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#### March 2020

# Helping patients who are without, or have lost, limbs

Albert Chi, MD, MSE, leads effort to expand accessibility of advanced bionic arms

#### **By Cliff Collins** For The Scribe

A motorcycle accident in college that caused him serious injuries altered the direction Albert Chi, MD, MSE, would follow for a career.

"It absolutely changed my life," said Chi, an associate professor of trauma, critical care and acute care surgery at Oregon Health & Science University. "I'm a product of two mathematicians," who grew up expecting me to be an engineer, he said. He had never thought of going into medicine until the accident. "It was a life-changing, humbling experience."

Although Chi did not lose any limbs, he had to undergo multiple surgeries and years of rehabilitation to recover. In addition, he never forgot how it felt "to be on the other side" in an emergency room, as he put it.

"I remember that fear of going to the trauma bay and hearing people talk about you, not to you," he said. "I remember how hard it is to be a patient. I always try to connect with the patient and say, 'I know this is scary, but we're going to take care of you."

Since OHSU recruited him in 2016, Chi has served as medical director of the **OHSU Targeted Muscle Reinnervation** program. He previously was medical director of the Targeted Muscle Reinnervation Program at Johns Hopkins University and medical director of its Physician Assistant Surgical Residency Program. He continues to hold an appointment with the Johns Hopkins Applied Physics Lab.

Chi is considered a national leader in advanced prosthetic technology and improving the lives of people with traumatic injuries or congenital limb loss.

The specialized field of bionics, or



biologically inspired engineering, combines his two great loves, said Chi, who holds a master of science degree in engineering. "It's the best job in the world to get to combine both."

As part of this year's OHSU Marquam Hill Lecture series, Chi will speak on "Bionics: The Evolution of Human and Machine" on April 16 at 7 p.m. at the OHSU Auditorium on the Hill. A patient he treated who lost an arm to cancer will be a key part of the presentation, Chi said.

#### Focus on affordability, accessibility

Chi is continuing to focus his research and clinical practice on people who have lost their limbs through trauma, infection, cancer or combat, as well as those who were born without limbs.

He has performed an intricate, highly specialized form of surgery called targeted muscle reinnervation, or TMR. The procedure involves reassigning existing nerves in order to enable patients to control their prosthetics simply by thinking of the actions they want to perform. In 2018, one of Chi's patients received the first LUKE arm, described as the world's most advanced commercially available prosthetic.

TMR is sophisticated technology inspired by science fiction. The origin of the LUKE name comes from a scene in the film "The Empire Strikes Back"

Johnny Matheny of Port Richey, Fla., has learned to play the piano using a thoughtcontrolled bionic arm. Matheny underwent TMR surgery, performed by Albert Chi, MD, MSE, to "reassign" nerves that once controlled an arm and hand he lost to cancer so that they could communicate with a robotic prosthetic. Photo courtesy of OHSU/Kristyna Wentz-Graff

when Luke Skywalker receives a perfectly functional artificial hand to replace the one cut off by villain Darth Vader. In Chi's version, TMR works through a surgical procedure reassigning nerves to the tasks required of prosthetic arms.



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#### MSMP's 136th Annual Meeting

6 – 8:30 p.m., Monday, May 11 Multnomah Athletic Club 1849 SW Salmon St., Portland

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Mini-grant awards are made on a quarterly basis, and application submission deadlines are March 31, June 30, Sept. 30 and Dec. 31 each year.

Further information about the MMFO, including grant applications, is available at *www.MMFO.org*.







With its fine-detail imaging capabilities, the MR-linac provides a high-resolutionpicture that distinguishes tumorous tissue from normal tissue for radiation therapyand treatment.Photos courtesy of Providence Health & Services

# Providence joins elite in offering advanced imaging for cancer treatment

#### **By John Rumler** For The Scribe

**Providence Portland Medical Center** has joined an elite handful of hospitals in the nation and about a dozen in the world offering the newest generation of cancer treatment/therapy through the ViewRay MRIdian MR-linac.

The MR-linac is a magnetic resonance imaging (MRI) scanner combined with a linear accelerator (linac), using an advanced, intelligent software interface.

With its fine-detail imaging capabilities, the MR-linac provides a high-resolution picture that distinguishes tumorous tissue from normal tissue for radiation therapy and treatment. It provides excellent soft-tissue visualization of tumors, even those deep within the body, and has real-time imaging capabilities, said **Steven K. Seung, MD, PhD, FACR**.

