



The Pitt Capsule

University of Pittsburgh School of Pharmacy

IPSF Plans World Water Week — Needs Your Help!

By Alexa Ray

IPSF is currently planning for World Water Week, a week full of events and fundraisers benefitting clean water development projects in third-world countries. We have a lot of exciting projects in the works and we hope you will join us!

Monday March 22nd from 12:00-1:00 p.m. in 402 Salk, we will be hosting Eric Hartman, Executive Director of the Amizade Global Service-Learning Organization. Eric will speak about the global clean water crisis and its effects on public health, economy, and development. He will focus specifically on Tanzania, rural Ghana, and urban Bolivia, where Amizade works. His talk is sure to be educational and interesting. If you don't know anything about the world water crisis, or if you know a little and want to hear more from someone who works directly with clean-water development organizations, consider attending! Refreshments will be provided and donations for the World Water Week fund will be taken.

We will continue the week with a bake sale in Salk Hall as well as one on lower campus, a breakfast bar in Salk Hall, a film screening, and possibly a happy hour in Oakland to benefit the fundraiser. Students will also be collecting donations in class throughout the week in water jugs. Please consider donating to the fund. You can learn more about the issues and challenges with clean water access around the world at <http://www.worldwaterday.net/>.

If you don't know anything about the global water crisis, consider the following:

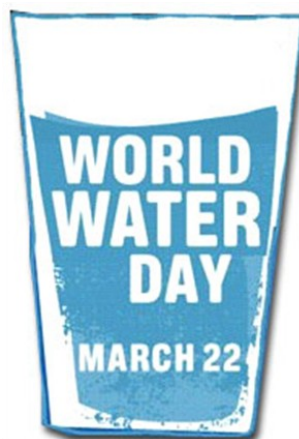
Nearly 1.1 billion people (roughly 20% of the world's population) lack access to safe drinking water.

The lack of clean, safe drinking water is estimated to kill almost 4,500 children per day.

Many women and young girls in rural areas in Sub-Saharan African and other parts of the world must trek as much as six miles every day to retrieve water for their families. Due to this manual labor, such women and children are prevented from pursuing an education, maintaining their households or earning additional income

As little as \$1 can provide clean drinking water to a child in a developing country for over a month. That means just \$10 can provide someone with clean drinking water for an ENTIRE YEAR! Most Americans spend more than that on coffee each week.

If you have any ideas for World Water Week that you'd like to share, or would like to be involved in planning our events for the week, please e-mail me at alexajray@gmail.com.



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The Pitt Capsule

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PPA News — Pitt Wins OTC Jeopardy Competition

By Nick Wytiaz

Seven teams of student pharmacists, representing the seven pharmacy schools across Pennsylvania, competed in the Pennsylvania Pharmacists Association (PPA) Annual Student OTC / Self-Care Competition on February 7, 2010 to kick-off the PPA's Mid Year Conference weekend at the Holiday Inn Harrisburg/Hershey in Grantville, PA. For the second consecutive year, the University of Pittsburgh took home the title! The team of three students – Jerry Mascara, Eric Gardner, and Mike Smith – took first place in the competition after correctly answering the “Final Jeopardy” question. This is the third time a team from the University of Pittsburgh has achieved this honor. Faculty and alumni from the University of Pittsburgh were present during the competition to help cheer the students on to victory. Presented by the Pennsylvania Pharmacists Association and endowed by Proctor and Gamble, the Self Care Championship is the nation-wide competition among pharmacy students designed to test knowledge of over the counter products and home remedies. Team members are selected by the individual schools of pharmacy within Pennsylvania.

The Pennsylvania Pharmacists Association is a professional membership society comprised of registered pharmacists, pharmacy students, and pharmacy technicians in all practice settings including academia, clinical, hospital, government, community, long-term care, mail order, managed care, and in-



University of Pittsburgh students and alumni with their winning team

dustry. The organization, as the leading voice of pharmacy, promotes the profession through advocacy, education, and communication in order to enhance patient care and public health. For more information about PPA student membership, benefits, and events, contact your chapter delegate (Nick Wytiaz: npw6@pitt.edu).

