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Use of Thiamine for Wernicke's Encephalopathy in Alcoholics Presenting to the Emergency Department

By: Jacqueline Meaney, PharmD Candidate c/o 2015, University at Buffalo: School of Pharmacy and Pharmaceutical Sciences

Chronic alcohol consumption may lead to a deficiency in thiamine (Vitamin B₁), which can lead to alcohol-induced brain damage. Since thiamine is a cofactor for essential pathways in the brain, decreased levels of thiamine in the body can interfere with brain cell function. The causes of thiamine deficiency in chronic alcoholics include inadequate nutritional intake, decreased absorption of thiamine from the gastrointestinal (GI) tract, impaired thiamine storage, and reduced thiamine phosphorylation.^{1,2} Thiamine deficiency can cause serious brain disorders such as Wernicke-Korsakoff syndrome (WKS). WKS is the presence of both Wernicke's encephalopathy (WE) and Korsakoff's syndrome (KS). WKS presents acutely in thiamine deficiency as Wernicke's encephalopathy, and then progresses into the chronic disorder known as Korsakoff's syndrome.³ WE is characterized by a triad of symptoms, including ocular disturbances, mental status changes, and ataxia. Additional symptoms may include hypotension, tachycardia, hypothermia, and seizures. If left untreated, WE can be fatal.⁴ Severe or insufficiently treated cases of Wernicke's encephalopathy can result in Korsakoff's syndrome, which is a chronic neurologic disorder characterized by the onset of severe memory impairment.¹ Because of the low levels of thiamine reported in 30–80% of alcoholic patients and the severity of WKS, it is important to be able to recognize and treat WE in alcoholics presenting to the emergency department (ED). Here we will review literature on the use of thiamine in alcoholics.^{1,2}

It is well-established that chronic alcoholics presenting with Wernicke's encephalopathy requires immediate treatment with intravenous (IV) or intramuscular (IM)

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Early Use of Antibiotics Tied to an Increased Risk of Pediatric Asthma

By: Fatima Elzin, PharmD Candidate c/o 2015

According to the Centers for Disease Control and Prevention, the prevalence of asthma has risen dramatically in the past two to three decades.¹ In the United States, 6.8 million children were diagnosed with asthma in 2012.¹ Recent data suggests that this increase in children with asthma may be correlated with the early use of antibiotics. More specifically, children treated with antibiotics before their first birthday were associated with a heightened risk of asthma and the risk increases the more often antibiotics are prescribed.²

A retrospective population based study of a cohort of children, enrolled in a nationwide employer-provided health insurance plan from January 1, 1999 through December 31, 2006, evaluated the association between antibiotic use during the first year of life and subsequent development of asthma.³ The main objective was to examine the link between antibiotic use in the first year of life and the development of transient wheezing (started and resolved before 3 years of age), late-onset asthma (after 3 years of age), and/or persistent asthma (started before 3 years of age and persisted through 4-7 years of age).

The data included medical insurance claims for approximately 1.6 million children, and consisted of 62,576 children who were enrolled from birth through at least age 5. The results of this study concluded that 18.5% of children (about 1 in 5) developed wheezing or asthma between infancy and age 7.³ The prevalence of the three types of asthma reflected these results: 5,460 cases (8.7%) were transient, 6,418 (10.3%) were late-onset, and 5,946 (9.5%) were persistent. According to the study, around 26,693 children (42.7%) had been through at least one course of antibiotic therapy during their first year of life.³

Ultimately, researchers concluded that the use of

antibiotics in the first year of life was linked to transient wheezing (odds ratio [OR] 2.0, 95% CI 1.9-2.2, $P < 0.001$) and an increased risk of persistent asthma (OR 1.6, 95% CI 1.5-1.7, $P < 0.001$).³ The associations remained even after excluding patients who experienced at least one episode of lower or upper respiratory tract infection (19.4% and 44%, respectively) and/or asthma.³ The results from this study supported the "hygiene and microbiota hypotheses" which states that decreased exposure during childhood leads to an increased risk of atopic disease in childhood.²

Unfortunately, the study did not take into consideration other factors that may increase the risk of asthma in children. Other risks such as where the patient lives (rural or urban), family smoking, and vaginal or c-section birth may cause changes in the data presented.² The study does not directly prove that antibiotic use causes asthma, since other factors in the child's life may cause asthma as well, but serves as a precaution to doctors to only prescribe antibiotics in children when it is absolutely necessary.

