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RHOCHISTJ.ORG

A student-operated newsletter by the St. John's University College of Pharmacy and Allied Health Professions Beta Delta chapter

SINGLE-LINE STORIES

- Rho Chi successfully hosts its third annual Coffeehouse Chats event
- Two residency and fellowship informational events to be held by Rho Chi and APhA-ASP
- RUN for the HEALTH of it with APhA-ASP on April 21
- Sixth-Year Pharmacy Formal on May 9 welcomes students and faculty
- College to offer practice NAPLEX examinations for sixth-year students

INSIDE THIS ISSUE

THE APhA ANNUAL MEETING BY: NANDINI PURANPRASHAD, PHARM.D. CANDIDATE C/O 2013

This year, we had 17 attendees representing the St. John's University College of Pharmacy and Allied Health Professions' American Pharmacists Association: Academy of Student Pharmacists (APhA-ASP) chapter at the APhA 2012 Annual Meeting & Exposition. The meeting took place in New Orleans from March 9th to 12th, 2012. New Orleans boasts the second largest convention center in the country; so, you can bet there was a lot to see. The APhA theme this year was "Driving Connections, Transforming Patient Care", which brought together pharmacists, new practitioners, residents, student pharmacists, and pharmacy technicians from across the country to share information and discuss the future of the pharmacy profession. Here are some of the highlights of my experience.

The APhA Exposition is a one-of-a-kind marketplace to visit and explore over 150 exhibiting companies and organizations. As APhA attendees, we were able to meet face-to-face with industry leaders from Amgen, Genentech, GlaxoSmithKline, Pfizer, AstraZeneca, and many other companies from the industry. Students were in the perfect setting to ask about each company's products, inquire about research and drug development, and explore other opportunities. The attendees also met organizational representatives from the FDA, ASHP, Pharmacist's Letter, Pharmacy Times, LexiComp, and many others to discuss their services and receive free samples or products. We spoke with pharmacy employers that offered jobs across the country, including the Department of Veterans Affairs, community pharmacy chains, Asereth Medical Services Inc., and the International Society of Travel Medicine. Walking by all the booths at the convention center was sure to get you tired; so, APhA provided some tasty snacks throughout the day to refuel us. There were also free massages to relax the travel weary attendees.

After we finished browsing through the different booths of the convention center, we went to a student information showcase on postgraduate residencies. We met representatives from PGY-1 community pharmacy residencies and other postgraduate training programs.

We also participated in a roundtable discussion with residency program directors, where we had opportunities to ask questions about interviewing skills and preparing a CV. One of the events, which I think every pharmacy student should see, was the open hearing on Proposed Resolutions and New Business. This essentially was the political platform for student pharmacists. It was interesting to listen to student pharmacists from all over the country, as they shared their thoughts on the APhA 2012 proposed resolutions. This year, the resolutions including the Expansion of Schools and Colleges of Pharmacy Relative to Pharmacist Demand, Proper Medication Disposal and Drug Take-Back Programs, Training Program for Post-diagnostic Pharmacist Prescriptive Authority, and Pharmacy Benefit Manager (PBM) Practices. We realized how these resolutions would affect the practice of pharmacy in each state. After this event, we had a chapter dinner at local restaurant, where everyone spoke about the things they accomplished at the convention.

Of course, before the convention began, we did some sight-seeing around New Orleans. If you ever find yourself down in New Orleans for a weekend, I would recommend purchasing several tours. Some of these include, but are not limited to, the Swamp Tour (to see some alligators and wildlife), a city tour (to learn about the history and culture of New Orleans), and/or a Ghost Tour (where you will hear strange but true tales). The spirit of Mardi-Gras, which took place two weeks ago, still lingered in the air in the French Quarters, especially on Bourbon Street (which guarantees a colorful nightlife). One of the things I enjoyed during this trip was the Southern hospitality; the colorful and flamboyant atmosphere of this city was very distinct from NYC's urban hustle and bustle.

I encourage each one of you reading this article to join us for the next APhA annual convention in Los Angeles, CA from March 1-4th, 2013. I promise that you will have amazing and worthwhile experiences by attending conventions.

St. John's University College of Pharmacy and Allied Health Professions APhA-ASP members (APhA 2012 Annual Meeting & Exposition held in New Orleans)
Photo Credit: Jaclyn Scott

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MY APhA 2012 EXPERIENCE BY: MOHAMED DUNGERSI, ASSOCIATE STUDENT EDITOR

I had the immense opportunity to travel to New Orleans to be a part of the biggest pharmacy gathering of the year – APhA 2012. The combined spirit, enthusiasm, and positivity for the profession of pharmacy at the meeting were truly inspiring.

Since this was my first ever APhA meeting, I feel that it would be appropriate for me to provide some practical advice and guidance to future APhA meeting attendees.

Firstly, be sure to get as much information about the meeting ahead of time from resources, such as the official website, APhA e-mails, and local APhA-ASP events about the meeting. This year, APhA introduced a smartphone application, which was incredibly easy to use. I found this application to be priceless, as it was the center of my planning. Since the annual meeting was incredibly large, it was natural that there were plenty of events running at the same time at many different locations. It is imperative that you know exactly where you have to be at a specific time. The application allows you to select scheduled events; it places them conveniently in a personal schedule with all the necessary information you will need.

Knowing which events to attend can also be extremely challenging. It is important to consider your goals for attending the meeting whilst initially choosing events to attend. Personally, my priority was to attend the Rho Chi Annual meeting, since I was our chapter's delegate. I also decided to attend Phi Lambda Sigma's annual meeting, since I am also an active member of the organization. Apart from that, I had the responsibility of attending some events to represent our APhA-ASP chapter. After I scheduled myself for these events, I had a clearer picture of my free time, and I attended other interesting events, the exposition, and certain local sites.

If you will be attending the meeting in the future for the first time, I highly recommend attending the "APhA-ASP Welcome for first Timers" event. Despite being at 8:30 in the morning on Saturday (and bearing in mind that the opening social the night before ended late), the event was a full house with no room to spare. The event was just what every first-timer needed. It provided students the opportunity to network with each other as an icebreaker, as well as provided tips on how to network with fellow professionals. The event also proved to be a vital guide to the types of events that students should attend. The enthusiastic and joyful mood was also very refreshing. Leaving this event, I felt that I had a clearer picture of the kinds of events I wanted to attend during my free time.

The largest of the events, by far, was the APhA exposition. The APhA exposition was a one-of-a-kind marketplace to visit and explore with over 150 exhibiting companies. APhA attendees met face-to-face with industry leaders and organizational representatives, as they demonstrated new products, discussed exciting new services, and answered questions. It was a great opportunity for me to see the nationwide progress of pharmacy, especially in terms of technology, growth, and development. You will also have a wonderful opportunity to network with some of the professions leaders and possibly a future employer.

At the time of the trip, I was on rotations at Town Total Health in Melville, which is a distance pharmacy that offers Medication Therapy Management (MTM) services to its patients nationwide. I was and still am, very keen to study about the increasing role of MTM in healthcare. I attended a session presented by APhA-ASP entitled, "Implementing MTM in your future practice." This session focused on challenges to overcome and methods to enable local pharmacies to begin providing MTM services. The event truly lived up to its expectations.

I also managed to attend events that had more information regarding residencies nationwide. It was a great opportunity to learn of residency options outside of the tri-state area and to learn about the additional opportunities that come with conducting an out-of-state residency. There was also an opportunity to speak to current residents to gain a sense of the day-to-day duties of each residency. If any student is interested in conducting a residency or fellowship, these wonderful events will cater you well.

As a member of APhA, there are some wonderful events to attend, including the APhA opening general session. This year, it featured a popular speaker, Thomas Goetz. Also, be sure to attend the APhA-ASP (Region 1) caucus to share your opinion, as well to listen to the opinions of others in regards to proposed resolutions. Students voted on each resolution after any comments or concerns were voiced. Similarly, attending the APhA-ASP House of Delegates sessions is vital to get a better understanding of the policy changes that student pharmacists would like to have. If you are on the executive board for the APhA-ASP chapter at our school, it is necessary for you to attend workshops that are specific to your position. These workshops serve as guides for you to maximize your potential as a student leader.

One of the events recommended at the first timer's event was the Walmart Leadership Training series. Introduced in 2007, the Walmart Leadership Training Series (LTS) is a four part series offered over the four professional four years of a student pharmacist's education. Upon completion of the series, participants will receive an APhA-ASP LTS Recognition of Participation, signed by the APhA Executive Vice President and the APhA-ASP National President. This is an excellent CV or resume builder. One can obtain the certificate by attending a variety of sessions at either the Annual Meeting, Midyear Regional Meetings (MRMs), and/or the Summer Leadership Institute (APhA SLI). For more information on this, please visit http://www.pharmacist.com/AM/Template.cfm?Section=Leadership_Training_Series

I attended the APhA-ASP General Student Leadership Development Workshop as part of the LTS. This session comprised of an interactive and full of life presentation by Mr. Ben Thankachan, who currently serves as a senior OTC buyer at Sam's Club. The presentation focused on his personal leadership journey through graduation to his current position. It also focused on understanding the characteristics of a true leader. Attending this session alone would have been worth the travel. The inspiration and positivity from this session is something I will hold on to for a very long time. I will leave you with a quote by John Buchan shared by Mr. Thankachan during this session, "The task of leadership is not to put greatness into humanity, but to elicit it, for the greatness is already there."

SPOTLIGHT ON THE NYS LEGISLATURE: SENATOR KEMP HANNON BY: MAHDIEH DANESH YAZDI, ASSOCIATE STUDENT EDITOR

In previous issues, we discussed prescription drug abuse and several bills currently on the floor of the NYS Legislature, sponsored by Sen. Hannon. On February 7, I sat down with Sen. Hannon's director of communications, Mr. Phil Hecken, and his legislative aide, Mr. Timothy Broschardt to discuss this matter and other health care issues.

DISCLAIMER: *The opinions expressed in this interview are solely those of Mr. Hecken and Mr. Broschardt, and do not reflect the perspectives of Sen. Hannon, the Rho Chi Post, the Rho Chi Beta Delta Chapter, or the St. John's University College of Pharmacy and Allied Health Professions.*

Q: Were the Medford shootings the impetus to start working on S5880?

Mr. Broschardt: I am not sure of the timing of the shooting, but I believe so.

Q: What was the reasoning behind the amendment of Bill S5880, to exempt hydrocodone from Schedule II regulations on storage and distribution?

Mr. Broschardt: This has the effect of moving all of them into Schedule II at the pharmacy level. I assume this is an effort to avoid placing more burdensome requirements on pharmacies.

Q: How did the Senator come to include tramadol to be part of this legislation? We do know that tramadol is an opiate but legislation has never addressed it as such.

Mr. Broschardt: I guess he saw it as a hole in how we treat these drugs. He saw it as something that had not been dealt with. I guess it is seen as a rising problem and one that has not been seen as a major addiction issue but rather one that is increasing.

Q: Where does the legislation stand right now? I read recently that the legislation was on third reading. What does that mean?

Mr. Hecken: Well, if the bill is in third reading that means it can be voted on anytime, they could vote on it tomorrow, or it could sit on third reading for two months.

Mr. Broschardt: It could sit on third reading forever.

Mr. Hecken: Well, yes. Sometimes, if it is not voted upon, the reason may be that they are not in agreement with the Assembly. You could pass a one-house bill, but unless both houses approve the same bill and then the governor signs it, it does not become law. You could have what we call a "feel-good" bill so that they can say that we did it, knowing that the Assembly will not. So, as to when it will be voted upon, I do not think anybody would know that.

Q: Has the bill faced much opposition from anybody?

Mr. Broschardt: To our knowledge, I do not think so,

Mr. Hecken: I do not want to say that there has been no opposition, but not to the best of my knowledge. At a law enforcement conference this morning, both the law enforcement and pharmacy community seemed to be on board with any new laws, bills, and technologies that could protect pharmacists while they sell these high-risk medications or give them security within the pharmacy itself. I do not think there is any major opposition to any of these bills.

Q: Now, with S6066, did older legislation only specify doctors and is that why there is a need for this bill to mention practitioners, pharmacists, and pharmacy interns?

Mr. Hecken: It has to close any loopholes that there were. I believe that right now the prosecution can only be of doctors who prescribe or abuse the prescription process whereas there are pharmacists, very few pharmacists, who are complicit in this, and I believe this is to close any existing loopholes.

Mr. Broschardt: My understanding is that it is more clarifying in terms of the actual practitioners and applying it to pharmacists. Part of the bill is that it is a new statute, it is not changing an existing statute; it is adding a new one. Maybe in the past there was a lower sanction, like a Class D or C felony. However, the bill itself would be creating an entirely new statute in the penal law. It is not just closing a hole, but also acting as a deterrent.

Q: How practical is it to enforce this law? The legislation uses the common term "good faith," but how do we apply this in real life?

Mr. Broschardt: Well, part of it is that enforcement is not something that can be legislated and that is going to come down to the executive and law enforcement. In addition, other legislation would be involved in this. For example, ISTOP would be related because it would set up a directory that they would have to be checked for how of-

ten someone has been prescribed a drug, whether it is chronic or not and gives them a history with this and similar drugs and allows them to make a better judgment call on the issue. In addition, there is going to be a lot of involvement in case law, which will be up to the courts.

Mr. Hecken: I understand what you mean about that term being "thrown around," and obviously, a lot of discretion would have to be exercised by both prosecutors and judges to deciding guilt and innocence based on a phrase like that. One of the gentlemen on the panel today, a Dr. JD from Nassau, mentioned a similar point that he sees people come through the emergency room or a physician's office and sometimes the doctors themselves have to make a judgment call as to whether someone is there to just score painkillers or whether there is legitimate need. Even the doctor themselves, even before it gets to the pharmacy stage, have to determine this. Currently they are storing records in a database, so that someone who is a known pill abuser or purchaser could be tracked and they do not resell to them down the road.

Q: How do we handle the situation where a known pill abuser or seller has a legitimate medical need for these drugs? What about patients who can only take high amounts for long periods? Would ISTOP differentiate these kinds of patients?

Mr. Hecken: This is all judgment, and that is why we would not want a pharmacist acting in good faith to be wrongly prosecuted. For example, if they may not be able to tell that someone is intending to resell the drug. They may not know or be able to tell. This is more of a safety mechanism in the legislation than a penal mechanism. If you honestly did not know you were writing or filling a prescription for someone who intended to resell it, you would not be held accountable for that action. It is better than a black and white definition in the law.

Q: This would be especially true for pharmacists who may not know their patients or may not have a complete patient profile. They only know the drugs that the patient is buying from their store and may not know if a patient is going to other pharmacies, as well.