Pharmacy Legislative Day 2010

The Pennsylvania Pharmacists Association (PPA) will be holding its annual Pharmacy Legislative Day Wednesday, March 24 in Harrisburg. This event is a great opportunity for pharmacists and students to promote the profession and help shape the future of pharmacy. Meet with key senators and representatives to discuss important issues that directly impact your career and demonstrate clinical skills and the evolving role of the pharmacist by providing

health screenings, information, and other pharmacy related services to Pennsylvania's legislators. In addition, students have the chance to network with today's leaders of pharmacy and gain valuable leadership and advocacy skills while helping to advance the profession. Held in the rotunda of the state capitol building, you will also be able to view the beautiful architecture and learn the history of Pennsylvania's Capitol during a guided tour.

As student pharmacists, we cannot afford to let someone else make decisions about our future profession. PPA is providing bus transportation, free of charge, for students coming from Pitt and Duquesne to Harrisburg for the day. If you are interested in participating or would like more information about Legislative Day, contact me, PPA chapter delegate Nick Wytiaz (npw6@pitt.edu).

APhA-ASP Updates

By Alexa Ray

On behalf of APhA-ASP, I would like to wish everyone a happy and safe spring break! Hopefully you will all find time for some much-needed rest and relaxation during our week off.

We are happy to announce that nearly 30 Pitt Pharmacy students will be attending the APhA Annual Meeting March 12-15 in Washington D.C.!

We are excited to have such strong representation from our chapter at a national conference, where the students will be able to attend educational seminars, professional development workshops, and networking sessions with students and practitioners from around the country. Students attending the conference are reminded of the **mandatory** meeting in the PCLC (229-230) tomorrow, March 4th, from 12:00-1:00 p.m. The meeting will be relatively brief but we will discuss important topics such as transportation, the schedule for the conference, reimbursement issues, and events/activities in D.C. Please contact me (alexajray@gmail.com) or Shailly (shaillykshah@gmail.com) with any questions.

After spring break, there are only 6 weeks of class left! Take advantage of this time to get involved in the end-of-the-year projects and events sponsored by APhA-ASP. IPSF will be sponsoring a week

full of fundraising events and activities for World Water Week, the Social Chair will be planning a joint social event with the Duquesne's APhA-ASP chapter, Dr. Afton



Yurkon, of the National Community Pharmacists Association will be visiting Salk Hall to speak about independent pharmacy careers and ownership, and we will hold our final General Body Meeting of the year on April 7th. Please visit the Pharmacy Student Portal and PharmacistSociety to read more about these events and stay

up-to-date on any others planned for the rest of the semester.

As always, if you have any questions about ASP or want to get involved with any ASP projects or events, feel free to contact any Exec Board member via e-mail!

Finally, I would like to congratulate the newly-elected 2010-2011 APhA-ASP Executive Board:

President: **Shailly Shah**
President-Elect: **Elyse Weitzman**
Secretary/Treasurer: **Sarah Dombrowski**
SPAN Coordinator: **Kate Steward**
IPSF Chair: **Julia Sasanko**
Historian/Pitt Capsule Editor: **Tim Mizak**
Patient Care Co-Chairs: **Karen Soong and Kajal Patel**
Co-Chairs to the Council of Social Activities: **Rebecca Crooks and Alicia Lichvar**
Chair to the Council of Professional Activities: **Nick Wytiaz**

PSHP News

By Taylor Miller

As we make our way toward the home stretch of the year, things with PSHP are heating up! Because we lost an organization meeting as well as a Lunch & Learn session due to Snowmageddon 2010, there is a lot for PSHP to accomplish in the final few weeks of school.

We are in the process of finalizing our plans for our Poison Prevention Week outreach during the month of March. National Poison Prevention Week is being celebrated March 14-20 of this month, and we have several activities in place to help spread the word about poison prevention. On Monday-Thursday of Poison Prevention week, we will be tabling in Falk Pharmacy to distribute Poison Prevention Brochures as well as Mr. Yuk Stickers. The week will culminate on Friday as we will be visiting an elementary school in the Ambridge School District and speaking with a 1st grade class about poisons and how they can protect themselves and their families. Any student interested in joining our efforts or in need of Experiential Learning hours should contact me as soon as possible so you can be included in the events!

Any students interested in purchasing a Sanford Antimicrobial Guide from PSHP should contact Taylor (tjm33@pitt.edu) as soon as possible.

