



Report to the Texas Pharmacy Congress — August 8-9, 2018

## NIH AWARDS LOKHANDWALA \$2.64M FOR STUDY OF ANG 1-7 IN HYPERTENSION

UH College of Pharmacy Professor Mustafa F. Lokhandwala, Ph.D., FAHA, FASN, has received a five-year, \$2.64 million grant to investigate the role and mechanisms surrounding the Angiotensin 1-7 molecule and its associated signaling cascades in restoring sodium homeostasis and reducing oxidative stress-induced hypertension.

The new funding for Lokhandwala, who also serves as director of the UH Heart and Kidney Institute and the college's executive vice dean for Research, was awarded by the National Heart, Lung, and Blood Institute in July.

Lokhandwala said the need to find ways to support or enhance endogenous antioxidant production and function is driven by a body of research in which the antioxidant benefits from plant products and dietary supplements



Professor Mustafa F. Lokhandwala and collaborator Research Assistant Professor Anees Bandy are investigating the Angiotensin 1-7 peptide molecule as a novel drug target against oxidative stress-induced hypertension.

reported in laboratory studies have failed to be conclusively realized in clinical studies.

His previous research has shown that Ang 1-7 could activate the redox-sensitive transcription factor Nrf2, which is involved in the transcriptional activation of antioxidant genes to protect cells against oxidative stress. In preliminary studies, Lokhandwala's team has shown that Ang1-7 activated Nrf2, reduced oxidative stress, normalized renal dopamine D1 receptor function, and eliminated hypertension in wild type mice but not in either Nrf2 knockout or PPAR $\gamma$  knockout mice.

Under the newly funded project, Lokhandwala hypothesizes that Ang 1-7 via Nrf2-PPAR $\gamma$  activation reduces oxidative stress, normalizes renal dopamine signaling and prevents hypertension during oxidative stress.

## UH EARNS SNPhA LARGE CHAPTER TITLE, ALLEN WINS PRESIDENTIAL ELECTION AND SCHOLARSHIPS AT NATIONALS

The UHCOP Chapter of the Student National Pharmaceutical Association won its second consecutive title – and its third in the past four years – for the Large Chapter category of the Chauncey I. Cooper Chapter Excellence Award at the 2018 SNPhA National Meeting July 27-30 in Charlotte, N.C.

In addition, outgoing UHCOP Chapter President Darien Allen was elected 2018-19 National President-elect of the organization. Allen also was honored as a Walgreens Advancement of Diversity in the Community Award and the Dr. Nicole Avant Presidential Scholarship recipient.

Two national resolutions proposed by the chapter and presented by UHCOP delegate Matyndia Oyourou were passed. The event also brought the completion of terms for three chapter members in 2017-18 national posts: National Vice President Gifty Gyebi, Bridging the Gap Chair Chidi Iroegbu, Region IV Facilitator Vivian Lieu.



Newly elected SNPhA National President-elect Darien Allen and faculty advisor Louis Williams display the Chapter Excellence Award in the Large Chapter category.

## RECENT GRAD RECEIVES DISTINGUISHED STUDENT HONORS AT TPA 2018

UHCOP Class of 2018 Pharm.D. graduate **Shawn Ahmad** was recognized with the Texas Pharmacy Association's Distinguished Student Pharmacist Award at the organization's Annual Conference & Expo July 13-15 in The Woodlands.

Ahmad was recognized for his service to TPA, including as chair of the Academy of Student Pharmacists and Student Representative on the TPA Board of Directors, as well as his leadership role in the development of TPA's new Student Pharmacists Advocacy and Relations (SPARX) training program to raise awareness of pharmacy's role in health care and advance the practice through legislative and regulatory initiatives.



AHMAD

At the UHCOP Graduation Awards Reception in May, Ahmad was recognized with the college's Legislative & Policy Award.

Ahmad said he intends to be an active participant in TPA's advocacy initiatives throughout his career.

## Student News

Two UHCOP Pharm.D. students were awarded scholarships from the TSHP Research & Education Foundation: **Bradley Endres** – Micheline & Bourjois Abboud Scholarship, and **Aimen Naveed** – Glenda Lawson McRee Scholarship.