Mr. Broschardt: This is part of the rationale for the ISTOP program. Because then you would have that information if they had gone to another store to get the same drug.

Q: So, just to turn quickly to the anti-mandatory mail order (AMMO) issue; I believe Sen. Hannon was a cosponsor on that. What were some of the reasons that he supported that bill, especially considering the backlash from consumer advocacy groups?

Mr. Hecken: There were many arguments for and against it. There were arguments that it would drive up cost, and there were arguments that on the other hand you could walk to your local pharmacy and pick up your prescription rather than mail order and that it would not cost more. He [Sen. Hannon] is pro-consumer and I do not believe he would support legislation that increases costs to the consumer, even if it was for protecting them. I do not think the cost argument drove him, but I do not think he would support the legislation if it would make people pay more for drugs. It increased access for most people and would not raise the cost of drugs. We need more access rather than less.

Mr. Broschardt: He did it to support independent pharmacies and help protect small pharmacies so that they would be more able to compete with large, mail-based pharmacies.

Q: Onto a broader topic: If you ask many pharmacists in New York, they will tell you that our state is behind in terms of legislation in the pharmacy world. We were the 49th state to allow immunizations, and then only allowed to administer the influenza and pneumococcal vaccines. In addition,

43 other states already have prescription monitoring programs. Why do you think we lag behind other states in terms of this kind of legislation?

Mr. Hecken: I do not think we lag behind. I think there is a lobby opposing such legislation. I cannot imagine why we did not do it sooner. I used to travel to other states and saw the CVS, Walmart, and Walgreens with signs to "Get your flu shot here," and I thought that you had to go to a doctor for that. I think there must have been people who would not want that kind of legislation. I think, in fact, that in New York, we are quite progressive when it comes to adopting legislation before the rest of the country. In this instance, I imagine there is a strong opposition to these legislations.

Mr. Broschardt: Part of it could also have something to do with our insurance system and the complexity of Medicare, Medicaid, and regulations. Because we are so careful in terms of consumer protection, we have a very set system. Anything we change would have more far-reaching effects than other states, which say, have a smaller government.

"...I used to travel to other states and saw the CVS, Walmart, and Walgreens with signs to 'Get your flu shot here,' and I thought that you had to go to a doctor for that..."

Q: These are tough economic times, especially for independent pharmacies. Medicaid and Medicare reimbursement rates have been cut and small businesses are struggling against their big-name competitors. This discourages people from starting their own business, at least in pharmacy. Is there anything the state can do, on a legislative level to alleviate this?

Mr. Broschardt: That gets to the bigger picture of big business versus small business. There are, for example, proposals for tax credits for small business, but beyond that, it is difficult to change things. The only other thing I can think of is strengthening antitrust laws.

Mr. Hecken: I think also, in a recession or poor economic times which we are in right now, economies of scale are going to trump everything. Therefore, the mass producers, CVS, and Walgreens can do it cheaper, and you think to yourself, "Why would I go into this business if I cannot even break even, let alone make a profit?" In better economic times, the state may be able to do more with, as Tim said, with tax credits or small business credits to encourage them. However, the state is so cash-poor right now that I do not think they would be able to help anybody; not that they do not want to, but they only have a limited amount of money they can spend.

Mr. Broschardt: Unfortunately, the current movement is away from offering tax credits. I think that in this year's budget there were only two tax credits, whereas there were more in the past. In the attempt to try to simplify our tax code, many legislators are hesitant to introduce that kind of legislation.

Q: I want to take a minute to talk about the Affordable Care Act. I know this is not within the Senator's purview on the national level, but on the state level, NY is supposed to set up an exchange to implement the bill by 2014, otherwise the federal government would step in and do it for NY. What is the legislature doing in terms of setting up this exchange? Why have not set up the exchange yet?

Mr. Broschardt: Part of it is that they are relying on the pending court cases; the entire bill might be struck down.

Mr. Hecken: The Assembly feels that certain deadlines need to be met, and the Senate feels that those deadlines have been met already. We are getting to the point where the Supreme Court would be deciding (we will call it "Obamacare" for lack of a better term) whether it is enforcea-

ble, or, at least, the health care exchange portion. Sen. Hannon proposed a bill last year to set up the health care exchange. Therefore, we are ready to go with them, if the court says its law. However, they do not want to do anything now and have it struck down by the court and have to start from scratch. It might be more difficult to amend or change if the law is codified. Whether the court strikes down the law or not, I think the states will move towards a model like Massachusetts, now called "Romney Care," a universal health care approach. I think that ball has already been set in motion.

Q: I just wanted to come full circle and go back to the issue of security in the pharmacy. Pharmacy is moving in directions that encourage an interactive approach. Amid growing concerns with security, that trend may slow down or stop all together, which is something that nobody wants. Do you think that current measures taken are enough to ensure security?

Mr. Broschardt: I do not think I can take a full stance on the issue because it would depend on how it is executed and how the reaction is to these bills. I do not think that these will be the only bills on the issue; I think it is an ongoing process. We are going to see more and more legislation on this issue whether at the state or federal level.

Mr. Hecken: No, they are not going to be enough. That is not because they are not good. This is going to take the efforts federal, state, and local authorities to work together with pharmacists on the issue. At the conference I attended this morning, there was talk of distributing a flyer or pamphlet on how to best set up a store, to have more sightlines to the street, to possibly change hours. There is also this new technology, SmartDNA, which has been implemented in other pharmacies and in Europe, and is going to be tested for a year at a pharmacy nearby. I do not know exactly how it works. However, I think you set up the system at an exit, so if you are robbed, they set off a trip wire, the thief is sprayed by an invisible compound, and if they were caught, it would be visible under an ultraviolet light. It has a 99% conviction rate. This is a deterrent now. You put this sign on your door, so it would deter the thief from going in. Nassau County has a new unit, which put out a flyer on tips to avert prescription drug abuse. Will legislation be enough? No. However, there has to be effort all around. Pharmacists have to better educate themselves. Then, there is trying to get people who are addicted to drugs to get off them.

Q: And that was going to be my next question. What do we do about those who are already addicted to prescription narcotics?

Mr. Hecken: This has been a problem for years. Recently, there has been an increase in addiction with prescription medications, as there is no stigma attached. After marijuana, these are the most abused set of drugs: more than heroin or cocaine. These drugs are not illegal – they are controlled, but obviously, people still have access to them. Do we combat drug abuse by making them less available? Do we make it socially unacceptable to even try them? Is there a way to make the drug less addictive? I do not know the answer.

"...there has been an increase in addiction with prescription medications, as there is no stigma attached..."

Q: Are we taking steps to treat those who are addicted to drugs right now? I do not believe that anybody thinks the right approach would be to have people go through treatment in prison.

Mr. Hecken: That is right. I think you could try to put inside pharmacies and workplaces a yellow caution sign to encourage people to realize that they have a problem and that it does not need to be hidden to such a point where they would commit crimes or rob people. I think we have to change the social mores to tell people if they are addicted and want help. We have laws that you cannot be fired if you are in rehab. I personally

think that one is not at fault unless they do not seek help. However, if they do seek help, they should not be denied the help they need. There should not be a stigma attached to it. However, that requires changing societal thought. There was once a time when same-sex marriage was unconsidered in this country, and, now, it is the law. I think this is people's attitudes changing.

Mr. Broschardt: Right now, there is a proposal to close down one of only two rehab centers in Nassau County at Nassau University Medical Center. The only one left would be the one in Long Beach. However, there is also a movement now towards a more outpatient treatment for it. I know there is now a discussion over which approach is more effective in terms of budgetary costs and the actual effects that you see in people.

Q: Are they closing down due to budgetary concerns?

Mr. Broschardt: Yes.

Q: I know that Sen. Hannon is head of the public health committee. Are there any other initiatives he is involved in that would be relevant to the pharmacy world?

Mr. Broschardt: Yes, there are other bills. I know there is one to increase the continuing education requirements for pharmacists and I think a few other health care professions. There is a bill to require further language requirements in pharmacies. There is a bill regarding telepharmacy, which is about advising via electronic systems.

I would like to thank Mr. Hecken and Mr. Broschardt. They were very generous with their time and information.

Since this interview, both Bill S5880 and Bill S6066, have passed the Senate and await passage in the Assembly.

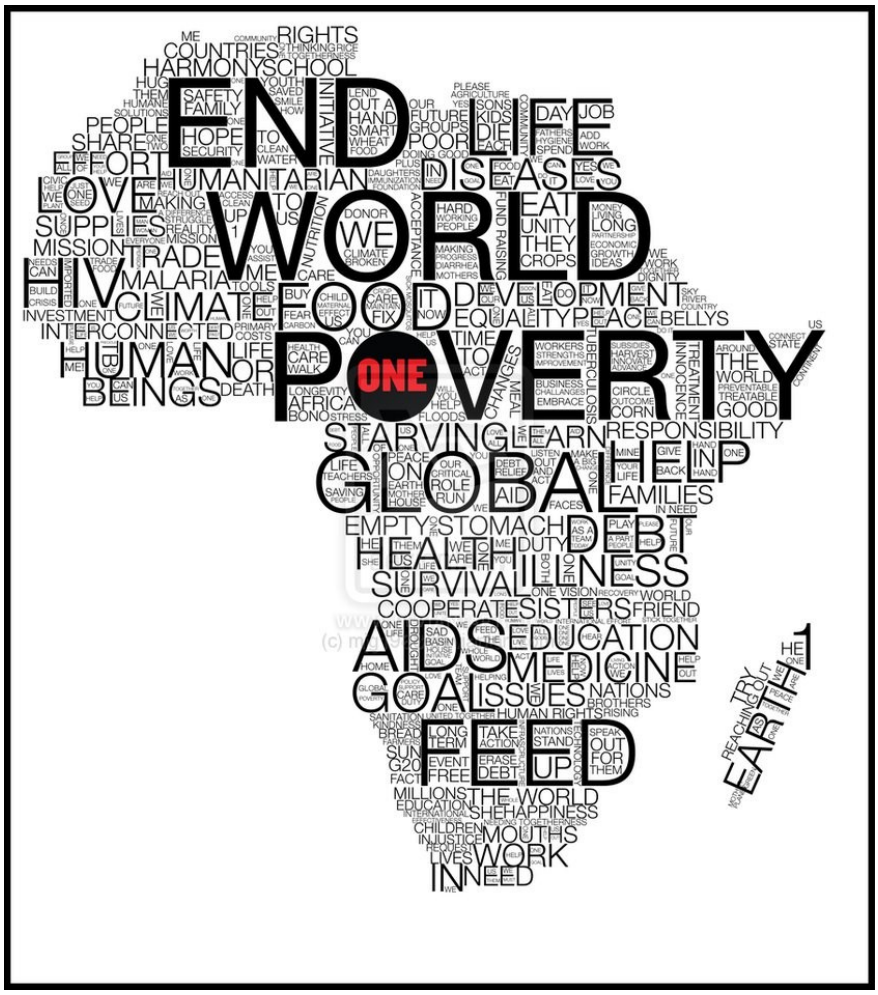
Wish to have us interview other legislators?

Write to our editors at rhochis@gmail.com!

Ebey, Dr. Cassagnol, Mohamed, and Marie at the Coffeehouse Chats event

MAKING A DIFFERENCE IN OUR WORLD

BY: EBEY SOMAN, ASSOCIATE STUDENT EDITOR, EDITOR-IN-CHIEF ELECT



As a member of ONE Campaign and a former ONE Campus Leader at St. John's University, I want to encourage pharmacy students and professionals to become involved with ONE Campaign. It provides an outlet for healthcare professionals to be involved with issues of social justice and work with fellow students to induce real change that save lives.

ONE is an effort to mobilize Americans to stand up and make a difference in a world that is plagued by hunger, disease, and the lack of necessities to sustain life. ONE Campus challenge is a friendly competition between campuses around the US to see which university would get most involved in helping fight poverty. St. John's University has an active and growing ONE Campaign chapter, which is an opportunity for pharmacy students to be active members.

Make a difference in our world; this is a ONE world, so let us voice our opinions as ONE to bring about that ONE change that can brighten the lives of millions of souls. You can visit ONE Campaign's website for more information and sign petitions. Every signature and every voice matters!

For more information, visit: www.one.org

Image Source: DeviantArt

EIGHT WAYS TO KICK THE HABIT

BY: NAGMA GARGI, PHARM.D. CANDIDATE C/O 2013

Smoking cessation programs are extremely important in our society as increasing evidence emerges showing the correlation between smoking and the risk factors for various disease states. Thus as professionals it is our duty to educate ourselves first, then our patients. In this article, I wish to discuss some practical tips and information that we can use to make patients aware and understand the need to quit smoking.

Tip 1: DO NOT let past failures discourage you.

You have probably tried to quit smoking before and failed. That is not a big deal. Take each failure as a learning experience, and keep moving forward towards your end goal.

Tip 2: Determine exactly WHY you want to quit.

Quitting is not an easy decision. Take a deep breath, seclude yourself, and reflect on your biggest motivation for quitting. Do you want to enjoy the rest of your life healthy? Do you wish to make more memories with your loved ones? Do you want to start playing basketball again without losing your breath? Save money and fulfill your dream trip to Europe? Whatever the case may be, write down your reason on a piece of paper, and carry it with you at all times. Whenever the temptation to smoke drives you "crazy," read it and envision yourself accomplishing your goal.

Tip 3: Set a QUIT DAY.

Decide on a quit date several weeks ahead so you can start imagining your life as a nonsmoker. Before Quit Day, thoroughly clean your house and get rid of any/all secret stashes of cigarettes that you may have. Clean up ashtrays and butts that you have flicked near your house.

Tip 4: Have a SUPPORT SYSTEM.

Speak to your family, friends, and coworkers about your desire to quit smoking. Managing unpleasant feelings such as stress, depression, loneliness, fear, and anxiety are some of the most common reasons why adults smoke. When it seems like cigarettes are your only friend, have a friend you can really count on in all times of trouble, even when it is 2 AM.

Tip 5: Discuss your OPTIONS.

All 50 states have free quit-smoking telephone lines, staffed with well-trained counselors to help devise a plan and provide you medical advice. We are fortunate enough to be living in an era where such a vast amount of guidance is available. Call today to find out more about Nicotine Replacement Therapy, and the current prescription medications available to help you quit.

Tip 6: Avoid TRIGGERS.

