Pitt names HR head

Cheryl L. Johnson has been appointed vice chancellor for Human Resources.

Johnson will lead Pitt’s Human Resources department and will be responsible for designing and administering employee benefits, compensation management, employee and labor relations, recruiting, talent acquisition and organization development, as well as the University Child Development Center.

She succeeds Ronald Freisch, associate vice chancellor for Human Resources, who retired July 1 after 21 years at Pitt.

Johnson comes to Pitt from Kansas State University, where she was vice president for human capital services. She previously served at the University of California, San Diego, where she was vice provost for faculty affairs, development and diversity.

Johnson will lead Pitt’s Human Resources department and will be responsible for designing and administering employee benefits, compensation management, employee and labor relations, recruiting, talent acquisition and organization development, as well as the University Child Development Center.

Policy on sexual misconduct complaints finalized, posted

A n updated sexual misconduct policy and related procedure for resolving sexual misconduct complaints have been finalized. The documents are posted at www.cfs.pitt.edu as University Policy 06-05-01 and resolute 06-05-01.

Sexual misconduct (including sexual harassment and sexual violence) that affects the educational or employment environment is considered a formal type of discrimination. Pitt’s response falls under the purview of the Title IX office.

The Title IX coordinator Katie Pope said her office is working this fall to get the University community acclimated to the new policy, which she said “puts emphasis on working with the Title IX office when complaints come in.”

Individuals who experience sexual misconduct are encouraged to report it to the Title IX office.

“There’s not a scissor process,” Pope said. “The individual drives the process as much as possible.”

The procedure document outlines the process and lists University and off-campus resources for the Pittsburgh campus and regional campus communities. Information also can be found on the Office of Sexual Harassment and Assault Response and Education (SHARE) site at www.share.pitt.edu.

“Responsibly employee” reporting requirements are a key part of the policy, Pope said. “Anyone who learns about sexual misconduct needs to let the Title IX office know about it,” she said.

New faculty and staff must complete online sexual harassment training during their probationary period. The policy also calls for additional sexual harassment prevention and response training every four years.

Pope said her office is working with Human Resources and the Office of the Provost to pilot school-by-school training to ensure that all employees receive the required training within that time frame.

Responsible employee training sessions have been scheduled for 10 a.m. Sept. 7, 7 p.m. Oct. 3 in 342 Craig Hall (registration: trifex.pitt.edu/events). Additional training sessions will be linked on the Title IX site.

The administration approved the updated policy and procedure following review by the Council of Deans and Senate last spring. (See May 12 University Times)

Laurie J. Kirch, vice provost for faculty affairs, development and diversity, chaired a provost’s ad hoc committee that recommended revisions earlier this year, following a reading review of Pitt’s previous policy. The committee also developed the separate procedure document that spells out options for reporting misconduct as well as for filing, investigating, resolving and appealing complaints.

The provost’s committee is continuing its work, now focusing on University policy on consensual relationships. The University’s current policy (Policy 02-04-03) pertains to faculty-student relationships.

—Kimberly K. Barlow
Blogs can be used to create blogs for groups of students in reverse chronological order. You can view one user's postings by a user in reverse chronological order, thereby reviewing class readings or merely commenting on original postings by other students who may have been too busy to work by students. On the other hand, posting a response to a reading is a thought-provoking or controversial comment interesting. Since post-secondary students naturally are motivated by problem-solving tasks, questions that elicit knowledge application in novel examples or problems solving can spark discussions.

A discussion board is the appropriate place for virtual debates, as opposed to a blog or journal. Creating a thread for all course-related questions encourages students to help each other. You can then control the discussion, making sure there are no responses within a time frame you have determined. This will reduce the time you spend answering individual emails. You also can create a "virtual cafe" by setting a thread to encourage students to share non-course-related information. This can help students bond with each other.

All of these tools allow you to share your students, embed photos and videos, as well as attachments using various file types such as PDFs, Word documents and PowerPoint slides. If implementing these tools seems daunting, start small by picking one and gradually introducing it into your syllabus. Regardless of the tool that you use, instruct students that any communication must be done in a respectful manner.

Meiyi Song is a teaching and learning support specialist at the University Center for Teaching and Learning.

<table>
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<tr>
<th>Technology Corner</th>
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<td><strong>Technology topics and trends from Computing Services and Systems Development (CSSD)</strong></td>
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- **Service owners**

  Whether they're programmers, network engineers or enterprise architects, CSSD staff members routinely interact informally with Pitt faculty, staff and students in a variety of ways. This approach can yield high-impact results.

  For instance, after learning at a recent meeting that faculty wanted electronic alternatives to traditional lab notebooks, a Pitt staff member initiated a project involving both faculty focus groups and meetings with software developers. This led to a CSSD-supported electronic lab notebook service that could be used by researchers.

  Because University community engagement and ongoing service improvements are key in helping CSSD reach its goals, we have formalized a way of engaging with individuals and departments: the service owner team.

  This new team of CSSD staff members will focus on service improvement, engagement with individuals/departments and user advocacy. Team members will ensure that the user perspective is consistently part of key technology services and projects. Some of the services about which we’d like to raise awareness this year are electronic lab notebooks (DocBook), Sign, the new digital signature service, Qualitrics, Pitt’s survey service; Box; SharePoint Online; the continued migration of email to the cloud; digital signage; and Skype for Business.

- **How will the service owner approach work to move our services beyond the current stage and into ongoing engagement and improvement?**

  As one example, service owner Brian Stengel recently held several information sessions with various types of stakeholders regarding the potential and advantages of using electronic lab notebooks (ELNs). These general sessions were supplemented by a lunch-and-learn session for the engineering school and the staffing of an information table in the Benedum Hall lobby for several days so that faculty could stop by to discuss ELNs. These interactions led to more detailed sessions with individual faculty members, targeting their specific needs, questions and usage scenarios.

  In another example, students approached Student Affairs about pulling together student health and wellness services into an existing organized service. The communications staff in Student Affairs now work with the ELN owner and others on the CSSD service owner team to provide a Pitt approach to organizing this online information to make it readily accessible.

- **Scanning our environment**

  Identification of opportunities for engagement and improvement often arise as they did with the ELN project. Involvement in a committee or a conversation at a meeting could highlight a problem for which CSSD staff can identify a possible technology solution and then follow an iterative process with University stakeholders to identify requirements, test options and pilot a particular solution.

  But service owners also are responsible for proactively scanning the Pitt environment for such improvement possibilities. Reviewing a department’s strategic goals or a set of course syllabi, for example, could result in identifying a collaborative opportunity. Research staff at the Center for Research on the exchange of large image files, for instance, may be best served by strategic use of services such as Box or SharePoint, rather than email attachments. If those services don’t meet a department’s needs, the service owner approach is uniquely designed to help identify technology that will meet those needs.

  Service owners also will identify opportunities to accelerate engagement with individuals/departments on applying new technology solutions to improve administrative processes or problems.

- **Engagement/improvement through communication**

  Members of the service owner team also will be involved in implementing and stewardship of various communication scenarios, such as focus groups, online communities, surveys and help ticket reviews. Every request for help, complaint or suggestion submitted through the Technology Help Desk (helpdesk.pitt.edu) or 624-HELP (624-HELP) will be reviewed not only by CSSD analysts and managers, but also by members of the service owner team, who will be looking for patterns or trends so that we can address them directly.

  We also will establish channels to facilitate conversations about particular technologies, using technology to build an online community where users can provide support, share ideas or concerns, and offer feedback.

- **Talk to me**

  CSSD staff welcome feedback—positive, negative or question-based. We are interested in hearing about your technology needs. Having the service owner group will help us to leverage that commitment and our focus on your technology needs. The service owner team will analyze opportunities to improve services, identify solutions to meet new needs and eliminate outdated technology services. Do you have a question, idea or bone to pick about technology? We want to hear about it. Do you want to do something but aren’t sure what solutions are available to help you do it? Let us help. Contact the Technology Help Desk and your question or idea will be passed on to us.

  If you are interested in discussing the service owner concept or collaborative opportunities related to technology at the University, please contact me at adam.hobaga@pitt.edu. I look forward to working with you.

  —Adam Hobaga is CSSD’s director of services and solutions.

**LETTERS**

To the editor:

The July 21 University Times article on “Restacking the Cathedrals of Learning” fails to mention a few negative decisions which will affect students.

