“SCIENCE, FOR ME, GIVES A PARTIAL EXPLANATION FOR LIFE. IN SO FAR AS IT GOES, IT IS BASED ON FACT, EXPERIENCE AND EXPERIMENT.”

DR. ROSALIND FRANKLIN
1920–1958
ACADEMIC ACHIEVEMENT IS IN OUR DNA

Rosalind Franklin University of Medicine and Science (RFU) is named for Dr. Rosalind Franklin, the pioneering British researcher who captured “Photograph 51” of the “B” form of DNA in 1952 while at King’s College London. This photograph revealed the structure of DNA, the key to understanding how the blueprint for every living thing is passed down from generation to generation.

Today, Rosalind Franklin University of Medicine and Science carries on her legacy of inquiry, diligence and academic excellence. Formed in 1912 as the Chicago Hospital-College of Medicine, the university is a national leader in interprofessional medical and healthcare education.

OUR MISSION

The mission of Rosalind Franklin University of Medicine and Science is to serve humanity through the interprofessional education of health and biomedical professionals, and the discovery of knowledge dedicated to improving wellness. Today, the university is shaping the future of health care through rigorous education, pioneering biomedical research and innovative community service.

OUR VISION

The vision of Rosalind Franklin University of Medicine and Science is to be the premier interprofessional health sciences university. Sharing our accomplishments and contributing to the evidence base for science, interprofessional education and practice will help build a safer, more responsive, coordinated system of patient care, prevention and wellness.

OUR VALUES

- Civility
- Diversity
- Excellence
- Innovation
- Integrity
- Scholarship
- Teamwork
INTERPROFESSIONAL EDUCATION

At Rosalind Franklin University of Medicine and Science, we believe in breaking down academic barriers. We take an interprofessional approach to education, so our students learn from and work with peers in other programs from the beginning of their time here.

That’s especially important, as healthcare teams play an increasingly vital role in patient care. At RFU, we prepare students for the future by integrating collaboration and teamwork into education. Having more than 30 graduate health professions and science programs in one university creates great opportunities to do that.

Additionally, each first-year student in our clinical programs takes the Foundations for Interprofessional Practice course which starts during the fall quarter. This class, which acts as the introduction for an integrated, interprofessional education experience, brings students from virtually all academic programs together to learn from one another, get oriented to the culture of health care and start interacting in small, interprofessional teams.
OUR MISSION To educate future podiatric physicians in an interprofessional environment that emphasizes academic excellence, patient care and research.

Scholl College has a great reputation thanks to a well-rounded medical curriculum, a passion for interprofessional health care and an enthusiasm for applying new technologies.

A LEADER IN RESEARCH The Center for Lower Extremity Ambulatory Research (CLEAR) conducts groundbreaking research with special emphasis on diabetic foot and limb preservation. Thanks to the work of this research institution, the Dr. William M. Scholl College of Podiatric Medicine is the first podiatric medical school to be awarded a prestigious National Institutes of Health T35 summer research fellowship training grant.
INTRODUCTION
We are pleased to share with you the second issue of the Dr. William M. Scholl College of Podiatric Medicine’s biennial Research and Scholarship Report. The following pages provide wonderful insight into the latest advances by our faculty and student researchers. While this group of individuals maintains a broad portfolio of novel investigative lines of research, a general commitment toward improving the health and function of lower extremities is readily evident throughout the research endeavors undertaken.

Scholl College faculty and students continue to utilize the wide range of resources afforded to them by the college for innovative initiatives such as motion analysis, balance, and fall prevention research in the Human Performance Lab. They also embody the interprofessional spirit of Rosalind Franklin University of Medicine and Science by actively maintaining and developing new collaborative initiatives with other researchers throughout the university and beyond.

The ability to continually improve the practice of evidence-based medicine is in large part dependent upon the gathering of a greater quantity and quality of evidence through the practice of biomedical research. Scholl College remains steadfastly committed to providing an environment that cultivates our university’s motto of “Life in Discovery.” We hope you enjoy this report’s testament to that commitment.