"The benefits to cancer patients will be very substantial," Seung said, "as the improvements over the past technologies will offer doctors many advantages and options in treating their oncology patients."

Seung, the medical director of Providence Radiation Oncology and the Gamma Knife Center of Oregon, and other radiation oncologists (in numerous medical reviews, such as the American Association of Physicists in Medicine's Journal of Applied Clinical Medical Physics, Vol. 20, Issue 6, June, 2019) believe the MR-linac is the most important advance in radiotherapy in decades.

"Radiation therapy began more than 100 years ago. While there have been many important advances, the radiation treatments were still delivered to parts of the body as though it was a static picture," he said. "In reality, that picture is constantly changing, such as a lung tumor moving when a patient is breathing."

One of the great advantages of the MR-linac, according to Seung, is that doctors can see tumor tissue more clearly and in real time, and adapt the radiation dose to the daily physiologic changes even while a patient is being treated.

The ViewRay MR-linac received FDA approval in February 2017, and it was first used in the United States to treat cancer patients in July of the same year at Henry Ford Health System in Detroit.

The MRI-linac was also approved for clinical use in Canada in July 2019 and is currently being used at just one hospital in Canada, Sunnybrook Health Sciences Centre in Toronto. The demand for the MR-linac is exploding globally and those on the wait list include many prestigious medical and educational institutions, Seung said.

Prototypes for the device were created nearly a dozen years ago. Scientists had great difficulty in their attempts to combine the MRI device with the linear accelerator as the two systems were so incompatible that their working together seemed to be impossible.

CONTINUES ON NEXT PAGE

# *MR-linac distinguishes tumorous from normal tissue for radiation therapy, treatment*

#### Continued from page 4

The problem was that a linear accelerator generates high-energy X-rays and the photons in those beams generate their own electrons, which are affected by the magnetic field, diverting, skewing or otherwise altering the accuracy of the treatment beam.

Through years of trial and error, scientists engineered a new system featuring magnetic shielding and radio frequency dampening technology to reduce the interference between the magnetic field and the radar beams.

# Time the most precious commodity

One of the main benefits of the MRlinac, Seung said, is it allows physicians to watch the radiotherapy process in real time and to adjust the radiation beams to reach the target areas, the tumors, with pinpoint accuracy.

"The tumors change size and adjacent organs move during radiation therapy, but with the MR-linac we can adapt and readjust it in real time. Theoretically, there's no cancer that we cannot kill with enough radiation, but the problem has always been that the normal tissues and healthy organs get in the way."

Seung estimates that the Providence Cancer Center will treat approximately eight oncology patients per day, with each radiation treatment lasting between 30 to 60 minutes. The center would start treating patients with prostate cancer and ease into treating more invasive and complicated forms of cancer, such as liver and pancreatic cancer. The treatment times should shorten as software upgrades become available. The system's start-up at Providence is slated for the spring.

"What's the most precious commodity a cancer patient has?" Seung asked. "It's time. As a result of using this new technology, we can better avoid healthy tissue while delivering a higher dose to the tumor; so, a patient that previously required radiation therapy for six to eight weeks will now be able to get better results while experiencing less complications, in just one to two weeks of therapy."

MRI-guided radiation therapy was conceived by the founder of ViewRay, James F. Dempsey, PhD, while he was a member of the radiation oncology faculty at the University of Florida. Founded in 2004, ViewRay, a publicly owned company headquartered in Cleveland, holds the exclusive worldwide license for its combination of MRI and radiation therapy technologies.

Providence Medical Center physician-researchers will join with other medical scientists from about a dozen hospitals, medical centers and learning institutions around the world as a global consortium "brain trust" to collect, share and analyze data to further explore and understand the practical applications of the MR-linac, with the end goal of improving outcomes of cancer patients treated with radiation therapy around the world.

The purchase of the \$8 million device was made possible by a \$4.5 million donation from Elsie Franz Finley, who, with her brother, Robert, combined to give more than \$100 million to Providence Portland Medical Center during the past 30 years. The MR-linac is located in the newly named Elsie Franz Finley Radiation Oncology Center at the Providence Portland Medical Center.