Since 1959, the only kitchen on campus which could be used by departments and summer classes was on the 12th floor (1220 CL). It adjoined a large conference and banquet room. The Nationality Rooms Committee asked for the kitchen to prepare ethnic foods to sell as summer study abroad students’ meals.

The kitchen was demolished in May 2016. The Nationality Rooms program was not consulted about this decision, which will severely impact our summer study abroad scholarship fundraising efforts. Since 1959, the Nationality Rooms program provided 47 scholarships to send students all over the world to study and to participate in the programming. This record is unlikely to be reached in the future without the 1220 CL kitchen.

On the bright side, the Braun Room, 1201 CL, with its $200,000 investment in the Nationality Rooms program, has been allowed to remain intact.

E. Maxine Brubaker
Director, Nationality Rooms and Intercultural Exchange Program
Pitt's senior administration grabs most of the headlines. The faculty here get noticed when they bring in research dollars, win teaching awards or publish in their fields. But behind the scenes, University staff, some 7,200 strong across five campuses, often toil in jobs ranging from the mundane to the esoteric.

From mailroom workers to data entry specialists, costume designers to biosafety officers, photographers to accountants, staff at Pitt perform tasks great and small, year-in and year-out, for the greater good of the University. This is one in an occasional series profiling University staff, providing a glimpse of some of the less recognized employees whose primary business is making Pitt work.

One of the undergraduates who handles calls for athletic tickets is upset, says Ben Smith as his boss, Justin Acierno, steps into Smith's office just behind the ticket windows in the Petersen Events Center. Acierno is assistant athletic director for ticket sales and operations. Smith runs the ticket operations.

The student is upset because one recent caller made quite a fuss: He had requested more tickets to the Pitt-Penn State football game on Sept. 10 than he got. More than 4,000 emails offering extra Penn State tickets to football season ticketholders had just gone out, six weeks before football season, resulting in an avalanche of requests for more tickets than Pitt had available. This caller, with two season tickets, was eligible for two extra tickets — more if he had been a donor to Pitt athletics' Panther Club.

“We had so many requests, we knew we wouldn’t be able to fulfill everybody’s,” Smith says. By restricting per-person ticket access, the office was able to spread the wealth. But too many people requested tickets up to their limit, so the donor-club membership-level restriction also kicked in. The office had begun receiving requests for PSU tickets as soon as the announcement of the renewed match with Penn State was made — during the 2015 football season.

“They don’t realize why we put those policies in place,” Smith says of callers. “By us setting those limitations, it allows us to help lots more people.” Not do callers realize that ticketing policies are instituted at a higher level in the administration.

Callers also don’t realize who is at the other end of the phone line: one of eight undergraduates who are perhaps hoping for a career in athletics but today are just fielding calls for many Pitt sports, here in cubicles behind a line of 10 windows that front the ticket office.

“When you get a phone call like that, you start to think, ‘Will every phone call be like that?’” says Acierno about his student worker.

But the story has a happy ending. When the call from the PSU ticket holder was passed to Smith, Smith was able to sell him eight three-game mini-packages, including the Penn State game, to get his additional eight seats.

However, given the high demand, those packages no longer can include the PSU game.

“It’s interesting when those calls get to us,” says Smith. “I’d say we probably get the better end of it when they get to us.”

Acierno welcomes those conversations with customers. “They allow us to get a pulse on conversations with customers.”

Pitt's senior administration grabs most of the headlines. The faculty here get noticed when they bring in research dollars, win teaching awards or publish in their fields. But behind the scenes, University staff, some 7,200 strong across five campuses, often toil in jobs ranging from the mundane to the esoteric.

From mailroom workers to data entry specialists, costume designers to biosafety officers, photographers to accountants, staff at Pitt perform tasks great and small, year-in and year-out, for the greater good of the University. This is one in an occasional series profiling University staff, providing a glimpse of some of the less recognized employees whose primary business is making Pitt work.

The Penn State ticket release was not a typical day for the Pitt athletic tickets office — but then there are no typical days, says Acierno, a former Pitt football player who graduated in 2005, earned a degree from the Katz Graduate School of Business and joined the ticket office staff in 2008. “It’s very cyclical,” he says, based on the ebb and flow of the seasons for sports with ticket sales: women’s and men’s basketball season tickets as well as volleyball, baseball, gymnastics and wrestling single tickets. After football and men’s basketball, women’s basketball is the third most popular sport for ticket sales at Pitt, followed by wrestling.

“Everything comes in waves,” adds Smith, who came here one year ago after holding similar posts at East Carolina, Arizona and most recently Nevada-Las Vegas. New coaches bring renewed interest in teams; women’s basketball sells a few games every year into educational events for young kids, which brings a lot of fresh faces to Petersen seats as well. All of that creates extra, but welcome, work for the ticket office.

Besides overseeing all the ticketing operations, Acierno supervises the sales team, determining whether they are making the right number of calls and reaching the right groups for sales potential, examining the sales plan and ticket renewal plans, making price recommendations based on revenue projection analyses and ascertaining whether his office is covering its budget.

In the weeks after the Penn State tickets went on sale, Acierno, Smith and their staff concentrated on away-game football tickets: allocating seats; changing credit cards; shipping tickets; creating welcome packages for each city where the away games are located; and letting ticketholders know what gate to enter and local phone numbers to call in case of problems.

In addition, they were gearing up to mail out football season tickets to 11,000 accounts. All those season tickets had been shipped to the ticket office and needed to be sorted. Unpaid tickets were held and payments requested, while prepaid tickets were mailed to fans on and off campus, with runners deployed to hand-deliver season tickets to VIPs on campus, such as those in the Chancellor’s office.

“One we get into season is when it gets a little easier,” Smith says.

“It gets easier and it gets fun,” Acierno says. “Now we’re actually working events.”

“You get to see all your work come together — after all the hours we’ve put into it,” says Smith. The staff spends late evenings and odd hours stuffing and preparing those ticket mailings for the football season, which includes printing all their own UPS labels and putting fan guides into each envelope.

Fans may not realize that the ticket office handles parking distribution for football season ticketholders as well. This summer the City of Pittsburgh surprised the office with news that it was building a parking garage on the North Shore, after Pitt season ticket...
The University of Pittsburgh
Chancellor’s Distinguished Research, Public Service and Teaching Awards

Office of the Provost and Senior Vice Chancellor

CONTINUED FROM PAGE 1

September 1, 2016
Dear Colleagues:

This year, the University of Pittsburgh will once again present the Chancellor’s Distinguished Teaching, Research, and Public Service Awards to accomplished members of the University’s faculty. These awards are designed to highlight exemplary teaching, research, and public service achievements.

I encourage you to nominate outstanding members of the University’s faculty for these awards. Please note the nomination deadline for each award.

• Nominations for the Chancellor’s Distinguished Teaching Awards should be sent electronically to Vice Provost for Faculty Affairs, Development, and Diversity, Laurie Kirsch (lkirsch@pitt.edu). The closing date for letters of nomination is Friday, October 14, 2016. Please see the provost’s website under “Guidelines” for more details.

• Nominations for the Chancellor’s Distinguished Research Award should be completed using the online form at upitt.infoready4.com (under the Chancellor’s Awards Research link). The closing date for letters of nomination is Friday, October 14, 2016. Please see the provost’s website under “Guidelines” for more details.

• Nominations for the Chancellor’s Distinguished Public Service Award should be completed using the online form at upitt.infoready4.com (under the Chancellor’s Awards Public Service link). The closing date for letters of nomination is Friday, October 14, 2016. Please see the provost’s website under “Guidelines” for more details.

You should have any questions on how to proceed, please contact Laurie Kirsch (Teaching Awards), Mark Redfern (Research Awards), or George Huber (Public Service Awards) as appropriate. In preparing nominations, you also may wish to [but need not] enlist the help of the Office of the Dean in your school. We look forward to hearing from you.

Sincerely,

Patricia E. Beson

CONTINUED FROM PAGE 3

holders already had purchased parking. That meant 400 surface parking spaces temporarily were lost. Football fans who tailgate may care deeply about where they park. “For a lot of them, the game is really important,” Smith says. “They park. “For a lot of them, the game is really important,” Smith says. “They

Only three of the 10 front ticket windows are really used daily basis” at Pitt thanks to this arrangement, Smith says. Other cubes in the ticket office hold seven full-time staffers who handle customer service and operations: making sure the phone lines are open and that printing and mailing tickets runs smoothly, handling daily financial deposits and ticket troubleshooting.

