

President's Message - John Ko

Greetings ASCLS-Michigan members! I hope that you are enjoying the Springtime rain and sunshine.

The closing keynote at the ASCLS-Michigan virtual annual conference was titled: "Creating a Culture of People First" presented by Nick Rambow and Lori Bruins from Spectrum Health in Grand Rapids. The session revolved around 3 key components of creating a "People First" system:

1. Know me,
2. Include me, and
3. Empower me.

I think these 3 elements align with the culture and tripartite beliefs of ASCLS:

1. Quality laboratory service is essential to quality health care,
2. Everyone deserves access to safe, effective, equitable, and patient-centered healthcare, and
3. Advancing the laboratory profession advances health care.



Know Me = Quality laboratory service is essential to quality health care

A core value of our profession and society is advocating for quality within the laboratory. We are accustomed to working in teams to achieve the best care for our patients. We know the critical value we play on the health care team.



Empower Me = Advancing the laboratory profession advances health care

Above all, our society is committed to its members. Through educational resources and networking opportunities, members are empowered to take action to advance the laboratory profession.

Include Me = Everyone deserves access to safe, effective, equitable, and patient-centered healthcare

Through committees, ASCLS members work collaboratively with other professional organizations to deliver care that is patient-centered. The Patient Safety Committee and the Choosing Wisely Committee are just two examples.

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ASCLS-Michigan is centered on members who are "People First". Our community continues to be active and engaged in demonstrating our society's beliefs in our daily work. Some of these members were recognized during our virtual awards ceremony. They are witnesses of creating a "People First" culture.

Our work makes a positive impact. We do it together – there's just no other way around it because we **#Live-LoveLab #ASCLS**

Sunrise in Lexington, Michigan



Seeking Photos of Previous Meetings - Suzanne Butch, Historian

In reviewing the materials in the archives of ASCLS-MI, I noted that we do not have recent photos. If you have digital original or copies of photos taken at ASCLS-MI events please send them to me at my email address if there is a small number of photos being sent. Otherwise, contact me and we will determine the best transfer method. And, by the way, dates and individuals in the photos would be a plus.

Thank you for taking the time to send them to me.

Suzanne Butch, ASCLS-Mi Historian

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**American
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chigan**

ASCLS-Michigan *Newslinks*

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for a complete listing and contact information for all ASCLS-MI board members and a wealth of other information on the Society.

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Clinical Laboratory Science

A focus on what is happening in our profession

Featuring articles from Scientific Assembly Chairs.

Materials from all members are also welcomed. Submit to editor. See page 2 for details.



A Presidential Visit and the Important Role of Laboratory Point of Care Testing During a Pandemic

Erika Deaton-Mohney & Alexis Ziegler (pictured L to R),
Point of Care Coordinators, Bronson Methodist Hospital



Last February, Bronson's Point of Care Team had the honor of implementing a Covid-19 testing laboratory for the scheduled visit from President Biden to the Pfizer Corporation manufacturing plant in Kalamazoo County Michigan. Our task was to perform testing on all persons who would be in the presence of President Biden within 24 hours of his visit.



The Pfizer facility in Portage

State regulations were taken into consideration and a CLIA certificate was obtained for the new testing site. Four Abbott ID Now instruments and disposables for testing were procured from Bronson's main laboratory campus for the duration. We tested over 50 people during our presence onsite at Pfizer. Timing was a big part of collection and testing. Attention was given to ensure that all samples were collected, labeled, delivered to testing site and had testing performed according to package insert. We worked collaboratively with the Pfizer clinic staff to meet the testing demands. The fruits of our collaborative effort were safe travels for President Biden, reliable safe test results and an emergent professional relationship between Bronson and Pfizer. It was our pleasure to participate in this event.