Jude Rochon of Astoria received a new 3-D prosthetic hand in 2017 at OHSU. The assistive device was created by Albert Chi, MD, MSE, for free, crafted out of 3-D printed parts and fitted to a shoulder harness. Photo courtesy of OHSU/Kristyna Wentz-Graff

#### **PROSTHETICS,** from page 1

Patients who were born without part or all of their arm and those who have nerve damage, degeneration or paralysis are not candidates for the procedure, he noted.

TMR-enabled prosthetics also are impractical for children due to the need to be refitted as they grow. To try to overcome that obstacle, Chi serves as the lead clinical investigator for the first U.S. clinical trial of myoelectric arms made for children and produced with 3-D printing technology. The objective is to expand access and affordability to children with congenital limb loss.

These arms operate using a pair of leads placed on the skin, which activate when children flex their muscles. The first-phase clinical trial is jointly conducted by OHSU and Limbitless Solutions, a nonprofit organization based at the University of Central Florida that creates bionic arms for children.

"Where this goes from here is going to be huge," said Chi. "It's my personal aspiration to provide advanced prosthetics to all those in need. Making it affordable and accessible is the goal, and I really do believe 3-D printing technology is the solution."

Thousands of children are born without arms each year. The combined cost of therapy and material associated with traditional prosthetics easily can exceed \$100,000, making it prohibitively expensive for children, who will quickly outgrow the devices. "But our bionic arms can change all that," said **Albert Manero, PhD**, who is collaborating with Chi on the trial and is chief executive and a co-founder of Limbitless Solutions. "We hope our work will ultimately allow us to provide prosthetic arms to children at little or no cost. There is a real psychological-social aspect of having an arm they can customize and which reflects their personality. It allows kids to be kids and understand (that) their opportunities are limitless."

The study recruited 20 children, primarily from the Southeast U.S. and the Pacific Northwest, to be fitted with Limbitless' advanced custom-designed arms. The children are trained to use them over the course of one year, with occupational therapy administered in Portland and Orlando, Fla. The trial will test the functionality of the arms in children ages 6 to 17, gauge the effect on their quality of life and determine how well they are using the arm for specialized tasks.

The trial, which is halfway through completion, will help the Food & Drug Administration decide whether to approve the arm for market clearance, which would enable it to be covered by insurance. The intent is to test whether "low-cost 3-D-produced devices" are safe and effective, Chi said.

"We believe it will make a difference in children's lives," Manero said. ■

For more information on the Marquam Hill Lecture Series, visit www.ohsu.edu/school-of-medicine/ marquam-hill-lecture-series



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By Avital O'Glasser, MD, FACP, FHM

Digital technologies have revolutionized how clinicians, patients, and patient advocates communicate in the 21st century. Despite the negative criticisms of social media, social media use by clinicians particularly the public platform Twitter—has demonstrated its expanding value for professional development, research dissemination, and advocacy as well as "flattened hierarchies" and given a new voice to many in the profession, including those often not well heard such as women and underrepresented minorities.

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# Brinton Clark's professional journey spans from Ghana to new research on treating OUD

**Brinton Clark, MD, MPH**, grew up with a pair of physicians as parents so medicine felt like a familiar career for her. She earned a degree in human biology from Stanford University before joining the Peace Corps and working in health education in Ghana for two years.

"I realized that I really loved working directly with people and hearing their stories," Clark said. "Medicine felt like a great career that would allow me to have those caring relationships and interpersonal connection with others."

She earned her medical degree from the University of California, San Francisco (UCSF), and stayed on at UCSF for her internal medicine residency training. Clark, who joined Providence Portland Medical Center's Department of Medical Education 14 years ago, talked with *The Scribe* about her work and her recent study on multimodal educational intervention for primary care providers on treating opioid use disorder (OUD) with buprenorphine in office-based settings.

# *The Scribe:* Why did you choose to specialize in internal medicine?

During medical school, I found that I loved the breadth of internal medicine, the puzzles of the complex medical diseases that the field offers, and the relationships with patients. As I've been in practice for many years now, I continue to really enjoy both outpatient and inpatient medicine. I am continually learning, both expanding my medical knowledge and learning about the behavioral aspects of medicine. I love that internal medicine offers the opportunity for continual growth.

# What do you enjoy most about your work?

I really enjoy being a teaching physician – it keeps me curious and excited to learn. I love taking care of patients as a primary care physician in a medical home setting - the teambased care model makes caring for complex patients rewarding. I've had some of my patients for 14 years, and love those long-term relationships and hearing my patients' stories. I think one of the great privileges of "I think one of the great privileges of practicing medicine is that **we get to interact with people from all walks of life,** and have a very special view into their lives and health."

practicing medicine is that we get to interact with people from all walks of life, and have a very special view into their lives and health.