Professional Council Selects Cardiovascular Health as Dean's Theme

By Jenny Bacci

At the leadership retreat this past fall, representatives of the pharmacy school organizations met to discuss ideas to further improve our school. One of the major ideas that came out of this brainstorming session was "The Dean's Theme." The idea came from students' frustration with the lack of collaboration among the pharmacy school organizations resulting in a multitude of projects all with different objectives. The students identified a need to create a central mission for all organizations to work toward to further unite the school without interfering with the established projects and goals of each organization. At a meeting in January, the Professional Council followed up on "The Dean's Theme" to discuss ideas on how we could implement such a project in the school of pharmacy.

The mission of the Dean's Theme is to promote school unity and collaboration by having each student organization working toward a common goal within the contexts of each organization's individual mission statement. Each spring semester, the Dean will meet with the Professional Council to discuss relevant issues within the profession of pharmacy and to choose the topic for the following year's "Dean's Theme", giving organizations the summer to plan. The goal is to have each organization be involved in at least one event of their choice promoting the chosen "Dean's Theme" each year. In order to implement the project, the spring leadership

retreat will be used to brainstorm ideas for projects for the following year's selected "Dean's Theme," while the fall leadership retreat will provide an opportunity for representatives from each organization to regroup and prepare for implementation after planning with their organizations over the summer.

After our meeting this January, the Professional Council is proud to announce the Dean's Theme for the 2010-2011 school year, "Cardiovascular Health."

This topic was chosen for all of the disease states that it encompasses and the huge cardiovascular health issues our nation currently faces. Additionally, since cardiology is taught in the P2 year, second- and third-year students will be able to contribute their clinical knowledge, while mentoring P1s who want to participate but haven't yet been taught cardiology in the curriculum.

The Professional Council would like to encourage every student to get involved with "The Dean's Theme" project within their organization. We are ready to portray ourselves as the students of The University of Pittsburgh School of Pharmacy to the Pittsburgh community and to implement our specialized knowledge and skill set as pharmacy students to perform service and evoke change, as Tom Menighan discussed at this year's Tucci Lecture.

Finally, the Professional Council would like to create a title for the cardiovascular health project, leaving "The Dean's Theme" as an internal title, and we would like input

from all pharmacy students. Therefore, we will be holding a school-wide competition to determine a title for the project. Submissions will be voted on during the April APhA-ASP General Body meeting. Please submit entries to jenny.bacci@gmail.com by Wednesday, March 31st.

Mark Your Calendars!

3/4—Mandatory Meeting for APhA
2010 Attendees

SNPhA MTM Presentation

3/12-3/14—APhA National Meeting
and Exposition

3/22—Rho Chi Meeting

PLS Meeting

IPSF World Water Week Kickoff
Lunch

3/24—Pharmacy Legislative Day

1st Annual PI Health Fair

3/25—IPSF General Body Meeting

3/30—LKS Hygeia Day

3/31—SNPhA General Body Meeting

Check the PharmacistSociety calendar for more details and up-to-date information!

A Man Who Always Follows His Heart

By Svetlana Goldman



Anatomy and Physiology and Pharmacotherapy of Cardiovascular Disease are both difficult subjects that require students to truly immerse themselves in the material, learn the concepts, and not merely memorize information.

Dr. Vollmer helps put these difficult concepts into a more concise and understandable view for students through his detailed handouts, discussions, and diagrams. Not only does he take the time to simplify the processes of the human body and how drugs work but also adds personal stories and anecdotes throughout his lectures to paint a more vivid picture of his experiences and provide applications to real life.

Most of us think of him as a modest, kind, and quiet professor completely engrossed with the actions of the human cardiovascular system. In fact, Dr. Vollmer is not merely an expert on the functions of the heart but also uses his heart on a daily basis to pursue his dreams, academic goals, and personal relationships.

His passion for human physiology began during his undergraduate education at St. Vincent College in Latrobe, PA where he pursued a biology major and completed a physiology laboratory course.

Dr. Vollmer recalls how mesmerized he was when they experimented with a turtle's beating heart. He placed various agents on the heart such as epinephrine which speeded up the heart and acetylcholine which slowed down the heart. Then they even removed the heart and watched it continuously beat since the turtle was a cold blooded reptile. This experiment left Dr. Vollmer in awe at the complexity of the heart's intricate functions. He realized there was much more to learn about the heart and cardiovascular drugs and even though his wife came from a family of pharmacists, he decided to follow his passion and obtained his pharmacology degree at the University of Houston.

In graduate school Dr. Vollmer solidified his knowledge about human physiology during a challenging course he took alongside medical students. Although many students thought this professor's teaching method was boring, Dr. Vollmer admired the teaching method because it was an "Arthur Guyton" approach. Arthur Guyton happens to be Dr. Vollmer's biggest role model and is a world renowned physiologist. In this course, "everything came together" and concepts became clear to Dr. Vollmer.