**Stephanie Wu, DPM, MSc, FACFAS**
Dean, Dr. William M. Scholl College of Podiatric Medicine
Professor of Surgery
Professor, Stem Cell and Regenerative Medicine
Director, Center for Lower Extremity Ambulatory Research (CLEAR)
Led by Stephanie Wu, DPM, MSc, professor and dean of Scholl College, Scholl College became the first podiatric medical school to be awarded a National Institutes of Health (NIH) T35 research training grant. Funding through this grant mechanism has been secured to support the Summer Research Fellowship Program from 2008 to 2024.
SUMMER RESEARCH FELLOWSHIP

Podiatric medical students at Scholl College who are interested in conducting research during the summer between their first and second years are encouraged to pursue a summer research fellowship. Students work closely with faculty mentors throughout the eight-week fellowship, then present their findings to the university community at a poster session held in the fall. Moreover, students commonly have the opportunity to present their research at regional, national and international scientific conferences.

SUMMER RESEARCH FELLOWSHIP PROGRAM OBJECTIVES

Provide each podiatric medical student with individual, hands-on experience in scientific research by joining an ongoing research mentor or group at RFU.

Provide an environment for either basic science research or clinical research, based on the individual interests of the students.

Provide podiatric medical students with an opportunity to maintain involvement over the course of their academic medical career.

Provide podiatric medical students with educational training in data collection, data analysis, grant writing, oral presentations, written reports and computer skills.

Provide podiatric medical students with opportunities to explore career options in medical research, as well as career development through interaction with role models, advisors and mentors.

Identify and foster exceptional trainees with the potential to pursue careers in biomedical research.

Foster among the trainees a sense of belonging to a community of scientists.

Evaluate the success of the program through the feedback of the faculty mentors and student participants.
Scholl College is proud to offer numerous opportunities for its students to participate in elite-level research. World-renowned leaders in their fields from Scholl College, Rosalind Franklin University, the greater Chicagoland area and beyond serve as mentors to those students interested in conducting research. Students have the opportunity to participate in a vast variety of research foci including basic and translational sciences, biomechanics, medicine, surgery, and more. There are four primary formal programs through which students partake in research. These include the Summer Research Fellowship Program, the Swanson Independent Scholar Program, the master’s degree in tissue repair and wound healing, and the DPM/PhD combined degree program.
SWANSON INDEPENDENT SCHOLAR PROGRAM

Established in 1994, this program memorializes Walter C. Swanson, DPM ’26, an alumnus of Scholl College, whose family foundation has been a principal benefactor of the Scholl College Research Program.

PURPOSE: The Swanson Independent Scholar Program allows the highly motivated student to participate in the research process from beginning to end. Swanson Scholars receive extra training in research methodology, preparation of manuscripts and grant writing. Due to the extensive time commitment and strict academic standards required by this program, only the most highly qualified and dedicated students are accepted. Historically, Swanson Scholars become highly sought after for the most competitive residency programs in the country.

MSc DEGREE IN TISSUE REPAIR AND WOUND HEALING

This is a conjoined program with Cardiff University (formerly the University of Wales). The pursuit of the MSc degree in wound healing typically occurs in the second and third years of podiatric medical school, and includes a combination of didactic and online coursework. Students are required to attend a five-day study block in years one and two at Cardiff University. The remaining coursework can be completed online.

PURPOSE: This unique study-abroad program has been designed for exceptional students who are interested in pursuing this program. Cardiff is a premier university in Wales and is the only university to offer the MSc in tissue repair and wound healing. All clinical work to support the master’s thesis is conducted at the Rosalind Franklin University Health Clinics, under the supervision of CLEAR faculty. The opportunity to earn a master’s degree in wound healing through this unique program is just one more way that Scholl College continues to supplement the traditional knowledge and practice of a DPM with innovative, relevant training.

DPM/PhD COMBINED DEGREE PROGRAM

This program is specially designed for students interested in pursuing a career in research or who would like clinical or basic science research to play a significant role in their future podiatric practice. Each student participating in this program is required to meet the academic requirements of both Scholl College and the School of Graduate and Postdoctoral Studies at RFU.