#### What are some of the challenges?

Like many physicians, I find one of the major challenges to current-day practice is the time we spend with the EMR.

#### What led you to conduct the study on DATA waivers and primary care providers' education about prescribing buprenorphine to treat OUD?

My colleague Mari Kai, MD, and I have been treating patients with buprenorphine for OUD for 10-plus years. We were often approached by other providers within Providence Medical Group (PMG) to see their patients for treatment of OUD, and found we were two of only five providers in Portland-area PMG clinics who had DATA waivers to treat patients with buprenorphine. We had seen the successes of treating patients with OUD in the primary care setting, and how it can be life-transforming for many patients. Treating addiction very much falls within the chronic disease model, something which as internists we are excellent at managing. We wanted to spread the practice of using medication-assisted treatment for OUD to other primary care providers, to help share the knowledge and workflows we had gained, and to remove barriers to treating patients for OUD in the primary care setting.

#### What would you like providers to know about the results of that study?

We first surveyed providers to understand what barriers they perceived to treating patients. We created an online toolkit and educational video, and met with physicians during their monthly clinic provider meetings to de-mystify the process, address barriers to prescribing and answer guestions. The educational interventions started in 2016. We found that by the end of 2018, we had been able to increase the number of PMG providers who had a DATA waiver to prescribe buprenorphine from five providers to 44 providers. We were also able to increase the number of PMG clinics with a waivered-provider from three clinics to 17 clinics in the Portlandservice area. Patients with OUD who had a PCP with a DATA waiver were substantially more likely to receive treatment with buprenorphine.

I hope the message that providers will take away from this study is that incorporating treatment of OUD into primary care settings is very feasible, and truly rewarding. For providers who are interested in learning more about getting a DATA waiver, the following link can provide more information about the training and application process: www.samhsa.



gov/medication-assisted-treatment/ training-materials-resources/ apply-for-practitioner-waiver

# What others areas of research are you interested in?

I love providing care to diverse patients, and am particularly interested in the care of vulnerable patient populations.

# What do you enjoy doing when you are not working?

I enjoy spending time with my three kids – ranging in age from 9 to 15 years old. I love hiking in our beautiful Pacific Northwest. I also love to travel. Last summer, we took our whole family to Ghana, where my husband and I met in the Peace Corps. It was such a fun experience to take our kids back to meet Ghanaian friends that we hadn't seen for over 20 years. ■

• MSMP MEMBER EXCLUSIVE •

#### Don't miss this article!

The 2019 novel coronavirus continues to spread across multiple continents, infecting tens of thousands of individuals worldwide, with thousands of deaths. On Tuesday, Feb. 25, the Centers for Disease Control and Prevention urged the U.S. public to begin making preparations for the possibility of a U.S. pandemic with "the expectation that this could be bad." Given that outbreaks are beginning to occur at a community level, medical offices will undoubtedly experience an influx of patients seeking assistance. The question is: Are medical offices doing enough to prepare?

Debbie Hill, MBA, RN, senior patient safety risk manager at The Doctors Company, notes that all medical offices should now have an infection control and emergency preparedness plan in place, and has additional recommendations in the event a patient comes into a medical office with suspected COVID-19. **To read the piece**, **please visit** *www.MSMP.org/MembersOnly.* 

In addition, the Oregon Medical Association has provided its members with links to national and state resources. **For more information, please visit** *www.theoma.org/COVID19.* 



Each month, *The Scribe* focuses on a health topic, providing a deeper look into issues and advances that impact the area's medical community and patients. Next month, we'll focus on Pediatrics.

# Research: Increasing opioid doses does not appear to curb pain

Increasing chronic pain patients' opioid prescription doses does not seem to improve pain, according to a VA study.

Researchers from the Central Arkansas and Minneapolis VA health care systems and three universities looked at prescribing data of more than 50,000 VA patients taking opioids. They found that patients who had their opioid dosage increased did not have meaningful improvements in pain, compared with patients who continued to take the same dose.

The findings led the study authors to warn that "clinicians should exercise extreme caution when embarking on a path of increasing opioid doses to manage non-cancer pain."

