

NJSHP

NEW JERSEY SOCIETY OF
HEALTH-SYSTEM
PHARMACISTS

May Newsletter



Photo by Scott R

The President's Perch

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Mission Statement

The mission of The New Jersey Society of Health-System Pharmacists is to advance health-system pharmacy practice and healthcare through education, professional development, and advocacy.

BROUGHT TO YOU BY
THE NEW JERSEY
SOCIETY OF
HEALTH-SYSTEMS
PHARMACISTS

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President's Perch | Spring 2022

By: Juliana Quad, PharmD, RPh



Over the past year as NJSHP President, I've gotten to know more of you and learn about the great work that happens every day in health-systems throughout the Garden State. I am humbled to have been able to lead a Society of such hard-working and dedicated pharmacists and technicians who take pride and care deeply about the future of pharmacy practice. As a Society, we've been motivated to continue to support you, our members, with a wide variety of educational topics sponsored by our local chapters, as well as spend time delving into professional public policy issues which affect us all.

Despite the chaos and challenges of the past 2 years, I have taken time to reflect on my journey- I've become a better pharmacist because of the relationships and opportunities offered to me. COVID has left us with opportunity which we must seize and carry forward. Think about your experience over the past 2 years- what have you learned about yourself, your organization and your career? Reflect on the feelings of driving to work during the Spring 2020 lockdown- we were essential workers, just going about doing our job while learning as much as we could about a new disease and how to treat those suffering from it. To the public and our patients, we were heroes. We were lauded with parades, free lunch and other reminders of the sacrifices that we make daily to ensure the health and welfare of our patients. While pharmacists might have been "behind the scenes" in the early stages of the pandemic, our diligence to manage the drug supply chain and keep our departments running never went un-noticed.

When COVID therapeutics became available in late Spring 2020, we again gained momentum as professionals. I will never forget the first shipment of remdesivir that we received at my hospital. I got a phone call from a New Jersey state trooper who asked for directions and the best place to meet him and a delivery truck. It was a beautiful day in May and I felt like I was in a spy movie as I waited outside for an unmarked police car and an 18-wheel tractor trailer to pull over on the side of Pocono Road in Denville, NJ to drop off a valuable package. Maybe I read too many mystery novels, but taking drugs from a policeman on the side of the road was definitely a first for me!

As we prepared for the first round of COVID vaccine in Fall 2020, it became clear to me that my pharmacist colleagues were going to do a tremendous job vaccinating our fellow New Jerseyans. We set up the first vaccine clinics and mega sites throughout New Jersey in record time, proving that we could move mountains quickly and get the job done efficiently and accurately. Many of us have spent immeasurable hours presiding over those vaccine clinics, supervising efforts, preparing syringes of vaccine, or administering shots ourselves. I don't think that any of us could have predicted we'd be in this situation at any point in our careers.

COVID has given us the opportunity to shine; the opportunity to show New Jersey and the United States that pharmacists are leaders, able to turn lemons into lemonade. We have taken the opportunity to establish ourselves as irrefutable members of the healthcare team. Executive orders have given our pharmacy technicians added responsibilities as vaccinators. And as professionals, we must continue to spread the enthusiasm for our work with pharmacy students and pharmacists and technicians who are new to the profession. If we can show them our passion for our work, we will undoubtedly encourage them to go farther than we have.

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Public Policy Council Section

Jessica Koerner, PharmD, BCPS, BCACP, FASHP
Director, NJSHP Council on Public Policy
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The Council on Public Policy has begun working with the New Jersey Joint Legislative and Governmental Affairs group and our Lobbyist. The council is also tracking several bills and administrative orders in our state. We shared the NJSHP Position Statement on White Bagging with the lobbyist. Opportunities may exist to begin educating your elected officials about the safety concerns in White Bagging.

Council members attended recent New Jersey Board of Pharmacy Meetings and ASHP State Legislative and Regulatory Conference Calls. Our elected Delegates to ASHP will be attending the ASHP Virtual House of Delegates. The Council on Public Policy reviewed several proposed policies and provided feedback to the delegates.

They council is planning for ways to keep our members up to date on the different legislation being reviewed in Trenton. Please forward any ideas for events that may be of interest.