It fields a barrage of questions directly and peripherally related to tickets, Acierno says, including: “Why did ESPN choose noon for a kickoff time?” Pitt has no say in such matters, Smith says.

The ticket office also handles donations to the athletics department, which are required for purchasers of club seats at Heinz Field. It fields a barrage of questions directly and peripherally related to tickets, Acierno says, including: “Why did ESPN choose noon for a kickoff time?” Pitt has no say in such matters, Smith says.

The ticket office has one employee who works with Pitt’s business office to make deposits and check the ledger — a much easier arrangement than at other universities, Smith says, which may have a business office employee popping into the ticket office to catch up on ticket sales periodically. “I feel like we really have a pulse on what we are doing on a daily basis” at Pitt thanks to this arrangement, Smith says.

Other areas in the ticket office hold seven full-time staffers who handle customer service and operations: making sure the phone lines are open and that printing and mailing tickets runs smoothly, handling daily financial deposits and ticket troubleshooting.

While the great mass of football season tickets are printed by an outside firm, if people buy them early enough the ticket office is even able to print the ticket booklets on their own printer in a conference room behind the cubicles. This is also the spot where ticket stuffing takes place.

One problem that some ticket offices sometimes face — mass purchases by ticket brokers, who then try to resell the tickets at a higher price than face value — isn’t too much of a problem for Pitt, Acierno says. Within 48 hours of a home game, the ticket office disallows print-at-home tickets to try to thwart potential ticket resellers, who can do more potential damage than scalpers on the street. That’s because these ticket holders may make credit card purchases using stolen cards, which later may be reversed by the card’s owner or bank, meaning Pitt loses all profit from the sale.

To prevent such purchases, Pitt reviews in-house data to check potential disconnects between credit card addresses and ticket mailing addresses. Orders for a maximum of 10 tickets are most suspicious, Acierno allows. “You can tell if some orders seem suspicious,” Smith says. What else marks potential trouble? Acierno smiles: “I don’t want to give away all of our secrets,” he says.

—Marty Levine
n Aug. 24, the world was surprised to learn a potentially habitable, rocky planet that could contain the essential ingredients of life — water — was detected around the nearest star, Proxima Centauri, a mere 4.2 light-years away. This smaller than our sun — “exoplanets” — as they cross, or “transit,” the face of a nearby star, STEPUP has used many nights of observation to confirm planets previously detected by other research projects and contribute this data to an international planetary database. The first exoplanet was discovered in 1995 and dubbed a “hot Jupiter” since it is a gas giant similar to Jupiter but orbiting much closer to its sun, which is 50 light-years from Earth. Researchers found the first planetary system in 1999, and one of the smallest exoplanets in 2005, just seven-and-a-half times the mass of Earth. Since then other, more Earth-like rocky planets have been detected, albeit with conditions that preclude life, such as being “tidally locked,” with one side always facing away from their suns, creating prohibitively hot or cold conditions on either side. The first potentially habitable planet was observed in 2011, called Kepler-22b. It is a rocky planet in an orbit that would allow water to be liquid — its average surface temperature is estimated at 72 degrees, but its mass would result in a gravity 36 times that of Earth, which is not exactly friendly to life as we know it.

Other planets have since been observed by STEPUP and various research programs, but none as close as the planet around Proxima Centauri, dubbed Proxima Centauri b.

Detecting planets at such distances is no easy task, said Wood-Vasey. Proxima Centauri is still more than 24 trillion miles distant. STEPUP uses a telescope that is not powerful enough to detect stars as more than a point of light; no star surface (if a star can even be said to have a surface) is visible. Planets crossing in front of their stars are thus detected by the amount of light they block from their stars are thus detected by the amount of light detected. They discussed their choice of reference star during observations — a star whose brightness has long been measured and determined to be steady, so that, if a dimms while STEPUP researchers are trying to observe a transit (due to interferences from Earth’s atmosphere), they will know that the dip in brightness they also observe in their target star is not necessarily due to an orbiting planet.

Star spots — analogous to sunspots — are the biggest contaminant of STEPUP data, since star spots also move across their stars. Anything close to Earth that moves across a star won’t be missed for a planet — it will simply be too narrow, relatively speaking, to eclipse any star being observed.

Are certain types of stars more likely to have planets? “That is indeed one of the big questions people are pursuing,” Wood-Vasey said. Right now STEPUP is shifting to look at more binary star systems than single-sun systems like our own. While most planets so far have been found very close to their stars, some of the moons may have potential for life, and moons may be detectable, since their orbits affect planet transits. “It would be really nice if we could find a moon around one of these planets,” he said — particularly one larger than our moon, which could hold an atmosphere.

STEPUP observers see no image of those transiting exoplanets. Instead, they gather data indicating a drop in the light output of a star as a planet crosses its edge, a stable amount of decreased light as the planet transits. “It would be really nice if we could find a moon around one of these planets,” he said — particularly one larger than our moon, which could hold an atmosphere.

STEPUP is a part of the worldwide effort to discover new planets. Since August 2009, STEPUP has used a 16-inch telescope at Pitt’s Allegheny Observatory on the North Side to take part in a worldwide effort to find new planets around stars other than our sun — “exoplanets” — as they cross, or “transit,” the face of a nearby star.

“Where your shadow always has wandered,” says one poster. “Relax on Kepler-16b,” a binary star system discovered around Proxima Centauri, dubbed a “super Earth,” says one poster. “Relax on Kepler-16b,” a binary star system, has one of the smallest exoplanets in 2005, just seven-and-a-half times the mass of Earth. Since then other, more Earth-like rocky planets have been detected, albeit with conditions that preclude life, such as being “tidally locked,” with one side always facing away from their suns, creating prohibitively hot or cold conditions on either side.

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Are certain types of stars more likely to have planets? “That is indeed one of the big questions people are pursuing.” Wood-Vasey explained. “Observations require not big telescopes but time, and time is one area where undergraduates can compete with professionals. My hope is that the group’s effort provides opportunities at Pitt — opportunities for undergraduates to do real research, and for them to develop their technical skills of observing and analysis, not to mention teamwork and research documentation.

Senior Cooper, who has been a member of the STEPUP team, said. Right now STEPUP is shifting to look at more binary star systems than single-sun systems like our own. While most planets so far have been found very close to their stars, some of the moons may have potential for life, and moons may be detectable, since their orbits affect planet transits. “It would be really nice if we could find a moon around one of these planets,” he said — particularly one larger than our moon, which could hold an atmosphere.

“I started the summer with grand dreams,” Wood-Vasey told the groups that all the undergrads in STEPUP had a system to look at and, for the first time, all would publish a paper based on their observations. But too many cloudy or stormy nights have intervened, which is par for the course in Pittsburgh. “It’s always been a challenge for us, observing, because half the nights you can’t,” Wood-Vasey said. He still hopes his students can publish this fall.

“These types of observations teach the basics of astronomi- cal observation,” Wood-Vasey explained. “Observations require not big telescopes but time, and time is one area where undergraduates can compete with professionals. My hope is that the group’s effort provides opportunities at Pitt — opportunities for undergraduates to do real research, and for them to develop their technical skills of observing and analysis, not to mention teamwork and research documentation.”
CONTINUED FROM PAGE 5

since 2014, said: “I really enjoy
the idea of looking at the planets,
the idea to look at other worlds
that have the potential …” He
stopped himself. “I’m not going
to say we’re going to find aliens
here at STEPUP. But …”

It’s the larger telescopes, and
those stationed in orbit, that are
doing the even more technically
sophisticated work of looking
for new transits for groups like
STEPUP to confirm, and of
measuring the spectra of elements
in planetary atmospheres to tell
whether they might harbor life.

At the end of the STEPUP
meeting, Wood-Vasey called out:
“Does everyone have shirts?” The
project has its own logo, with a
planet transiting the Cathedral of
Learning.

At Allegheny Observatory,
inside one of the 30-foot domes,
Lou Coban sat at a computer
below the STEPUP’s 16-inch
Meade reflecting telescope and
commanded it to orient to Venus.