PURPOSE: To provide students with highly advanced research training that complements the clinical training provided at Scholl College. This program is geared toward individuals interested in a career in research or academics, in conjunction with podiatric medicine. The application process for this combined degree program cannot begin until a student has matriculated into the DPM program at Scholl College.
Publication in scholarly journals affords researchers the opportunity to share their results with their fellow healthcare providers and scientists. The peer-review process, conducted by other experts in the field, ensures that the research meets the high standards required for publication. The following list of peer-reviewed publications includes titles both within and beyond the discipline of podiatric medicine — a testament to the interprofessional nature of research conducted by faculty and students at Scholl College of Podiatric Medicine.


**Bold** = Scholl College student, **Asterisk** = Scholl College faculty member, **Double Asterisk** = Rosalind Franklin faculty member (CHP, CMS, Pharmacy)


**Bold** = Scholl College student, **Asterisk** = Scholl College faculty member, **Double Asterisk** = Rosalind Franklin faculty member (CHP, CMS, Pharmacy)


# Bold = Scholl College student, Asterisk* = Scholl College faculty member, Double Asterisk** = Rosalind Franklin faculty member (CHP, CMS, Pharmacy)
Faculty members at Scholl College of Podiatric Medicine are experts in a range of specialties, from biomechanics and surgery to diabetic wound care and amputation prevention. The breadth of their expertise is reflected in the books containing chapters authored by these faculty members, listed here.
**BOOK CHAPTERS**


**NON–PEER–REVIEWED PROFESSIONAL PUBLICATIONS**


*Bold* = Scholl College student, *Asterisk* = Scholl College faculty member, Double Asterisk** = Rosalind Franklin faculty member (CHP, CMS, Pharmacy)
The sharing of knowledge inspires continued discovery. Conferences and seminars held at the local, national and international levels provide a forum for researchers to share their own findings, as well as learn from their peers. Faculty and students from Scholl College of Podiatric Medicine attend an impressive number of these professional conferences to share their research through oral or poster presentations, as seen in the following list.
**ORAL PRESENTATIONS**


_Bold_ = Scholl College student, _Asterisk* = Scholl College faculty member, _Double Asterisk** = Rosalind Franklin faculty member (CHP, CMS, Pharmacy)


Bold = Scholl College student, Asterisk* = Scholl College faculty member, Double Asterisk** = Rosalind Franklin faculty member (CHP, CMS, Pharmacy)


POSTERS


Hurst M and Rosenblatt NJ*. Initial Evidence of Different Foot Strike Patterns During Recovery from a Laboratory–Induced Trip. Summer Research Poster Session, Rosalind Franklin University, North Chicago, IL, October 2016.


Bold = Scholl College student, Asterisk* = Scholl College faculty member, Double Asterisk** = Rosalind Franklin faculty member (CHP, CMS, Pharmacy)


Saman G and Rosenblatt NJ*. Effects of Anxiety on the Biomechanics of the Compensatory Stepping Response Following a Laboratory-Induced Trip. Summer Research Poster Session, Rosalind Franklin University, North Chicago, IL, October 2016.


Young J, Wu SC* and Rosenblatt NJ*. Are Stepping Threshold and Vibratory Sensation Independently Related to Fall History in Older Adults with Diabetes? Awarded Second Place, Summer Research Poster Session, Rosalind Franklin University, North Chicago, IL, October 2017.


Bold = Scholl College student, Asterisk* = Scholl College faculty member, Double Asterisk** = Rosalind Franklin faculty member (CHP, CMS, Pharmacy)
Young J, Wu SC* and Rosenblatt NJ*. Are Stepping Threshold and Vibratory Sensation Independently Related to Fall History in Older Adults with Diabetes? Awarded Second Place Poster, Ninth Annual Midwest Student Biomedical Research Forum, Co-sponsored by Creighton University and University of Nebraska Medical Center, Omaha, NE, February 2018.

Zweck K and Lin AF*. Foot Elongation in Stance Phase of Gait in People with Diabetes. Awarded Fourth Place Poster, Ninth Annual Midwest Student Biomedical Research Forum, Co-sponsored by Creighton University and University of Nebraska Medical Center, Omaha, NE, February 2018.


