imaging system is based on capturing optical, near-field virtual images, which are free from optical diffraction and amplifying them using a microsphere, a tiny spherical particle which is further relayed and amplified by a standard optical microscope.

Professor Li, who initiated and led the research in collaboration with academics at the National University and Data Storage Institute of

Singapore, believes their research could prove to be an important development.

He said: “This is a world record in terms of how small an optical microscope can go by direct imaging under a light source covering the whole range of optical spectrum.

“Not only have we been able to see items of 50 nanometres, we believe that is just the

start and we will be able to see far smaller items.

“Theoretically, there is no limit on how small an object we will be able to see.

“The common way of seeing tiny items presently is with an electron microscope, and even then you cannot see inside a cell – only the outside. Optical fluorescence microscopes can see inside the cells indirectly by dyeing them, but these dyes cannot penetrate viruses.

“Seeing inside a cell directly without dying and seeing living viruses directly could revolutionize the way cells are studied and allow us to examine closely viruses and biomedicine for the first time.”

Among other tiny objects the scientists will be able to examine are anodized aluminum oxide nano-structures, and nano-patterns on Blue-Ray CVC disks, not previously visible with an optical microscope.

Story Source:

Materials provided by **University of Manchester**.