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UHCOP recognized 115 graduates receiving the Doctor of Pharmacy degree, 20 graduates receiving the Doctor of Philosophy degree, and eight graduates receiving the Master of Science degree during the 2017-18 academic year at the college's May 10 Commencement.

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Pharm.D. students **Mariellee Aurelio**, **Callie Downs**, **Joo Hee Kim**, **Amilda Medina**, **Autumn Prestenbock**, **Kaycie Rathburn**, **Breanna Russ**, and **John Samson** and faculty members **Austin De La Cruz** and **Matthew Wanat** attended the American Pharmacists Association from Institute on Alcoholism & Drug Dependencies May 30-June 3 in Salt Lake City, Utah.

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Pharmaceutical Health Outcomes and Policy Ph.D. student and 2017-19 Fulbright Scholar **EeVien Low** was selected to receive a \$10,000 P.E.O. International Peace Scholarship. Low also attended a Utrecht-World Health Organization summer course on Pharmaceutical Policy Analysis July 9-13 at the Universiteit Utrecht, a WHO Collaborating Centre for Pharmaceutical Policy and Regulation in The Netherlands.

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Four Pharm.D. students were awarded scholarships from the Texas Pharmacy Foundation during the 2018 Texas Pharmacy Association Annual Conference & Expo July 13-15 in The Woodlands. The recipients were: **Mariellee Aurelio** and **Kaycie Rathburn** – TPF Professional Recovery Network Scholarship; **Brittany Musselman** – TPF Larry "Neal" McLaugherty Scholarship; and **Aimee Naveed** – TPF General Scholarship.

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P2 Pharm.D. students and members of the UHCOP Chapter of the American Pharmacists Association-Academy of Student Pharmacists **Susan Dembny** and **Kristen Underbrink** attended the 2018 APhA-ASP Summer Leadership Institute July 13-15 in Washington, D.C.

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Pharmaceutical Health Outcomes & Policy Ph.D. student **Tyler Varisco** was selected for the 2018 Walmart Scholars Program, which provided financial support for him to attend the American Association of Colleges of Pharmacy 2018 Annual Meeting July 21-25 in Boston, Mass., with his faculty advisor Marc L. Fleming, Ph.D., MPH, R.Ph.

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Pharm.D. student **Sylvia Stefanos** completed the six-week Houston Methodist Pharmacy Student Observership Program, which provides students with early exposure to health-system pharmacy between their P1 and P2 years.

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Five Pharmaceutical Health Outcomes and Policy Ph.D. students undertook summer internships: **Benjamin Lewing** – Shell Health, **Sanika Rege** – Abbvie, **Swarnawa Sanyal** – Ascent Pharmaceuticals, **Aisha Vadhariya** – Regeneron Pharmaceuticals, and **Qingqing Xu** – Abbvie. Three Pharmaceutics Ph.D. students also undertook summer internships: **Katherine Shatzer** – FDA's Office of Clinical Pharmacology, **Yifan Tu** – Boehringer Ingelheim, and **Changhong Yun** – Genentech.

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During the spring semester, UHCOP's Upsilon Chapter of the Phi Lambda Sigma Pharmacy Leadership Society inducted 18 Pharm.D. students into the society, and the UH Chapter of the Phi Kappa Phi Honor Society welcomed Pharmaceutical Health Outcomes and Policy Ph.D. student **Qingqing Xu**.

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**CLASS OF 2018** **27** Students Matched in PGY-1 Residencies **79.4** Percent Match Rate of PGY-1 Residency Applicants

## College News

### UHCOP HONORS TOP PRECEPTORS, EXPERIENTIAL SITE FOR 2017-18

In May, UH College of Pharmacy honored its top preceptors for experiential education excellence during the 2017-18 academic year:

Ambulatory Care Preceptor of the Year – **Jodie Gee**, Pharm.D., BCACP, CDE, Fondren Foundation Pharmacy at Harris Health System's Smith Clinic;

Community Preceptor of the Year – **Amer Hakam**, Pharm.D., Ph.D., Walgreens;

Faculty Preceptor of the Year – **Austin De La Cruz**, Pharm.D., BCPP, UH College of Pharmacy/Michael E. DeBakey Veterans Affairs Medical Center.