Analyze your regular smoking pattern, and pinpoint situations that compel you to reach for a cigarette. You do not need to keep company with your friends who still smoke. Avoid corridors, staircases, and walkways, where you anticipate most smokers typically get together. It may sound silly, but try holding your breath for ten seconds as you walk past a smoker to avoid a craving. Cut back on coffee if you tend to smoke right after it. Monitor your drinking behavior as well (smoking and drinking usually go hand-in-hand). It takes a maximum of ten minutes for a craving to last. Try to preoccupy yourself with something else you love doing for those ten minutes (i.e. listen to music, call a friend, eat your favorite food, read a magazine, exercise, etc.).

Tip 7: REWARD yourself.

Do not think of quitting as a way of punishing yourself. Set daily and weekly goals for yourself, and view it as a journey with a rewarding endpoint. Decrease the number of cigarettes you smoke per day. With the money you will now be saving, you can invest time in other activities you enjoy. Spend a day at the spa, enroll at the gym, go on a shopping spree, join a book club, or try that new authentic restaurant that recently opened up on your block.

Tip 8: BE realistic.

Quitting may initially cause an appetite boost. Be aware, and make food selections accordingly. However, you need to concentrate on the bigger

picture here. The countless threats cigarette smoking imposes on your health and the resulting consequences from them definitely outweigh a slight weight gain. DO NOT run towards food as an escape. As you will start to see an improvement in your breathing rate, you will now be able to exercise, and commence a more active energetic lifestyle.

Healthcare Professionals:
http://talktoyourpatients.org

Patients:
http://www.nysmokefree.com

Image Source: NYS Smokers' Quit Line

HMG-COA REDUCTASE INHIBITORS AND MEMORY LOSS

BY: YUFAN (FRANK) LIU, PHARM.D. CANDIDATE C/O 2013

Results of numerous epidemiological studies have indicated that having high serum cholesterol can lead to coronary heart disease (CHD).[1] More specifically having high LDL cholesterol puts patients at risk for angina and heart attack.[2] To reduce this risk HMG-CoA reductase inhibitors, also known as statins, lower the incidence and progression of CHD. Multiple studies have found that statins reduce risk of major coronary events by about 30%.[3] However, every drug comes with risk of side effects, with statins being no exception. As a result, many health care professionals believe that LDL is an imperfect predictor of risk and that treating patients based on risk would be more appropriate.[4] Therefore, patients who would not need to be on a statin would not experience the side effects of the drug.

Initial reports have stated that the most dangerous side effect of statins was the occurrence of rhabdomyolysis, which results in the breakdown of muscle fibers and (eventually) kidney damage. Other side effects of statins include gastrointestinal disturbances, fatigue, musculoskeletal pain, headache and hepatotoxicity.[5] However, as more and more post-marketing data became available, statins were also associated with the development of other side effects, such as depression and diabetes.[6] Most recently, memory loss has also been an added adverse effect of these drugs.

In February of 2012, the FDA came out with a new warning that reversible memory impairment may occur in patients using statins. The FDA reported that the memory loss was reversible, with resolution occurring approximately three weeks after discontinuation of the drug.[7] These studies generally included subjects who were over 50 years of age. The onset of memory loss from the use of statins was highly variable ranging from one day to years after use. The studies stated that the cases do not appear to be associated with dementia or Alzheimer's disease. The reviews also did not examine associations between memory loss and a specific statin, dose of statin, the age of the person, or use of other medication.

"...the FDA reported that the memory loss was reversible with resolution occurring approximately three weeks after discontinuation of the drug..."

Memory loss was never a side effect for statins. According to the clinical trials conducted by Pfizer for atorvastatin (Lipitor®), amnesia occurred in seven out of 2502 of the subjects.[8] Many case reports found that statin-related

memory loss involved simvastatin (Zocor®) or atorvastatin (Lipitor®) more commonly than other statins. In randomized control trials, such as the heart study and the PROSPER study, which tested for reduced mortality by statins, no significant differences were found between patients receiving statins and the placebo group.[9, 10]

"...statins were also associated with the development of other side effects, such as depression and diabetes..."

Other studies have attempted to associate statins with cognitive impairment. One study tried to assess the cognitive function of patients who were taking lovastatin (Mevacor®) 20 mg versus placebo at baseline and six months. After six months, the patients who were on placebo improved on their test scores while the patients on lovastatin (Mevacor®) actually regressed.[11] However, it was not a significant regression and we need more studies to make more definitive statements.

Physicians commonly prescribe statins because there is strong evidence that they decrease mortality. However, the FDA's new release of safety labeling changes warrants a second look or assessment of the risks and benefits of using these drugs. With statins, there have been several case reports of memory loss and a few randomized control trials of impaired cognition. Alas, we need to conduct further studies to understand the clinical significance of this information.

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KORLYM® FOR ENDOGENOUS CUSHING'S SYNDROME

BY: ALEXANDRA ALLEVA, PHARM.D. CANDIDATE C/O 2013

On February 17, 2012, the US Food and Drug Administration (FDA) approved the first medication indicated specifically for patients with endogenous Cushing's syndrome, a hormone disorder characterized by elevated blood levels of cortisol.

Mifepristone (Korlym®) is for the treatment of glucose intolerance and Type 2 Diabetes Mellitus resulting from hypercortisolism. Such patients experience hyperglycemia through the glucocorticoid-mediated activation of gluconeogenesis. Prior to this, only a few drugs (*e.g.* ketoconazole) were used off-label to combat increased cortisol production. Korlym® is only for Cushing's patients who have developed glucose intolerance secondary to elevated cortisol. They must also either be non-candidates for surgery or have failed surgery in the past, as well as have recurring symptoms.

Cushing's syndrome, primarily caused by adrenal or pituitary tumors, can bring about serious consequences with long-term exposure to increased plasma cortisol. The FDA classified Korlym® as an orphan drug, which means the medication is targeted toward treating rarer diseases for which there is not much incentive to develop new therapies. As a result, the manufacturer, Corcept, retains marketing exclusivity until February 2019.

Pharmacologically, mifepristone acts as a cortisol receptor blocker at glucocorticoid type II (GR-II) receptors. This limits the gluconeogenic effects that would otherwise be troublesome for those with Cushing's syndrome. At low doses, mifepristone is a progesterone antagonist, and at increased doses, it blocks the GR-II receptors with high affinity. It displays little or no affinity for estrogen, muscarinic, or GR-I mineralocorticoid receptors.

Mifepristone is also an abortifacient, particularly due to its known progesterone antagonism. Accordingly, the drug carries a black box warning for termination of pregnancy and is designated category X. Physicians should only prescribe non-hormonal contraceptives during treatment because Korlym® will likely interfere with hormonal contraceptives.

Mifepristone, an inhibitor of CYP3A isoenzymes, may also significantly affect levels of other drugs. There are also documented interactions with CYP2C8, 2C9, and 2B6 substrates. Patients should not take mifepristone in combination with lovastatin, simvastatin, CYP3A substrates with narrow therapeutic indexes, or corticosteroids due to this antagonism. Women with a prior history of endometrial hyperplasia are also of great concern, since the drug encourages unopposed proliferation of the endometrium (through its hormonal effects).

Common side effects include nausea, fatigue, headache, edema, and dizziness. Adverse effects include QT interval prolongation, hypokalemia, and bleeding. Due to the endocrinologic nature of Cushing's syndrome, patients need close monitoring for any signs of adrenal insufficiency or other aforementioned complications.

The clinical trial supporting the drug's approval was an uncontrolled, open-label, multi-center, and 24-week phase III study involving 50 patients. A significant number of patients experienced relief and reduction in glucose tolerance tests from baseline, as well as HbA1C levels. Another noted effect was a reduction in anti-diabetic medications needed to maintain glycemic control.

Korlym® will be available as a 300 mg tablet, taken once daily. It may be titrated in 300 mg increments, depending on symptom improvements, to a maximum of 1200 mg per day. Dosing adjustments are necessary for those with renal and hepatic impairment. Since there is no clear understanding of safety in several patient populations, physicians should exercise caution when prescribing the medication.

By May 1, 2012, specialty pharmacies will be able to process prescriptions for Korlym®. SPARK (Support Program for Access and Reimbursement for Korlym®) will be utilized by patients and their providers to coordinate the distribution. Korlym® is now a substantiated drug that patients suffering from Cushing's can resort to when prior treatments fail or surgery is not viable.

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CARRYING THE VINCENTIAN TORCH: THE URBAN SANTA PROJECT

BY: SIBYL CHERIAN, PHARM.D. CANDIDATE C/O 2013

Santhosh Cherian is the co-founder and executive director of the Urban Humanitarian Projects (UHP). He is currently in his third year of medical school at St. George University and is completing his clinical clerkships in Brooklyn, New York.

St. John's University is a Catholic, Vincentian and metropolitan university. It seeks to follow in the footsteps of St. Vincent de Paul, a man known for his compassion and zeal for service. Urban Humanitarian Projects (UHP) is a New York-based nonprofit organization that exemplifies many of the characteristics that St. John's University holds in high regard. The organization is mainly composed of St. George's University students, a medical school in Grenada.

Mr. Santhosh Cherian, executive director of UHP, began the first, Urban Santa Project (USP), in 2009 by delivering gifts to 23 children at Covenant House in NY. By next December, USP was involved with five different organizations based in New York and New Jersey. That year, approximately 300 young children received gifts. In 2011, USP exponentially grew to include over 1200 children from 19 different organizations. Urban Santa team, which consists of a Santa Clause and 3-4 elves, visited almost every organization during the week of Christmas (including Christmas day) to hand deliver the presents. USP was also able to reach out to children at five different orphanages in Haiti through two new partners, Operation Haiti Recovery and Yele Haiti Foundation. Amerijet International shipped gifts to the children in Haiti and generously sponsored all shipping costs.

I became a volunteer of this organization in 2009 and it has been a phenomenal experience for me. The team gets in touch with various organizations months in advance in order to get information on the children that will be present on Christmas. We then spend the next few months fundraising for the anticipated number of children. In the weeks before Christmas, the Urban Santa team begins purchasing gender and age appropriate gifts for these children. One of UHP's advisory board members, Dr. Nilay Shah, donated space for wrapping in New York. Homewood Suites did the same in New Jersey. This year, several pharmacy students from St. John's University College of Pharmacy and Allied Health Professions were able to donate their time and efforts to help wrap presents.

St. John's University has always prided itself in its efforts to provide exceptional education, especially those lacking economic, physical, or social advantages. Similarly, as part of the mission to improve education in urban communities, UHP undertook a second project, Urban GURUS. In partnership with New York City Department of Education, UHP launched a high school mentorship program called GURUS Project to address the issue of high dropout rates in the city high schools.

St. George's Chancellor Charles R. Modica, who advocated for the inclusion of high school students as part of the organization's initiative, donated $6,000 to launch the program. During one GURUS meeting, InnovatePC.com donated twenty-eight computers for the "Build-a-PC" event. Mentors and mentees worked to construct a computer from scratch, after which the mentees could keep the computers. GURUS Project will run through this academic year and resume in September with another class of students.

Currently, UHP is working to raise funds for this as well as several other projects, including a GURUS project in Grenada. UHP will be working with The Grenada Carriacou and Petit Martinique Foundation for Needy Students to launch a new computer-training program for young Grenadian children. UHP will also be using funds for Operation ASHA, in an effort to support ASHA's

efforts to eradicate tuberculosis in India.

In a world where there is still much room for improvement in terms of health and education, it is important to recognize those organizations that seek to bring change. UHP's endeavor to help catalyze this change aligns with the mission of St. John's University. Furthermore, it provides a way for students to become more involved through volunteering for one of the various projects. When asked about his motivation behind UHP, Mr. Cherian said, "The dedication of our team of volunteers and the impact we had on the world in such a short period of time is my greatest motivation. Working with highly motivated individuals and organizations who are driven by the desire to improve our community has been a wonderful experience."

For more information about UHP, visit www.uhp.org

What are your thoughts on Urban Santa Project? Write to our editors at rhochis@gmail.com and we will feature your response in our next edition!

IMMUNIZATIONS AND PHARMACY

BY: MAHDIEH DANESH YAZDI, ASSOCIATE STUDENT EDITOR

Many pharmacists were disappointed that New York was the 49th state to allow pharmacists to immunize in December 2008. Even then, the state legislature limited pharmacists to administering the influenza vaccine and the pneumococcal vaccine to those 18 years and older. There is now some exciting news from Albany. The legislature is looking at a bill that significantly expands the immunization powers of pharmacists.

"...significantly expands the immunization powers of pharmacists..."

Bill S3808A in the New York State Senate, also known as Bill A36301A in the New York State Assembly, gives pharmacists the right to administer all adult vaccines recommended by the Center for Disease Control (CDC). The law also extends immunization rights to pharmacy residents and pharmacy interns as long as they are under the supervision of a licensed pharmacist. Of course, the pharmacy resident or intern must first obtain a Certificate of Administration and must work under a pharmacist who also possesses the Certificate as well. Furthermore, this bill would set a one-time one hundred dollar fee for the Certificate, as opposed to paying the same amount on a triennial basis, and would eliminate the requirement that the prescriber of the vaccine needs to register in the same county as the pharmacist who would provide the immunization.

This bill would expand immunizations to include varicella, human papilloma virus (HPV), measles, mumps and rubella (MMR), meningococcal, Hepatitis A, and Hepatitis B. Pharmacists, pharmacy residents, and pharmacy interns would also be permitted to administer the Tdap booster shot, which would protect patients from tetanus, diphtheria, and pertussis.

This bill is in response to the "sunset provision" of the original bill that gave pharmacists the power to immunize. The "sunset provision" set an expiration date for the bill for March 31, 2012. Legislators presumably wanted to see how effective the bill would be before making it permanent. Having deemed it a successful initiative, the legislature is now trying to expand the pharmacists' immunization powers. They deem this necessary in order to comply with the CDC recommendation to increase the rate of those vaccinated within New York State.

The legislators recognize that in case of a pan-

demic, having pharmacists who can give vaccines besides the pneumococcal and influenza vaccine may be a tremendous asset. The authors of the bill recognize that pharmacy residents and pharmacy interns could play a role in increasing vaccination rates as immunization providers. The need for this bill is further justified by the fact that physicians are now limiting their supply of vaccines due to the cost of the products and storage issues. With Medicare Part D now covering pharmacist-administered vaccinations, many physicians may not see the need to keep vaccines in their offices. This may limit the supply available for patients. As such, expanding pharmacists' ability to immunize also translates into increased access for patients.

Bill S3808A is currently in the higher education committee in the New York State Senate and Bill A6301A is in the respective committee in the New York State Assembly. Sen. Fuschillo in the Senate and Assemblywoman Paulin in the Assembly are sponsoring it. We hope that through this bill, the legislature will acknowledge the pivotal role that pharmacists can play in increasing compliance rates with immunizations and ultimately, the immense resource they can be in disease prevention.