The POCT lab set up at Pfizer

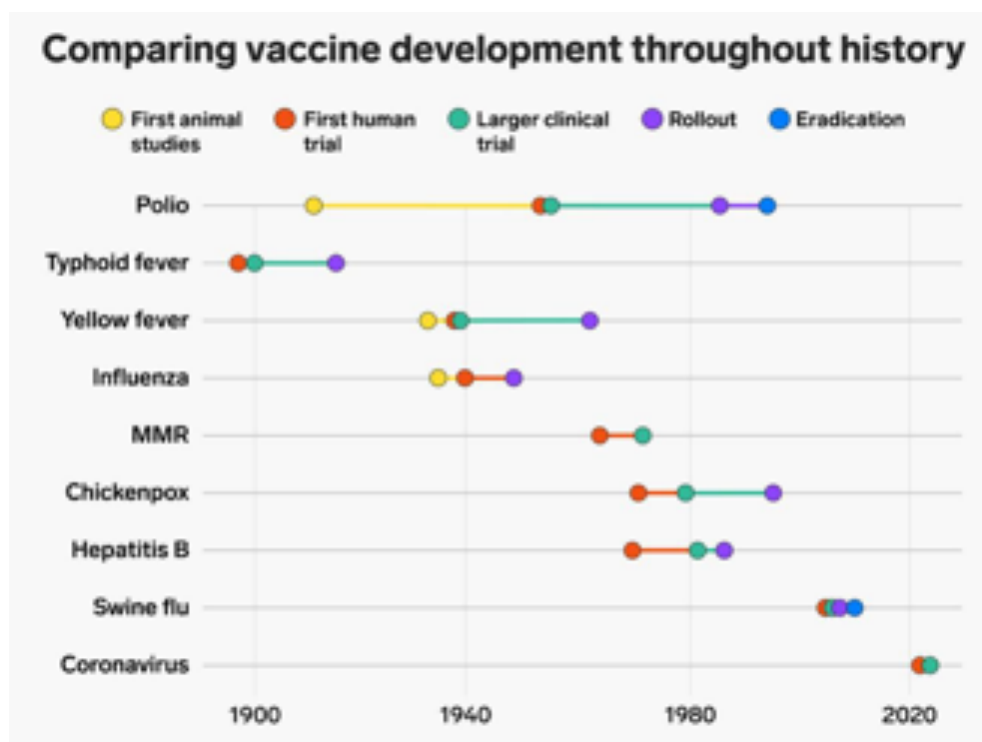


President Biden speaking at event

For a news summary of President Biden's visit to Kalamazoo please click here: <https://youtu.be/Lay4q1BP2PE>

Molecular Biologists Solved the SARS-CoV-2 Structure to Bring About One of the Fastest Vaccine Developments in History

Kaitlyn G. Martin, Scientific Assembly, Molecular



<https://www.businessinsider.com/how-coronavirus-vaccine-development-compares-to-other-shots-in-history-2020-11>