Meade telescope is a
mere three feet long. “It is such a
paragon in this dome,” Coban
said — especially compared to the
observatory’s 100-year-old, 47-foot-long, 30-inch refracting
telecope, which looms above a
visitor like an ocean-going ship
hoisted into dry dock.

About four years ago, Coban
and two Pitt students motorized
dome opening, which previously
had to be turned by hand with a
kind of ship’s wheel, which still sits propped against the dome
wall.

Today, as the telescope rotates
with the night sky, the dome also
shifts position. It is capable of
turning 360 degrees.

Another Pitt student, an
undergraduate mechanical engi-
near, added a remotely controlled
lens cap for the STEPUP students
to use as well.

Coban sat at a quartet of
screens on a small table beside the
telecope’s arm and stared Starry
Night College 6, a commercial
telecope-orienting program, and
connected it to the telescope. Red
crosshairs indicated where in the
night sky the telescope is aiming.

Since all of STEPUP’s obser-
vations are of course at night
— some are in the middle of the
night — it’s good that no one has
to be physically in the observatory,
he said, although students must
run each observation, and check on
its progress, from Allen Hall.

“It works very well,” he
reported. “It took a long time to
get it like that.” He has had to come
over once or twice and I’ve had
to kick it and push it,” he joked.

Coban turned on the tele-
scope’s main camera, its foci
and finder cameras and the lens
cap control. The finder camera
is external to the telescope, giving
a lower-powered but wider view
of the night sky to help orient it. The
telecope points to coordinates
in space, of course — no one is
eyeballing the aim. But the finder
camera can help if telescope users
get lost or the target is not quite
in focus.

The telescope’s main camera
view is a tiny box on Coban’s
computer screen within the much
larger full-sky seen by the finder
camera. And within the main
camera view is an even smaller
viewing guide chip. If users can
get a guide star, such as the North
Star, inside that much smaller box,
that will be tracked throughout the
night, helping keep the telescope
centered on the actual star being
observed, since everything in the
sky rises and sets.

Coban turned on a controller
that showed the four compass
directions for aiming the tele-
scope, plus different speeds for
tracking stars. He used Starry
Night to speed up a picture of the
night sky, which spun in a diz-
yzing circle, with the North Star
in the tallest, tiniest circle at the
center. In real time, to the naked
eye, it appeared not to move at all
— hence its use by sailors for
navigation.

Outside, another camera is vid-
erecasting the weather, so that the
STEPUP crew can log in and see
local sky conditions during cur-
et and even past observations.
They also can remotely check a
clear-sky monitor — an infrared
sensor measuring the temperature
of the atmosphere, since warmer
conditions can indicate cloudy
skies. A third remotely accessible
item outside, the “seeing” moni-
tor, measures the steadiness of
the atmosphere — how easy it
is to see the stars. “You look up
and you see the stars twinkling
like crazy?” said Coban. “That’s
a bad seeing night.” Pollution
isn’t to blame, or credit, for the
twinkling; instead, it’s radiational
cooling — the heat rising from the
ground — at work. Clear nights
allow more radiational cooling,
which interferes with telescope
views.

Transparency — measure of
the clearness of the sky — in the
atmosphere is best in winter, when
the dew point is low and there
is much less moisture in the air.

But winter is the worst for
seeing. In the summer, the haze
of the atmosphere ramps down
turbulence.

When all the best atmospheric
factors align, said Coban, “It can
really see the constella-
tions over the city of Pittsburgh.”

—Marty Levine

Observatory open house set

Allegheny Observatory will hold its annual open house this
year on Oct. 7. The observatory, in Riverview Park at 159 River-
view Ave. on the North Side, is a working astronomical research
institution operated by the University’s Department of Physics
and Astronomy. During the open house, the observatory’s 30-inch
Thaw refracting telescope will be reconfigured for visual use by
visitors, and the photograhic plate vault, containing close to
500,000 images from 1914-85, will be open for viewing.

Volunteers from the Amateur Astronomers Association of
Pittsburgh will set up portable telescopes on the front lawn for
open house attendees. The two-hour tours begin at 7 p.m., with
the final tour ending at 10 p.m. Admission is free, and tickets can
be obtained by calling the observatory at 412-321-2400 weekdays
1-5 p.m. Attendance is limited and the tours usually fill up, so early
reservations are advised.

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Research Notes

Testing 3-D printed partial dentures

The ADEA/Gies Foundation has awarded Nathan Clark, 2016 Gies Award for Outstanding Innovation by an Academic Dental Institution.

The award includes a grant that will enable Ference, faculty member in the Department of Prosthodontics, to continue his research. Ference’s recent study compared the mechanical and physical properties of a 3-D-printed removable partial denture framework with traditionally manufactured frameworks. This work is being performed in conjunction with Markus Chmielus, faculty member in the Swanson School of Engineering’s Department of Mechanical Engineering and Materials Science.

The research uses an Inconel 625 metal alloy. During the initial phase, biocompatible frameworks were made to test the mechanical and mechanical properties of the alloy according to the ASTM standards and compared to the values for dental alloys. Ference and Chmielus recorded descriptive statistics, mean, median and standard deviation, to analyze the removable partial denture frameworks for specific gravity, tensile strength, flexural strength, impact, and coefficient of linear thermal expansion.

The physical and mechanical properties of the completed partial dentures are very similar to the stated manufacturer’s data sheet. The next phase of testing for the specific gravity of biocompatible metal alloy partial dentures and subjecting them to ASTM standards.

Website aids evolutionary biology researchers

Drosophila species, no one’s own peculiar path over time to ensure we come out on the right side of the "adapt or die" equation. At the genetic level, our shared body, we have our species and creatures great and small whose molecular evolution can bring new clarity to the cellular functions, proteins and other regulatory molecules linked with human disease.

This bioinformatics approach — known as evolutionary rate covariation (ERC) — developed by Nathan Clark, faculty member in computational and systems biology in the School of Medicine, and colleagues correlates lineage-specific evolutionary rates of a chosen pair of genes. The fundamental concept behind ERC is that functionally related genes should respond similarly to evolutionary pressures and, therefore, be easier to track and characterize.

By parsing such genetic "guilt" by following the evolution of genes and other species, Clark and his colleagues have identified new protein networks that influence reproduction, amino acid transporters that affect signal transmission in the endocannabinoid and neural pathways that could help to untangle heretofore unknown relationships between clinically distinct disease processes.

Over the past year, the Clark lab has built a publically accessible internet portal to assist researchers with ERC-based investigations.

"Imagine you’re a kidney disease researcher interested in a pathway that leads to sodium permeability on the cell surface," says Clark. "Take a gene that you know influences that pathway, put it into the portal, and it will serve you up genes that are highly conserved with which you are shown now through a number of published studies that this work."

The portal, Clark adds, recently in Bioinformatics last year, contains data on three taxonomic groups — 33 mammal species, 12 Drosophila species and 18 kinds of yeast. Website analyses are designed to provide statistically supported results that are easy to interpret, Clark explains, adding that as of July 2016, there are 3,000 unique users representing "all inhabited continents." Clark’s lab most recently used a modified ERC method to discern evolutionary contributions of genes with environmental influences in marine mammals and to test reciprocal comparisons.

These analyses traced molecular-level contributions to physiological and physical adaptations necessary to support species transition from landlubber to breathing sea dweller.

Published in Molecular Biology and Evolution, the Clark lab’s findings report unique changes in genes affecting muscle formation, lipid metabolism, sensory systems, skin, lung, and connective tissue — broadly recognized functional adaptations for which underlying mechanisms are not well understood.

Cleft lip/palate project among first from NIH

"A federal initiative to accelerate research into pediatric diseases and conditions will fund a Pitt-led effort to identify the exact causes of cleft lip and palate, and to look for treatments.

In its first round of funding under the Gabriella Miller Kids First Research Act, the National Institutes of Health’s Office of the NIH Director selected a proposal from Pitt’s School of Dental Medicine and Graduate School of Public Health to sequence the whole genomes of 430 children with clefts, as well as their parents. According to the plan, the team will use whole-genome sequencing efforts to examine an oral condition that currently remains unresolved.

"We are working to repurpose these drugs for treatment of human PH, which now can include long-neglected disease types such as HIV-related conditions and others," said Chan. "We hope that we can do so without the delay of decades that often happens when developing new compounds from scratch.

Given that vessel stiffness is prevalent in other diseases—including cancer progression—these results also may be important beyond PH, noted Chan.