On the morning before a final exam in graduate school Dr. Vollmer received a conscription letter (draft

Continued on Page 8

SNPhA Updates

By Julia Schnippert

Twelve SNPhA members braved the final blast of snow and cold that "February Fury" provided the last weekend of February to trek to Baltimore to attend the SNPhA 2010 Regions I and II Regional Conference hosted by the University of Maryland.

The weekend was filled with great speakers, informative sessions, collaboration, and the opportunity to meet a wonderful group of people. Maryland State Delegate Shawn Tarrant gave a rousing speech calling on all of us to promote the profession of pharmacy through networking and the legislative process. Sybil Richards, Vice President for Professional Affairs of Wal-Mart, encouraged us to be involved in promoting pharmacy as students and challenged us to continue to be active once we are practicing our profession.

There was a panel discussion regarding non-traditional careers in pharmacy and a workshop regarding financial literacy.

Pitt is now partnering with the University of Charleston SOP (West Virginia) in an effort to promote an even broader array of community outreach projects. It was well worth driving through the howling winds and blizzard-like conditions to attend the meeting!

LKS Recovers from the Snow

By: Hoi Yee Lung

With the winter storm that blanketed the city with over 20 inches of snow, Lambda Kappa Sigma unfortunately had to cancel several events in early February. However, as the snow is slowly removed from the roads and sidewalks and class schedules return to normal, the sisters are busy preparing for our remaining spring events.

First and foremost, the Delta Chapter feels compelled to acknowledge our fellow sisters who will be inducted into Rho Chi Honor Society this month. Congratulations to Samantha Allen, Jess Elefritz, Lauren Fischer, Justine Parker, Kristi Sadowski, Abbey Schram, and Jenn Smith on your outstanding academic achievements.

In fundraising news, LKS is pro-

viding students the opportunity to purchase new white coats for upcoming rotations and those mandatory professional dress days. These white coats are the same as the standard white coat presented in the P1 ceremony. So, if your Tide-to-Go pen is no longer sufficient in keeping your coat clean, please support LKS and consider purchasing a new (actually white) white coat! Also, look forward to another bake sale on Wednesday, March 3rd at noon with proceeds benefiting Project HOPE and Relay for Life.

Our professional project co-chairs are planning the annual Hygeia Day lunch which will be held on March 30th in 402 Salk. This year's program will focus on Ovarian Cancer and will feature a Registered Nurse who is a survivor of the disease. Hygeia Day serves as a nationwide



LKS effort to publicly call attention to the profession and to advance knowledge in women health topics. For this reason, we will be asking for donations to support the National Ovarian Cancer Coalition and Ovarian Cancer National Alliance.

LKS's International Office (IO) has finalized more details regarding the biennial convention and released the image depicting the host city. Along with Tau Chapter and Tau Alumni, we are looking forward to the "Building Bridges of Sisterhood" event taking place at the end of July.

Kappa Psi Updates

By Julie Styche

The Brothers of Kappa Psi have been busy over the past month with transitioning into newly elected offices and planning this semester's service and social events.

Service events for this semester include blood pressure screenings, volunteering at Gilda's Club, cooking at Family House and more. A handful of Brothers recently visited with veteran's at the annual National Salute at the VA Hospital where they talked to the veterans and passed out cards thanking them for their service. The Brothers are currently selling Malley's chocolate to raise the funds needed to carry out these planned service projects.

See a Kappa Psi Brother for details if interested!

As far as social events go, the Brothers held the first annual Professor lunch this semester, where Regent Dan Yarabinec gave a PowerPoint presentation that reviewed the history of the chapter and updated Kappa Psi professors in the pharmacy school on the chapter's recent accomplishments. In turn, the professors shared their Kappa Psi experiences and what being a Brother meant to them. The Brothers are also looking forward to a fun night at Dave & Buster's, spring formal and the semi-annual Province meeting, which will be



hosted by our very Pittsburgh Kappa Psi chapter.

Finally, congratulations to Lindsay McCartney, Elyse Weitzman, and Dan Yarabinec for being accepted in Phi Lamda Sigma and to Svetlana Goldman, Dan Lindsay and Katelyn Schultz for their acceptance into Rho Chi.

