ACCEL IS NOW ON SOCIAL MEDIA!

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ACCEL has launched an online forum to connect members, provoke conversation and serve as a catalyst for research development and innovation!

Click, here to view the Forum & go to "General Discussion" to start your own discussion or to view ongoing discussions.

NIH Site Visit

On May 12th-13th, members of the National Institute of Health were welcomed to the Delaware community by DE-CTR ACCEL. The two-day visit included presentations from the executive board, site visits to the three DE-CTR institutions and special presentations from Pilot Grant Awardees. Discussion throughout the day focused on program progress, challenges as well as opportunities and future directions to enhance clinical and translational research in the state of Delaware.

(From left to right) Thomas Buchanan (PhD), William Weintraub (MD), Stuart Binder-Macleod (PT, PhD, FAPTA), Regine Douthard (MD, MPH), Charles Riordan (PhD), Rafael Gorospe (MD, PHD), and Julia Barthold (PhD) (not present) pose for a picture during the NIH visit.

(From left to right) Pilot Grant Awardees, Michelle Woodbury (PhD, OTR/L) from MUSC, Claudine Jurkovitz (MD, MPH) from CCHS and Mia Papas (PhD) from UD presented to NIH during the site visit.
Due to her extraordinary collaboration efforts and endeavors to improve clinical and translational research, Dr. Elisa Arch has been chosen as the ACCEL programs, Researcher of the Quarter.

Dr. Elisa Arch specializes in optimization of prosthetic and orthotic devices at the University of Delaware’s Department of Kinesiology and Applied Physiology. Currently, Dr. Arch is utilizing state of the art 3D printing technology funded by the ACCEL Pilot Grant to evaluate personalized manufactured ankle-foot orthotics (AFO) for individuals post-stroke.

Stroke is the leading cause of disability in the United States affecting 795,000 individuals annually. Calf muscle weakness while walking is the primary contributor to walking impairments post-stroke causing limited mobility.

Bending stiffness of a foot ankle orthotic is believed to replicate the function of calf muscles, enhancing mobility. Stiffness or the spring like characteristic of an ankle brace is crucial to comfortable mobility and thus the springiness of the device must be personalized.

Currently, AFO’s are primarily made using a craft based method by a prosthetist or orthotist. The process consists of sculpting plastic by pulling the cast over a limb to determine stiffness and alignment, leaving room for error. Customization of AFO’s is occurring but with no quantification of cast characteristics. Personalization is subjective and often involves a trial and error process, leaving many prosthetics ineffective, restricting patient mobility.

Dr. Arch is working to improve prescribed AFO design, improving gait function, mobility and patient overall quality of life post-stroke. To achieve this, Dr. Arch is currently assessing the immediate effectiveness of customized AFO’s at three different stiffness levels by (continued on page 3)
Researchers of the Quarter: Dr. Elisa Arch

Having subjects walk in the personalized braces, no ankle brace and their prescribed ankle brace while capturing motion analysis as well as energy expenditure data.

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“I hope that my research can help drive objective design and personalization of devices so that each individual can have a device that best fits them,” stated Dr. Arch.

To create the 3D printed AFO’s, Dr. Arch has been working with the University of Delaware’s Center for Carbon Composite Materials and with the U.S. Army’s Aberdeen Proving Ground. The current model’s employed to evaluate functionality are research prototypes. Working with these facilities this summer, Dr. Archer is looking to develop a clinically viable, hybrid ankle-foot orthotic that is thinner, lightweight and able to fit in a patient’s shoe.

Dr. Arch earned her bachelor’s degree at the University of Virginia in Biomedical Engineering and completed her Ph.D in Mechanical Engineering at the University of Delaware.

ACCEL Researcher receives K Award!

Congratulations to Dr. Thao-Ly Phan who has been awarded a K award with dynamic assistance from ACCEL’s MRDA award! The K23 project spanning over 5 years, will work to target family factors that contribute to childhood obesity with the development of a video-based intervention parent management of child obesity-related behaviors, integrated into clinical care by delivery through an internet based patient portal linked to a child’s electronic health record.