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How Many Drugs is Too Many?

By: Caitlyn Cummings, PharmD Candidate c/o 2016 and Ruby Lee, PharmD Candidate c/o 2017

In Dina Spector's *Business Insider* article, "The World's 2nd-Smartest Man Reveals The 'Brain Drugs' That He Thinks Make Him Smarter," the daily medications taken by Rick Rosner, said genius, are revealed.¹ There are unsubstantial descriptions for indications, no strengths or frequencies, and it is inferred that many of the over-the-counter (OTC) drugs are self-prescribed. While data is limited, it is through our professional insight that we will deconstruct his medication list in order to evaluate drug-drug interactions, potential adverse reactions, and unnecessary drug therapies; and additionally show how these 'brain drugs' may in fact cause him more long-term harm than good.

Polypharmacy can be defined as the use of five or more drugs by one patient. Excessive use of medications could lead to inappropriate therapies, duplicate therapies, and deadly interactions between other drugs, food, or disease states.² Additionally, the use of OTC supplements could also increase the risk of adverse reactions, since many patients mistakenly believe they are innocuous. Pharmacists and other healthcare providers are given the challenging task to keep track of a patient's prescribed medications as well as any supplemental OTC medications the patient may take. An extreme example of polypharmacy can be seen with Rick Rosner, who takes over 40 medications each morning.

The first major interaction spotted in Rosner's list is between his half an aspirin, SAM-e, horse Chestnut, piracetam, vitamin K, vitamin E, glucosamine, omega-3 fatty acids, curcumin and to a lesser extent coenzyme Q₁₀, lycopene, and selenium. These drugs, with the exception of vitamin K, may increase his risk of bleeding including, but not limited to, gastrointestinal bleeding, having a hemorrhage (intracerebrally, retrobulbarly, or in the subarachnoid space), or having a hemorrhagic stroke.³

While more studies are needed to assess dietary supplements and the likelihood of these events (particularly in combination with other anticoagulant or antiplatelet drugs), there is *in vitro* and some *in vivo* evidence supporting their mechanisms of action

and potential for adverse bleeding events.

Rick Rosner's List of "Brain Drugs"¹

Half an aspirin daily*
Glisodin
Fancy multivitamins from Life Extension and Vitacost
Astragalus
Curcumin*
ALA and acetyl L-carnitine
Vitamin E with Selenium and Gamma E*
Calcium
Mangosteen pomegranate noni complex
Quercetin and Bromelain
DMAE
Piracetam*
Methylene blue ⁺
Metformin
Avodart
Sam-E*+
Fat blockers
ToCoQ10*
Vitamin D3
Lycopene*
Benfotamine
Vitamin K ⁺
Coffee
Aminoguanidine
Cognitex from Life Extension
Omega-3 Fish Oil Capsules*
Metoprolol
Glucosamine* and Chondroitin
RX and non-RX drugs to lower cholesterol
Fiber gummies
L-carnosine
Vitamin C
TMG (trimethylglycine)
N-acetyl cysteine
Horse Chestnut*
Phosphatidylserine
Centrophenoxine
Vinpocetine

* Increases chances of adverse bleeding events

+ Increases risk of serotonin syndrome

** Promotes clotting

Aspirin inhibits platelet aggregation, the body's first step in clotting after injury to the blood vessel, as do SAM-e, glucosamine, omega-3 fatty acids, vitamin E, curcumin, and lycopene. This will increase the time it takes for blood to clot and the likelihood of an adverse reaction related to bleeding.³ Glucosamine was found to increase the INR in patients on warfarin, but there is limited evidence of its effect when combined with NSAIDs.³ Studies have also shown that vitamin E may have a dose-dependent effect on the anti-coagulation cascade in patients.³ Two additional drugs that inhibit hemostasis include piracetam and horse chestnut. Piracetam is an NSAID that inhibits the formation of thromboxane A₂ (pro-clotting factor) and affects blood cell deformability.⁴ Horse chestnut constricts the veins and decreases the permeability of the venous capillaries.⁵ Thus, through the interplay of various mechanisms, Rosner's ability to clot his blood is seriously compromised.