The results were published in the Jan. 9, 2020, issue of the journal *Pain*. A companion study by the same team that appeared online Jan.

15, 2020, in *Addiction* confirmed increased risk of side effects from higher doses.

"What we found ... was that the pain relief the provider and the patient are going for really isn't there when they increase their doses," said lead author Dr. Corey Hayes in a University of Arkansas for Medical Sciences report. "You don't see the benefit, but you do see the risk. Our overall message is, when you're thinking about increasing the dose, you need to realize the risk it brings, too."

Opioid medications relieve pain. They reduce the intensity of pain signals in the brain and affect areas of the brain controlling emotion, which diminishes the effects of pain stimuli. While opioids can help manage pain when taken correctly, they have a high risk for abuse and addiction.

Patients often receive increased doses of opioid medication because their pain may not be well-controlled on lower doses. People can also develop a tolerance to opioids over time, meaning a higher dose is needed to get the same effects. In these cases, prescribers must weigh the risks and rewards of escalating a patient's opioid dose. Higher opioid doses can lead to a variety of side effects, such as constipation, dizziness, increased sensitivity to pain, and increased risk of substance use disorder.

Despite common prescribing practices, the benefits of increasing opioid doses for chronic pain are not well understood. To get a better idea of whether escalating opioid prescriptions leads to better pain management, researchers looked at the medical records of VA patients prescribed opioids for chronic pain between 2008 and 2015. The patients were being treated for arthritis, back pain, neck pain, neuropathic pain or headache/migraine.

During the study period, nearly 21,000 patients had their opioid dose escalated. Dose escalation was defined as a more than 20 percent increase in the average daily dose. These patients were compared with more than 32,000 patients who continued to take the same opioid dose.

Patients rated their pain on the Numerical Rating Scale during routine clinical encounters, with 0 meaning no pain and 10 meaning the worst pain imaginable. This scale is one of the most common self-report pain measures. Patients in the dose escalation group had consistently higher average pain scores than the maintainer group both before and after dose escalation, although the overall differences were small. However, the results show that their pain scores did not go down to any significant degree after their medication doses were increased. After 180 days after dose escalation, average pain scores only decreased by 0.1 on the pain scale.

Changes in pain rating need to be at least 0.5 to 1.0 to be meaningful, according to the researchers. In fact, over the same period of time, the average pain score for patients who kept the same dosage decreased by 0.3, a greater change than in the escalation group.

The results led the researchers to conclude that "increasing opioid doses was not associated with improvements in pain."

The findings add to mounting evidence that opioid dose escalation does not lead to significantly improved pain scores, the VA said. A 2016 study by researchers at the VA Portland Health Care System found that opioid prescriptions may actually be linked with a lower Despite common prescribing practices, the benefits of increasing opioid doses for chronic pain are not well understood.

likelihood of improved pain scores. Another study by the same group, involving both veterans and privately insured patients, found that higher opioid doses were associated with worse pain outcomes.

VA has taken steps to reduce opioid prescribing in response to the nationwide opioid epidemic. In 2013, VA launched the Opioid Safety Initiative. As a result, the number of veterans prescribed opioids each year has decreased by 25 percent from the rate in 2013. As of 2016, only about 16 percent of VA patients received opioid prescriptions. The decline is mostly due to less long-term opioid prescribing, as opposed to short-term use for acute pain. Veterans are also receiving more non-opioid pain therapies, as well as more substance use disorder treatment, the agency said.





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# **OHSU** initiatives help relieve pain, reduce addiction among opioid users

#### **By Melody Finnemore** For The Scribe

Six months after opening, the Harm **Reduction and Bridges to Care** (HRBR) clinic at **Oregon Health &** Science University's Marguam Hill campus is seeing significant results in providing an urgent response to people with opioid use disorder, an epidemic that takes the lives of an average of five Oregonians each week from overdoses.

The clinic, which opened in late October, provides same-day, walkin access to buprenorphine, a proven medication to treat opioid use disorder. The goal is to increase access to drug treatment by removing common barriers. Many treatment programs require patients to wait for an intake appointment, attend counseling sessions, or commit to abstinence from all drugs and alcohol before beginning treatment.

Buprenorphine, also known as Suboxone, relives withdrawal symptoms, cravings and pain. In contrast with methadone, which must be administered daily in a clinic, patients can leave the clinic with a longer-term prescription for buprenorphine.