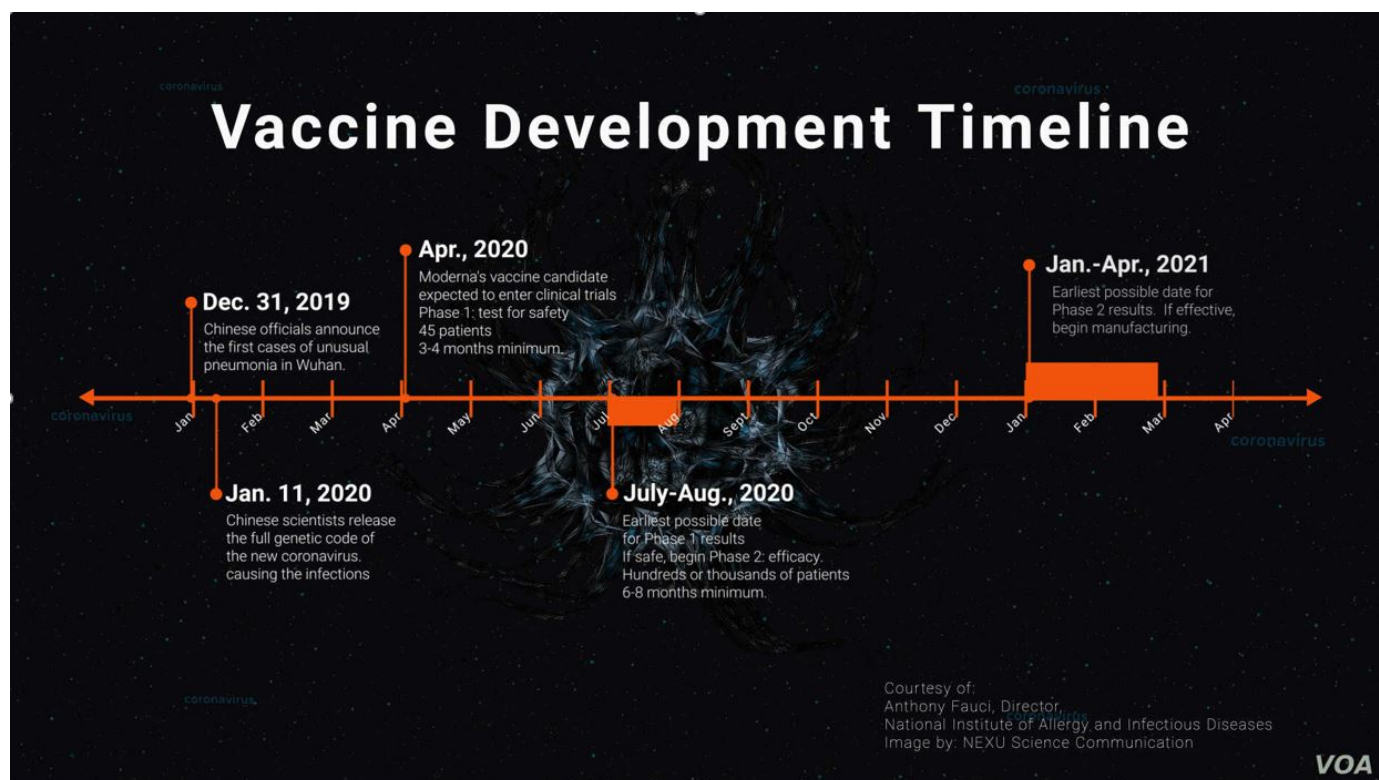
Vaccine Development

This time last year, our lives looked incredibly different. Michigan was in a state of emergency that was extended multiple times during the height of the COVID-19 pandemic. Events were being canceled and businesses were being closed while the people that could, did their best to stay home and isolate themselves from others. It was during this time that some of the most remarkable laboratory work in our history was performed. Between testing new assays for screening, working in a clinical laboratory running patient results, helping develop treatment and preventative measures, and everything in between, laboratorians braved this novel disease everyday to try to bring an end to these devastating times. The beginning of the end came with the development of the SARS-CoV-2 vaccines.

Traditionally, vaccine development can take up to a decade or even longer, starting with lengthy discovery studies followed by preclinical development work, which is just as long. Next are the clinical trials which take just as long as the prior stages, sometimes even longer, consisting of three phases. The last step is filing for a biologics license application (BLA) and having the vaccine candidate reviewed by the appropriate regulatory agencies. The SARS-CoV-2 vaccine followed the same timeline as a traditional vaccine would, but with the stages taking much less time: months instead of years. This accelerated timeline was achieved because of the extensive knowledge already obtained from other coronaviruses, such as SARS-CoV and MERS-CoV, which essentially eliminated the first stage (discovery studies) of the SARS-CoV-2 vaccine. Because vaccine designs and exploratory preclinical studies already existed for other coronaviruses, scientists were able to leap into the clinical phases within just a handful of months after adopting and implementing these processes with SARS-CoV-2. Clinical trials were reduced from several years to several months as well, as scientists were able to have the phases running concomitant-