Ultrasound, microbubbles may fight heart disease, cancer

Combining ultrasound energy and microbubbles to poke holes in cells may prove to be a new tool in the fight against cardiovascular disease and cancer, according to researchers from Pitt and UPMC.

A study of this gene therapy approach, called sonoporation, appears in the Proceedings of the National Academy of Sciences.

Brandon Holtfield, lead author of the study and a postdoctoral fellow at the Center for Ultrasonic Molecular Imaging and Therapeutics at UPMC.

"We can use ultrasound energy in combination with small, gas-filled bubbles to selectively open up cells to allow the delivery of therapies directly to a given cell type," said Holtfield.

"The link between vessel hardening and energy production is absolutely central to this disease," said Chan. "That discovery offers us so many new ways to design drugs tailored to stop PH in its tracks."

In a proof-of-concept, Chan’s team tested both the YAP pathway inhibitor verteporfin, a Food and Drug Administration-approved medication for macular degeneration, and a GLI1 inhibitor called CHM-5470, which was developed for treating cancer.

They found that both of these compounds disrupted YAP and rough effects in improving PH in a rodent model of disease. "We are working to repurpose these drugs for treatment of human PH, which now can include long-neglected disease types such as HIV-related conditions and others," Chan said.

"We hope that we can do so without the delay of decades that often happens when developing new compounds from scratch."

Given that vessel stiffness is prevalent in other diseases—including cancer progression—these results also may be important beyond PH, noted Chan.
to investigate how sonoporation
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researchers have developed gene-
uture will make it possible to hit the

research into the early detection

Cancer Institute (UPCI), partner with UPMC CancerCenter, is
five years from the National Institute of (NCI) to accelerate
toive into the early detection of
cancer.
The NCI Early Detection Research Network (EDRN) ob-
jects to discover, develop and validate tests that use blood or
other bodily fluids to detect cancer biomarkers — the biologi-
signatures left by cancerous cells — to detect cancer at an ear-
er stage or to better monitor cancer progression. The projects typi-
ly involve teams of scientists at multiple institutions.

Randall Brand, medianormal, professor of Medicine at the Up-
PCI’s gastrointestinal malign-
any early detection, diagnosis and treatment of cancer. He
is principal investigator with a colleague from the University of
braska, and the EDRN work
Center for pancreatic cancer. These centers manage large re-
positories of blood and tissue samples against which promising biomarkers can be tested. This is a critical early detection process. Once a promising biomarker is validated, it can be tested for clinical use by a biotech or pharmaceutical company.

Brand also is a co-investigator on an EDRN grant for a Bio-
marker Development Laboratory headed by the University of Texas
MD Anderson Cancer Center that is geared toward discovering biomarkers for pancreatic cancer.

Said Brand: “Pancreatic cancer is one of the deadliest cancers among men and women. That is why teamwork is so essen-
tial to saving lives. Our infrastruc-
ture will make it possible to run
ground running in coordinating with other institutions toward the development of a blood-monitoring test for people with newly diagnosed stage III colon cancer. The group proposes that its monitoring test is better than the standard monitoring test that

Said Schoen: “Of course, a blood test to screen for cancer is highly vulnerable to false-positives or stoll-tests that currently are in use. A test that
tell you things you’ve been diagnosed would be valuable. For example, you could determine if your treatment is working or if it needs to be changed, and you could potentially identify patients with resistance earlier.

Anna Lokshin, a genetics faculty member in medicine and pathol-
ygy with UPCI, is a principal investigator on a contract at the EDRN Clinical Validation Center led by a colleague at the Fred Hutchinson Cancer Research Center to evaluate potential biomarkers for breast, colon, and ovarian cancers.

said Lokshin: “We believe we’ve selected some very strong biomarker test candidates for validation and that these tests will not only help detect cancer earlier, but also lessen the difficul-
ty some patients find with preventative screenings, such as mammograms.”

We anticipate that the work we do with these new findings will have a clinical impact relatively soon.”

**Metabolic improvements may help depression symptoms**

Identifying and treating meta-
bolic derangements in patients with treatment-resistant depression can improve symptoms and in some cases even lead to remis-
sion, according to research from the School of Medicine published in the American Journal of Psychiatry.

This research is funded through a 2014 Pitt Innovation Challenge Award from Pitt’s Clinical and Translational Science Institute.

said David Lewis, Thomas Detre Professor and chair of the Department of Psychiatry: “What’s really promising about these new findings is that they indicate that there may be physiological mechanisms underlying depression that we can use to improve the quality of life in patients with this disabling ill-
ness.”

Major depressive disorder, also referred to simply as depression, affects nearly 15 million Americans and is one of the most common mental disorders. Unfortunately, at least 15 percent of patients don’t find relief from conventional treatments such as antidepressant medications and psychotherapy, according to lead study investigator Lisa Pan, faculty member in psychiatry and transdisciplinary science in the School of Medicine. Depression also is the cause of more than two-thirds of suicides.

The groundwork for the cur-
rent study was laid five years ago when Dr. John Enders, Endowed Chair in Suicide Studies and faculty member in psychiatry, pediatrics, epidemiology and clinical and translational science, treated a teen with a history of sui-
cide by delivering antidepres-
sion drugs for the first time.

Over a period of years, we tried every treatment available for this patient, and yet he still found no relief from his depression symptoms,” said Pan. On recommendation from her colleagues in public health, she contacted Jerry Vockley, pedi-

A handout for parents and children, “Advances in Suicide Prevention,” also contributed.

**Pitt continues flu vaccine evaluation**

The Vaccination Research Group (PittVax) has earned a $5.5 million, five-year renewal from the U.S. Centers for Disease Control and Prevention (CDC) to continue vaccine evaluation of the annual influenza vaccine and, once licensed, the respiratory syncytial virus (RSV) vaccine. The PittVax team collaborates with laboratories in medicine and public health and is a member of the Fred Hutchinson Cancer Research Center’s Vaccine Effectiveness Network, which also contributed.

**New grant with PittVax will help develop respiratory disease diagnostic test**

For example, you could determine if they have flu or another illness, such as RSV, or simply a cold. The researchers also confirm whether or not the participants were immunized against flu earlier in the season and conduct a follow-up survey on participants’ recovery.

In the past five years, PittVax participants had the highest follow-up survey completion rate of any of the sites and the highest enrollment rate compared to well over the 1,100 necessary participants annually. The research is supported by operating, outbreak surveillance at six UPMC sites, with more than 14,000 respiratory virus tests performed each flu season.

These data allow PittVax to determine if the flu vaccine — which is designed to work against the three or four strains of flu that the World Health Organization predicts are most likely to be circulating when the flu vaccine is manufactured, months before flu season actually starts — is effective against whatever strains of flu ultimately circulate.

Last season, the flu vaccine, which was nearly 60 percent effective, means that the chances someone vaccinated against flu would get sick with the virus were less than half the chances of illness in someone who didn’t get the flu vaccine. In the 2014-15 season, the vaccine was only 23 percent effective, the lowest in nearly a decade, but it still offered more protection against flu than not being vaccinated. On average, the vaccine is about 50-60 percent effective.

Based on 2015-16 data collected by PittVax and other sites, the nasal spray flu vaccine often offered to children was found to be only 3 percent effective, and the CDC’s advisory committee on immunization practices recommended it not be used this season, instead recommending the traditional influenza vaccination with a needle for everyone six months and older.

In the event of a flu pan-
demic — when a new strain of flu to which people have little existing immunity emerges and spreads globally — PittVax will be prepared to collect respira-
tory samples and conduct studies estimating how many people are affected and how well antivirals or other flu vaccines work against it.

New with this grant, PittVax will be prepared to collect and provide data and analysis on the effectiveness of the RSV vaccine, which is expected to be offered to older adults within the next five years, if clinical trials go well.

**NEH grants go to 2 faculty members**

The National Endowment for the Humanities’ Office of Digital Humanities has awarded one of Four Institutes for Advanced Topics in the Digital Humanities grants to David J. Birnbaum. Birnbaum is faculty member and chair of the Department of Slavic Languages and Literatures in the Dietrich School of Arts and Sciences.

The $156,251 grant will support “Make Your Editing: Models and Methods for Digital Ex-

The success prompted the researchers to examine young adults with depression who were not responding to treatment, said Pan.