> HRBR Medical Director **Bradley** Buchheit, MD, said that as of early February the clinic had seen about 80 patients who have made up more than 200 individual visits.

"Most of the individuals we're seeing



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in the clinic have an opioid use disorder and a lot of them have an underlying meth use disorder," he said.

When people go to the clinic, they are asked if they were referred and who referred them. Buchheit said about 25 percent reported being referred by a primary care physician, 10 percent by an emergency room physician and one-third by community programs. Others learned about the HRBR from specialty care providers and word of mouth or news reports.

"Overall, patients are very thankful and appreciative that they are able to get on-demand treatment. We're seeing the full spectrum of people who are seeking addiction treatment, from individuals who are pretty stable and have an appointment with their primary care provider in two weeks ... to others who were transferred from an intensive, in-patient clinic and only have a weeks' supply," Buchheit said. "We also see people who are still in the active throes of addiction who maybe used a few hours before and come in and say, 'I'm ready to stop today."

In addition to providing immediate medication, the clinic helps each patient form a long-term plan for continuing their care at a primary or specialty clinic in their community. Traditionally, people with heroin addiction or opioid use disorder turn up in hospital emergency rooms with a variety of acute medical conditions but do not receive medications that can treat their addiction, according to OHSU.

Some people who have been admitted to the hospital work with OHSU's Project IMPACT, or Improving Addiction Care Team, which brings together physicians, social workers, peer-recovery mentors and community addiction providers.

A 2019 study showed that patients who meet an addiction medicine consult team while they're in the hospital are twice as likely to participate in treatment for substance use disorder after they go home. The study, published in the Journal of General Internal Medicine, measured

In addition to providing immediate medication, the clinic helps each patient form a long-term plan for continuing their care at a primary or specialty clinic in their community.

**Scribe Focus** 

Pain Management

key outcomes from Project IMPACT, initiated in 2015.

The study compared 208 patients who received addiction medicine consultation at OHSU with a control group of Medicaid patients with similar conditions hospitalized in any Oregon hospital. The study compared the substance use treatment engagement in the month after they were released from the hospital. A total of 38.9 percent of IMPACT patients engaged in substance use treatment, compared with 23.3 percent of similar patients who did not work with IMPACT.

Buchheit noted that a comprehensive approach such as the HRBR clinic and Project IMPACT is drawing people from across the state.

"It really is serving a pretty large catchment area and it's doing exactly what we hoped it would do, which is serving people who are interested in stopping their drug use and not having to wait," he said, adding OHSU is exploring ways to expand the program. "Our hope is we can make the service more accessible to other parts of the Portland metro area and even other parts of the state."

Located in the Physicians Pavilion, the HRBR clinic is open weekdays from 4-7:30 p.m. In addition to Buchheit, it employs a full-time care transitions coordinator, a peer-recovery mentor and a part-time nurse practitioner. The clinic follows a model developed by Massachusetts General Hospital and Boston Medical Center.







# New treatment for adults with migraine approved by FDA

Ubrelvy (ubrogepant) tablets have been approved by the Food and Drug Administration for the acute, or immediate, treatment of migraine with or without aura (a sensory phenomenon or visual disturbance) in adults.

Ubrelvy is not indicated for migraine prevention. It is the first drug in the class of oral calcitonin gene-related peptide receptor antagonists approved for the acute treatment of migraine, the FDA said.

"Migraine is an often disabling condition that affects an estimated 37 million people in the U.S.," noted Billy Dunn, MD, acting director of the Office of Neuroscience in the FDA's Center for Drug Evaluation and Research. "Ubrelvy represents an important new option for the acute treatment of migraine in adults, as it is the first drug in its class approved for this indication."

Migraine headache pain is often described as an intense throbbing or pulsating pain in one area of the head.

Additional symptoms include nausea and/or vomiting and sensitivity to light and sound. Approximately

# **Coronavirus cases increase in the Northwest**

The Northwest came into sharp focus in recent days concerning the novel coronavirus, as Oregon public health officials at the end of the first week of March said they had identified four new presumptive cases of COVID-19 among residents in Washington, Jackson and Klamath counties.

OHA said state and local health officials "are moving quickly to contact people who may have been in close contact with the individuals who tested as presumptively positive cases. Three of the new cases are travel related; one was a contact of a known case."