Rosner additionally takes vitamin K, without a stated indication. Vitamin K's only approved indication is for extreme cases of warfarin overdose by promoting liver clotting factors; it is worth noting that this is a different part of blood coagulation than the antiplatelet drugs described previously, so it does not inhibit their antiplatelet action.⁶ The effects of vitamin K on the coagulation cascade are dose-dependent due to the fact that vitamin K-dependent clotting factors (factors II, VII, IX, and X) have varying half-lives.⁷ However, Rosner did not specify which form of vitamin K, strength, or frequency so it is unknown the extent of clotting factors formed. The bottom line is that Rosner is taking vitamin K without a clear indication and in combination with many drugs that exude opposite effects; this presents no advantage. Additionally, the combination of so many pro-bleeding supplements and their varying mechanisms in preventing clotting poses a potentially serious health threat to Rosner.

Secondly, Rick Rosner has an increased risk of serotonin syndrome by combining methylene blue and SAM-e. Serotonin syndrome is a predictable, acute-onset, and potentially fatal reaction to the use of multiple serotonergic drugs, having symptoms including hypertension, tremor, agitation, and diarrhea.⁸ Methylene blue is typically used as an injection to treat methemoglobinemia or used as a dye for diagnostic purposes,⁹ but Rosner is taking an oral

dose as part of a clinical trial to reduce his risk of developing Alzheimer's disease.¹⁰ While its use in Alzheimer's seems promising, methylene blue also inhibits monoamine oxidase A, which in turn inhibits the breakdown of serotonin in the brain.⁹ SAM-e works by an unknown mechanism to increase serotonin in the brain as well.¹¹ Since methylene blue is only in clinical trials and data for interactions is limited, it can be theorized that Rosner has the potential for a major interaction between SAM-e and methylene blue and the combination should be avoided.

Lastly, two drugs that lack indications for Rosner include N-acetylcysteine and a fat blocker (assuming over-the-counter Orlistat). N-acetylcysteine is mainly used as an antidote for acetaminophen poisoning or as an adjunct to thin the mucus in respiratory conditions.¹² He has not listed any other pulmonary-specific drugs, making us question the use of this particular drug, especially since it causes a high incidence of vomiting.¹² Additionally, the fat blocker that Rosner takes is inappropriate because we calculated his BMI as 19.9, close to being classified as underweight.¹³ Orlistat should only be used in patients with a BMI greater than 30 or greater than 28 with additional medical conditions. It also interacts with every fat-soluble vitamin he takes, thus canceling out any effectiveness from vitamins A, D, E, or K (unless taken two hours apart).¹⁴ The danger with blocking vitamin K absorption is that he is now even more susceptible to the anti-clotting effects described previously.

The dangers of polypharmacy can be clearly seen in Rick Rosner's case. While he claims this list of medications makes him smarter, as future pharmacists, we see a list of problems, some potentially fatal, while only scratching the surface of his medication list. As one can see, sometimes it only takes one drug to be one too many.

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Fifth Time's a Charm?

By: Sylva Ohanian, Staff Writer

Liraglutide (Saxenda®) has recently been approved by the FDA for the treatment of chronic weight management in adult patients.¹ The indication is specified for those with an initial body mass index (BMI) of 30 kg/m² or greater (obese) or 27 kg/m² or greater (overweight) in the presence of at least one weight-related co-morbid condition, such as hypertension or type 2 diabetes.²

The glucagon-like peptide-1 (GLP-1) receptor agonist, liraglutide, which is indicated as an adjunct to increased physical activity and a reduced-calorie diet, has been available on the market as Victoza® since 2010 for the treatment of type 2 diabetes. While the dose for diabetes is 1.2 or 1.8 mg, the dose for obesity is 3 mg.³