De la Cruz



Gee



Hakam



Tran

Health Systems Pharmacy of the Year – **Methodist Charlton Medical Center** of Dallas;

Hospital Pharmacy Preceptor of the Year – **Lori Krustchinsky**, Pharm.D., MPH, Memorial Hermann-Texas Medical Center; and

Institutional Patient Care Preceptor of the Year – **Mai Tran**, Pharm.D., BCPS, Memorial Hermann Memorial City Medical Center;

## WANAT'S STUDY ON ANTICOAGULANT RISKS IN AFIB 'TOP RATED' AT ISTH MEETING

A study led by UHCOP Clinical Assistant Professor **Matthew A. Wanat**, Pharm.D., BCPS, BCCCP, FCCM, on the comparative thrombosis and bleeding risks associated with two anticoagulant drugs for non-valvular atrial fibrillation was recognized as a "Top Rated Poster" at an international scientific meeting.

The study, which analyzed outcomes from more than 10,000 NVAf patients on apixaban and more than 21,000 NVAf patients on warfarin, found a 32 percent reduction in bleeding risk and a 26 percent reduction in the stroke/

systemic embolism risk associated with the newer anticoagulant agent apixaban over the older anticoagulant agent warfarin.

Wanat's collaborators included UHCOP Pharmaceutical Health Outcomes & Policy graduate **Xin Wang**, Ph.D., and fellow UHCOP faculty members, in alphabetical order, **Susan A. Abughosh**, Ph.D., **Hua Chen**, M.D., Ph.D., **Marc L. Fleming**, Ph.D., MPH, R.Ph., and **Michael L. Johnson**, Ph.D., with contributions by current UHCOP Pharm.D. candidate **Diane Dreucean** and recent Pharm.D. graduates **Ro-**

**drigo De La Torre**, **Thao Tran** and **Jake Li**.

Wanat's presentation was recognized at the 64th Annual Scientific & Standardization Committee of the International Society on Thrombosis and Haemostasis (ISTH) July 18-21 in Dublin, Ireland.

The project was supported by a \$207,000 American Thrombosis Investigator Initiated Research Program (ARISTA-USA) grant jointly funded by apixaban's co-developers, Bristol-Myers Squibb and Pfizer.

## PROJECTS ON CONCOMITANT PPI-TKI USE, COPD MEDICATION FILL RATES IN ELDERLY AMONG ISPOR BEST POSTER FINALISTS

UHCOP Pharmaceutical Health Outcomes & Policy (PHOP) Ph.D. candidate **Qingqing Xu**, M.S., and recent PHOP graduate **Manvi Sharma**, Ph.D., were among the "Best Student Poster Presentation" finalists at the 2018 ISPOR International Meeting May 19-23 in Baltimore, Md.

Xu's project, "Medication use before and after hospitalization for COPD in a cohort of elderly patients with Medicare Advantage Plan," found that less than 10 percent of elderly MAP-enrolled patients were prescribed a COPD medication up to 90 days prior to their first hospitalization for the disease and the poor prescription utilization rate increased only nominally after hospitalization. Study coauthors were UHCOP graduate **Omar Serna**, Pharm.D., BCACP, of Cigna Healthspring, and **Sujit Sansgiry**, Ph.D., UHCOP faculty member and Xu's advisor.

Sharma presented "The prevalence and predictors of concomitant use of tyrosine kinase inhibitors and proton pump inhibitors in older adults with cancer: An observational study using SEER-Medicare Data." The study found that nearly a quarter of the 12,500-plus cancer patients received concomitant PPI and TKI chemotherapy, which could reduce a patient's cancer treatment options with TKI failure due to known drug-drug interactions and increase healthcare costs.

Coauthors of the project were **Holly M. Holmes**, MD, MS, AGSF, of the McGovern Medical School at UTHealth; fellow PHOP alumnus **Hemalkumar B. Mehta**, Ph.D., of The University of Texas Medical Branch at Galveston; and **Hua Chen**, M.D., Ph.D., **Rajender R. Aparasu**, Ph.D., FAPhA, and **Michael L. Johnson**, Ph.D., of UHCOP.