In the published trial, the researchers looked for metabolic abnormalities in 33 adolescents and young adults with treatment-resistant depression and 16 controls. Although the specific metabolites affected differed for each individual, researchers found that 64 percent of the patients had a deficiency in neu-
rogenotransmitters, a function that paralleled with none of the controls.

In almost all of these patients, treatment with the antidepressant fluoxetine improved their depression symp-
toms, and some patients even achieved complete remission. In addition, the further along the patients progress in the treatment, the better they are getting, Pan added.

Additional Pitt School of Medicine collaborators on the study are David Peters, Petra Martin, Thomas Zimmer, Anna Marta Segreti, Ivan Stojkovski, Brian McKain, Cynthia Baca, Manivel Rengasamy, Nico-
lette Walano, Marion Hughes, Steven Dobrowolski, Michele Pasquino, Rasim Diler, and James Perel. Colleagues from the University of California-San Diego, MNG Laboratories in Santa Monica and the Universi-
des of Pittsburgh and the Munich Center for Genetics in Germany also contributed.

This research was also sup-
ported by the American Foun-
dation for Suicide Prevention, a Brain and Behavior Research Foundation NARSAD Young Investigator Award and the Beck and Lohmann family through the Children’s Hospital of Pittsburgh Foundation.

**CONTINUED ON PAGE 10**
Small-molecule switch activates proteins

From growing teeth, bones and tissue in skin and organs to treating cancer, type-2 diabetes, obesity, Crohn’s disease, and many other diseases, proteins are one of the most diverse and important elements of living organisms. But despite all these varied roles, along with the interconnectivity of all systems in life, much remains unclear about which therapies are effective for which conditions. Part of the reason is that researchers have struggled for years to determine how the body responds to them.

But recently, researchers led by chemistry faculty member Alexander Deiters in the Dietrich School of Arts and Sciences developed a technology that allows scientists to control protein activity, giving them a new way to learn more about their behavior and function, and potentially to develop new therapies.

Proteins are composed of long chains of amino acids and the researchers found that adding an unnatural amino acid called ortho-azidobenzyloxycarbonyl lysine to a specific site in proteins “protected” them, or rendered them inactive. When the researchers treated cells expressing the protected protein with a phosphine, they were able to activate proteins and significantly activate protein function in cells using a small molecule containing phosphine to activate proteins.

Deiters’ team was able to activate proteins in living cells, make it challenging for researchers to determine how proteins operate. For researchers to determine how proteins operate, they need to identify their behavior and function.” He said.

Proteins are the building blocks of biological systems. In living organisms, proteins take on a variety of functions — in healthy people, they operate.

But recently, researchers led by chemistry faculty member Alexander Deiters in the Dietrich School of Arts and Sciences developed a technology that allows scientists to control protein activity, giving them a new way to learn more about their behavior and function, and potentially to develop new therapies. “Being able to precisely control specific protein function in cells using a small, drug-like molecule as an external trigger reveals activities related to the protein in isolation and provides the kinetic of cellular protein expression, which is important for researchers to determine how the body responds to them. But recently, researchers led by chemistry faculty member Alexander Deiters in the Dietrich School of Arts and Sciences developed a technology that allows scientists to control protein activity, giving them a new way to learn more about their behavior and function, and potentially to develop new therapies.”

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RESEARCH NOTES

CONTINUED FROM PAGE 9

Similiar training is common in Europe. “In Europe, there are a lot of 'summer camps' that are not a one-size-fits-all training. What we propose is to do train the attendees to ‘fish,’ as it were, so that they’ll be able to conceptualize their editions according to their own research questions and venture forth with fear to build what they need to realize it.”

Birnbaum is the principal investigator of the project. Other researchers invited to create their own edition at the University of Bern, Switzerland; Huygens Institute for the History of the Netherlands, Royal Netherlands Academy of Arts and Sciences; the University of Copenhagen, Faculty of Arts; the University of Antwerp, Belgium.

English faculty member Michael Meyer said, “Being able to control proteins is a great support in support of his book project toward NEH’s public scholar program.

The $50,400 award for “Benjamin Franklin’s Last Beast: How a Fictional Poultrymingling Phantasmogoria Reshaped the Ameri- can Will,” will support Meyer’s research and writing toward publication of a book on the subject.

New cancer immunotherapy-strengthening strategies

The microenvironment that supports a cancerous tumor also invades the immune cells that the body sends in to destroy the cancer. UCPI scientists revealed in a discovery in a discovery that holds the potential to significantly boost the effectiveness of breakthrough immunotherapy drugs.

The UCPI team showed that when cancer invades the tumor microenvironment, their mitochondria — which act as mini-factories inside cells, making energy and crucial nutrients a cell needs to survive — begin to drain and disappear, indicating that the T cell is out of fuel and can’t do its tumor-destructing job. The finding, reported in Immunity, opens the door to several potential clinical approaches that could help keep T cells functioning and boost the body’s ability to fight cancer.

Richard Duerr, a chemistry professor and a partner of the UCPI team, said “This is an exciting discovery because we already have various strategies to exploit the T cell fuel tank and support T cell function in the tumor microenvironment.” In laboratory experiments with mice, Delgoffe and his colleagues demonstrated that when they boosted the mitochondria in the T cells, they were better able to clear the tumor.

Delgoffe is partnering with other researchers from UPCI, the University of California, San Diego, and Johns Hopkins University, all in California; Icahn School of Medicine at Mount Sinai; University of Chicago; Montreal Children’s Hospital, and the University of Pennsylvania.

The UCPI team is focused on microbiology and their discovery has sparked interest in that field of research.

In laboratory experiments and in patients with inflammatory bowel disease (IBD), they discovered that a genetic variant may increase risk for disease by altering the gut habitat. This is an important step toward understanding how the disease works so we can develop therapies or a cure in the future.”

Duerr’s team focused their attention on 10,523 blood samples from people with inflammatory bowel disease (half of whom had Crohn’s disease and half had ulcerative colitis) and found a genetic variant that is associated with Crohn’s disease.

But recently, researchers led by chemistry faculty member Alexander Deiters in the Dietrich School of Arts and Sciences developed a technology that allows scientists to control protein activity, giving them a new way to learn more about their behavior and function, and potentially to develop new therapies. "Being able to precisely control specific protein function in cells using a small, drug-like molecule as an external trigger reveals activities related to the protein in isolation and provides the kinetic of cellular protein expression, which is important for researchers to determine how the body responds to them. But recently, researchers led by chemistry faculty member Alexander Deiters in the Dietrich School of Arts and Sciences developed a technology that allows scientists to control protein activity, giving them a new way to learn more about their behavior and function, and potentially to develop new therapies."
deprotecting the enzyme luciferase, which catalyzes the reaction that emits light. The light can then be measured or detected by a camera system. The researchers were able to use the small molecule switch to assist in monitoring and studying different cellular compartments; and gene editing and DNA recoding technologies which enabled researchers to control the insertion and removal of genetic information.

The paper, “Small-Molecule Control of Protein Function Through Switching,” which was published in Nature Chemistry by Dienert, along with graduate assistants Jh Lui, Qingyang Liu and postdoctoral student Kumiiko Morihito. The work was supported in part by NIH, NSF and the Charles E. Kaufman Foundation of The Pittsburgh Foundation.

Sampling method may underestimate cancer risk

Not only is breast cancer more than one disease, but a single breast cancer tumor can vary within itself, a finding that UPCI researchers discovered has the potential to lead to very different patient treatment plans depending on the tumor sample and diagnostic testing used.

The research results, reported in Clinical Cancer Research, demonstrate how commonly used techniques to newly developed personalized medicine gene expression profile may need to be refined to ensure that the most appropriate tumor sections are tested.

Said Adrian V. Lee, faculty member in pharmacology and chemical biology at UPCI, partner with UPMC CancerCenter: “These tests are a good thing — they tell doctors what kind of drugs and therapies to use.” But, if we want to make sure the tests are effective, we need to be better at identifying the right sample to test.

Lee and his team examined cases of breast cancer that included new types of breast cancer called “estrogen-receptor-positive” that was caused early in a patient’s life and hadn’t spread to other parts of the body. In all cases, the tumor had been removed and sample taken for expression profiling. A total of 181 samples were taken from various parts of the tumors, and the results measured the expression of 141 different genes from five different parts of the samples to gene expression tests commonly used for breast cancer tumors.