As the fifth obesity drug that is now available in the United States, liraglutide invites comparisons with its predecessors. Currently, Trial 1807 is the only head-to-head trial that compares liraglutide to another weight loss drug. In a 20-week, double-blinded, placebo-controlled study, 564 obese indi-

viduals without type 2 diabetes, aged 18 to 65 years of age, were randomized to take one of the following: one of four liraglutide doses (1.2 mg, 1.8 mg, 2.4 mg, or 3 mg) taken once daily, a placebo taken once daily, or orlistat 120 mg taken three times daily. Orlistat (Alli®, Xenical®) was initially approved in 1999.^{3,4} Orlistat is a reversible inhibitor of lipases and is indicated for obesity management including weight loss and weight maintenance when used in accordance with a reduced-calorie diet.⁴ After 20 weeks, patients had the option to enroll in an extension of the trial that lasted until a 52-week mark. As a result, "there was a significantly greater mean weight loss (in kg) in the groups treated with liraglutide 1.8, 2.4, and 3 mg compared with placebo (p < 0.001) at week 52. Treatment with liraglutide 2.4 and 3 mg was associated with a statistically significantly greater mean weight loss compared to orlistat (p < 0.05)."⁵

Although liraglutide 2.4 and 3 mg proved superior in efficacy of weight loss to orlistat in phase 2 clinical trials for weight loss, other factors should be

considered when deciding which drug is optimal. For instance, Saxenda® has a black box warning for thyroid c-cell tumors seen in rodent studies; it is not to be used in patients with a personal or family history of medullary thyroid carcinoma (MTC) or multiple endocrine neoplasia syndrome type 2.² Although orlistat does not have a black box warning, it has a warning about rare reports of severe liver injury that was discovered during routine monitoring of post-marketing adverse events.⁶ While orlistat's infrequent hepatotoxic effect may still be alarming, it is important to note that post-marketing studies are still ongoing for Saxenda®.¹

Along with the adverse effects of a drug, administration can seemingly influence a patient's mind when looking at various options of any chronic condition's management. Saxenda® comes as a subcutaneous injection that is administered once daily, while orlistat (Xenical®) is available orally but needs to be taken three times daily.^{2,4} Patient preference and adherence may be affected by the route and/or frequency of administration.

As medical advisors to patients, pharmacists must realize that it is pertinent to consider a drug's many facets and remain unbiased when doing so. Until more information is available about Saxenda®, it is best to assess the risks and benefits of starting it as a treatment plan for individual patients.

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The Overmedication of Foster Care Children

By: Andrew Leong, Staff Writer

There are over 510,000 children in foster care nationwide.¹ They face tremendous emotional stress, affecting their behavior and mental health. To treat their symptoms, many are prescribed psychotropic medications. A study published in the journal of the American Academy of Pediatrics found that “21.3% are receiving mono-therapy, 41.3% are taking three or more classes of psychotropic medications, 15.4% are taking medication from four or more classes, and 2.1% are taking five or more classes of psychotropic drugs.”² However, there is no evidence that using all of this medication in this pediatric population is of any benefit.

To try to define overmedicating is difficult. At the very least, there should be a discussion about the trade-offs between symptom management and side effects. However, there are no clear-cut guidelines to follow for medicating children on psychotropic medications owing to the fact that many of these medications are prescribed based on off-label indications. According to a study published in JAMA on pediatric drug labeling, approximately 50% to 75% of drugs used in pediatric treatment do not have adequate labeling.³ Fluvoxamine maleate (Luvox®), an SSRI used for OCD and depression, is one such drug found in the study.

Off-label prescribing in itself is not a problem. Many medications are effective in this way; for example, montelukast (Singulair®) is used for asthma but can be used off-label for COPD. The problem unfolds when there is a lack of drug therapy management. Without careful oversight, an effective psychotropic treatment can lend itself to dangerous side effects such as rapid weight gain, diabetes, and seizures.

While some people may try to blame doctors for overmedicating children, the problem is multifaceted. On average, children in the foster care system experience three different foster home placements.¹ Not only is this a concern because of the child's emotional well-being, it is also difficult for caretakers to properly monitor a child's progress on therapy. Attorney Jennifer Rodriguez, a former foster youth,

comments, “As a parent, when your child goes on something that's dangerous, the most dangerous drugs that are out there, your doctor is relying on you-- someone who knows that child, who watches over time.”⁴ Without a watchful eye, doctors are often left in the dark about a child's past, both medical and familial, and so cannot make fully informed decisions.