## PHARMACEUTICS PHD STUDENT GETS ACCP TRAVEL AWARD FOR STATIN USE IN GASTRIC BYPASS

UHCOP Pharmaceuticals Ph.D. student Asma El-Zailik has received her third consecutive travel award from the American College of Clinical Pharmacology in recognition of her project being among the top 16 student abstracts submitted for presentation at the 2018 ACCP Annual Meeting Sept. 23-25 in Bethesda, Md.

Asma's project, "Impacts of Gastric Bypass Surgery on the Pharmacokinetics of Simvastatin, Atorvastatin, Rosuvastatin, and Their Active Metabolites," is the first to analyze the pre-surgery and 3-, 6- and 12-month post-surgery statins and metabolite concentrations in blood samples from 23 gastric bypass patients with comorbidities.

The study found that surgery uniquely affects the pharmacokinetics of statins with distinctly different patterns between simvastatin, which showed increased in its concentrations metabolite, and atorvastatin/rosuvastatin, which both conversely decreased in their concentrations and metabolites, on the same dose/body weight basis.

Coauthors of the project are Lily K. Cheung, Pharm.D., of Texas Southern University's College of Pharmacy and Health Sciences; Yang Wang, Ph.D., UHCOP Pharmaceuticals alumna; Vadim Sherman, M.D., FACS, FRCSC, of Houston Methodist Hospital and Weill Cornell Medical College; and Diana S-L Chow, Ph.D., FNAI, of UHCOP. The abstract will be published online in ACCP's *Clinical Pharmacology in Drug Development*.

Faculty members **Krishna M. Boini**, Ph.D., **Lindsay Schwarz**, Ph.D., and **Matthew A. Wanat**, Pharm.D., BCPS, BCCCP, FCCM, were recognized with the college's Faculty Excellence Awards in Research, Service and Teaching, respectively, in May.

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Assistant professors **Marc L. Fleming**, Ph.D., MPH, R.Ph., and **J. Douglas Thornton**, Ph.D., Pharm.D., BCPS, co-presented "Prescription Drug Monitoring Programs" during the 2018 Houston Opioid Summit July 25-27 in Houston. Fleming also presented "Prescription Drugs of Potential Misuse in Texas" as part of the "Texas Substance Misuse Prevention Strategies" panel session at the Texas Oral Health Conference July 25-27 in Austin.

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**Dhara N. Surati**, Pharm.D., BCPS, clinical assistant professor, has been appointed Director of Pharmaceutical Care Teaching Laboratories, with oversight of the college's pharmaceutical care and sterile products laboratories and skills lab sequences in the new Pharm.D. curriculum.

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**Kimberly A. Nguyen**, Pharm.D., clinical assistant professor, has been appointed to the Texas Society of Health-System Pharmacists Residency Excellence Awards Selection Committee and the TSHP Editorial Advisory Board after completed a two-year team on the organization's Education Council.