For 25 percent of the patients, their tumors received a different risk of recurrence score depending on which sample was processed.

“This indicates that one part of the tumor is more aggressive than another part,” said Lee. “If an oncologist were to know this, he or she would create a treatment plan tailored to destroy the most aggressive section of the tumor.”

Because the patients in this study all were caught early, their risk of recurrence was low to begin with, and there weren’t enough recurrences to make a complete determination, the researchers wanted to see whether they would have done better if more samples had been taken from the tumors.

Additional Pitt researchers on the study were Bohka Gyan-chandani, Yaron Lin, Min Lin, Kristine Cooper, Daniel P. Normolle, Adam Bruskey, Michael Fastuca, Whitney Crosson, Steffi Oesterreich, Sean Y. Davidson, Rohit Bhargava and David J. Dabbs.

This work was supported by the Breast Cancer Research Foun- dation, NCI, Fashion Footwear of New York and UPMC.

Stolen guns dominate police recovered

Nearly 80 percent of perpetrators carrying a gun recovered by Pittsburgh Police were not the lawful owners, a strong indica- tion that theft and trafficking are significant sources of firearms involved in crimes in southwest Pennsylvania, a new Graduate School of Public Health analysis reveals.

The finding suggests a timely opportunity for collaboration between public health and law enforcement officials to better understand and reduce violent crimes involving firearms. The research was published in Social Medicine and funded by the former Falk Foundation.

Said lead author Anthony Fabio, epidemiology faculty member: “Homicide by firearms continues to rank among the leading causes of death for young people in the U.S. Given the pandemic threat, it is necessary to have data to estimate that there are more than 300 million guns in the U.S. and we know that firearms production is increasing. In 2013, nearly 11 million firearms were manufactured in the U.S., more than double the number produced in 2008.”

Fabio and his team analyzed 762 cases in which a gun was recovered by the Pittsburgh Bureau of Police firearm tracking unit in 2008. In 44.3 percent of the cases where the perpetrator was not the owner of the firearm, the police could not get in touch with the owner to find out how they lost possession of it. In cases where police made contact with the orig- inal owner, more than 30 percent of people had officially reported the theft prior to recovery by police.

Firearms reported stolen before recovery by police were owned by women 16.0 percent of the time. However, that number climbs to 19.3 percent for firearms reported stolen only after recovery by police.

Owners who have illegally transferred their firearm, perhaps as a straw purchase where they buy the gun for someone they otherwise would not be able to legally obtain one, may be more likely to resist attempts by police to contact them or claim the firearm was stolen after police contacted them, said Fabio. “The disparity we found in firearms reported stolen by women may be due to legal ratio and spouses making straw purchases for their male partners. But the overiding issue here is that these numbers are just estimates. Even police depart- ments do not have the resources to accurately and consistently track firearms used in illegal activities.”

Fabio and his co-authors recommend that more efforts be made to educate the public about safe storage of firearms and injury prevention, as well as encourage ongoing, systematic collaboration between public health and law enforcement experts to better understand and reduce violent crime and improve access to data collection on firearms.

Additional Pitt authors on the research were Jessica Duell, Kathleen Creppon and Rap Laporte. A colleague from the former Falk Foundation also contributed.

New kidney stone prevention proposed

A natural citrus fruit extract has been found to dissolve calcium oxalate crystals, the most common component of human kidney stones, in a finding that could lead to significantly improving kidney stone treatment, according to researchers at Pitt, the University of Houston and Litholink Corp.

In a study published in Nature, the researchers offer evidence that the compound hydroxycitrate (HCA) effectively inhibits cal- cium oxalate crystal growth and, under certain conditions, is able to dissolve the crystals and shows promise as a potential therapy to prevent kidney stones.

Kidney stones are small mineral pellets that form in the kidneys and may be found throughout the urinary tract. Frequently painful, kidney stones occur in over 762 cases in which a gun was recovered by police, to dissolve the crystals and shows promise as a potential therapy to prevent kidney stones.

Kidney stones are small mineral pellets that form in the kidneys and may be found throughout the urinary tract. Frequently painful, kidney stones occur in more than 300,000 patients to visit emergency rooms, NIH estimates. Though it’s the most frequent urinary tract ailment, little has changed in preventative treatments for kidney stones in the last 30 years. Most patients at risk for kidney stones are instructed to drink water, reduce the amount of foods high in oxalates such as leafy green vegetables and remove the calcium precipitate in their urine (CA) in the form of a potassium citrate supplement to slow crystal growth.

HCA, which is chemically simi- lar to potassium citrate, is found in several tropical plants including garcinia cambogia, commonly known as the weight-loss leaf.

The researchers found that the HCA inhibits growth of the crystals by binding to them and that even in very small concentra- tions it actually can dissolve those crystals.

Giannis Mpourmpakis, faculty member in chemical and petroleum engineering at the Swanson school, was joined in the research by graduate student Michael G. Taylor.

Mpourmpakis and Taylor applied density functional theory, a highly accurate computational method used to study the structure and properties of materials, to discover how HCA and CA bind to calcium and to calcium oxalate crystals. They found that HCA formed a stronger bond with crystal surfaces, inducing a strain that appears to be relieved by the release of calcium and oxalate, thus dissolving the crystal.

Their colleagues at other institutions studied interactions between the crystals CA and HCA under realistic growth conditions, allowing the researchers to record crystal growth in real time with near-molecular resolution. They found that the images of the crystal actually shrinking when exposed even to supersatu- rated concentrations of calcium oxalate. Other co-authors tested HCA in human subjects, allow- ing researchers to determine that HCA is excreted through urine, a requirement for the supplement to work as a treatment.

The authors say more work is needed, including additional human studies, to address the longer term safety and dosage.

—Compiled by Martha Levine
**PittBenefits**

Office of Human Resources • September 2016

**2016 On-Campus Flu Shot Clinics**

Even though it is the beginning of September and it may still be warm outside, flu season is just around the corner. According to the Centers for Disease Control and Prevention (CDC), the timing of flu season is very unpredictable and can vary in different parts of the country and from season to season, but flu activity generally begins to increase in October and has lasted as late as May. The CDC recommends a yearly flu vaccine for everyone 6 months of age and older as the first and most important step in protecting against this serious disease.

In addition to getting a seasonal flu vaccine, you can take everyday preventive actions like staying away from sick people and washing your hands to reduce the spread of germs. If you are sick with flu, stay home from work or school to prevent spreading the flu to others.

Because the peak flu season may begin as early as October, it is best to obtain a flu shot as soon as possible starting in September. It takes about two weeks for the flu shot to be most effective. You can still obtain a flu shot in December or later — flu season lasts well into spring — but the earlier in flu season that you get it, the better your odds are of staying flu free.

The School of Pharmacy, working with Falk Pharmacy, will be conducting flu shot clinics on the Pittsburgh campus. Through the dedication of Dr. Deanne Hall and her team, the University consistently has achieved high levels of participation. In addition, arrangements are being made to conduct clinics at the regional campuses.

All faculty and staff, as well as their dependents, are encouraged to obtain a flu shot. In particular, faculty and staff who work in health sciences and other areas that have any type of exposure to patients should consider the vaccination.

If you are unable to attend one of the flu clinics listed here, you can attend one at Falk Pharmacy. Clinics will be held every Tuesday and Thursday, 9:30 am – 3 pm, Sept. 13 – Nov. 29.

Starting on Dec. 1, Falk Pharmacy will be administering the vaccines on a walk-in basis during the regular business hours of 8 am - 5 pm, Monday through Friday.

**Information that you should bring with you when attending an on-campus flu shot clinic**

Prior to the start of the scheduled clinics, you will receive additional information regarding flu shots from UPMC Health Plan. If you attend an on-campus flu shot clinic, you will need to bring your University ID card as well as your UPMC Health Plan insurance card. Individuals who participate in the Panther Advocate plan can receive $25 in HIA credits for obtaining a flu shot.

If you do not carry the University’s medical insurance, you can still obtain a flu shot on campus for a $25 out-of-pocket charge.