**Bold** = Scholl College student, **Asterisk* = Scholl College faculty member, **Double Asterisk** = Rosalind Franklin faculty member (CHP, CMS, Pharmacy)


So J, Peterson D** and Lin AF*. Visualizing Satellite Cell Activation and Adaptation of the Neuromuscular Junction in a Resistance Training Mouse Model. Second Place Award, Summer Research Poster Session, Rosalind Franklin University, North Chicago, IL, October 2018.


Andersen R, Young J, Wu SC* and Rosenblatt NJ*. Single Step Thresholds as a Modifiable Fall Risk Factor in Older Adults with Diabetes. Summer Research Poster Session, Rosalind Franklin University, North Chicago, IL, October 2018.


**Bold** = Scholl College student, Asterisk* = Scholl College faculty member, Double Asterisk** = Rosalind Franklin faculty member (CHP, CMS, Pharmacy)


Kiefer CT, Samuelson KL, Wu SC* and Crews R*. Changing Perspectives: Offloading a Patient with a Diabetic Foot Ulcer as Opposed to Offloading a Diabetic Foot Ulcer. Summer Research Poster Session, Rosalind Franklin University, North Chicago, IL, December 2019.


Tong KP, Ortiz J and Wu SC*. Association Between Hemoglobin A1c and Microbiome in Diabetic Foot Ulcers, Intact Diabetic Skin, and Non–diabetic Skin. First Place Award, Summer Research Poster Session, Rosalind Franklin University, North Chicago, IL, December 2019.


**Bold** = Scholl College student, Asterisk* = Scholl College faculty member, Double Asterisk** = Rosalind Franklin faculty member (CHP, CMS, Pharmacy)

2019 SUMMER RESEARCH POSTER SESSION WINNERS

First place winner
Khanh Phuong Tong,
Class of 2022

Second place winner
Katherine Samuelson,
Class of 2022

Third place winners
Lauren A. Michels, Class of 2022 and Sara A. Gulczynski, Class of 2022

Students presenting their posters

Executive Vice President for Research Dr. Ronald Kaplan and Summer Research Students, Mentors and Staff
WHERE IN THE WORLD HAS CLEAR PRESENTED?

Knowledge makes the greatest impact when it is shared. Each year, faculty and students from Scholl College and its Center for Lower Extremity Ambulatory Research (CLEAR) travel across the country and around the world to share their research findings with clinicians and scientists representing a variety of disciplines. Below is a snapshot of all the places our researchers have visited since the inception of CLEAR in 2004, putting into action the mission of Rosalind Franklin University — to serve humanity through the interprofessional education of health and biomedical professionals, and the discovery of knowledge dedicated to improving wellness.
From fall prevention to diabetic wound healing, the research conducted at Scholl College and its Center for Lower Extremity Ambulatory Research (CLEAR) has real-world applications that improve the health and well-being of patients who have both acute and chronic illnesses. Much of this work is supported through grants from organizations that demand the highest standards in research excellence, including the National Institutes of Health.


Bold = Scholl College student, Asterisk* = Scholl College faculty member, Double Asterisk** = Rosalind Franklin faculty member (CHP, CMS, Pharmacy)
CLEAR’S HUMAN PERFORMANCE LAB

Instrumentation in the lab allows for analyses of movement such as linear/angular displacements of body segments and associated velocities/accelerations. The lab is also equipped to investigate the kinetics, or forces, associated with movement. Both the forces necessary to generate movement and the forces applied to the body as a result of movement are of interest to researchers working in the Human Performance Lab.
CLEAR RESEARCH

Ryan Crews, MS, CCRP: The role of biomechanics and physical activity in the development and treatment of injury/disease (e.g., diabetes, fall prevention).

Adam Fleischer, DPM, MPH, FACFAS: Clinical research that explores patient risk factors associated with favorable outcomes in elective and non-elective foot surgery, as well as foot/ankle and lower extremity therapies that may improve balance and reduce fall risk.

Leland Jaffe, DPM, FACFAS, CWSP: Clinical research into the treatment of chronic ulcerations and diabetic complications (wounds, neurological, musculoskeletal and vascular) of the lower extremities.

Robert Joseph, DPM, PhD, FACFAS: Interprofessional collaboration in clinical outcomes and education assessment, reconstructive surgery and wound healing.