Combined with the pressure from overwhelmed parents who want to reduce behaviors in the most troubled children, it is no wonder the system is conducive to overmedication. Edgardo Tolentino, a child psychiatrist, remarks on this pressure by stating, “The expectation is that they'll be given some type of medication; if they are already on medications, the only thing I can do is continue them.”⁴ When the choice is between continually moving a child from home to home and medication, the system is bound to take the easier option.

Children are naturally vulnerable; those in foster care are even more so. It is harrowing to think that it is so easy to overmedicate a child in their formative years because of a flawed system. Thankfully, there are many states that have implemented Drug Utilization Review programs to “intensify the oversight of prescribing of these potent medications to children.”⁵ For instance, many states require pharmacists to manually review prescription requests while others have developed psychiatric telephone lines that can guide patients in their choice of therapy. Pharmacists are, as always, the last line of defense for this patient population. They are in a position to counsel and educate patients on these medications but sometimes are pressed for time. However, all providers need to make a concerted effort to make time for the future-- our children.

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Use of Thiamine for Wernicke's Encephalopathy in Alcoholics Presenting to the Emergency Department (Continued)

By: Jacqueline Meaney, PharmD Candidate c/o 2015, University at Buffalo: School of Pharmacy and Pharmaceutical Sciences

thiamine.⁵ If WE is left untreated or is insufficiently treated with only low doses of thiamine or oral thiamine, the mortality rate may reach up to 20%.^{2,6} Even though oral thiamine may be less invasive to administer, it is not sufficient for the treatment due to extremely variable absorption and poor bioavailability.² It is difficult to determine whether an alcoholic has WE based solely on signs and symptoms. As a result, it is recommended that all alcoholics presenting to the emergency department be administered parenteral thiamine, either for prevention or treatment of the disease. The benefits of thiamine treatment in preventing the progression of WE far exceeds the risk associated with parenteral thiamine administration.^{3,5,7,8}

The current recommendations for the use of thiamine are based mostly on case reports and clinical experience rather than on clinical trials. A 2004 meta-analysis demonstrated that there is insufficient evidence from randomized controlled trials (RCTs) to guide practitioners in dosing, frequency or duration of thiamine treatment for prevention or treatment of WE.⁹⁻¹¹ Current literature suggests that 200-500 mg of IV or IM thiamine be administered until symptoms resolve.¹ European and British guidelines recommend using 250mg of IM or IV thiamine three times daily for 3-5 days to avoid consequences of thiamine deficiency, which includes WE.⁴

WE is diagnosed at autopsy in 80% of cases, indicating that it is a commonly missed diagnosis in alcoholics.⁴ Since WE varies in presentation and can be easily mistaken for other disorders, and the prognosis depends on the speed at which thiamine deficiency is reversed, thiamine must be administered to all alcoholics, with or without signs of WE. Maintaining high serum levels of thiamine restores cognitive function, though the exact dosing for effective treatment is still under research.^{9,12,13}

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Remember, you do not have to be a member of the Rho Chi Honor Society to write for the Rho Chi Post.

Have something interesting to say?

Want to publish your poster presentation?

Want to review a new drug on the market?

Then write to us at RhoChiPost@gmail.com

Visit our website:

<http://rhochistj.org/RhoChiPost/Topics/>

Matching Column:

BOXED

WARNINGS



By: Svetlana Akbasheva
Staff Writer

Many drugs have

BOXED

WARNINGS

for dangerous adverse
events.

Can **YOU** match the
warning with the correct
medication?

Answers

On page 11

1. Risk of drug-induced lupus erythematosus-like syndrome

2. Risk of epidural or spinal hematomas in patients receiving neuraxial anesthesia or undergoing spinal puncture

3. Risk of lactic acidosis

4. Risk of neuropsychiatric adverse reactions that can persist after discontinuation

5. Increased mortality in elderly patients

6. Risk of *Clostridium difficile*-associated diarrhea

7. Risk of tendonitis and tendon rupture

8. Risk of severe liver injury and acute liver failure

9. Risk of causing or exacerbating congestive heart failure

10. Risk of suicidal thoughts in young adults

A. Olanzapine

B. Mefloquine

C. Propylthiouracil

D. Ciprofloxacin

E. Procainamide

F. Clindamycin

G. Venlafaxine

H. Rosiglitazone

I. Apixaban

J. Metformin

Lexi-Comp Online®, Lexi-Drugs Online®, Hudson, Ohio: Lexi-Comp, Inc.; March 30, 2015.