PPA's GRASP Weekend and Legislative Day – March 24th

By Kate Steward

This past weekend, February 19-21, twenty-three students from pharmacy schools throughout Pennsylvania attended the **Pennsylvania Pharmacists Association (PPA) annual Government Relations Advocacy for Student Pharmacists (GRASP)** program. Pitt attendees included Svetlana Goldman, Ruth Seifert, Kate Steward, Elyse Weitzman, and Nick Wytiaz. Several specific legislative issues were the focus of many of the activities, especially...

- House Bill 1041 (expanding the scope of practice),
- House Bill 882 (setting forth standard practices for conducting pharmacy audits),

House Bill 1676 (PACE Proposed Pharmacy Cuts), as a historical example of a bill which PPA helped to defeat, thereby preserving reimbursement rates for medications.

Using the previously mentioned Bills as examples, the GRASP program identified several techniques student pharmacists can utilize to advocate for their profession. First, **consider writing a letter** to your district's Pennsylvania State Senator or Representative, introducing yourself to them as a student pharmacist willing to provide insight on pharmacy issues. Never underestimate your value or be intimidated – you're their constituent and a voter after all. Chances are, you have many voting years ahead of you, so introduce yourself. They want to know you, and when it comes to protecting and advancing the profession of pharmacy, you want your legislator to know you.



Secondly, **pay attention to what's going on regarding pharmacy at the State level**; this means staying involved with your state pharmacy associations like PPA. Presently out of the 50 legislators in the Senate and 203 Representatives in the House, not one of them is a pharmacist. They need your insight. However how can you keep up with the 4,000+ bills that are introduced over every two-year legislative session? This is where PPA fits in. PPA dedicates its resources to monitoring legislation, analyzing bills, providing concise information to in the form of Legislative Updates, Calls to Action and Issue Briefs and helping you contact your Senator or Representative.

Finally, **market your skills to your community**. We still have a long way to go to change the public perception of simply pouring pills from the big bottle to the little bot-

tle. When we work as pharmacists, our "product" is so much more than pills – it's our knowledge, service and skill set. However if a product is not valued, it will eventually disappear from the market. Demonstrate your value by giving your patients and colleagues reasons to support you. Becoming an advocate for the profession by being an active, involved member of the professional organizations that represent you.

If you haven't considered it before, see the article by Nick Wytiaz, Pitt's PPA Student Representative for information on attending Legislative Day, March 24th!

Dr. Vollmer Interview, Continued from page 5

notice), requiring him to serve in the army for the next three years. Although he began graduate school at the height of the Vietnam War this news was still somewhat shocking and surprising to him. However, he was glad to know that when he got back he would be set in his future career plan.

In the army he was specialized in chemical, biological, and radiological warfare (CBR) and further practiced his teaching abilities by training other army members in California before having to spend one year in Vietnam.

Once he finished graduate school and served in the army he then interviewed for a job as a research scientist at the Squibb Institute for Research in Princeton, NJ. Again a man who firmly follows his heart, Dr. Vollmer engaged in animal research regarding angiotensin converting enzyme inhibitors and whether these drugs have effects on the nervous system due to numerous drug interactions.

While working at the Squibb Institute Dr. Vollmer received a call from (the infamous) Dr. Dixit about a faculty position opening at Pitt. Although he was not sure about whether he wanted to take this position he decided to come to Pitt and give a seminar to many graduate students interested in cardiovascular diseases and drugs. After this experience he decided to stay at Squibb for half a year, but then move to Pittsburgh and take the position. He remembers a surprising meeting with his boss at Squibb, where his boss tried to convince him to stay with the research institute. Dr. Vollmer was shocked to

find out that his boss knew about his pursuit of this other position. However, in the end his boss pushed him to take this new path and said "I envy you; I really want to teach too". Later, Dr. Vollmer found out that his past boss also followed his heart after retiring from Squibb and pursued a teaching position in Philadelphia.

Currently, Dr. Vollmer is continuing research involving the use of oxytocin knockout mice alongside Dr. Janet Amico, an endocrinologist specialist. They are investigating the difference in normal mice and those which do not product oxytocin. For example, the knockout female mice seem more anxious and perhaps oxytocin might be an important aspect to decrease depression and anxiety and help with mother-bonding with the mice pups. However, the knockout male mice appear to be more aggressive than the normal mice.