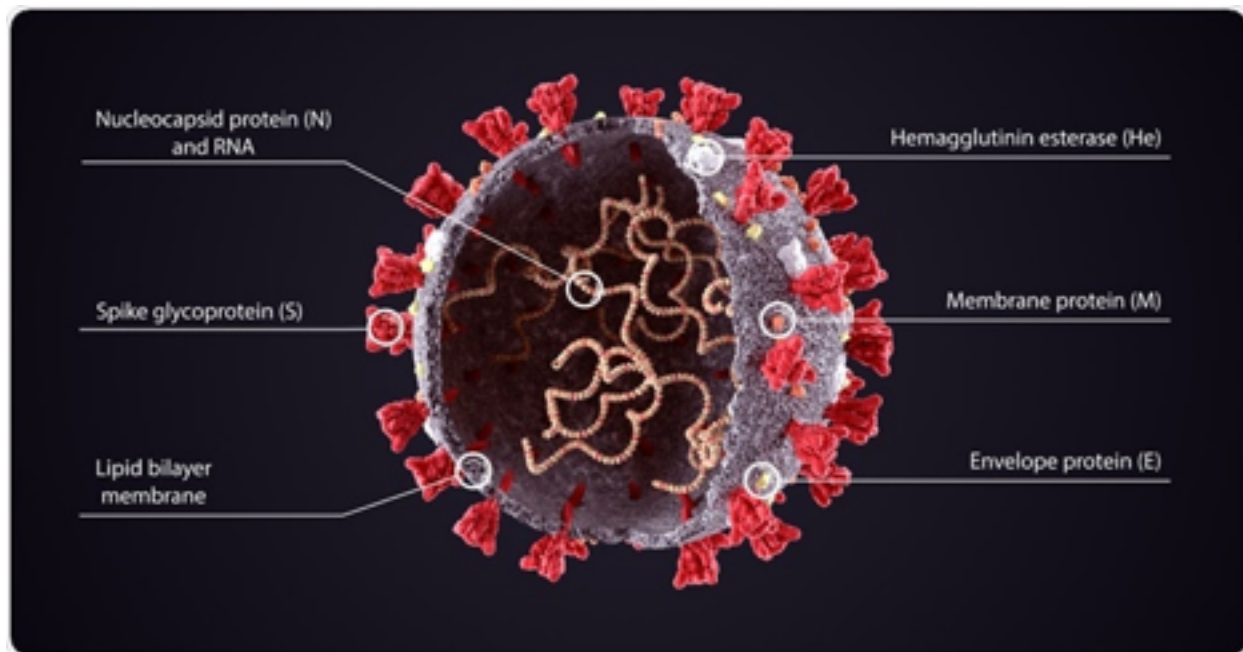
ly at times. Following submission of the BLA as would occur in traditional vaccine development, regulatory agencies reviewed the vaccine candidates and authorized for emergency use, taking just a month or two, versus the year or two in traditional timelines.

Since the outbreak of the COVID-19 pandemic, molecular biologists worked diligently with virologists and immunologists to understand the structure of the virus and get an effective vaccine out to the public. Currently, we have three vaccines authorized for use in the United States: Pfizer-BioNTech, Moderna, and Johnson & Johnson's Janssen, along with two vaccines in phase 3 of their clinical trials: AstraZeneca and Novavax. Johnson & Johnson's Janssen vaccine uses viral vectors to elicit an immune response, while the Pfizer-BioNTech and Moderna vaccines use the new mRNA approach. The use of viral vectors has been studied since the early 1970s and were used to create Ebola vaccines to combat the 2014-2016 epidemic. The use of mRNA has also been studied for decades, but only very recently has it been made effective for use in vaccines. Both methods utilize the virus' spike (S) protein, the means by which the virus fuses to host cell membranes and subsequently enters the cell.



Structure: Solved!

Although the initial stages of vaccine development for SARS-CoV-2 were accelerated thanks to other coronavirus studies, they were not skipped altogether. A vaccine cannot be developed without a specific target for the immune system to recognize and "memorize." This started with solving the sequence of the virus and then solving its structure before pinpointing a specific vaccine target, the S protein. Molecular biologists who were familiar with coronaviruses, such as Jason S. McLellan's molecular biosciences team at the University of Texas in Austin, knew that the virus' key S protein had two different conformations, one before infection and one after. Additionally, being familiar with the genome sequence of the S protein made purifying the protein quick and easy, as it eliminated the "guesswork" that comes from unfamiliar pathogens and proteins. McLellan and his team were able to solve the three-dimensional structure of the protein in both conformations, and begin design of a safe and stable version for our bodies' immune systems to recognize in just under two weeks. Together with collaborators at the National Institutes of Health's Vaccine Research Center, they developed a stable S protein that is being used as an antigen in SARS-CoV-2 vaccines.