How Did You Do???

Answers to Look Alike and Sound Alike

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

Quote of Month

By: Nicollette Pacheco, Staff Editor [Graphics-focused]



PUZZLES

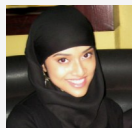
Do you enjoy our puzzle?

Send us a suggestion for a brainteaser at

RhoChiPost@gmail.com

We will feature your work in our next issue!

RHO CHI POST: TEAM MEMBERS


@ Tasnima Nabi (5th Year, STJ; Editor-in-Chief)

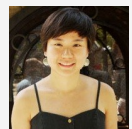
Writing has always been my greatest outlet for experience and knowledge, through which I hope to keep you engaged and informed. It is imperative to keep up with our changing profession and community, and I look forward to bringing pertinent information to the newsletter.


@ Katharine Cimmino (6th Year, STJ; Copy Editor [Content-Focused])

I have always been an avid reader and writer. As a member of the Rho Chi Post I am able to merge my passions with the professionalism that comes with aspiring to be a healthcare provider. I am eager to be a part of a publication that promotes my interests and vocation.


@ Bharat Kirthivasan (PhD, Copy Editor [Content-Focused])

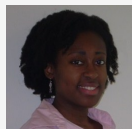
I am a doctoral candidate in Industrial Pharmacy researching nanoparticles for delivery to the brain. The only thing I enjoy more than reading a well-written piece of work is writing it. I am glad to work for the Rho Chi Post, and I encourage others to do the same.


@ Hayeon Na (6th Year, STJ; Copy Editor [Content-Focused])

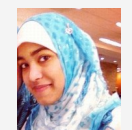
Hello! My name is Hayeon Na. I am a 2015 PharmD Candidate and one of the Copy Editors for the Rho Chi Post. I hope the information I present will be helpful, or at least interesting. If you have any comments regarding my contribution, feel free to contact me at any time!


@ Erica Dimitropoulos (6th Year, STJ; Copy Editor [Content-Focused])

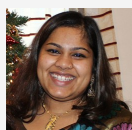
As busy student pharmacists, we often fail to keep current with healthcare developments. My aim is to sort through the news and provide quick updates that are important to our profession. Feel free to contact me if there are any topics you would like to see covered in the next issue!


@ Davidta Brown (4th Year, STJ; Copy Editor [Content-Focused])

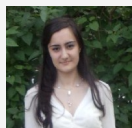
My two great loves are innovative science and quality writing, and the Rho Chi Post is an insightful combination of both. As an editor, I look forward to bringing relevant information and fresh perspectives to the student and faculty of St. John's University, as well as to making the Rho Chi Post a newsletter that offers something new to every reader.


@ Fatema Elias (5th Year, STJ; Copy Editor [Content-Focused])

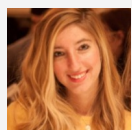
I am honored to be a part of the Rho Chi Post team. In this age of technology and the continuously changing healthcare profession, I hope to engage like-minded students and professionals. Writing is something that I hold dear to my heart and I hope with this newsletter we can all stay well informed, interested, and educated.


@ Melissa Roy (6th Year, STJ; Copy Editor [Graphics-Focused])

We as future healthcare professionals owe it to our patients and ourselves to be aware and current on the events affecting our profession. The Rho Chi Post is our way to learn new things and stay in touch with the pharmacy world, on- and off-campus. Feel free to reach out to me with suggestions and comments.


@ Tamara Yunusova (4th Year, STJ; Section Editor: Clinical)

My name is Tamara Yunusova, and I am a 4th year Pharm D candidate at St. John's University. I enjoy articulating information in a captivating and insightful way. I hope to make this publication more informative, student-friendly, and innovative.


@ Beatrisa Popovitz (6th Year, STJ; Section Editor: Clinical)

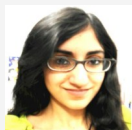
I am eager to relay current information on interesting topics making waves in the world of healthcare pertinent to the advancement of our profession. As student pharmacists, we are molding the future of our profession, and the Rho Chi Post facilitates the cultivation of a relationship (between students, faculty, and other members of the healthcare community) to share ideas and spread awareness of various issues.