Furthermore, Dr. Vollmer is curious whether there exists a link between oxytocin and control of salt intake. When mice were given a choice to drink salt water or pure water the knockout mice drank more of the salt than the regular mice. However, over time the mice seemed to understand to avoid the salt water. Thus, he is still unsure whether there is a direct link between oxytocin and salt intake or the development of hypertension.

Not only did Dr. Vollmer follow his heart in the pursuit of his academic and research goals but he also made sure to follow his heart to find the love of his life. He knew his wife since they are little kids because their grandparents both moved from Poland and settled in the same area of Western Pennsylvania called

Level Green. They dated for many years and finally married at the beginning of graduate school. His wife is now the assistant director of Falk School.

As for outside hobbies that Dr. Vollmer enjoys, most students know about his passion for astronomy from his generous contribution to the PLS Auction of a night of watching stars with students. I can truly see his passion for the planets and stars above as he explained the beauty of Jupiter and its many moons along with Saturn and its magnificent rings. He has two children, as well as two grandchildren. Outside of school, you can find him up at Trees doing some cardio workouts to keep his heart in shape.

Dr. Vollmer is truly a man that defines his life by the goals he accomplishes and most importantly the people he touches with his generous, kind, and intelligent heart.

P3 Class Updates

By Mike Smith

6 more exams, and rotation selection complete. The end is in sight! Be on the lookout for announcements about the class party, on April 28th! I also have to make a retraction from last month's Pitt Capsule - Congratulations to Jerry Mascara for finally winning a competition!

Rho Chi Updates

By Morgan Adams

Rho Chi members would like to congratulate all of the P2 student inductees for the 2010 year. We are looking forward to the Rho Chi/PLS initiation ceremony to be held on Tuesday, March 23rd, 2010 at the University Club. Additionally, Rho Chi would like to invite all students to attend the Koch Lecture on Wednesday March 24th, 2010 from 12-1 PM in Scaife #6. This year's lecturer will be Julie Johnson, Pharm.D. from the University of Florida.

On Saturday, February 27th, Rho Chi members participated in the Race to Anyplace that benefited the Leukemia and Lymphoma Society. Rho Chi riders included Dana Riether, Jerry Mascara, Tracy Sparkes, Cat Kim, BJ Conklyn, Morgan Adams, and Eric Gardner. Rho Chi members are also looking forward to beating

PLS and pummeling Mike Smith with paint in paintball later on this month and participating in a social event with PLS and Duquesne.

Rho Chi will continue to host its monthly health talks at the Salvation Army. March's topic will feature asthma and COPD information. We will also be co-sponsoring a blood drive with the Dental School on Thursday, April 8th from 11-5 in the PCLC.

Missed out on the fall sale of lab cards? Rho Chi will be holding another lab card sale this spring. Look for more information in class after Spring break.

Please visit the ID blog website (<http://rxweb.pharmacy.pitt.edu/groups/infectiousdiseasesblog/blog/>) or the article in the Pitt capsule to see the latest contribution to the ID blog by members Dana Riether and Jaci Schlott!

PLS Inducts 11

By Anastasia Elmiger

Phi Lambda Sigma will induct eleven new members into the Beta Delta chapter on March 23, 2010. After applying, students were selected by their peers based on leadership within the profession of pharmacy.

On behalf of the current PLS members, congratulations to **Taylor Miller, Amanda Johnson, Shailly Shah, Nick Wytiaz, Dan Yarabinec, Cynthia Bou-Abboud, Indrani Kar, Lindsay McCartney, Sarah Rindfuss, Kailey Troutman, and Elyse Weitzman!**

Rho Chi Student of the Month

Summer Stairs - P2

Rho Chi would like to congratulate P2 student Summer Stairs on being selected as the February Student of the Month. Summer was nominated by her peers not only for the outstanding work she has done for the School of Pharmacy but also for the surrounding community.

Summer belongs to APhA-ASP where she is the Patient Care Committee Co-Chair and is also the President-Elect for PLS. As the Patient Care Committee Co-Chair, she helped to organize a cigarette butt pick-up around campus as well as a smoking cessation informational tabling during the Great American Smokeout. Summer also spent the fall semester putting together Operation Diabetes so that it could be implemented in the spring. So far this semester, over 50 students have gone out into the community to raise awareness about diabetes and in just over a month, they've screened about 200 patients in the area. As the PLS President-Elect, Summer has worked with several faculty members and students to plan a proposal for the PLS Leadership Challenge that was submitted to the national office in hopes of winning. She is also in charge of scheduling the spring and fall retreats.