ASHP is asking for members to contact their representatives to support HR 7213 – the Equitable Community Access to Pharmacist Services Act. Support of this bill is part of the Pharmacy and Medically Underserved Areas Enhancement Act. A link to the website that finds your congressperson and send an electronic message in support of this legislation is below:

https://ashsp.ac360.aristotleactioncenter.com/?&utm_campaign=GRD-Breaking-News-1-00-1135-52000&utm_medium=email&_hsmi=210081805&_hsenc=p2ANqtz-N5FxcZjdE76XHcKf8bhUCNok2IHgeK-9762f_g7TNht1QvwLOEW0EcLgi6SU5l_lI035mdOhpvF_lI08gXxjZUYuu7xVAhrPLIPA7fZUIXSuMZc&utm_content=210081805&utm_source=hs_email#/alertId/bd087d80-bd57-4755-8d11-2bfe483acdec/

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I sense that public policy is nearing a tipping point- we pharmacists have been fighting uphill battles for greater recognition for many years, and many states have recently succeeded in authorizing pharmacist prescribing, medication administration, etc. While New Jersey may be a little behind the curve, I am hopeful for the future of our profession- that local and national advocacy efforts are having an impact to positively change the way that our profession is practiced. While I'd like to think that a world-wide pandemic had nothing to do with the changes, I'm happy that progress is being made.

COVID might have pushed us into the limelight as healthcare heroes, but now that the spot light is lit, we all need to perform like the shining stars that we are. Take that feeling of pride and accomplishment with you to work every day as motivation to continue to be a hero. Your work saves lives every day as you ensure appropriate medication use and prevent medication errors, all while juggling a hundred and one tasks. Keep sharing your great catches and fun pharmacy facts with students and new staff- your random knowledge might someday prove valuable in saving a life.

As a professional, I have always had the dream to leave the profession better than I found it. Some days are tough and I am uncertain of my long-term impact. But when I think back and reflect, I am certain that I am leaving things better than before.

Thank you for the opportunity to be a part of NJSHP.

Yours in service,
Juliana Quad, PharmD, RPh, NJSHP President 2021-2022

Continuous Glucose Monitoring

Elim Oh

Pharm. D. Candidate, Class of 2022

Ernest Mario School of Pharmacy

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Continuous glucose monitoring (CGM) is a wearable device able to track glucose levels at set intervals. CGM can be used in type 1 and 2 diabetes management and allows diabetic patients to monitor their glucose readings without so many fingerstick blood glucose tests. Continuous glucose monitoring system (CGMS) specifically measures glucose in the interstitial fluid (ISF) which can differ slightly from blood glucose readings. CGMS can consist of three components: sensor, transmitter, and receiver. A sensor measures glucose levels when inserted under the skin, and the duration of wear varies between different CGM brands. A transmitter sits on top of a sensor or attached to a sensor and sends data to a receiver or a smart device wirelessly. Lastly, a receiver displays glucose levels and trends. CGM is prescription only and it is not intended for use in pregnant, dialysis, or critically ill population. When patients experience hypoglycemic symptoms and CGM does not match symptoms or when no trend arrow is displayed, confirmatory fingerstick blood glucose testing should be performed.

American Diabetes Association recommends real-time continuous glucose monitoring (rtCGM) or intermittently scanned continuous glucose monitoring (isCGM) for management in patients with type 1 or 2 diabetes on multiple daily injections or continuous subcutaneous insulin infusion. CGM can also be utilized in adult diabetic population on basal insulin. Though both rtCGM and isCGM can be helpful in the management of diabetes, there are some differences between the two systems. RtCGM has a transmitter attached to a sensor and this allows continuous wireless monitoring of glucose levels. It comes with a programmable audible alarm system to warn patients when they are hypoglycemic or hyperglycemic. The devices are also programmed so that the patient's glucose level data can be shared with their family and caregivers. In addition to these benefits, some rtCGM devices are factory calibrated and do not require fingerstick calibration. Examples of rtCGM include Dexcom and Medtronic. IsCGM, on the other hand, does not have an automated alarm system to warn patients during hypoglycemia, but these CGMs tend to be more affordable. These devices record glucose levels every 15 minutes. Similar to rtCGM, data can be shared with patient's family and caregivers, and no fingerstick testing is required in some isCGM brands. An example of isCGM is Freestyle Libre. Selection between rtCGM and isCGM should be based on various factors including patient's risk of hypoglycemia, patient activity level, A1C, and glycemic variability.

CGM devices help patients with their overall diabetes management by providing alternative option to frequent, painful fingerstick glucose testing.