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What are your thoughts on the subject? Write to our editors at rhochis@gmail.com and we will feature your response in our next edition!

IMPROVING PATIENT AND HEALTH SYSTEM OUTCOMES

BY: SHANNON TELLIER, ASSOCIATE STUDENT EDITOR

In December 2011, a report written to the US Surgeon General, Dr. Regina Benjamin, discussed the importance of pharmacists in the healthcare system. The objective of the report was to obtain support for expanding the roles of pharmacists in patient care, primary care, and public health services. This was an update to a report written in 2009 to the previous U.S. Surgeon General.

Four main points in this report discussed both, the current and future, roles of pharmacists in the healthcare system. The first point gave current examples of pharmacists integrated into the healthcare system. Over the past 40 years, pharmacists in the federal healthcare system have actively participated in disease management, disease prevention, and other clinical services. More recently, pharmacists have become increasingly involved in patient care services, including Collaborative Drug Therapy Management (CDTM) and Medication Therapy Management (MTM). The federal healthcare system documents support for the movement of pharmacy toward a patient-centered practice, which exemplifies the expanding role of pharmacists.

The second point explains that pharmacists who provide patient care services should receive recognition as healthcare providers in national healthcare policy. According to The American Academy of Family Physicians, primary care is "health promotion, disease prevention, health maintenance, counseling, patient education, diagnosis, and treatment of acute and chronic illnesses in a variety of healthcare settings." After a diagnosis by prescriber, pharmacists manage disease states with optimal medication regimens. Pharmacists, who are formally educated in disease management and therapeutics, have huge impacts on

patient care. By identifying pharmacists as healthcare providers under the Social Security Act, pharmacists will be involved in certain areas to improve outcomes.

"...federal healthcare system documents support for the movement of pharmacy toward a patient-centered practice, which exemplifies the expanding role of pharmacists..."

The third point addresses the difficulty that pharmacists face to receive compensation for patient care services. This barrier currently prevents pharmacists from integration into the primary healthcare team. The current reimbursement model only pays pharmacists for dispensing medications, and not for providing patient care services. Although the Centers for Medicare and Medicaid Services (CMS) allows pharmacists to receive some compensation for MTM through Medicare Part D, there are numerous restrictions that limit the number of eligible patients who receive this service. A new compensation mechanism (that includes all patients) would be valuable in allowing pharmacists to receive compensation for services other than dispensing of drugs.

The last point provides evidence and documentation of healthcare outcomes involving pharmacists in patient care services. Numerous database reviews have published positive results in disease outcomes, patient safety, and cost-containment when pharmacists are directly involved in patient care. These documented examples provide evidence that support the expanded role of pharmacists in the healthcare system.

If the objectives of this report integrate into the U.S. healthcare system, we will be able to full utilize pharmacists' knowledge about disease state management and patient care services. Maximizing the full potential of pharmacists will have positive outcomes on patients' disease states, patient safety, and healthcare costs. Scott Giberson, the Chief Professional Officer for Public Health Service Pharmacists and also an author of this report stated, "I firmly believe that one of the most evidence-based and cost-effective decisions we can make as a nation is to maximize the expertise and scope of pharmacists, and minimize expansion barriers to successful healthcare delivery models. It is the right thing to do for our patients." On December 14, 2011, the U.S. Surgeon General wrote a letter to Scott Giberson publically supporting the report and the awareness of pharmacists as a crucial part of the healthcare team.

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Albana Alili, Dr. Madan, and Taylor Lucchesi at the Coffeehouse Chats event

COUNTERFEIT PRESCRIPTION MEDICATIONS: A GLOBAL THREAT

BY: LUNBAO HUANG, PHARM.D. CANDIDATE C/O 2013

Counterfeit prescription medications are becoming a great concern for us. They have increased worldwide costs and endangered our public safety. Activities related to counterfeit drugs cost our healthcare system an estimated $75 billion in 2010. Many patients were seriously injured and died due to counterfeit medications.

The FDA defines counterfeit medications as:

"...fake medicine. It may be contaminated or contain the wrong or no active ingredient. They could have the right active ingredient but at the wrong dose. Counterfeit drugs are illegal and may be harmful to your health...."

Ingredients found in counterfeit medications are dangerous due to two main factors (or reasons). The first factor is the active ingredient content. There could be an incorrect amount of active ingredient or often no active ingredient at all. Patients depend on prescription medications during emergencies and life-threatening situations, and lacking the correct amounts of active ingredients leads to under-treatment of the illness and causes further complications. For medications, such as antibiotics, an unexpected alteration in the dose could lead to bacterial resistance. The patient may then progress into a more severe state of infection.

The second factor is that these counterfeit medications contain inactive ingredients, such as calcium carbonate, flour, vitamins, talcum powder, fluoric acid, floor wax, or maple sugar. They could mix with dirty water, open air, excessive heat, insects, and other unsanitary conditions. To some patients, these medications may be innocuous. However, in those taking multiple medications for multiple medical conditions, counterfeit drugs can cause unexpected and undesirable drug-drug interactions, drug-food interactions, and drug-disease interactions.

Through news media, we have learned that counterfeit pharmaceuticals' main manufacturing locations are in China and India, and they operate under non-GMP (Good Manufacturing Practices) conditions. These illicit drug labs or "street laboratories" are part of a network that utilizes multinational transportation methods (in air and on the road). Globalization brings in many imports from China and India, two countries known for having weak quality control systems. This enormous global network surpasses United States Postal Service's jurisdiction or power to pursue after these package senders. It would also take a lot more physical and financial means to find the operators behind the organized crime networks.

In contrast, packages often arrive in United States from the United Kingdom. According to the U.S. Immigration and Customs Enforcement (ICE), companies like FedEx, UPS, USPS, and other express mail services, usually ship the final products into our country. Alas, it is more difficult for law enforcement agents to detect these packages, especially when compared to large container shipments (inspected by U.S. customs).

It would be easy to avoid counterfeit medications if we could simply tell the difference between the genuine and fake ones. However, it is more difficult than we imagined. First, counterfeit drugs appear so similar to genuine medications that it is often impossible to tell with the naked eye. Without pairing them up with the genuine products and put them next to each other, it is often impossible to tell the difference between the packaging and the labeling.

What can we do to fight against these counterfeits? Howard Zucker, a former Assistant Director General of the WHO and former head of IMPACT, addressed that the five main areas we need to focus on are technology, strong legislation, enforcement, unilateral regulatory standards, and public knowledge. Just by learning about this information, we already have taken steps to com-

bat against counterfeit medications. The best way for pharmacies in the U.S. to avoid stocking counterfeit medications on their shelves is to avoid unreliable distributors. Unregulated online pharmacies sell most of the counterfeit medications. This is also how most of the counterfeit medications get into our country. One of the reasons why consumers visit these websites is because they often provide prescription drugs without any pharmacy license or prescriber authorization. This is illegal, at all times!

The second reason is that these medications have attractively cheap pricing that seem to hold onto consumers' attention. Most of these websites often announce that they are in Canada. They create the image of reliable, safe, and inexpensive medication because Canada's pharmaceuticals are "generally safe" and have "trustworthy quality controls" with "cheaper import pricings." Unfortunately, the FDA does not approve counterfeit online pharmacy websites. From the price, seller's policy, and regulations, one can infer that they do not belong to Canadian origins. However, pharmacists and physicians need to understand that not all online pharmacies are illegal. Legitimate online pharmacies are always safe for placing orders. The National Association of Boards of Pharmacy (NABP) with the VIPPS accreditation program validates all online pharmacies. As of January 12, 2012, there are 30 online pharmacies accredited by VIPPS. Pharmacists can verify whether a particular online pharmacy is legal by going to *http://vipps.nabp.net*.

Among some of the findings about counterfeit and stolen medications, the FDA received reports of adverse events. In summer of 2009, patients stated that their insulin was not controlling their sugar level. The FDA later used the lot numbers of the insulin products to discover that they were stolen products from months ago. Because of inappropriate handling and storage, the insulin products lost their activity months ago. Such crimes are no different from other crimes that risk public lives in exchange for money. It is a serious crime to sell fake, stolen, or expired medications, and the FDA is taking significant steps to fight against these issues.

In 2008, news about heparin contamination revealed that the medication had counterfeit active ingredients sourced from Changzhou SPL in China. This led to extensive recalls of the drug because of severe adverse events, injuries, and deaths. The FDA now calls for testing to detect over-sulfated chondroitin sulfate in all medications, especially heparin.

The best way to find drug adulterators is to realize their motives, and this reason is usually economical. If a drug ingredient is expensive, then criminals have the incentive to find cheaper alternative for these expensive ingredient. If a cheaper alternative yields a similar result as the original ingredient, then the incentive would sharply increase. The FDA found more than 1,000 active ingredients at risk for "economically-motivated adulteration." The FDA will then put higher restrictions, as well as more specific testing and sampling of these products.

In addition, due to this global network of organized crime, the FDA is required to work with foreign regulatory authorities around the world, the World Health Organization, and other international organizations (such as forums on international pharmaceutical crime and pharmaceutical industries). We need this cooperation to prevent the importation of counterfeit pharmaceutical products. The FDA is training fellow regulators around the world. It would like to provide more scientific and technical expertise to maximize our security system for better detection, surveillance, and assessment on imported medications. We now have international posts with field inspectors to improve the safety of imported food and medical products.

As mentioned multiple times in this article, counterfeit medications are dangerous and life threatening. There is an enormous network of organized crime, and it has its way of effectively luring its buyers. The FDA and pharmaceutical companies are increasing security measures to

prevent counterfeiting inside and outside our country. The best way to protect pharmacies and hospitals is to be aware of the issues, purchase pharmaceutical products from trusted retailers, and avoid unregulated online pharmacies. Medications within the United States are still safer compared to those purchased from outside the country. Experts like Howard Zucker encourage Americans traveling abroad to take their medications with them and avoid purchasing drugs abroad. As Zucker states, "try to keep your eyes open in developing countries."

FUN FACT: Viagra is the world's most counterfeited drug.

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What is your input on this situation?

Write to our editors at rhochis@gmail.com and we will feature your response in our next edition!

sixth year pharmacy

Formal

Chelsea Piers
Sunset Terrace

May 8th

8pm - 12am

appetizers, buffet,
& open bar

Meet Jason, Khilna, Mohammad

tickets @ cvs lounge:

3/16 @ 1:50 pm
3/19 @ 10:40 am
3/20 @ 1:50 pm
3/22 @ 12:10 pm

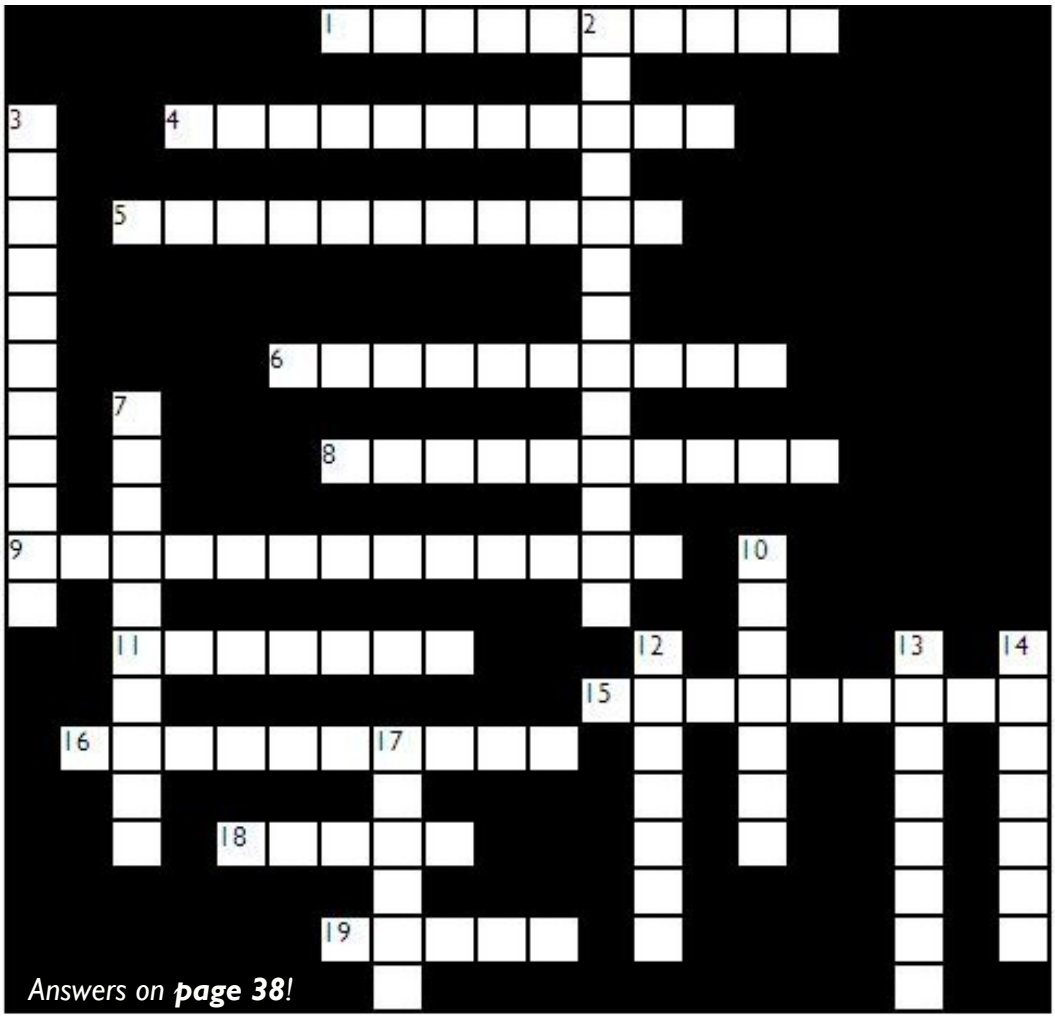
Primary contact: jasonmlee88@gmail.com

$90 per person

cash -or- checks made
out to "cash"

PUZZLE: CROSSWORD

BY: MAHDIEH DANESH YAZDI, ASSOCIATE STUDENT EDITOR



ACROSS

1. Most commonly prescribed antidepressant
4. SNRI known to cause hypertension
5. Herbal drug often used for depression which is metabolized through CYP3A4
6. Cymbalta
8. Nardil
9. Aventyl, Pamelor
11. MAOI withdrawn from the market for 8 months in 1964 amid safety concerns
15. Oleptro, Desyrel
16. SSRI used often in patients with depression who have CHD
18. Fluvoxamine
19. SSRI known to exhibit the most anticholinergic side effects