<https://www.shutterstock.com/image-illustration/realistic-3d-illustration-covid19-virus-structure-1703444803>

The pre-fusion conformation of the S protein was the ultimate target for use as an antigen in the vaccines and the McLellan team developed mutations to lock the protein into this conformation. This allows for easier analysis of the protein structurally, as the post-fusion conformation is more compact. Creation of an atomic-scale three-dimensional model of the S protein in its pre-fusion state was made possible by cryogenic electron microscopy (cryo-EM), a state-of-the-art imaging technology. This structural biology technique starts with a protein sample applied to a sample grid which is then fully exposed to liquid ethane. This flash-freezes the protein, trapping the particles in a thin film of amorphous ice. Two-dimensional images of the individual particles created by beams of electrons in the sample grid are then averaged computationally to give the three-dimensional structure. The ability to create these three-dimensional models in such molecular detail allows scientists to understand how the structure of the protein relates to its biological functions. This is a founding principle of molecular/structural biology.



Molecular Structure of SARS-CoV-2 S Protein in its Pre-fusion Conformation, Obtained by Cryo-EM

Credit: Jason McLellan/University of Texas at Austin

Multiple companies have utilized this purified S protein in their vaccine development, including those listed above. The viral vector method uses a nonpathogenic virus to deliver the S protein information to host cells, which will then produce the S protein and display it on their cell surface. The immune system recognizes the S protein as foreign, producing antibodies as it would if actually infected with the virus. With the mRNA method, delivery is quite different. mRNA of the S protein is encapsulated, typically by lipid nanoparticles, to protect it from damage and be transfected into immune cells. The rest is very similar; The S protein is produced and the immune system responds by producing antibodies. Based on immunogenicity data, the viral vector vaccines appear to only require one dose, while the mRNA vaccines need a little extra "boost" with two total doses. Despite some differences, the CDC does not recommend one vaccine over another.

There is no cure or direct treatment for SARS-CoV-2, but researchers are actively working to create and produce antivirals that target the S protein. The development of effective vaccines is typically the beginning of the end of a pandemic or epidemic, as seen in history, but this is only possible if the people who can get vaccinated do get their vaccine(s). If you or someone you know needs assistance in scheduling their vaccination appointment, please contact the local health department or visit the official web site at: https://www.michigan.gov/coronavirus/0,9753,7-406-98178_103214_104822---,00.html

For information on the available SARS-CoV-2 vaccines, please see the CDC's page here: <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/different-vaccines.html>

For more information on vaccine development, please see the FDA's page here: <https://www.fda.gov/vaccines-blood-biologics/development-approval-process-cber/vaccine-development-101>

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Save the Date! Attend the ASCLS Legislative Symposium and Labvocate!

Meighan Sharp, MLS(ASCP)^{CM}. - Government Affairs Committee Chair, ASCLS-Michigan

The ASCLS Legislative Symposium will take place this fall! Mark your calendars for October 25 and 26, 2021 at the Hilton Alexandria Old Town in Alexandria, Virginia. Some of legislative issues that will be discussed will include:

- Laboratory workforce shortages
- Laboratory developed tests (LDTs)
- The effects of the Protecting Access to Medicare Act (PAMA) relating to the laboratory
- Laboratory's role in the COVID-19 pandemic.

It is never too late to become a Labvocate! There are several ways to raise awareness to our Congressional leaders. Don't hesitate to reach out to your member of Congress. To discover who your Representative and Senators are, visit www.house.gov/representatives/find-your-representative and www.senate.gov. Call their offices and ask for the contact information for their congressional aide who handles health care issues. Someone in the office will be more than happy to give out an e-mail address. From there, start a conversation. Introduce yourself as a laboratory professional and let them know the issues you face daily and how decisions in Congress effect this profession.

To keep up on the issues, sign up for alerts on the Labvocate Action Center at www.ascls.org



ASCLS-Michigan 2021 Awards

By: Lindsey Haveman

This year's awards ceremony was done virtually on April 18th, 2021, honoring all of our hard working members who deserved to be recognized! This past year was not easy for any of us, and we truly appreciate everyone's dedication to this profession and organization.