Through Dr. Phan’s 2015 MRDA award, “Technology-Based Parenting Intervention for Families of Young Children with Obesity,” Dr. Phan worked closely with mentors, Dianne Abatemarco and Dr. Kazark to cultivate the skills and expertise necessary to develop a meaningful media delivered family-based research intervention in a clinical setting.

“Without the MRDA and the time it allowed me, I wouldn’t have had time to do the work to refine and resubmit the grant,” stated Dr. Phan.

Dr. Phan is currently a pediatric clinician at Nemours Alfred I. DuPont Hospital for Children. She earned her M.D. at Brown University School of Medicine and completed her residency at Jefferson Medical College and Alfred I. DuPont Hospital.
Quarter Highlights

Community Researcher Exchange

On May 23rd Nemours Alfred I DuPont Hospital for children hosted the annual ACCEL Community Research Exchange. The events’ agenda included platform presentations, a poster presentation session, keynote speakers and afternoon workshops and symposia as well as networking between academic and Delaware community partners. The event was a success with over 200 registered attendees.

Dr. David Vlahov kicked off the morning with a morning keynote address on Community Engagement for Urban Health. Followed by brief 15-minute platform presentations, offering community partners a chance to learn about pertinent ACCEL supported research being conducted in the community.

The Poster Session began at noon with over 30 ACCEL supported posters presented. Posters were then competitively judged and scored based upon their ability to communicate relevant data, findings and translational highlights to community partners. Congratulations to Dr. Krishna White and Jane Bowen who won first place on their poster, “Assessing Delaware Parents’ Knowledge, Attitude, & Preferences about Long-Acting Reversible Contraceptives for Teens using participatory Action Research.”
Quarter Highlights

Community Researcher Exchange

Seats were scarce in the Nemours Auditorium during guest speaker Howard Pinderhughes keynote address on inner city violence. Dr. Pinderhughes is an Associate Professor in the Department of Social and Behavioral Sciences at UCSF and is the author of "Race in the Hood: Conflict and Violence Among Urban Youth." Dr. Pinderhughes is also the lead partner with the UNITY Imitative (Urban Networks to Increase Thriving Youth) a CDC funded initiative on violence prevention in 30 of the largest cities in the United States, developing and implementing comprehensive violence prevention plans.

Community partners and leaders, clinicians, and members of academia listened intently to Dr. Pinderhughes speech, giving possible insight to better understand and address Wilmington Delaware's problem with violence (pictured right).

Secretary of the Delaware Department of Health and Social Services, Rita Landgraf introduced the community panel on Violence Prevention in Delaware following Dr. Pinderhughes address. The panel was a meeting of the minds, bringing together leaders from organizations all over Wilmington to prompt discussion on violence prevention.

(Pictured Left, not in order) Organizations in attendance included: Brandywine Counseling (Domenica Personti), Cease Violence Wilmington (Coley Harris), Children and Families First (Leslie Newman), City of Wilmington's Mayor's Office (Richard Iardella), Delaware Coalition to Dismantle the New Jim Crow (La Vaida Owens-White), Eastside Rising (Rev. Terrence Keeling), The Achievement Center (Charles Madden), The People's Report (Yasser Payne), Wilmington City Council (Hanifa Shabazz), Wilmington Youth Leadership Commission (Darion Gray) and Youth Violence Prevention Program at the Christiana Trauma Center (Chaz Molins).
Quarter Highlights

Research Speed Dating Event

On April 27th, Nemours hosted the DE-CTR ACCEL’s “Reverse Speed Dating Event.” This creative event offered a chance for community partners and researchers to mingle allowing for an exchange of knowledge, ideas and a platform for brainstorming. Community partners from all around the state hosted each table while researchers rotated from table to table at the ring of the bell. With upcoming ACCEL research funding opportunities this spring, the event offered a way to encourage research that matters to the Delaware community and the formation of new partnerships that can help drive a project proposal. The event was a success with 50 participants in attendance.