DOWN

2. TCA with a tertiary amine approved in 1961
3. Tetracyclic antidepressant which exhibits alpha 2 antagonist action
7. Antidepressant also used in smoking cessation
10. Antidepressant with a black box warning about hepatic failure
12. Analog of Effexor
13. First TCA every developed (as HCl salt)
14. S isomer of Celexa which recently became generic
17. SSRI most known to result in activation

MATCHING CHALLENGE: LOOK-ALIKES, SOUND-ALIKES

BY: ADDOLORATA CICCONE, PHARM.D. CANDIDATE C/O 2013

The following medications are easily confused.
Try to match each one with its corresponding fun fact.
*If you need help, please view the answers on **page 33**.*

1. The recommended dose and duration of this antibiotic differs depending on whether one is treating or preventing hepatic encephalopathy.
2. There are multiple significant drug-drug interactions for this antibiotic, as it induces the hepatic metabolism of agents that utilize the cytochrome-P450 enzymes.
3. This antiretroviral agent is given concomitantly with many protease inhibitors to boost regimens; it has also been associated with many fatal drug-drug interactions.
4. This antiretroviral agent has a unique mechanism of action in blocking viral integrase, which is essential for viral DNA insertion into host DNA.
5. This antiviral agent is a pregnancy category X drug; both men and women must use contraception during and six months after discontinuation of treatment.
6. This broad-spectrum antimicrobial agent carries an off-label indication for the treatment of persistent *Helicobacter pylori* infections after multiple previous treatment failures with first-line antibiotics.
7. This chimeric monoclonal antibody used as an antineoplastic in the treatment of Non-Hodgkin's lymphoma is associated with numerous toxicities, including infusion-related reactions, cardiac arrhythmias, tumor lysis syndrome, and hyperuricemia.
8. This monoclonal antibody, a vascular endothelial growth factor inhibitor, is indicated for age-related macular degeneration and may have some efficacy in treating diabetic retinopathy.
9. This new oral anticoagulant which selectively inhibits factor Xa provides an alternative to low-molecular-weight heparins or warfarin for the prevention of deep vein thrombosis following knee or hip replacement surgery. It does not require frequeny monitoring, has fewer drug interactions, and avoids the concern of heparin-induced thrombocytopenia; however, there is no decrease in risk of bleeding and there is not a specific antidote for this agent.
10. This tissue-specific selective estrogen receptor modulator is an estrogen antagonist in the breast and uterus and an estrogen agonist in the bone; it can thus be used for prophylaxis against invasive breast cancer and osteoporosis in postmenopausal women.

A. Raloxifene
B. Raltigravir
C. Ranibizumab
D. Ribavirin
E. Rifabutin
F. Rifampin
G. Rifaximin
H. Ritonavir
I. Rituximab
J. Rivaroxaban

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LIPID PANELS: FASTING OR NON-FASTING?

BY: NAGMA GARGI, PHARM.D. CANDIDATE C/O 2013

Cholesterol is essential for the synthesis of hormones, vitamin D, and bile acids. However, an excess of cholesterol poses a serious threat to our health, as it contributes to heart disease, stroke, and other comorbidities. Knowing our cholesterol level is fundamental in helping to identify when and how to take proper measures (*e.g.* therapeutic lifestyle changes). To take precautions and preventative measures at the right time, most doctors order a lipid panel at least once every year for males ≥ 35 years of age and for females ≥ 45 years of age. This blood test measures cholesterol, triglycerides, high-density lipoprotein (HDL), and low-density lipoprotein (LDL).

To obtain an accurate lipid panel, we ask the patient to not to eat any food or drink any beverages (other than water) for 9-12 hours before the blood draw. Food may not actually affect the levels of total cholesterol and HDL cholesterol. However, it could increase triglyceride levels by 20-30 percent, most likely producing an incorrect reading.[1] It is also important to stay away from all alcoholic beverages for at least 24 hours before the blood draw.[1] Prescription / OTC medications and herbal supplements may sway the readings, as well, and it is important that physicians have the patient's current medication list.

Although the fasting lipid panel is a traditional requirement, the big question today is the extent to which fasting lipid levels are "more accurate" than non-fasting lipid levels. A cross-sectional study examined 33,391 participants from the Copenhagen General Population Study and 9,319 individuals from the Copenhagen City Heart Study.[2] With efficient methods and procedures, including a 14-year follow-up, patients generally had a maximum mean change from fasting levels of −0.2 mmol/L for total cholesterol at 0 to 2 hours after the last meal.[2] They also had −0.2 mmol/L for LDL cholesterol at 0 to 2 hours, −0.1 mmol/L for HDL cholesterol at 0 to 5 hours, and 0.3 mmol/L for triglycerides at 1 to 4 hours after the last meal.[2] Lipid profiles varied only minimally in response to normal food intake.[2]

Recently, various large, prospective cohort studies and meta-analyses examined the possible relationship between fasting and non-fasting serum triglycerides in patients with cardiovascular disease.[3] Fasting triglycerides augmented the adjusted hazard ratios for cardiovascular disease risk 1.7 times as much (comparing upper and lower tertiles), and non-fasting levels about twice as much.[3]

While patients are encouraged to make early morning appointments after fasting overnight, it is not feasible for every patient to adhere to these guidelines, established by the National Cholesterol Education Program (NCEP) Adult Treatment Panel III (ATP III). Patients' daily routines, eating habits, working days, and sleeping patterns may not allow them to fast for a long period. Moreover, fasting for 9-12 hours may not be possible for hospitalized, critical care patients.

While providers may find such "noncompliance" to skew the readings towards inaccuracy, fasting and non-fasting lipid levels are only notably different when measuring triglycerides.

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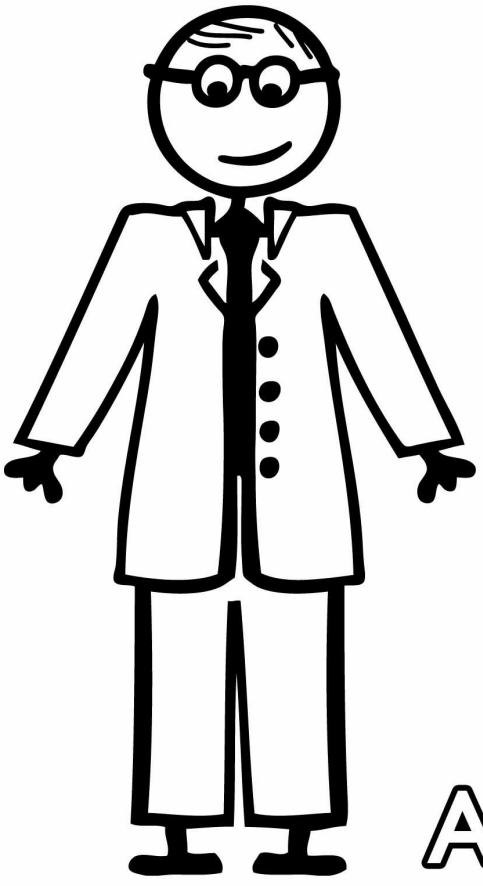

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CVS Lounge

April 26, 6:30PM-8:00PM

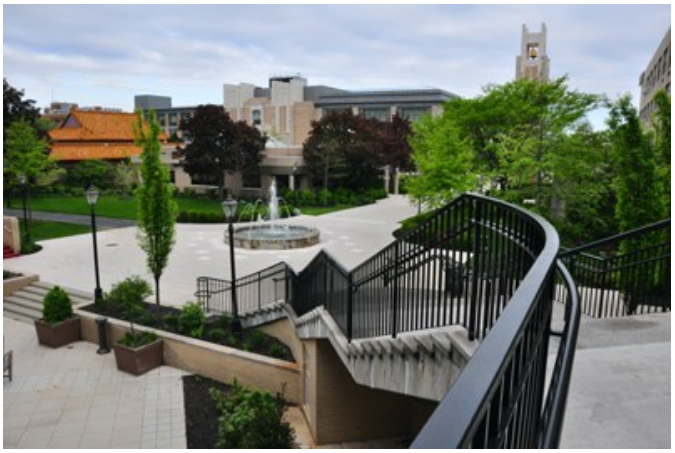
A SPRING WALK: A PHOTO JOURNAL

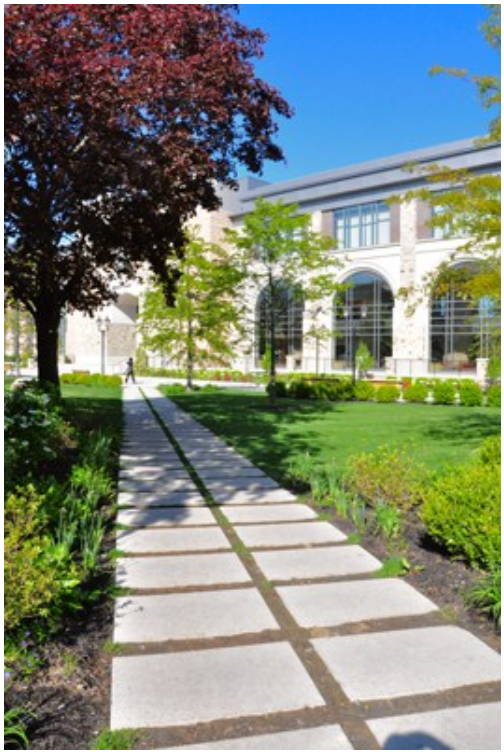
BY: STEPHY SUNNY, PHARM.D. CANDIDATE C/O 2014

As students make they make their way to lectures held in DAC, this is just a sample of the view that greets them. Starting from the top of the Marillac staircase, students can see the fountain that bubbles and jets water into the air.

Then, they cut through the stone pathway laid over the already-worn path forged by students from years before.

Finally, over the lion by Sun Yat Sen Memorial Hall, one can see the path leading towards to the basement level of St. Albert's Hall. As the spring weather shines through, a walk around St. John's campus can be refreshing and reveal things you have not seen before.





SATIVEX® FOR ADVANCED CANCER PAIN

BY: KATHLYNN FERRER, PHARM.D. CANDIDATE C/O 2013

Nabiximols (Sativex®) is a buccal spray approved for use in the UK, Spain, Germany, Denmark, New Zealand, and Canada. The active ingredients in this product are tetrahydrocannabinol and cannabidiol, two kinds of cannabinoids[1].

Cannabinoids are chemical compounds that stimulate cannabinoid receptors and are the main chemicals in marijuana, a drug that has been Schedule I since 1937. Marijuana has long been a subject of legal and medical controversies. Research on the active cannabinoids revealed that they stimulate the cannabinoid receptors, CB1 and CB2, and lead to an analgesia. Cannabinoid receptors are G-protein coupled receptors, and are, at least, located in the brain (notably the midbrain), spinal cord, and peripheral nervous tissue (CB1), as well as the immune system (CB2). Stimulation of cannabinoid receptors inhibits the release of various neurotransmitters that affect nociceptive neurons, such as glutamate and GABA, as well as pro-inflammatory factors from other cells. Nociceptive neurons can cause somatic (typically more acute, occurs in the bone, joints, muscle, connective tissue, or skin) or visceral (more dull and persistent pain affecting internal organs) pain, but cannabinoids may help with hyperalgesic states and neuropathic pain, as well.[2]

In Canada, specifically, Sativex® is for spasticity or neuropathic pain associated with multiple sclerosis (MS), as well as the management of moderate-to-severe cancer pain. As many other drugs listed for pain, or even just like all drugs in general, there are pertinent boxed warnings regarding its use in the package insert. Boxed warnings listed in the Canadian package monograph for Sativex® include the possibility of adverse cardiovascular effects, mental function changes (dizziness, changes in memory and perception), and drug dependence, as well as a warning to use cautiously in patients with a history of seizures. Some of the common side effects of Sativex® include nausea, vomiting, diarrhea, fatigue, dizziness, dry mouth, vertigo, confusion, and hypotension.[3]

There is a lot of positive research involving cannabinoids, and although Sativex® is approved in a number of countries, it is not approved for use in the United States. GW Pharma, the company that manufactures Sativex®, has been making a push for approval in the US, and has made progress over the last 6 years. The FDA accepted an IND for the drug in January 2006, allowing the company to start Phase III trials to test the drug in advanced cancer patients with pain unrelieved by opioids. A Phase III trial evaluated Sativex® for pain alleviation, reduction in opioid use for breakthrough pain, and other measures regarding improved quality of life.[4] In April 2011, GW Pharma obtained a patent for the use of Sativex® for cancer pain in the US, while the drug was still undergoing Phase III trial testing.[5] A few months ago in January 2012, GW Pharma submitted an NDA for Sativex® to the FDA, with hopes for approval by the end of 2013.[6,7]

In light of recent news, a couple of interesting points concerning Sativex® have come up: does it have an abuse potential similar to that of marijuana? If the drug has many side effects similar to marijuana, would the FDA approve it? The abuse potential, dependency, and changes in mental function associated with marijuana are among some of the reasons why marijuana itself is dangerous (and why it remains a Schedule I drug in the US today).[6] Perhaps the stigma of smoking marijuana (from when it was first banned) still resonates in society today. However, 16 states (plus Washington, D.C.) have approved medical marijuana and some patients have benefited from using the drug. Cannabinoids have been shown to help ease the severity of nausea and vomiting associated with chemotherapy (hence Nabilone [Cesamet®] and Dronabinol [Marinol®]) in addition to relieving pain.[6,8] Drugs like Sativex® do have their relevance in medicine today.

If the FDA fails to find something unacceptable from pre-existing evidence (*e.g.* from a Phase IV prevalence in Europe or Canada of a significant

adverse drug reaction), Sativex® may be approved for advanced cancer pain in the US in the near future. This would be great in today's market, as the only current, practical option for addressing advanced cancer pain are opioid medications.

Opioid drugs, in contrast to cannabinoids, work to inhibit pain by binding to opioid receptors in the CNS, leading to a decreased perception of pain. There is inhibition of ascending pain pathways that start at the spinal cord. The main black box warning for these (mostly Schedule II) drugs is the abuse potential. Opioids are not without side effects; they can cause respiratory depression, constipation (this particular side effect does not abate with prolonged use), nausea, vomiting, sedation, and fatigue. Opioids also vary in potencies; for example, fentanyl (Actiq®, Fentora™, and Duragesic®) is so potent that patients must be opioid-tolerant before receiving the medication or they will experience undesirable and dangerous pharmacodynamic effects.[9]

It is unsurprising that prescription drug misuse is on the rise, and opioids are part of the equation. Unfortunately, prescription drug abuse has not decreased as of late and painkillers are the number one abused drug class. Opioid prescriptions have almost tripled over two decades.[10] A string of pharmacy robberies and murders in Long Island (recently reported in the news) involved the intention to steal opioid medications.