**Pittsburgh Campus Flu Shot Clinics**

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<tr>
<th>Date</th>
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<th>Room</th>
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<td>Sept. 13</td>
<td>WPU</td>
<td>Room</td>
<td>10 am-2 pm</td>
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<tr>
<td>Sept. 19</td>
<td>Sales Hall</td>
<td>Commons 1</td>
<td>10 am-2 pm</td>
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<tr>
<td>Sept. 26</td>
<td>BBST</td>
<td>5123</td>
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<td>Oct. 4</td>
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<tr>
<td>Oct. 12</td>
<td>Braddock</td>
<td>513</td>
<td>11 am-1 pm</td>
</tr>
<tr>
<td>Oct. 24</td>
<td>Benedum</td>
<td>102</td>
<td>10 am-2 pm</td>
</tr>
<tr>
<td>Nov. 16</td>
<td>Posvar</td>
<td>Commons 1</td>
<td>10 am-2 pm</td>
</tr>
</tbody>
</table>

**Regional Campus Flu Shot Clinics**

<table>
<thead>
<tr>
<th>Date</th>
<th>Building</th>
<th>Room/Building</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oct. 4</td>
<td>Bradford</td>
<td>University Room</td>
<td>11 am-2 pm</td>
</tr>
<tr>
<td>Oct. 4</td>
<td>Greensburg</td>
<td>214 Chambers Hall</td>
<td>TBD</td>
</tr>
<tr>
<td>Oct. 27</td>
<td>Johnstown</td>
<td>Cambria Room Student Union</td>
<td>7-11 am</td>
</tr>
<tr>
<td>TBD</td>
<td>Titusville</td>
<td>219 Student Union</td>
<td>TBD</td>
</tr>
</tbody>
</table>

**Can’t make it to an on-campus flu shot clinic?**

UPMC Health Plan members also may obtain a flu shot from a participating provider at no out-of-pocket cost. Members also may obtain a flu shot with no out-of-pocket cost at CVS, Giant Eagle or Rite Aid pharmacies. Simply present your UPMC Health Plan member ID card at the time you receive your flu shot, and you will not need to submit a receipt or any other additional paperwork to UPMC Health Plan.

If you obtain a flu shot at a clinic or pharmacy that does not participate with UPMC Health Plan, then you will need to pay for the flu shot at the time of service and file a claim for reimbursement. Reimbursement forms can be downloaded from UPMC Health Plan’s website at www.upmchealthplan.com, under “Commonly Used Forms” at the bottom of the page.

**UPMC MyHealth@Work for the University of Pittsburgh Faculty and Staff**

With cold and flu season approaching, remember that the MyHealth@Work Center is conveniently located in Suite 505 of the Medical Arts Building in the heart of the Oakland campus. It is open Monday - Friday, 7 am – 3:30 pm.

Some of the conditions that UPMC MyHealth@Work can help with include:

* **UPPER RESPIRATORY INFECTIONS**
  - Acute Bronchitis
  - Coughs & Colds
  - Influenza (Flu)
  - Laryngitis
  - Pharyngitis
  - Sinusitis

* **SKIN CONDITIONS**
  - Dermatitis
  - Insect Bites & Stings
  - Impetigo
  - Minor Cuts
  - Poison Ivy
  - Rashes
  - Sunburns
  - Superficial, Limited Skin Infections
  - Suture Removal

* **OTHER COMMON CONDITIONS**
  - Headaches
  - Nausea & Vomiting
  - Pink Eye
  - Sprains & Strains
  - Urinary Tract Infections

* **INJECTIONS**
  - Allergy
  - B12
  - Depo Provera
  - Vaccinations

* **WELLNESS AND PREVENTATIVE SCREENING**
  - Blood Draws (with a prescription)
  - Blood Pressure
  - BMI
  - Height/Weight
  - Rx for Wellness: Health Coaching

* You may be referred to a primary care provider or a specialist for further diagnostic testing if warranted.

The UPMC MyHealth@Work Center for the University of Pittsburgh is NOT equipped to handle life threatening emergencies such as chest pain, shortness of breath, heart attack, stroke, or severe trauma or injury. If you are experiencing these types of issues, please call 911 or report to the closest emergency room.

UPMC HEALTH PLAN

PAID ADVERTISEMENT
The award will be presented at the society’s annual scientific meeting in November.

Evan Fisher has been promoted to senior director of innovation commercialization and is also a member of the director of licensing at Pitt’s Innovation Alert Line presents

Mariana J. Kaplan, MD
Senior Investigator
Chief, Systemic Autoimmunity Branch
National Institutes of Arthritis and Musculoskeletal and Skin Diseases
National Institutes of Health

“Premature atherosclerosis in systemic autoimmunity: lessons learned from lupus”

Friday, September 2, 2016, at 9:00 a.m.
UPMC Presbyterian, Scalf Hall 1105 AB
Donald Ainslee D.A. Henderson

D.A. Henderson, center, with students from Pitt’s Graduate School of Public Health.
Thursday 15

Molecular Biophysics/Structural Biology Seminar
"Removal of Restriction & Viral Countermeasures," Ian Taylor, Francis Crick Inst., London; 6014 BST3, 11 am

Exhibits
"The Terrible, the Repulsive & the Obscure," Michelle Mudanyahiri; 6:02 CL, 12:30 pm (humens@pitt.edu)

Senator PUP Mtg.
272 Hillman, 2:30 pm

ULS Graduate Students Pints & Pies
G-49 Hillman Library, 4:7 pm

Pitt Arts Lecture
"Thunderleg: The True Story of a Blind Man, His Guide Dog & the Triumph of Trust at Ground Zero," Michael Hingson; FFA aud., 7-9 pm

Defenses
Public Health/Epidemiology
"A Prospective Evaluation of Pancreatic Cancer Risk in Relation to Dietary One Carbon Metabolism Related Nutrients, Serum Biotin & Metabolites of the Kynurenine Pathway," Yonghu Huang; Sept. 2, Hillman Cancer Ctr., Suite 500, 1 pm

Nursing
"Cognitive & Occupational Function in Survivors of Adolescent Cancer," Bethany Nugent; Sept. 12, 431 Victoria, 9 am

Beckwith Inst. Frontline Innovation Program Grant
Applications due Sept. 2. (info: heinrich@pitt.edu)

Pitt-United Way Day of Caring
Registrations: deadline Sept. 5. (www.unitedway.pitt.edu)

Boroughs Welcomes Fund Cancer Award for Medical Scientists
Proposals due Oct. 3; (www.unitedway.pitt.edu/documents/BWFUND.pdf)

Alzheimer Disease Research Center Seed Monies Grant Program
Letters of intent due Oct. 7; invited proposals due Oct. 28. (info: 602-2735)

Chancellor’s Distinguished Teaching Awards
Nominations due Oct. 14. (kisch@pitt.edu)

Chancellor’s Distinguished Public Service Awards
Nominations due Oct. 14. (ghuber@pitt.edu)

Sept. 5 deadline for Day of Caring sign up
Painting, planting and power washing are among the projects Pitt volunteers will tackle in partnership with community organizations in Oakland and nearby neighborhoods as part of the annual Pitt United Way Day of Caring.

This year’s event is set for 8:30 a.m.-3:30 p.m. Sept 16. Transportation and lunch are provided.

To participate, sign up by Sept. 5 via the Day of Caring link at www.unitedway.pitt.edu.

ADRC seeks proposals
The Alzheimer Disease Research Center (ADRC) seed monies grant program funds pilot grants to stimulate new and innovative research relevant to Alzheimer’s disease.

Types of research proposals can range from basic science to psychosocial in methodology, with priority given to novel approaches. Proposed research may involve humans, other animals or in vitro studies.

Types of research proposals can range from basic science to psychosocial in methodology, with priority given to novel approaches. Proposed research may involve humans, other animals or in vitro studies.

The patient registry and clinical and neuropathological data collected through the Alzheimer Coordinating Center.

Additional resources include the database from the National Alzheimer’s Coordinating Center.

Full-time faculty and post-doctoral fellows of the University are eligible. Previous recipients of ADRC seed monies are not eligible.

The funding period is April 1, 2017-March 31, 2018. Grants are limited to $25,000 per project.

Email a brief description of the proposed pilot study to Leslie Dunn (dunnlo@upmc.edu) by Oct. 7. Include the title of the proposal, the names of investigators/co-investigators, a brief description of the project and a brief statement of relevance of the proposed research to the field.

Investigators invited to submit a full proposal will be notified by Oct. 12.

For more information, call Dunn at 412-602-2731.