## Recent Publications

- Role of Vancomycin Minimum Inhibitory Concentrations by Modified Population Analysis Profile Method and Clinical Outcomes in High Inoculum Methicillin-Resistant *Staphylococcus aureus* Infections. Trinh TD, **Zasowski EJ**, Claeys KC, Casapao AM, Compton M, Lagnf A, Kidambi SD, Levine DP, Rybak MJ. *Infect Dis Ther*. 2018 Mar;7(1):161-169. doi: 10.1007/s40121-018-0187-0. Epub 2018 Feb 22. PMID: 29470836
- Clinical Practice Guidelines for *Clostridium difficile* Infection in Adults and Children: 2017 Update by the Infectious Diseases Society of America (IDSA) and Society for Healthcare Epidemiology of America (SHEA). McDonald LC, Gerding DN, Johnson S, Bakken JS, Carroll KC, Coffin SE, Dubberke ER, **Garey KW**, Gould CV, Kelly C, Loo V, Shaklee Sammons J, Sandora TJ, Wilcox MH. *Clin Infect Dis*. 2018 Mar 19;66(7):987-994. doi: 10.1093/cid/ciy149. PMID: 29562266
- Human muscle-specific A-kinase anchoring protein (mAKAP) polymorphisms modulate the susceptibility to cardiovascular diseases by altering cAMP/ PKA signaling. **Suryavanshi SV, Jadhav SM**, Anderson KL, Katsonis P, Lichtarge O, **McConnell BK**. *Am J Physiol Heart Circ Physiol*. 2018 Mar 30. doi: 10.1152/ajpheart.00034.2018. [Epub ahead of print] PMID: 29600899
- Association between industry payments and prescribing costly medications: an observational study using open payments and medicare part D data. **Sharma M, Vadhariya A, Johnson ML**, Marcum ZA, Holmes HM. *BMC Health Serv Res*. 2018 Apr 2;18(1):236. doi: 10.1186/s12913-018-3043-8. PMID: 29609611
- Racial/ethnic differences in the treatment of adolescent major depressive disorders (MDD) across healthcare providers participating in the Medicaid program. **Yucel A, Essien EJ, Sanyal S**, Mgbere O, **Aparasu RR**, Bhatara VS, Alonzo JP, **Chen H**. *J Affect Disord*. 2018 Apr 6;235:155-161. doi: 10.1016/j.jad.2018.04.045. [Epub ahead of print] PMID: 29656260
- Advances in extracellular ligand recognition sites on prostanoid receptors. **Li Y, Xu A, Ling Q, Ruan KH**. *Future Med Chem*. 2018 Apr 20. doi: 10.4155/fmc-2017-0319. [Epub ahead of print] PMID: 29673264
- Enhanced brain delivery with lower hepatic exposure of lazaroïd loaded nanostructured lipid carriers developed using a design of experiment approach. **Gadgil P, Shah J, Chow DS**. *Int J Pharm*. 2018 Apr 22;544(1):265-277. doi: 10.1016/j.ijpharm.2018.04.046. [Epub ahead of print] PMID: 29689367
- Dimerization of AT2 and Mas Receptors in Control of Blood Pressure. **Patel S, Hussain T**. 2018 May 1;20(5):41. doi: 10.1007/s11906-018-0845-3. PMID: 29717388
- Prevention of prostate cancer by natural product MDM2 inhibitor GS25: In vitro and in vivo activities and molecular mechanisms. **Wang W, Qin JJ, Li X, Tao G**, Wang Q, Wu X, Zhou J, Zi X, **Zhang R**. 2018 May 12. doi: 10.1093/carcin/bgy063. [Epub ahead of print] PMID: 29762656
- Let K-Ras activate its own inhibitor. **Statsyuk AV**. 2018 May 14. doi: 10.1038/s41594-018-0066-0. [Epub ahead of print] PMID: 29760530
- Prevalence and predictors of spontaneous bacterial peritonitis due to ceftriaxone-resistant organisms at a large tertiary center in the United States. **Sofjan AK, Musgrove RJ, Beyda ND**, Russo HP, Lasco TM, Yau R, Restrepo A, **Garey KW**. 2018 May 26. pii: S2213-7165(18)30099-7. doi: 10.1016/j.jgar.2018.05.015. [Epub ahead of print] PMID: 29842975
- Delayed effects of combined stress and A $\beta$  infusion on L-LTP of the dentate gyrus: Prevention by nicotine. **Alkadhi KA**. *Neurosci Lett*. 2018 Jun 5;682:10-15. doi: 10.1016/j.neulet.2018.05.038. [Epub ahead of print] PMID: 29883681