Board of Directors Appreciation Award

This award is intended to recognize non-members who have contributed significantly to the profession and/or society. This year's award went to **Dr. Katherine J. Wu, Ph.D.** An excerpt from her nomination letter reads:

"Dr. Wu was recognized for this award during the opening remarks of her session. Briefly, Dr. Wu wrote an article 'Nobody Sees Us': Testing – Lab Workers Strain Under Demand. Her article brought to light the medical laboratory profession, our people, and our passion for our patients and for performing our job regardless of circumstance."

Joseph Miller Memorial Award

Established in honor of a vendor who passed away following an ASCLS-Michigan Annual Conference, this award recognizes an outstanding medical laboratory science student who will complete their clinical internship in the calendar year in which the award is presented. This year's award winner was **Melanie Vander-vest** from Grand Valley State University. An excerpt from Melanie's nomination letter reads:

"Melanie is a bright, kind and self-motivated individual who takes pride in her work. She picks up new skills in both the classroom and the job setting quickly and requires little supervision."

Martha Roulund Membership Award

Established in honor of former ASCLS-Michigan Executive Secretary Martha Roulund in 2003, this award provides a voucher for Ascending Professional dues to deserving Developing Professional Members. This year's award went to **Kara Daniels** from Oakland University. Kara's nomination letter reads:

"Kara is an eager, conscientious, and capable student who performs exceptionally well in both the didactic lecture-based courses and the hands-on laboratory-based courses. She asks insightful questions that demonstrate a desire to truly understand the material beyond passing a test, and that demonstrate her desire to comprehend the final impact to a patient, a testament to her patient-centered focus even now as an undergraduate student. She is also an Honors College student, and as such has performed research in addition to her coursework. Her interest was on dosage-based antibiotic cycling, and she performed research with E. coli using ceftriaxone and gentamicin and with S. aureus using ceftiofur, oxacillin, and clindamycin to compare results between monotherapy, combination therapy, and dosage based cycling to explore which treatment option/s best prevented development of antimicrobial resistance in these bacterial strains. Impressively, all research on this project was completed by her alone. Kara has exhibited a solid foundation in both theoretical knowledge and technical skills in medical laboratory science, and I trust her capacity to perform well in additional scholarly and professional pursuits."

Presidential Recognition Award

This honor is bestowed to individuals who have greatly assisted the President during their tenure. This year, John Ko honored **Carey Loveland** and **Stephanie Mabry** for all of their help during his presidency.

Pamela Agren Inspiraton Award

Established in honor of dedicated member Pam Agren in 1999, this award recognizes an individual who is actively involved in behind the scenes activities for the society. This year's honor went to **Kathy Hoag**. Her nomination letter reads:

"Kathy is the perfect embodiment of a deserving individual for this award; that is, she is actively involved in behind-the-scenes activities for this Society. For the past three years, Kathy has served on the Region IV Council as the Region IV Treasurer. Kathy's expertise in this position has ensured Region IV remains financially stable, that our Region Director has funds to assist in representing the Region's interests at national BOD meetings, and most recently, that Ascending Professionals were able to receive reimbursement assistance to attend the Emerging Laboratory Managers Collaborative Conference. Beyond carrying out her professional responsibilities, Kathy is also a source of mentorship and encouragement for her fellow ASCLS members."



Donna Duberg Mentorship Award

Established in honor of passionate educator Donna Duberg in 1990, this award recognizes an individual who has exhibited outstanding abilities to enlighten and mentor others in the professional society. This year's award went to **Alicia Kuzia**. An excerpt from her nomination letter reads:

"She is always willing and eager to give extra help to individual students when needed, as well as to teach to and review with the entire class. We, and our CLS program students, are very fortunate to have Alicia working with us. In my opinion, her positive attitude and expertise and her ongoing consistent dedication to teaching and mentoring others make her an excellent and very deserving candidate."

Omicron Sigma Awards

First award in 1977, Omicron Sigma is the ASCLS President's Honor Roll for Outstanding Service, recognizing those who have gone above and beyond in their dedication of time, energy, or resources in carrying out the duties of their position. Recognition is at three levels: national, regional, and constituent society.