C. difficile? Si, difficult: Possible Novel Treatment for Severe Refractory *Clostridium difficile* Infection

From the Infectious Disease Blog, Found at <http://rxweb.pharmacy.pitt.edu/groups/infectiousdiseasesblog/blog/>

According to the Infectious Disease Society of America, “*Clostridium difficile* is the most frequently identified cause of nosocomial diarrhea.” However, the clinical practice guidelines for treating *Clostridium difficile*-associated diarrhea have not been updated since 1995 (around the same time that we were learning geography in the 5th grade). There is an update in progress, projected publication for this coming summer, but we wanted to highlight a few new case studies specifically on the treatment of severe refractory *C. difficile*.

Not only is the incidence of *Clostridium difficile* infection (CDI) increasing rapidly, hypervirulent strains, such as BI/NAP1/027, have also emerged causing increased relapse rates and refractory cases. Characteristics associated with this strain include increased TcdA and TcdB toxins, presence of a binary toxin, fluoroquinolone resistance, and increased sporulation capacity. Oral vancomycin and either oral or IV metronidazole are the current first line therapies for initial and recurrent CDI. However, there are no clear guidelines on treating CDI that is refractory to vancomycin and metronidazole.

Tigecycline is a tetracycline derivative known as a glycylcycline, which was designed to overcome bacterial efflux pump resistance and/or ribosomal protection. It is only available as an intravenous formulation known as Tygacil®. Although it is a broad-spectrum antibiotic, previous studies have suggested that it is associated with a very low risk of CDI. More importantly, recent case studies have suggested its use in successfully treating CDI. These findings will be further evaluated in prospective clinical trials. The table below summarizes the important findings from four case studies.[1]

Table 1. Demographic and clinical characteristics of 4 patients with severe refractory *Clostridium difficile* infection who were treated with tigecycline.

Case	Sex	Age, years	Symptoms	Method of diagnosis ^a	Duration of previous standard therapy ^a	Duration of tigecycline therapy ^a	Date of relief of symptoms after start of tigecycline therapy	Date of negative toxin EIA result after start of tigecycline therapy	Relapse within 3 months?
1	Male	60	Diarrhea >8 times per day; temperature >38.5°C; hypovolemic shock; pseudomembranes; bloody stools	Toxin EIA (day 16); culture positive for ribotype 159	Mtz (days 16–20); Vm (days 21–25); Vm and Mtz (days 26–57)	3 weeks, in combination with Vm (days 58–78)	Day 3	Day 3	No
2	Female	36	Ileus; temperature >38.5°C; hypovolemic shock; pseudomembranes	Toxin EIA (day 22); culture positive for ribotype 078	Vm (day 22–26); Vm and Mtz (days 27–35)	15 days (days 36–50)	Day 5	Day 5	No
3	Male	36	Diarrhea >8 times per day; temperature >38.5°C; hypovolemic shock	Toxin EIA (day 36); culture positive for ribotype 078	No standard therapy	7 days (days 36–42), followed by 4 weeks of Vm (days 43–70)	Day 5	Day 13	No
4	Female	82	Diarrhea >8 times per day; temperature >38.5°C; hypovolemic shock; pseudomembranes; bloody stools	Toxin EIA (day 6); culture positive for ribotype 087	Mtz (days 6–16); Vm (days 17–27)	24 days (days 28–51), then 2 courses of pulse therapy ^b (days 59–65 and 73–79)	Day 7	Day 4	No

NOTE. EIA, enzyme immunoassay; Mtz, metronidazole; Vm, vancomycin.

^a The day (after hospital admission) on which the toxin EIA result was positive or the day (after hospital admission) on which therapy was started is given in parentheses.

^b After 24 days, 2 additional weeks of treatment were interspersed with 1 treatment-free week.

Why Tigecycline?

Tigecycline appears to be a feasible alternative for the treatment of severe refractory CDI due to the following reasons:

Reported MIC₉₀ values for *C. difficile* are low, ranging from 0.06 to 0.25 mg/mL.

The fecal concentrations of tigecycline in formed stools are significantly higher than those of metronidazole.

Despite its inhibition of gut microflora, tigecycline did not induce proliferation or cytotoxin production of *C. difficile*.

The intravenous administration of tigecycline is more favorable than the oral administration of vancomycin for critically ill patients.