Noah Rosenblatt, PhD: The neuromechanics of locomotion in association with the prevention of falls and promotion of mobility in community-dwelling older adults, as well as secondary complications associated with lower-limb prosthesis use.

Stephanie Wu, DPM, MSc, FACFAS: Clinical and translational research into the risk factors, treatment and prevention of diabetic complications (wounds, neurological, musculoskeletal and vascular) of the lower extremities.

Sai Yalla, PhD: Research involving applied biomechanics via the use of body-worn sensors to analyze human gait, balance, muscle activity and patient compliance in order to investigate diabetic complications, fall prevention and improvement of patient lifestyles through postural stability training.
CONTACT US FOR MORE INFORMATION

DR. WILLIAM M. SCHOLL
COLLEGE OF PODIATRIC MEDICINE

Rosalind Franklin University of Medicine and Science
3333 Green Bay Road
North Chicago, IL 60064-3095

CLEAR@rosalindfranklin.edu
847-578-8420
rosalindfranklin.edu
THE PERSONAL SIDE OF HEALTH CARE

Our mission? To educate future podiatric physicians in an interprofessional environment that emphasizes academic excellence, patient care and research.

Scholl College has a great reputation thanks to a well-rounded medical curriculum, a passion for interprofessional health care and an enthusiasm for applying new technologies.

EXCELLENT MEDICAL CARE IS THE PRODUCT OF A GREAT TEAM

We teach that patients are not only at the center of the model of care, but also active members of that team. Our students learn that outcomes improve through positive patient interactions and clear communication. During their didactic training, our students sharpen those interactions, along with their critical reasoning and communication skills, in our simulation labs. Our program also puts them into contact with actual patients sooner than most podiatric medical schools.

STATE-OF-THE-ART FACILITIES

The RFU 97-acre campus is home to cutting-edge technology and facilities used throughout the curriculum to develop and master clinical performance. This includes a simulation-based virtual health system and innovative education approaches, as well as laboratory and classroom spaces that promote team development and interactive learning.

INNOVATION AND RESEARCH PARK: Opened in Spring 2020, includes 100,000 square feet of space designed to increase interaction, a free exchange of ideas and sharing of expertise and scientific tools.

SIMULATION LABS: Our dynamic learning labs are designed to allow students to practice in a near-real virtual health system. Facilities include a simulated 14-room outpatient clinic, emergency department and critical care environments, inpatient rooms, an operating room and clinical procedures lab, physical assessment and diagnostic training labs, and even a simulated clinical pathology lab.

ROTHSTEIN WARDEN CENTENNIAL LEARNING CENTER: This state-of-the-art building includes classrooms that were designed to provide highly engaging and interactive learning experiences. Instruction in this environment promotes critical thinking and collaboration through team-based and problem-based learning activities.
CREATE YOUR IMPACT.

YOU CAN SHAPE THE FUTURE OF
THE DR. WILLIAM M. SCHOLL COLLEGE OF PODIATRIC MEDICINE

BUOYED BY YOUR SUPPORT, we are:

- Redoubling our commitment to student scholarships so that we can remove the economic barriers of students’ aspirations.

- Encouraging active mentorship that builds bridges of professional insight between Scholl College students and our experienced alumni.

- Supporting the evolution of podiatric practice with a focus on the changing needs of more vulnerable populations, emerging research on balance and the lower extremities and on new challenges posed by active lifestyles.

Together, we can strengthen our podiatric medical workforce and advance the discovery of knowledge dedicated to improving wellness.

PARTNER WITH US TO MAKE AN IMPACT.

SUPPORT PODIATRIC MEDICAL EDUCATION by contributing online

https://rfu.ms/impactscholl

Please consider a recurring gift, which empowers our students and faculty and funds our top priorities.
CREATE YOUR IMPACT AT SCHOLL COLLEGE

MAKE AN IMMEDIATE IMPACT

CONTRIBUTE ONLINE
(One-time or monthly gift)
https://rfu.ms/impactscholl

CONTRIBUTE BY PHONE
Contact
MAUREEN McGRAIN
at 224-570-7316

CONTRIBUTE from a donor advised fund, IRA or retirement plan or with appreciated securities.
Contact
GEORGE RATTIN
at 847-578-8345