How many times have we encountered fake prescriptions for opioids while at work or on advanced pharmacy practice rotations? These drugs have addictive properties, and their abuse can lead to a tolerance or dependence.

Tolerance occurs when one has his or her ability to sense pain blunted; meaning more amounts of the drug is required to achieve one's previous pain-blunting effect. Dependence is a more significant physiologic change where the discontinuation or reduction of an opioid dose or the addition of an opioid antagonist leads to withdrawal symptoms. Addiction is more serious, psychological in nature, and related to severe behavioral changes to obtain a drug, as well as compulsive drug use.[9,10] When abused, opioid medications may precipitate consequences similar to abused Schedule I drugs. Toxic effects, such as low respiratory rate, low blood pressure, coma, and death, may be seen. The difference between cannabinoids and opioids is that most opioids are legally available with a prescription in the US.[10]

More notably, the prolonged use of opioids can lead to a hyperalgesic state, which sounds counterintuitive. Opioid-induced hyperalgesia is an increased sensitivity to pain stimuli, leading to an increased perception of pain. In this phenomenon, increasing the dose or frequency of opioids actually increases the amount of pain a patient experiences. This pain is more diffuse and almost similar to how neuropathic pain develops.[11] Unlike opioid receptor agonists as mentioned earlier, cannabinoid receptor agonists have anti-hyperalgesic properties and have been helpful for neuropathic pain, adding to the value of using a drug like Sativex®.

The above problems associated with opioids are not to disavow the medical benefit of the opioids, but to highlight that Sativex® ought to be an equivalent, if not better, choice in decreasing pain and improving quality of life. Both of these elements would be greatly beneficial to an advanced cancer patient. Having different options to help control pain makes such patients feel more in control of their life altogether, and may even improve adherence. After all, a medication regimen is only as effective when a patient adheres to it.

To reiterate, the drug's effectiveness lead to its approval in other countries. Along with opioids, Sativex® seems like a reasonable option for patients with advanced cancer pain. If the lack of safety were the reason for rejection of the NDA for Sativex®, it ought to warrant the investigation of the safety of opioids. Users may perceive opioid prescription medications as safe, as compared to illegal drugs. Ultimately, ANY drug used improperly will put patients in danger of experiencing various adverse effects. For example, in theory, if one continually overuses Sativex®, dependence is possible. However, opioids pose that

same exact risk. In many ways, Sativex® and the opioids are similar to one another.

A pharmacist's intervention to counsel a patient on directions for the spray (for Sativex®) or an explanation of the maximum daily dose (for both types of drugs) would promote effectiveness (pain alleviation) and minimize side effects (via stressing proper use) of either drug. Safety is definitely an important problem, but for patients with advanced cancer pain (a grim prognosis), decreased pain and improved quality of life may be equally important (if not even more important) than a drug's safety.

It will be interesting to observe whether the NDA for Sativex® is accepted or rejected. The FDA will soon provide the reasoning for its acceptance or rejection, and we will acknowledge the FDA's stance on the legality of marijuana and the safety of opioids.

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What are your thoughts on the topic?
Write to our editors at rhochis@gmail.com and we will feature your response in our next edition!

FACULTY SPOTLIGHT: DR. HIRA SHAFEEQ

BY: JESSICA LEE, PHARM.D. CANDIDATE C/O 2013

Dr. Hira Shafeeq received her PharmD in 2009 from St. John's University College of Pharmacy and Allied Health Professions. Upon graduation, she pursued a PGY-1 at the Brooklyn Hospital Center. She then completed her specialty residency in critical care at University of Chicago Medical Center in Chicago, IL. She joined our College as a new faculty member this past year, in 2011. Her practice interests are critical care and research.

Q: What made you decide to do a residency and how did you prepare for it?

A: I first developed an interest in residency training during my hospital rotations. After my rotation with Dr. Beizer, I realized that I wanted to be involved in academia as well. After making my decision to pursue a residency, I changed many of my rotation sites to faculty rotations to gain experience in any inpatient settings available. I also attended regional meetings from professional organizations and local residency showcases to learn about the residency opportunities available in the NY area. I also obtained a hospital internship in order to learn more about the role of inpatient pharmacist.

Q: What was your residency like at the Brooklyn Hospital Center and at the University of Chicago Medical Center?

A: My training at both institutions was rewarding and at times extremely challenging. The Brooklyn Hospital Center (TBHC) provided me with experiences in both ambulatory and in-patient care settings. The primary focus of the residency was application of principles of patient specific pharmacokinetics & pharmacodynamics. There was an emphasis on providing pharmaceutical care for all patients, 24-hour a day, throughout the residency year. This meant participating in medical emergencies and weekly 24-hour in-house call. My on-call experiences at TBHC sparked my interest in critical care. TBHC had a close affiliation with Long Island University, so I was also able to gain invaluable academic experience as a course facilitator and rotation preceptor. A critical care specialty residency, the University of Chicago Medical Center had a strong inpatient component of training. During my second year of training, there was an increased emphasis on practice management. I enjoyed the added responsibilities of participating in research, active membership in hospital committees and professional organizations for improvement of patient care. I also had the opportunity to teach at Chicago State University as an Adjunct Instructor of Pharmacy Practice for the critical care elective.

Q: How was the transition from New York to Chicago—was it difficult adapting to a new city?

A: Initially, it was difficult getting used a new city. After 2 months of a busy residency schedule, however, I did not even notice the difference. Most of my residency peers had also relocated for the year, so after a short while I felt very comfortable in the new environment. Additionally, University of Chicago Medical Center provides support their out-of-state residents with housing placement to ease the transition for the out of state residents.

Q: How was the transition from a PGY-1 to a PGY-2? How were they different?

A: It was very similar to my transition from a student to a resident. I found my PGY-2 year to be even more challenging as I had to become accustomed to a busier schedule. I learned invaluable lessons for balancing research, active participation in hospital committees and professional societies along with fulfilling my daily patient care responsibilities. The PGY-2 training placed greater em-

phasis on practice management, involvement in professional societies, and outcomes related research.

Q: Why did you choose to specialize in critical care? What tips can you give to students who are trying to figure out where to specialize?

A: Critical care is my passion. The complexities that come with my specialty continue to challenge me and keep me intrigued. I am eager to help care for my patients. In order to find you are niche in the world of pharmacy practice I want to advise students to dig deep and really find what speaks to them. Understand what type of practice setting will make you happy and provide you with a sense of accomplishment. Do you like to work with a team of doctors? Do you find a one-on-one teaching session with a patient more satisfying? This may help you in deciding whether you would work better with an in-patient multidisciplinary team or in an ambulatory care setting. Job satisfaction is an important factor in one's career. Give it a strong consideration when choosing your field.

Q: Can you share what it is like being a clinical pharmacist at NewYork-Presbyterian Hospital and a faculty member at St. John's University College of Pharmacy and Allied Health Professions?

A: I practice in a medical step-down unit at my institution. My position allows me to participate in patient care, be a mentor to students, and continually develop as a clinician and scholar. Working with St. John's University pharmacy students has been very rewarding.

Q: What advice would you give to students currently pursuing a residency?

A: I would advise the students to understand for themselves why they want to do a residency. Look at the short and long-term benefits and drawbacks. Do what you can to expand the number of your clinical rotations in order to have diverse patient experiences. Make sure to pursue any opportunities that will help you stand out, such as participating in research etc. Keep an open mind open about residencies that you would not initially pick. Sometimes residency is about synergizing with the right people. Spend some time researching about various residency programs and their mission statements. Evaluate if the residency aligns with your own personal goals and objectives for post-graduate training and choose accordingly.

MATCHING CHALLENGE: LOOK-ALIKES, SOUND-ALIKES (ANSWERS)

BY: ADDOLORATA CICCONE, PHARM.D. CANDIDATE C/O 2013

1 = G, 2 = F, 3 = H, 4 = B, 5 = D, 6 = E, 7 = I, 8 = C, 9 = J, 10 = A

*Go back to **page 25**?*

Drs. Chatterjee, Serajuddin, Madan, Tran, and Brocavich with students at the Coffeehouse Chats event

(SELECT) RHO CHI COFFEEHOUSE CHATS EVENT PHOTOS BY: MOHAMMAD A. RATTU, EDITOR-IN-CHIEF

Top Left: *Mohamed Dungersi and Ebey Soman*
Top Middle: *Elizabeth Mo and Aleena Cherian*
Top Right: *Marie Huang and Shannon Tellier*
Bottom: *Dr. Woon-Kai Low (center), Albana Alili (second from right), Helen Dong (right)*

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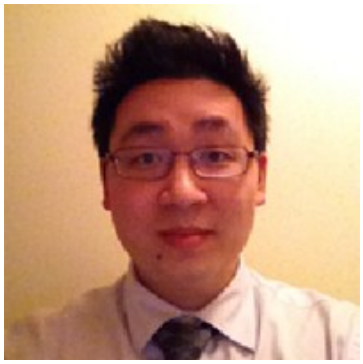
THE CORE VALUES OF A PHARMACIST

BY: JOSEPH LEE, PHARM.D. CANDIDATE C/O 2013



In *StrengthsFinder 2.0, Rath describes 34 different talents that people naturally possess and can develop into strengths. At the end of the book, a code provided access to a comprehensive online survey.*

The survey included a plethora of questions that, through a proprietary algorithm, was able to identify my five talents. One of my natural talents was belief.

The following is an excerpt from the description of one who possesses the theme of *belief*: '*If you possess a strong "belief" theme, you have certain core values that are enduring. These values vary from one person to another, but ordinarily your "belief" theme causes you to be family-oriented, altruistic, even spiritual, and to value responsibility and high ethics — both in yourself and others… This consistency is the foundation for all your relationships. Your friends call you dependable. "I know where you stand," they say. Your belief makes you easy to trust. It also demands that you find work that meshes with your values. Your work must be meaningful; it must matter to you. And guided by your "belief" theme, it will matter only if it gives you a chance to live out your values.*'

After reading this description, I concluded that our profession ought to demand that every pharmacist possess a strong *belief* theme. As one of the most trusted professionals, pharmacists must drive themselves with the core values of responsibility, high ethics, and altruism. There is meaning behind every decision. Pharmacists must be dependable and easy to trust. Without core values, pharmacists can neither achieve optimal therapeutic outcomes nor provide patients with the best care possible.

Pharmacy is a profession that is constantly evolving. Healthcare professionals, politicians, and lobbyists are always conjuring new ways to improve the healthcare system. Alas, pharmacists were not always an integral part of the healthcare team. In the early days of pharmacy, they served as a bridge between the medical and chemical world. The doctor would diagnose each patient, and apothecaries, through the art of compounding, created remedies to treat each patient's ailments. However, after experiencing the industrial revolution in the 1950s, pharmacists did not need to create medicine for each patient because of the ability of machines to mass-produce. At this time, pharmacists were able to shift their focus more towards patient care, and become more directly involved in catering to their patients' needs.

Although the art of compounding at the local level still exists, this shift in focus was the defining moment of pharmacy. In 1990, the American Association of Colleges of Pharmacy (AACP) created the doctor of pharmacy degree (Pharm.D.) as the new standard in pharmacy education. The Pharm.D. program would focus more on the clinical aspects of healthcare and give students a "hands-on" experience for an additional year. This change led to pharmacists taking on greater responsibilities in healthcare. Pharmacists began to participate in clinical research, and became more extensively involved in patient care.

Another pivotal point in the history of the role of pharmacists in healthcare was just a few years ago – when the Medicare Modernization Act of 2003 was passed. The Act, widely known for Medicare Part D, expanded prescription drug coverage for Medicare beneficiaries. It deeply affected pharmacists' involvement in healthcare. Via Medication Therapy Management (MTM), pharmacists are now at forefront of monitoring and modifying complex drug regimens to improve therapeutic outcomes.

In addition to providing MTM and moral support, patient education is a top priority in delivering optimal patient care. Without proper patient

education, it is impossible for pharmacists to fulfill their duties to monitor drug therapy and yield optimal therapeutic outcomes. Patients may develop medication non-adherence, which negatively affects the patient's health and results in unnecessary direct and indirect costs.

With all of the ever-changing responsibilities of a pharmacist, our core values should remain consistent and be the driving force behind providing all patients with the best healthcare possible.

SOURCE:

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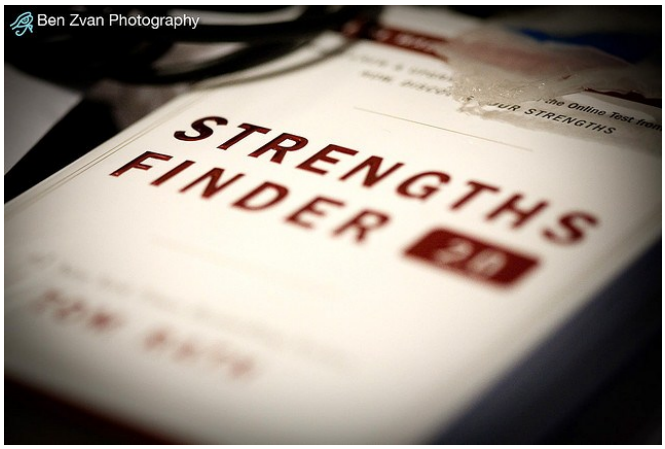


Image Source: Flickr

MY EXPERIENCE AT AMERICAN REGENT, INC. BY: SIMARDEEP SINGH, PHARM.D. CANDIDATE C/O 2013

In February, I had the opportunity to complete an Advanced Pharmacy Practice Experience (APPE) rotation at an industry site (not located in New Jersey!). American Regent Inc. is a subsidiary of Luitpold Pharmaceuticals and operates out of Shirley, Long Island (located conveniently off the Long Island Expressway). American Regent produces numerous injectable products, and holds a major stake in the IV iron market with iron sucrose (Venofer®).

My time at American Regent permitted me to see pharmacy practice outside of the community and inpatient settings. The focus of this rotation was Drug Information. Pharmacists on staff would answer questions, from patients and healthcare professionals alike, about numerous products. I researched numerous on- and off-label questions about some interesting products, such as dehydrated alcohol, methylene blue, and various TPN additives.

At American Regent, I also learned about the business aspect of pharmacy. Since Luitpold is a relatively small company, the Professional Services (such as drug information and the Marketing Department) operate out of the same building. I was able to look through and proof some marketing material disseminated to sales representatives, patients, and doctors. To do so, I read clinical studies and ensured that the data in the marketing material was accurate. I received an introduction to some basic considerations made by a pharmaceutical company when launching or acquiring new products.