Looking Ahead

With the anticipated summer release of the updated CDI treatment guidelines, it will be interesting to see if the evidence is compelling enough to give tigecycline a novel indication of treating severe refractory *Clostridium difficile* infection.

[1] Herpers BL, Vlamincx B, Burkhardt O, et al. Intravenous tigecycline as adjunctive or alternative therapy for severe refractory *Clostridium difficile* infection. *Clin Infect Dis*. 2009; 48:1732–5.

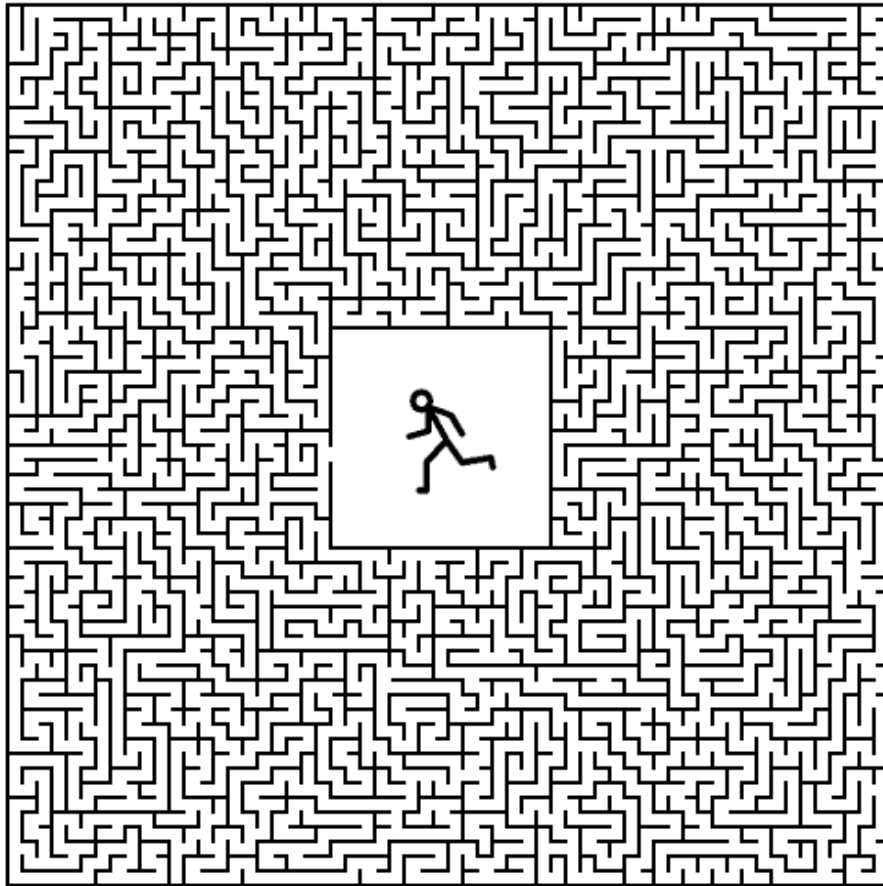
[2] Bauer MP, van Dissel JT, Kuijper EP. *Clostridium difficile*: controversies and approaches to management. *Curr Opin Infect Dis* 2009; 22:517–524.

Fun and Games!

How much do you know about drug names?

1. This PPI was originally known as Losec, but confusion with Lasix led to a name change.
2. This beta-blocker's brand name is a combination of the Latin word for "heart" and a word implying "protector."
3. What controlled substance was named for its action: slowing intestinal motility?
4. This drug, commonly used in asthma patients, was named for its once-a-day administration.
5. What 4 letters no longer start a generic drug name due to their difficulty to pronounce in various languages?
6. This transdermal MAOI has a trade name derived from the names of the children of the CEO of its manufacturer.
7. This anticoagulant was named after a research foundation that discovered its uses.
8. A movie about a jewel heist inspired the name of this class of antibiotics.
9. This PDE5 inhibitor's brand name is roughly translated to "tiger" in Sanskrit.
10. When metabolized, this class of antihypertensives adds the suffix "-at."

This PI just got out of his last class for the week and it's time for spring break. Help him find his way through the confusing corridors of Salk Hall to a week of freedom!



Spring Break!!!

Answers:
1. Prilosec, 2. Nadolol (Corgard), 3. Lomotil, 4. Singulair, 5. H, J, K, V, 6. Emsam, 7. Warfarin, 8. Rifamycins (Rififi is the movie), 9. Viagra, 10. ACE inhibitors