OHA added that the Oregon State Public Health Laboratory tested 42 samples from 22 people on March 6, resulting in the four presumptive positive cases and 18 negatives. Testing was ongoing as this edition of *The Scribe* was being published.

OHA officials continued to recommend Oregonians take everyday precautions to prevent the spread of many respiratory illnesses, including COVID-19 and influenza, by effective hand washing; staying home if sick; never visiting a hospital or long-term care facility if you have a fever or cough illness; and covering coughs and sneezes with a tissue and throwing that tissue away, among other steps. On March 7 in Washington, King County public health

officials said that of the 15 COVID-19 deaths reported, 14 were associated with the Life Care Center facility. Prior to COVID-19 developments in Oregon and

Washington, the Oregon Medical Association had forwarded to members information about interim infection prevention and control recommendations from the Centers for Disease Control and Prevention concerning COVID-19.

The CDC's recommendations for patients with confirmed COVID-19 can be found at www.cdc.gov/ coronavirus/2019-nCoV/hcp/infection-control.html

The recommendations cover minimizing chances for exposures; adherence to standard, contact and airborne precautions, including use of eye protection; managing visitor access and movement within a facility; implementing engineering controls; monitoring and managing ill and exposed health care personnel; training and educating health care personnel; implementing environmental infection control; and establishing reporting within health care facilities and to public health authorities.

# **Wallace to anchor Downtown Rockwood**

Wallace, the non-profit community health center that serves east Multnomah County, has announced plans to open its new headquarters in Downtown Rockwood.

Downtown Rockwood, formerly known as Rockwood Rising, is Gresham's newest community empowerment project, which is centered around economic revitalization and focused on workforce training and skills building. Downtown Rockwood, located at 18535 S.E. Stark St., is adjacent to the Rockwood/East 188th Avenue MAX stop.

Wallace, a Federally Qualified Health Center offering primary medical, dental and behavioral services, has helped adults and children overcome barriers to health for more than 35 years.

"Our mission is to be 'health home base' for our patients, a place where they can find a full array of services in a safe and welcoming environment," said Wallace CEO Lisa Cline.

Critical medical, dental and behavioral health services as well as a variety of health-promoting services will be available in one location to residents and visitors of Downtown Rockwood.

"If you're a Wallace patient you'll be able to bring your baby for a well-child check, get your teeth cleaned, sign up for health insurance, talk with a counselor, fill a prescription and take a cooking class—all in one place and in your own language," Cline said. "Your entire care team will work with you to connect all of the dots, and our new location will make it even easier."

Wallace's headquarters will take up approximately 20,600 square feet in the office building currently under construction. Wallace joins a group of community development-minded organizations including Oregon Tradeswomen, WorkSource Oregon, La Villa Grill, Mount Hood Community College Small Business Development Center and Little Wings Academy.

Construction of the main building is scheduled for completion by July. Wallace is expected to open in this year's fourth quarter.



one-third of individuals who suffer from migraine also experience aura shortly before the migraine. An aura can appear as flashing lights, zig-zag lines or a temporary loss of vision. Migraines can often be triggered by various factors, including stress, hormone changes, bright or flashing lights, lack of food or sleep, and diet.

Migraine is three times more common in women than in men and affects more than 10 percent of people worldwide, the FDA said.

The effectiveness of Ubrelvy for the acute treatment of migraine was demonstrated in two randomized, double-blind, placebo-controlled trials. In these studies, 1,439 adult patients with a history of migraine, with and without aura, received the approved doses of Ubrelvy to treat an ongoing migraine. In both studies, the percentages of patients free of pain two hours after treatment (defined as a reduction in headache severity from moderate or severe pain to no pain) and whose most bothersome migraine symptom (nausea, light sensitivity or sound sensitivity) stopped two hours after treatment were significantly greater among patients receiving Ubrelvy at all doses compared to those receiving a placebo.

Patients were allowed to take their usual acute treatment of migraine at least two hours after taking Ubrelvy. Twenty-three percent of patients were taking a preventive medication for migraine.

The most common side effects that patients in the clinical trials reported were nausea, tiredness and dry mouth. Ubrelvy is contraindicated for co-administration with strong CYP3A4 inhibitors.

The FDA granted the approval of Ubrelvy to Allergan USA, Inc. ■

### The MSMP

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For more information regarding the Physician Wellness Program, including detailed profiles on our counselors and coaches, visit www.MSMP.org.