Being at this industry site made me realize what the true potential of a PharmD degree can be. Pharmacists that hold MBAs lead all of the professional service and marketing departments for the company's brand and generic products. Luitpold Pharmaceuticals' CEO, Ms. Mary Jane Helenek is a pharmacist herself.

Overall, my rotation at American Regent, Inc. was a unique and interesting experience. The preceptor, Mr. William Fridrich, and the staff were very helpful and accommodating. Time was set aside for me to meet with the research and development (R&D) and the regulatory departments. I was even able to tour the manufacturing facility, located on the same property.

I would definitely recommend this rotation site to anyone even remotely interested in the business and manufacturing aspect of pharmacy.

UPDATED BEERS CRITERIA FOR MEDICATION USE IN THE ELDERLY BY: SHANNON TELLIER, ASSOCIATE STUDENT EDITOR

We can reduce medication-related problems in older adults if healthcare professionals utilize the Beers Criteria. The criteria serves as a guideline to identify potentially inappropriate medications (PIMs) to avoid in the elderly population, but it should not replace clinical judgment.

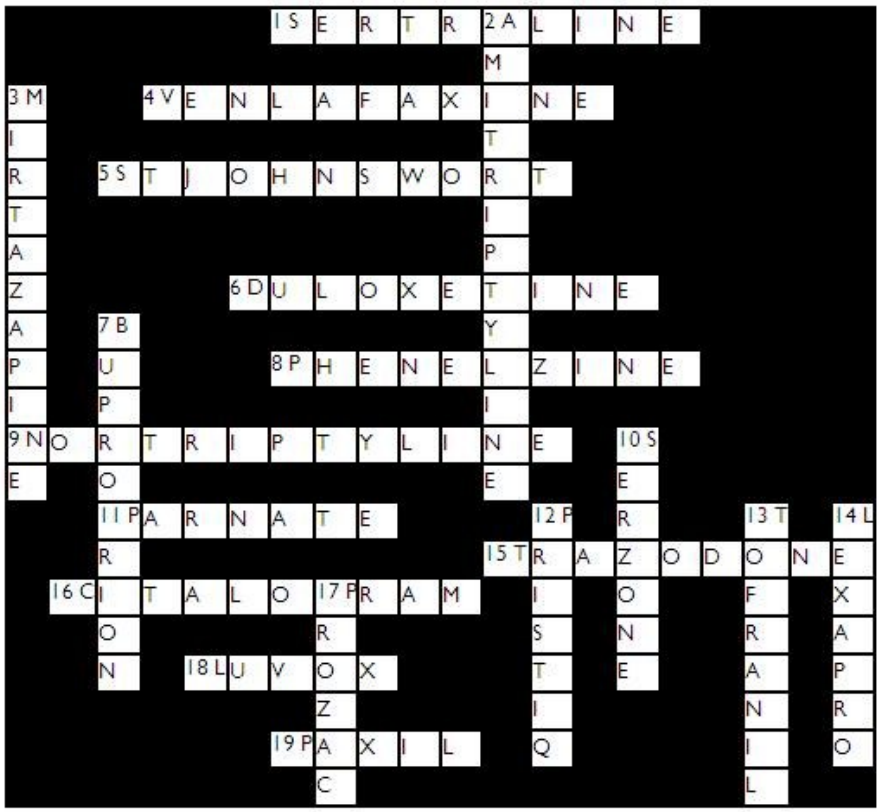
This 2012 update includes a systematic literature review, use of an expert panel, grading the strength of evidence, and three categories of PIMs. The categories include PIMs and classes to avoid in older adults, PIMs and classes to avoid in older adults with certain diseases and syndromes that the drugs can exacerbate, and medications used with caution in older adults. The 2012 update to the Beers Criteria is necessary due to new medications, recalled medications, and insufficient or new evidences evaluated by the panel.

It is important for us to be aware of classes of medications that have the potential to harm older adults. Additions to the 2012 update include megestrol (Megace®), glyburide (DiaBeta®, Glynase®), sliding-scale insulin, thiazolidinediones [or glitazones] in patients with heart failure, acetylcholinesterase inhibitors in patients with histories of syncope, and selective serotonin reuptake inhibitors in patients with histories of falls and fractures. The 2012 update to the criteria also removed 19 medications. Some of these include propoxyphene, as well as combination products like fluoxetine (Paxil®) and ferrous sulfate (>325 mg/day).

Overall, a combination of clinical judgment and familiarity with the Beers Criteria by all healthcare professionals will help reduce adverse drug events in older adults.

Read the 2012 Beers Criteria update at:
http://onlinelibrary.wiley.com/doi/10.1111/j.1532-5415.2012.03923.x/pdf

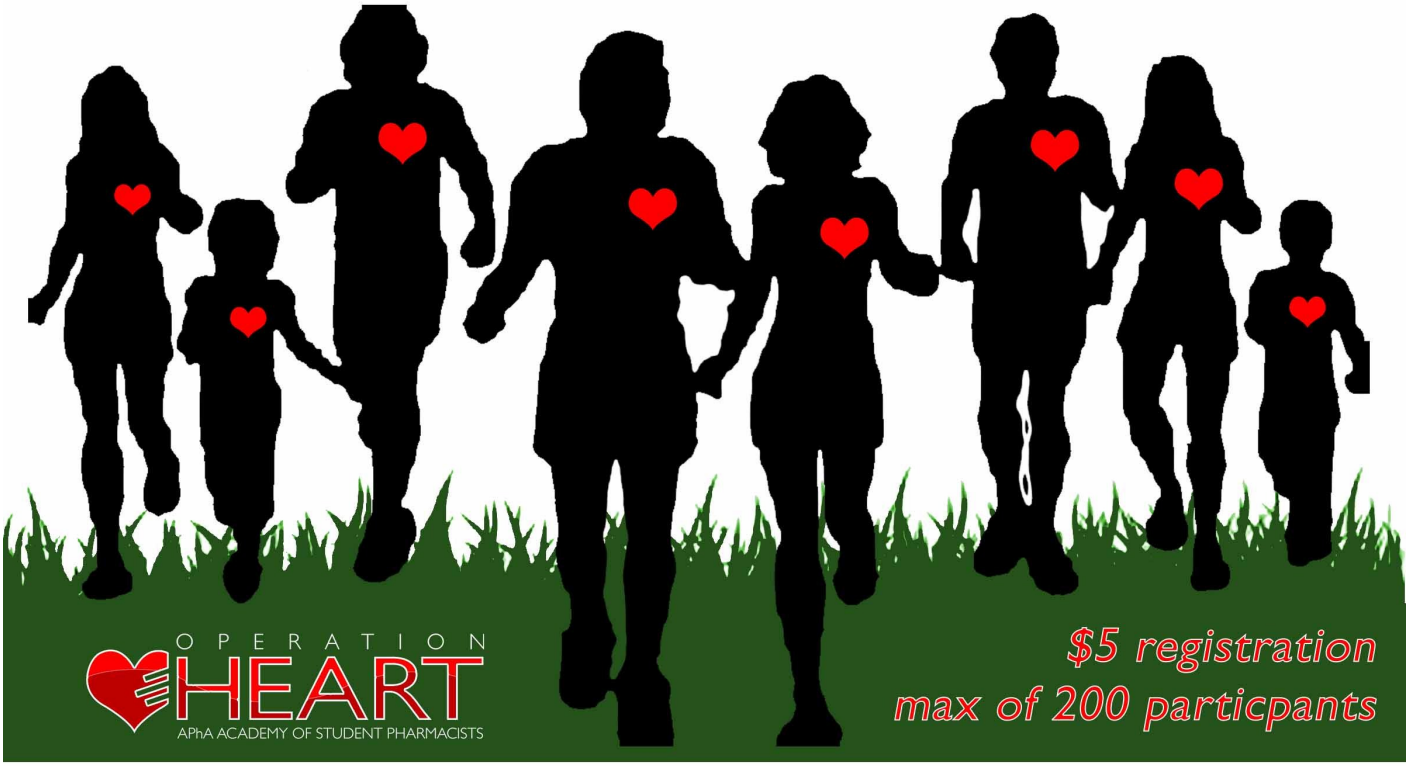
PUZZLE: CROSSWORD (SOLUTION) BY: MAHDIEH DANESH YAZDI



RUN FOR THE HEALTH OF IT! WITH APhA-ASP

Saturday, April 21 at 11 AM

rain date: April 22



1. BEFORE THE EVENT

Blood pressure screenings
Great Lawn, behind St. Thomas More Church

2. START

Great Lawn,
behind St. Thomas More Church

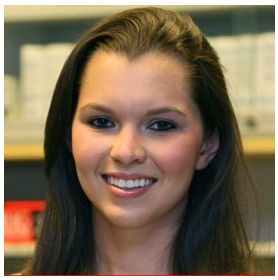
3. END

Lawn in front of D'Angelo Center,
between St. Albert and Sun Yat Sen Halls

4. AFTER THE EVENT

Relay races
Raffles
Fundraising for the
American Heart Association

STUDENT PHARMACIST STAR OF THE MONTH: MICHELLE PERNICE BY: MARIE HUANG, ASSOCIATE STUDENT EDITOR



Each month, the Rho Chi Post has the wonderful opportunity to sit down with an inspiring leader among the student pharmacists here at St. John's University College of Pharmacy and Allied Health Professions – someone who is not afraid to stand apart from the crowd and can be the change he or she wants to see in the world. This April, Michelle Pernice, a 6th year PharmD candidate and student chapter advisor of the Drug Information Association, speaks to us about the pharmaceutical industry, graduation, and seafood.

Q: Some of your colleagues have said that you are one of the most involved students in your year. We are curious to know the specifics; what are some organizations and projects you are directly involved in? Please tell us more about them!

A: I would not call myself one of the most involved. I could think of a number of students more involved than myself. Many students are incredibly involved, not only in multiple professional student organizations, but also on the e-board of these organizations. I look up to these students. Any involvement I have had at St. John's University College of Pharmacy and Allied Health Professions comes down to an initial relationship I built with Dr. Serajuddin (from my first Pharmaceutics class in the pharmacy program). We began researching pertinent topics in the pharmaceutical industry together, building ideas of problems and solutions. Through our collaboration, I was able to meet various people in the college that would help guide me into the career I am looking for in the pharmaceutical industry. Most notably, Patricia Nolan, from the Alumni Affairs office, had the ability to connect students with unique career goals with the appropriate, prominent alumni. This was exactly what she did for me – she led me to branch off into the projects and relationships I mention here and more.

I have been involved throughout pharmacy school in various professional organizations, some student chapters within the college, and others that were not. One of the first groups that I was involved in was APhA. I was fortunate enough to act as the fundraising chairperson on the executive board from 2009 to 2010. It was a great learning experience. I still recall lessons that I learned during that time, including how to work with a group of people with different backgrounds than myself on a subject; here, it was fundraising. I came from a large-scale, big-picture fundraising group, and worked with a group of people who had greater time and energy restrictions than I was accustomed to. It was good practice in compromise and learning how to communicate different ideas.

Outside of the professional organizations at our college, I immersed myself more fully in groups as the years went on. PSSNY has been a great organization to me; they have very accessible annual meetings and conventions. This past January, I had the opportunity to present at a Continuing Education (CE) meeting on Risk Evaluation Mitigation Strategies (REMS) at their Mid-Winter meeting in Albany! Most importantly, I became involved in the Drug Information Association (DIA) two years ago. As I developed the strong conviction to pursue a career in the pharmaceutical industry, I realized that I wanted to align myself with this organization. Since my initial attendance of their annual convention in June of 2010, I have published an abstract in their Drug Information Journal, an editorial piece in their Global Forum publication, presented as a student poster presenter at the 2011 annual meeting, and started a DIA Student Chapter at our college. My involvement with DIA was the single best thing I did for my career, thus far. Through a series of events, I gained experience working at FDA and Amgen, as well as my impending fellowship with Novartis.

Q: Wow! That is impressive! It seems like working closely with Dr. Serajuddin during your third year made all the difference in that it led and allowed you to explore your options relatively early. Did you already have a strong interest in the pharmaceutical industry? How did you come to the point where you said to yourself, "I've found my niche – is this what I want to do after graduation?"

A: Coming into pharmacy school, I did not know that I wanted to pursue a career in the industry. No particular avenue bought my full attention. Throughout my classes, I would continually hear that I was overanalyz-

ing concepts – "thinking too far into it." I soon had the perpetual feeling that I was a law student in pharmacy school. This was when I decided to combine the two disciplines and pursue a career in the industry. I developed this more as the years went on, particularly to hone into regulatory affairs (after researching different options and seeing which suited my strengths the best).

Q: Let us focus more about the Drug Information Association. The first time I have heard about the DIA was actually when I received an e-mail our college's administration regarding an upcoming meeting. What is the importance of DIA, and what is its mission? In addition, as chapter advisor, what do you hope to accomplish?

A: The DIA Student Chapter is a brand new initiative at St. John's University College of Pharmacy and Allied Health Professions. DIA is a non-profit organization that serves to bring together all facets of the pharmaceutical industry (from the private sector to patient advocate groups, government agencies to stakeholder groups) to share ideas and work together towards the betterment of public health. Chartering student chapters is also a new initiative for DIA, as we are only the sixth one in the country.

My personal involvement with DIA on the national level was incredibly influential for my career. I feel very strongly about sharing what I have gained from the organization with current students interested in a career in the pharmaceutical industry. The chapter has been wildly successful, with over 100 members already! As chapter advisor, my goal is simple: I want to help students in the way that so many people have helped me, but only in a more accessible way.

DIA is fortunate to have Dr. Patel co-advising the student chapter. She is a great resource, as she is also a faculty member with hands in both, clinical and industry careers. Michael Cronin is a motivated fourth-year PharmD candidate and the first chapter president of DIA. He has been working diligently toward a successful launch of the chapter.

Q: I see here that informing student members of "opportunities that exist within the pharmaceutical industry to better serve public health needs" is one of the chapter goals. Pharmacy seems to be a commonly overlooked aspect of public health. What is the role of a pharmacist and the pharmaceutical industry, particularly in public health?

A: The betterment of public health is really the end goal of every decision made in the pharmaceutical industry. In the public, some may not see this motivation so clearly, but it truly is what every facet of the industry strives to achieve (whether it be a dramatic improvement in a dire health need in an underdeveloped country or an incremental improvement in an expensive cancer therapy focused in the more fortunate countries). All of these contributions to health are affecting public health in one way or another. Pharmacists have the capacity to influence public health in a positive way in any way they desire, really. From joining an effort like "Uniting to Combat Neglected Tropical Diseases" to taking on a career developing an innovative new orphan drug therapy, if you, as a pharmacist, want to make a public health impact, you will.