- Ethanol Regulates Presynaptic Activity and Sedation through Presynaptic Unc13 Proteins in *Drosophila*. Xu S, **Pany S**, Benny K, Tarique K, Al-Hatem O, Gajewski K, Leasure JL, **Das J**, Roman G. 2018 Jun 8;5(3). pii: ENEURO.0125-18.2018. doi: 10.1523/ENEURO.0125-18. eCollection 2018 May-Jun. PMID: 29911175
- Risk factors of psychotropic polypharmacy in the treatment of children and adolescents with psychiatric disorders. **Medhekar R, Aparasu R**, Bhatara V, **Johnson M, Alonzo J**, Schwarzwald H, **Chen H**. 2018 Jun 13. pii: S1551-7411(17)30981-6. doi: 10.1016/j.sapharm.2018.06.005. [Epub ahead of print] PMID: 29929905
- Neuroprotective effects of nicotine on hippocampal long-term potentiation in brain disorders. **Alkadhi KA**. *J Pharmacol Exp Ther*. 2018 Jun 18. pii: jpet.118.247841. doi: 10.1124/jpet.118.247841. [Epub ahead of print] PMID: 29914875
- Impact of diet on irinotecan toxicity in mice. **Mallick P**, Shah P, Ittmann MM, **Trivedi M, Hu M**, Gao S, **Ghose R**. 2018 Aug 1;291:87-94. doi: 10.1016/j.cbi.2018.06.018. Epub 2018 Jun 18. PMID: 29913120
- 7B2 chaperone knockout in APP model mice results in reduced plaque burden. Jarvela TS, **Womack T**, Georgiou P, Gould TD, **Eriksen JL**, Lindberg I. *Sci Rep*. 2018 Jun 28;8(1):9813. doi: 10.1038/s41598-018-28031-7. PMID: 29955078
- C.B-17 SCID Mice Develop Epicardial Calcinosi with Unaltered Cardiac Function. **Raghunathan S**, Reynolds CL, Schwartz RJ, Stewart MD, **McConnell BK**. *Fundam Clin Pharmacol*. 2018 Jun 30. doi: 10.1111/fcp.12398. [Epub ahead of print] PMID: 29959870
- Outcomes associated with *Clostridium difficile* infection in patients with chronic liver disease. **Dotson KM, Aitken SL, Sofjan AK, Shah DN, Aparasu RR, Garey KW**. 2018 Jul;146(9):1101-1105. doi: 10.1017/S0950268818001036. Epub 2018 May 9. PMID: 29739486
- Effect of coverage gap on healthcare utilization among Medicare beneficiaries with chronic obstructive pulmonary disorder. **Sansgiry SS, Bhansali A, Serna O**, Kamdar M, **Fleming M, Abughosh S**, Stanford RH. 2018 Jul 2:1-20. doi: 10.1080/03007995.2018.1495622. [Epub ahead of print] PMID: 29962241
- Age-related Changes in Hepatic Expression and Activity of Drug Metabolizing Enzymes in Male Wild-type and Breast Cancer Resistance Protein Knockout Mice. Zheng H, Wang L, Zeng S, Chen J, Wang H, Yu J, Gong X, Jiang H, Yang X, Qi X, Wang Y, Lu L, **Hu M**, Zhu L, Liu Z. 2018 Jul 17. doi: 10.1002/bdd.2151. [Epub ahead of print] PMID: 30016542
- The Importance of Individualized Vancomycin Dosing to Ensure Optimal Exposure Early in Therapy. **Zasowski EJ**, Lodise TP. 2018 Jul 19. doi: 10.1002/jcph.1281. [Epub ahead of print] PMID: 30024648
- In Vitro Evaluation of BacT/Alert FA Blood Culture Bottles and T2Candida Assay for Detection of Candida in the Presence of Antifungals. **Beyda ND, Amadio J**, Rodriguez JR, Malinowski K, **Garey KW**, Wanger A, Ostrosky-Zeichner L. 2018 Jul 26;56(8). pii: e00471-18. doi: 10.1128/JCM.00471-18. Print 2018 Aug. PMID: 29898999
- Monitoring PARKIN RBR Ubiquitin Ligase Activation States with UbFluor. Foote PK, **Statsyuk AV**. *Curr Protoc Chem Biol*. 2018 Jul 31:e45. doi: 10.1002/cpch.45. [Epub ahead of print] PMID: 30063295
- Kappa opioid receptor antagonism: Are opioids the answer for treatment resistant depression? Peckham AM, **De La Cruz A**, Dufresne RL. *Ment Health Clin [Internet]* 2018;8(4):175-83. DOI: 10.9740/mhc.2018.07.175