All Hands Lunch Meeting

On April 19th the ACCEL Executive Committee hosted an ALL Hands Lunch Meeting to appraise the program’s progress, brainstorm ideas on ACCEL’s competitive renewal and discuss possible changes to continue to progress and improve the program and in turn, clinical and translational research.

Community partners hosted their own tables while researchers rotated around the room (pictured above).

Participants broke up into their specific KCA to promote discussion (pictured above).
Grant Application Highlights

The purpose of the ACE awards is to train academic and community scholars to conduct partnership research that engages the community in the research experience. This initial research experience of the ACE award should lead to larger, externally-funded research, publications and support individuals to become independent Community-Engaged researchers. **Our vision is to improve outcomes that matter to patients and communities through research.**

### Key Dates

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### Pilot Grants Program

This year the ACCEL Pilot Grant Program will be combined with the call for Big Data projects. Senior investigators as well as junior investigators are encouraged to apply. Also, the application process has been somewhat simplified.

Proposals should be submitted electronically using the ACCEL website [grant proposal form](#) by noon on July 18. Note that all investigators on the proposal must have user accounts on the ACCEL website prior to submission. Contacting the other cores for support (i.e., Epidemiology/Biostatistics and Community Engagement—see Pre-Submission section above) must be done at least two weeks before the submission date (i.e., before June 27).
As part of the DE-CTR Clinical Research Support and Expansion Program, ACCEL hired four clinical and translational researchers with established excellence in research and scholarship.

Late last year, Dr. Diane C. Chugani joined Nemours Alfred I. duPont Hospital for Children as Director of Neuroscience Research. As a renowned neuropharmacologist, Dr. Chugani has made a name for herself in the field of autism research. Her research primarily aims to discover mechanisms involved in the pathogenesis of autism and based upon these findings, she designs and tests new treatments. A combination of approaches is utilized including imaging (PET and MRI), genetic and pharmacological studies.

Dr. Chugani’s previously conducted PET studies of serotonin synthesis in children with autism has identified differences in developmental changes in brain serotonin synthesis in young children with autism compared to children without autism. As a result of her exemplary work in the field, Dr. Chugani was recently awarded an Autism Center of Excellence Network Grant Award (NINDS) to further test innovative treatments for autism.

Her research endeavors also include investigating biochemical mechanisms involved in epilepsy. Recently, in a study involved children with tuberous sclerosis and medically uncontrolled epilepsy, Dr. Chugani demonstrated that increased metabolism of tryptophan in brain regions causing seizures was related to production of a toxic metabolite of tryptophan metabolism in the kynurenine pathway called quinolinic acid.

Dr. Chugani earned her Bachelor of Science degree at the University of Maryland and completed her Ph.D in Pharmacology at UCLA. In addition to her research achievements, Dr. Chugani is an active member of the Scientific Advisory Boards of Autism Speaks and the Tuberous Sclerosis Alliance and was a founding board member of the International Society for Autism Research. Before arriving to Nemours, Dr. Chugani worked at Wayne State University’s Department of Pediatrics and Radiology as a professor and at the Children’s Hospital of Michigan’s Director of Translational Imaging Laboratory.

Upon her arrival to Nemours, Jeffrey Campbell, MD, Director of the Nemours Neuroscience Center stated: "Dr. Chugani is a talented scientist with a long history of close collaborations with providers and mentoring young investigators. We look forward to her leadership in developing new clinician researchers within the Neuroscience Center and throughout Nemours."
ATTEND IN PERSON OR FROM YOUR HOME/OFFICE, EVERY FRIDAY 12PM-1PM

For more information on the Innovative Discovery Series, click here.

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**In Person**
Christiana Hospital, Ammon Room 2E56 (lunch served) location of speaker

Wilmington Hospital, Brandywine Room 2

**Through BlueJeans**
Meeting ID 361095905
https://bluejeans.com/361095905/
No Account sign-up required