References:

1. Bev. The Basics of Continuous Glucose Monitoring (CGM). Diabetes Educators Calgary. <https://diabeteseducatorscalgary.ca/devices/continuous-glucose-monitors/the-basics-of-cgm.html#types-of-cgm>. Accessed April 22, 2022.
2. Choosing a CGM. Choosing a CGM | ADA. <https://www.diabetes.org/tools-support/devices-3.technology/choosing-cgm>. Accessed April 22, 2022.
3. Siegmund T, Heinemann L, Kolassa R, Thomas A. Discrepancies Between Blood Glucose and Interstitial Glucose-Technological Artifacts or Physiology: Implications for Selection of the Appropriate Therapeutic Target. *J Diabetes Sci Technol*. 2017;11(4):766-772.
4. NJSHP CGM Presentations: Diabetes Technology for Pharmacists: An Overview of Continuous Glucose Monitoring (CGM)

Happy 30+ years!

Our very own Administrative Director, Stella Williams, is celebrating 30 years with NJSHP this year! Stella started working with New Jersey Hospital Association and NJSHP in a joint position in August 1991, and transitioned to full-time NJSHP duties in February 1997.

Stella can best be described as the “glue” that holds us together! She has a wealth of historical knowledge about our organization and keeps us all on task. As our organization changes Presidents and leaders on an annual basis, she can always be counted on to keep things running smoothly in the background. She is invaluable to maintain relationships with our sponsors and vendors, facilitate chapter CE meetings, and coordinate our annual conference. *Without her we would be lost!*

In this anniversary year, we celebrate Stella for her milestone achievement and say a heartfelt Thank You for being part of NJSHP history.



Pharmacy Trivia: What Founding Father, inventor, and scientist got his start as a pharmacist? Answer: Benjamin Franklin

The New Nomenclature Scheme for Monoclonal Antibodies

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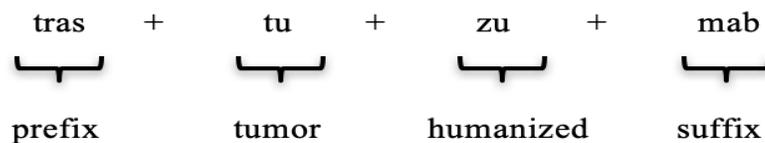
Monoclonal antibodies (mAbs) are the largest class of biological products that are widely used in practice. They are made in the laboratory, composed of different structures, and bind to different antigens in the body. Over the years, the World Health Organization (WHO) has implemented a consistent nomenclature system called the International Nonproprietary Names (INNs), which includes a systematic scheme for mAbs. The use of nonproprietary names or generic names often depends on each national legislature in collaboration with the INNs created by the WHO. As a result, the United States Adopted Name (USAN) scheme has been used by the American Medical Association to assign generic names for mAbs in the United States; it is identical to the INNs with rare exceptions. For instance, the USAN scheme does not include Greek letters (eg. alpha, beta, etc.) to indicate new glycosylation patterns in monoclonal antibodies.^{1,2}

A mAb is typically named based on an order combining some key elements. The order is as follows:³

1. Prefix with 2 or more syllables
2. Infix representing the target or disease
3. Infix indicating the source
4. Suffix, usually “-mab” to indicate mAbs



For example, trastuzumab (Herceptin[®]) is a monoclonal antibody that targets the human epidermal growth factor receptor 2 protein (HER2), and is used in the treatment of breast cancer. Its name follows the order mentioned above:⁴



In October 2021, INN experts and the USAN Council revised the mAbs nomenclature scheme due to the crowding in the “-mab” stem class and published a new scheme with changes. The use of “-mab” stem class is discontinued and replaced by 4 new stem classes.⁵ Below is the new mAbs nomenclature scheme, which has been effective since December 2021.^{2,6}

Pharmacy Trivia: Which of the following sodas was not invented by a pharmacist: Coca Cola, Pepsi, Dr Pepper, Ginger Ale, or Orange?