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Amanda Borges



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**By Jon Bell** For The Scribe

To grown-up **Jesse Powell**, **MD** – the internal medicine doctor and member of the general medicine faculty at Providence Health & Services – it now seems kind of silly.

But to high school-age Jesse Powell, the artistic kid who'd been the school newspaper's cartoonist, the disagreement with his art teacher was a huge deal.

Powell, an art lover who grew up in Utah spending hours drawing after school, had had a grand idea for his final art project: an elaborate map of a fantasy world he had created, one of those ancient-looking maps with dragons in the seas and gold leaf around the edges.

But his art teacher said he couldn't do it – a denial that hit Powell hard.

"I got so mad about it that I quit her class," he said. "I essentially walked away from art because of that. It was such a stupid thing."

In the years that followed that falling out, Powell would instead find his way into medicine. He'd started at the University of Utah thinking he wanted to study language and literature, though he'd also had an interest in biology. One of his professors was married to a biologist, and Powell got inspired to pursue the field when he learned what you could do with it in medicine.

Fast-forward a few intense, art-free years through medical school at the University of Utah and an internship and residency at Providence Portland, and Powell found himself with a little more time for himself again. He'd also been chief resident for a year, a role that found him teaching residents.

At one point, Powell was creating a talk on chronic obstructive pulmonary disease. He created a dense, text-heavy handout from all his notes and planned to use it in his teaching.

"I looked at it and it was just so boring," Powell said.

By chance, a friend had given him a nice pen that day, and as he wrote with it and saw the ink flowing out, adds creativity to medicine

# *Jesse Powell, MD, rediscovers an affinity for illustrations, applies his skills to health care topics*

Powell had a thought: Why don't I illustrate this teaching point?

"So I made this whole page that was a cartoon version and gave it to the residents," he said. "It got photocopied and passed around, and then a little later I got a call that it was at another hospital in their team room. I suddenly realized you could make medical topics much more interesting if you could add visual elements to them. I just loved it and loved rediscovering that part of myself."

#### Drawings help people digest complex information

And so Powell, who's also a hobbyist beekeeper and birdwatcher, found his way back to art. Since then, he's been sketching regularly as way to share information visually and creatively. Using an Apple Pencil and an iPad, Powell draws sketches

CONTINUES ON NEXT PAGE



Jesse Powell, MD, found that sharing information about medical topics is more interesting with visual elements, and it helped him find his way back to art. Illustrations courtesy of Jesse Powell



### MKSAP NEUROLOGY: QUESTION 17



# NEXT DIAGNOSTIC TEST?



# ANSWER:











·2018 Jesse POWELL



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Continued from page 12

for everything from study guestions from the American College of Physicians' Medical Knowledge Self-Assessment Program to summary handouts and notes from meeting lectures. He's sketched pictures of shoulder exams, chronic back pain, strokes, headaches and more.

Powell also found himself somewhat distracted and doodling during a visiting professor's talk. He essentially ended up illustrating the talk and shared his work with the professor, who then passed it on to other groups at the Mayo Clinic. And while most of the sketching that Powell does happens on his own time over the weekend or at night, he does have a paying gig with a contractor for work like he did with the Mayo Clinic lecture.

Powell said he thinks his drawings help people digest complex medical information a little easier.

"I think most of us appreciate visual information, especially in medicine," he said. "It really demands a lot of reading and processing information, so if you can get it quickly in a visual form, it can be super helpful."

As for his style, Powell said that since he gave up art at the high school level, he hasn't progressed too far past that level yet. But that actually might be a benefit.

"I'm basically still at the level I was as a high school kid," he said. "I wish I could do something more than cartoons, but in a way, it's a little bit more appealing than a rigorous diagram thing."

As for dream projects, Powell said he'd love to someday illustrate

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"Being able to do anything creative in your work is a key part of

wor your For me, when you can add your own touch and be creative that's a big part of the sustainability of craft and of life."

the entire "Pocket Medicine: The Massachusetts General Hospital Handbook of Internal Medicine," a reference book widely used by residents. He's started that project, but admits it would take him years to complete. He'd also like to someday have illustrated all of the MKSA program's study questions, but there are hundreds of those, as well.

No matter what, though, Powell said he's happy to have art back in his life.

"Being able to do anything creative in your work is a key part of enjoying your work," he said. "For me, when you can add your own touch and be creative that's a big part of the sustainability of craft and of life."



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