RHO CHI POST: TEAM MEMBERS



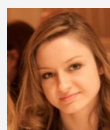
@ Sang Hyo Kim (3rd Year, STJ; Section Editor: Puzzles)

Advancements of technology and developments of new medicines, prolonging the lifespan and improving the quality of life, have increased the geriatric population. In years to come, pharmaceutical industries and healthcare systems will persistently work to find solutions to changing demands and new problems of the society. Through the Rho Chi Post, I wish to learn, educate, and prepare myself and others for the future.



@ Azia Tariq (4th Year, STJ; Section Editor: News)

The Rho Chi Post is a prominent and highly esteemed resource for pharmacy students and professionals. I am privileged to be a part of the team and hope to contribute informative and engaging pieces to the newsletter.



@ Ada Seldin (6th Year, STJ; Staff Editor [Content-Focused])

I am thrilled to have become a new member of the Rho Chi Post team. I hope to further strengthen the goals of this newsletter and make a lasting contribution. It is important, as future pharmacists, to collaborate with our peers, as well as accomplished professionals in the field. Rho Chi Post provides a vehicle to voice our opinions and share relevant news.



@ Nicollette Pacheco (4th Year, STJ; Staff Editor [Graphics-Focused])

As a new member of the Rho Chi Post team, I have a vast appreciation of what it means to be a future pharmacist in the rapidly evolving world of healthcare. I am looking forward to being on the team as a graphics-focused staff editor, and I hope to bring my passion for science and creativity to the Rho Chi Post.



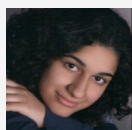
@ Andrew Leong (5th Year, STJ; Staff Writer)

Students have to do more than what is required of us in classes to truly learn about our profession. That's why I joined the Rho Chi Post. This publication represents a channel by which our team members, faculty, and readership can share information - something I believe is important in this ever-changing pharmacy world.



@ Svetlana Akbasheva (5th Year, STJ; Staff Writer)

I am very excited and honored to be part of the Rho Chi Post! In a profession that is constantly evolving with new developments, it is so important to remain informed and current. The Rho Chi Post helps do just that, and I look forward to contributing to this unique publication.



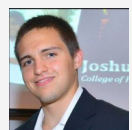
@ Sylva Ohanian (4th Year, STJ; Staff Writer)

The Rho Chi Post is a refreshing outlook on our profession. I am thrilled and grateful to be able to work with the other members in continuing its success, and hopefully to bring greater attention to it, which it deserves.



@ Fawad Piracha (5th Year, STJ; Finance and Outreach Manager)

I am delighted to join the editorial team. I have the firm intention of broadening readership and facilitating growth of the Rho Chi Post.



@ Joshua Bliss (5th Year, STJ; Social Media Manager)

By providing student-organized, reliable information in the healthcare field, the Rho Chi Post helps us all in fulfilling our education both in and out of the classroom. Education is the tool we use to set paths for our futures, and every chance to expand our education is a chance at building a better future. I am honored to be a part of the Rho Chi Post and look forward to the future!



@ You!

We are always looking for creative and motivated students to join our team! If you are interested in becoming an editor for the Rho Chi Post, please visit: <http://rhochistj.org/RhoChiPost/EditorApplication>

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 is an award-winning, monthly, electronic, student-operated, faculty-approved publication that 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 aims to become the most exciting and creative student-operated newsletter within St. John's University College of Pharmacy and Health Sciences. Our newsletter continues to be known for its relatable and useful content. Our editorial team continues to be known for its excellence and professionalism. The Rho Chi Post essentially sets the stage for the future of student-operated 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



Anthony, Tyler, Sara, Tasnima, Joshua, Fawad at the 2014 Induction Ceremony

President: **Tyler Valente**

Vice President: **Fawad Piracha**

Secretary: **Tasnima Nabi**

Treasurer: **Anthony Nania**

Historian: **Sara James**

Media Relations Coordinator **Joshua Bliss**

Faculty Advisor: **S. William Zito, PhD**

UPCOMING EVENTS

June 14-18: DIA 51st Annual Meeting
Washington, DC

June 23-24: Annual NSCLC Summit
Boston, MA

June 29-July 2: APHA Childhood Diabetes
Conference
San Diego, CA