Answer: Orange

Suffixes

Group 1	<p>“-tug” for unmodified immunoglobulins of any class, including:</p> <ol style="list-style-type: none"> 1. IgG, IgA, IgM, IgD, and IgE 2. Only allelic variants 3. Glycoengineering without mutation 4. C-terminal lysine deletion without any other mutation in the Fc region
Group 2	<p>“-bart” for antibody artificial Monospecific full immunoglobulins with engineered constant domain (CH1/2/3) Monospecific full length immunoglobulins that have any point mutation introduced by engineering for any reason anywhere (hinge, new glycan attachment site, etc.)</p>
Group 3	<p>“-mig” for multi-immunoglobulin Bi- and multi-specific immunoglobulins regardless of format, type or shape</p>
Group 4	<p>“-ment” for fragment All monospecific domains, any kind of fragments, derived from an immunoglobulin variable domain</p>

Select Infixes

Infix	Definition
-ami-	Serum amyloid protein (SAP)/amyloidosis (pre-substem)
-ba-	Bacterial
-ci-	Cardiovascular
-de-	Metabolic or endocrine pathways
-eni-	Enzyme inhibition
-fung-	Fungal
-gro-	Skeletal muscle mass related to growth factors and receptors (pre-substem)
-ki-	Cytokine and cytokine receptor
-ler-	Allergen
-sto-	Immunostimulatory
-pru-	Immunosuppressive
-ne-	Neural
-os-	Bone
-ta-	Tumor
-toxa-	Toxin
-vet-	Veterinary use (sub-stem)
-vi-	Viral

**new changes are bolded and in orange*

Currently, there are no mAbs named using the new naming system as it is only applicable to unnamed agents. The WHO-INN will release the first list of candidates named under the revised scheme in mid-2022.⁷

References:

15. Mayrhofer P, Kunert R. Nomenclature of humanized mAbs: early concepts, current challenges and future perspectives. *Hum Antibodies*. 2019;27(1):37-51.
16. American Medical Association (AMA). Monoclonal antibodies [Internet]. Available at: <https://www.ama-assn.org/about/united-states-adopted-names/monoclonal-antibodies>. Accessed April 18, 2022.
17. World Health Organization (WHO). Guidance on the use of International Nonproprietary Names (INNs) for pharmaceutical substances [Internet]. Available at: [https://cdn.who.int/media/docs/default-source/international-nonproprietary-names-\(inn\)/who-pharm-s-nom-1570.pdf](https://cdn.who.int/media/docs/default-source/international-nonproprietary-names-(inn)/who-pharm-s-nom-1570.pdf). Accessed April 18, 2022.
18. American Medical Association (AMA). Monoclonal antibodies [Internet]. Available at: <https://www.antibodysociety.org/wordpress/wp-content/uploads/2017/07/INN-2017-Reference-20.pdf>. Accessed April 14, 2022.
19. Balocco R, De Sousa Guimaraes Koch S, Thorpe R, et al. New INN nomenclature for monoclonal antibodies. *Lancet*. 2022;399(10319):24.
20. World Health Organization (WHO). New INN monoclonal antibody (mAb) nomenclature scheme [Internet]. Available at: [https://cdn.who.int/media/docs/default-source/international-nonproprietary-names-\(inn\)/new_mab_-nomenclature-_2021.pdf](https://cdn.who.int/media/docs/default-source/international-nonproprietary-names-(inn)/new_mab_-nomenclature-_2021.pdf). Accessed April 14, 2022.
21. Mullard A. New naming scheme for antibodies drops the -mab stem. *Nat Rev Drug Discov*. 2022;21(2):89.

Puzzle Me This...

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E S K X Q Q U V O V V E C B E F V P H O Q J S
K C C T G G E L T S E P E H E D X U P V U C P
W L R U S U O D R A Z A H T G L F I Y M S O A
P P E O D S I I C H N L N G A T W E I N F V T
D E A B Q F W H S E N I C C A V G K F W B E U
Y K M S P N V C I T P E S A M T X U F P J O L
O V K D W E K S U R Q H K I U S Y R I N G E A
N I S U P P O S I T O R Y J O K T E L B A T E
K T N H R C I N M W D X G H H N Z S I H K T F
K X F T W X C I S E P O U I O M O R T A R G W
L M T Z M U S A M D J C A P S U L E T C T O Y
E W Y N E E W R L A I B Q W C S P M C N P C G
G V O M I X N G D R S L A B N F M W Y P E M Q
U Q R O C L A T J Y Y Q Z Q B N C H P U C C F
I S P W S W J L W T A R R R S A X N P L N M A
B U N I T D O S E V I F J M W V F X T D C N P
    
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Find the following words in the puzzle.
Words are hidden ↑ ↓ → ← and ↘ .

ASEPTIC
CAPSULE
CREAM
GEL
HAZARDOUS
MORTAR

OINTMENT
PESTLE
SLAB
SPATULA
SUPPOSITORY
SYRINGE

TABLET
UNITDOSE
VACCINES