This year's constituent society Omicron Sigma Award went to **Ric Benson, Mattie Brechbiel, Dan deRegnier, Paul Guthrie, Julie Hall, Andrea Hickey, Abbey Hilden, Billie Ketelsen, Alicia Kuzia, Sarah Lewis, Christina Lim, Stephanie Mabry, Barb Mannor, Kristina Martin, Kyle McCafferty, Michelle Russell, and Meighan Sharp**

This year's Region IV Omicron Sigma Award went to **Suzanne Butch, Ninive Costa, Dan deRegnier, John Gerlach, Kathy Hoag, Billie Ketelsen, John Ko, Carey Loveland, Stephanie Mabry, Barb Mannor, Kyle McCafferty, Roslyn McQueen, Rachel Morris, Lea Schebil, Romina Selzer, and Lynne Williams**

Key to the Future Award

This award recognizes and rewards ASCLS members who has demonstrated their leadership potential to the organization by directing at least one task force or project, chairing a committee with significant tasks, or performing exceptionally as a constituent society board member. This year's award went to:

Christina Lim who currently serves as a District Director and helped plan the Coffee Klatch networking event. She has also served as the Microbiology SA Chair. She has assisted with awards and planning of the conference.

Kathy Hoag currently serves as region 4 treasurer, and she has served on the ASCLS MI BOD.

Allison Young has served as the student activities chair and is the current ascending professional director. She has attended state and national conferences.

Past President

Intended to recognize the time and work put into this organization by the outgoing president. This year's award goes to **Stephanie Mabry**, thank you for all of your hard work!

Member of the Year Award

This award recognizes an individual who has been active in professional, civic, and non-professional activities. This year, this honor went to **Julie Hall**. Her nomination letter reads:

"Julie has been positively impacting students, faculty and staff at GVSU for the last 17 years. Her dedication to the MLS profession is emphasized by her commitment to excellence in her teaching. Julie welcomes opportunities to learn alongside her students and never loses sight of what it is like to be an entry level tech. She is known for telling memorable stories during her lectures and occasionally getting off track to provide the students with

a 'pep talk'. What really sets Julie apart is her ability to develop meaningful relationships with each and every student. She cares for them on a personal level, always wanting them to be the best they can professionally, while showing compassion and understanding for their emotional and mental health. She is an exceptional educator, mentor and the mother bear of the GVSU MLS Program."

Lifetime Achievement Award

This award is the highest honor ASCLS-Michigan bestows. It is awarded to an individual with over 20 years of experience in the profession or in the society advancing, promoting, and improving the profession. This year's recipient is **Janet Brown**. Her nomination letter reads:

"Janet Brown has been a staple in CLS education and an advocate for the laboratory profession throughout her 40-year career.

Janet has been a longtime member of ASCLS. She has served in several leadership positions, particularly within ASCLS-Michigan including president, secretary, district representative, and nominations chair. Her passion and advocacy for the laboratory profession has brought her to represent Michigan at the ASCLS House of Delegates and the Legislative Symposium. Janet has received the Omicron Sigma award several times for her commitment and service to ASCLS-Michigan.

She worked in coagulation research in Dr. Eberhard Mammen's laboratory – a well known clinician and scientist in the field of hemostasis. Janet has traveled nationally and internationally as an invited speaker due to her expertise and knowledge of coagulation, hemostasis, and immunohematology.

She later transitioned to education. Janet has been a dedicated professor and director of the CLS department at Wayne State University. She mentored and directed graduate student projects and essays. Her passion for education has garnered her the College of Pharmacy and Health Science's Teaching Excellence Award and the University President's Exceptional Service Award. She has participated in several campaigns to raise awareness for STEM and healthcare careers to surrounding Detroit high school students. Through her many years of service, she has inspired and influenced many generations of CLS professionals."



*Janet Brown receiving the 2021 Lifetime Achievement Award via the
2021 Virtual ASCLS - Michigan Awards Ceremony*

Congratulations to all of our 2021 award winners!

American Society for
Clinical Laboratory Science



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