Q: Of all of the APPE rotations that you have had, which one has been the most rewarding and why?

A: I am being genuine when I say that every single rotation I had been extremely rewarding in a unique way. If you challenge yourself to make the most of every opportunity, you will receive rewards.

My first rotation was with Dr. Ezzo at Long Island Jewish Medical Center (LIJMC), a fantastic learning experience. I learned so much about building SOAP notes and patient care in primary disease states. Dr. See at Beth Israel in Family Medicine was also such an important experience. I learned how to prioritize patients' complex profiles, a life lesson. Dr. See would politely say, "You have a very wide differential," her nice way of saying, "You're crazy, get your head out of the sticks, and look at the whole forest for once!" Dr. El-Chaar at LIJMC in Pediatrics was a turning point in my life, as a whole. I always had this inner battle between an industry career and specializing in pediatrics. Ultimately, I chose industry but my focus has (and hopefully always will be) underrepresented diseases and pediatrics. I also have this crazy idea that I will get a per diem position working with cystic fibrosis in some capacity.

Of course, the FDA rotation at Office of Special Health Issues made a huge impact on my career. The amount of incredible people I met there and learned from was overwhelming. The time spent at Pfizer

working in Medical Communications was an enriched experience. The preceptors there allowed for a lot of flexibility for me to expand on all of my ambitious ideas, including focusing my final project on personalized medicine and their new product, crizotinib (Xalkori®). Finally, my last rotation at Town Total Health conducting MTMs turned into my site for my ongoing research project.

Q: How does it feel being so close to graduation and your PharmD? Do you have any regrets of the past or any great plans mapped out for the future?

A: Imminent graduation is surreal. Six years went by quickly, but it also feels like I have been in the program for my entire life, especially because so much has changed. As a rule, I have no regrets. There are endless lessons learned and to learn in the future, though. I am constantly setting short- and long-term goals; I feel that this is the only way I can accomplish anything.

In July, I begin a fellowship with Novartis Pharmaceuticals Corporation, through the Rutgers Post-Doctoral Industry Fellowship Program in Drug Regulatory Affairs, with foci on autoimmune disorders, infectious diseases, and transplant. I am excited for the opportunity to learn, and hope to make an impact during my short, two-year tenure.

I also received an appointment as the new practitioner member on the Public Policy Council for ASHP. I really enjoy sinking my teeth into prominent issues that affect patient care on the large scale (*e.g.* biosimilars, drug shortages, and patient medication information). The idea that I may be a part of a decision-making team pertaining to these issues in the next year is mind-blowing.

Q: So, now, moving away from pharmacy and onto questions that are more "vital": if you had to give up either pasta or seafood, which would it be?

A: I am a vegetarian, actually! Well, technically, I am a "pescetarian" because I keep seafood in my diet. If I had to choose between pasta and seafood, I would be a bad vegetarian and choose seafood. I guess it subconsciously stems from my inner fear of pernicious anemia (my last name is a major risk factor).

Q: *[Laughs]* Great answer! Would you rather forget who you were or who everyone else was?

A: The latter – so much time and energy goes into cultivating oneself. The vast majority of those efforts include the influences that other people had and will have on me. If I forgot who I was, I would in essence forget what everyone else really meant to me, as well. If I forget who everyone else is, I still carry them and their influence with me (in terms of how I act and what decisions I make). Some people have had such a profound impact on my life that I really could not conceive the idea of forgetting them, even if I had no memory. While that sounds nonsensical, their involvement in my life dominates my actions, and I think that is beyond a memory relationship.

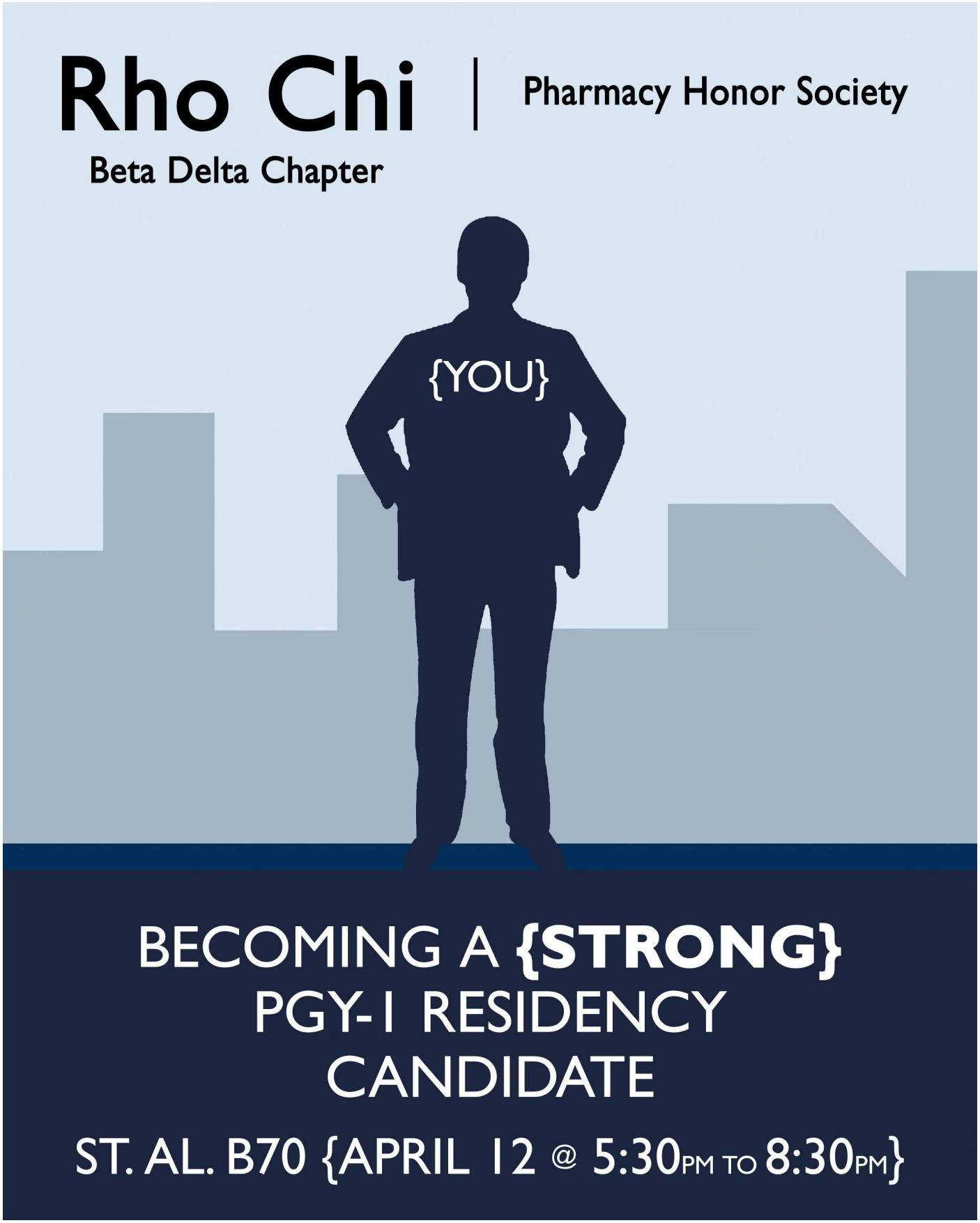
Q: A very articulate response and I completely agree! Finally yet importantly, if you could choose someone famous, alive or dead, to have an hour conversation with, whom would it be?

A: I have a warped sense of fame; so, this response may be a bit unconventional. Recently listed as one of the 25 Most Influential People in Biopharma today by FierceBiotech, Dr. Susan Desmond-Hellmann, is an example of a person who fits my definition of "famous." A conversation with her would be invaluable. My interest was first piqued when a friend sent me a New York Times profile on Dr. Desmond-Hellmann. It is easy to admire her influence on the industry and courage to blaze a new trial in the public-private partnership arena. What I would hope to truly gain out of the conversation, though, is not intricate industry wisdom. Instead, I would like to observe for myself the dichotomy often used in her descriptions. Just the idea that she succeeds in this harsh industry (by acting with kindness, while commanding action) is my highest aspiration.

Q: Thank you so much for taking the time to have this interview! Do you have any last words or tidbits of advice for your fellow student pharmacists?

A: Breathe in deeply, and hold your breath for a moment, appreciating that you can. Then, realize, in exhaling, that you have the potential to blow everyone away.

If you have any additional questions for Ms. Pernice, you may contact her at michelle.pernice06@stjohns.edu


Rho Chi | Pharmacy Honor Society
Beta Delta Chapter
{YOU}
BECOMING A {STRONG}
PGY-1 RESIDENCY
CANDIDATE
ST. AL. B70 {APRIL 12 @ 5:30PM TO 8:30PM}

PUZZLE: WORD SEARCH BY: MARIE HUANG

M C O N E E E Y L O N
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FIND THE FOLLOWING WORDS:

DOXYLAMINE
CODEINE
ALBUTEROL
MONTELUKAST
FLUTICASONE
BUDESONIDE
TIOTROPIUM
MECLIZINE
BENZONATATE
NICOTINE

NOTICE A THEME?

THE RHO CHI POST EDITORIAL TEAM

My name is Mohammad A. Rattu, and I am a 6th year PharmD candidate. I have had profound experiences with media-related positions in pharmacy organizations at our university, and continue to support the utilization of technology to further our profession. As the current Editor-in-Chief of Rho Chi Post, I hope to instill motivation and leadership in our student body. Feel free to get in touch with me at: mohammad.rattu06@stjohns.edu

My name is Mahdieh Danesh Yazdi, and I am a 5th year PharmD candidate. I like to stay current with all the changes in our profession, both legal and clinical. I hope to keep you informed with all that I learn. Please enjoy Rho Chi Post, and provide us detailed feedback so that we may improve our newsletter. If you have any questions or concerns, you can reach me at: mahdieh.daneshyazdi07@stjohns.edu

My name is Marie Huang, and I am a 5th year PharmD candidate. I am in a continuous process of self-definition, and constantly testing the boundaries of this world. I enjoy channeling my inspiration through words and photographs. As a student editor and a witness to an evolving profession, I look forward to keeping you updated! Who knows where we will be tomorrow? You can reach me at: mary.huang07@stjohns.edu

My name is Ebey P. Soman, and I am a 5th year PharmD candidate. I enjoy writing very opinionated articles, and am excited to be an editor of Rho Chi Post. I encourage all readers of our newsletter (students, faculty, professionals) to respond with their own literary pieces. I look forward to hearing from you, and welcome your comments and constructive criticisms: ebey.soman07@stjohns.edu

My name is Neal Shah, and I am a 5th year PharmD candidate. I frequently assist several professors on campus with their research. My goal is to provide my fellow students with research-based information that correlates with clinical pharmacotherapy. If you have any topics of interest or comments on currently-published articles, please do not hesitate to email me at: neal.shah07@stjohns.edu

My name is Shannon Tellier and I'm a 5th year PharmD candidate. I believe it is extremely important for pharmacy students and everyone else in the profession to stay informed about current pharmacy events. The Rho Chi Post is a great way to stay informed and to continue learning about pharmacy information that is pertinent to our campus and the nation. Feel free to contact me at: shannon.tellier07@stjohns.edu

My name is Mohamed Dungersi, and I am a 5th year PharmD candidate. I am excited to continue the hard work put into this newsletter, especially since its inception during my term as president last year. I am enthusiastic about promoting the pharmacy profession; what better way to do this than by being a part of the Rho Chi Post? Should you have any comments or concerns, feel free to contact me at: mohamedjameel.dungersi07@stjohns.edu

? Attention!

We are looking for creative and motivated students interested in becoming a full-time student editor. You do not have to be a member of Rho Chi to be a part of our newsletter! If you would like more information about the responsibilities that the position entails, please contact us via email: **rhochis@gmail.com**

RHO CHI

The Rho Chi Society encourages and recognizes excellence in intellectual achievement and advocates critical inquiry in all aspects of Pharmacy.

The Society further encourages high standards of conduct and character and fosters fellowship among its members.

The Society seeks universal recognition of its members as lifelong intellectual leaders in Pharmacy, and as a community of scholars, to instill the desire to pursue intellectual excellence and critical inquiry to advance the profession.

THE RHO CHI POST

MISSION

The Rho Chi Post aims to promote the Pharmacy profession through creativity and effective communication. Our publication is a profound platform for integrating ideas, opinions, and innovations from students, faculty, and administrators.

VISION

The Rho Chi Post is the most exciting and creative student-operated newsletter within the St. John's University College of Pharmacy and Allied Health Professions. Our newsletter is known for its relatable and useful content. Our editorial team members are recognized for their excellence and professionalism. The Rho Chi Post sets the stage for the future of student-run publications in Pharmacy.

VALUES

Opportunity, Teamwork, Respect, Excellence

GOALS

1. To provide the highest quality student-operated newsletter with accurate information
2. To maintain a healthy, respectful, challenging, and rewarding environment for student editors
3. To cultivate sound relationships with other organizations and individuals who are like-minded and involved in like pursuits
4. To have a strong, positive impact on fellow students, faculty, and administrators
5. To contribute ideas and innovations to the Pharmacy profession

CURRENT EXECUTIVE BOARD

Bethsy, Albana, Yining, Elizabeth, and Aleena at the 2012 Induction Ceremony

President: **Yining Shao**
Vice President: **Albana Alili**
Secretary: **Elizabeth Mo**
Treasurer: **Aleena Cherian**
Historian: **Bethsy Jacob**
Media Relations Coordinator: **Mohammad A. Rattu**
Faculty Advisor: **S. William Zito, PhD**

UPCOMING EVENTS

Apr. 5-9: Easter Break

Apr. 12: Becoming a {STRONGER} PGY-1 Residency Candidate
(St. Al. B70, 5:30pm)

Apr. 13: Relay for Life
(Carnesecca Arena, 6pm)

Apr. 21: RUN for the HEALTH of it
(Great Lawn, 11am)

Apr. 26: Residency and Fellowship Awareness Challenge
(CVS Lounge, 6:30pm)

May 8: Sixth-Year Pharmacy Formal
(Chelsea Piers, 8pm)

May 10: PharmD Hooding Ceremony and Awards Night
(Carnesecca Arena, 6pm Assembly, 7pm Ceremony)

May 13: Commencement / Graduation
(Great Lawn, 8:30am)

Promote your event through us!

Submit the name, location, date, and time of your venue to our editors at:
rhochis@gmail.com

We welcome all pharmacy-related advertisements