



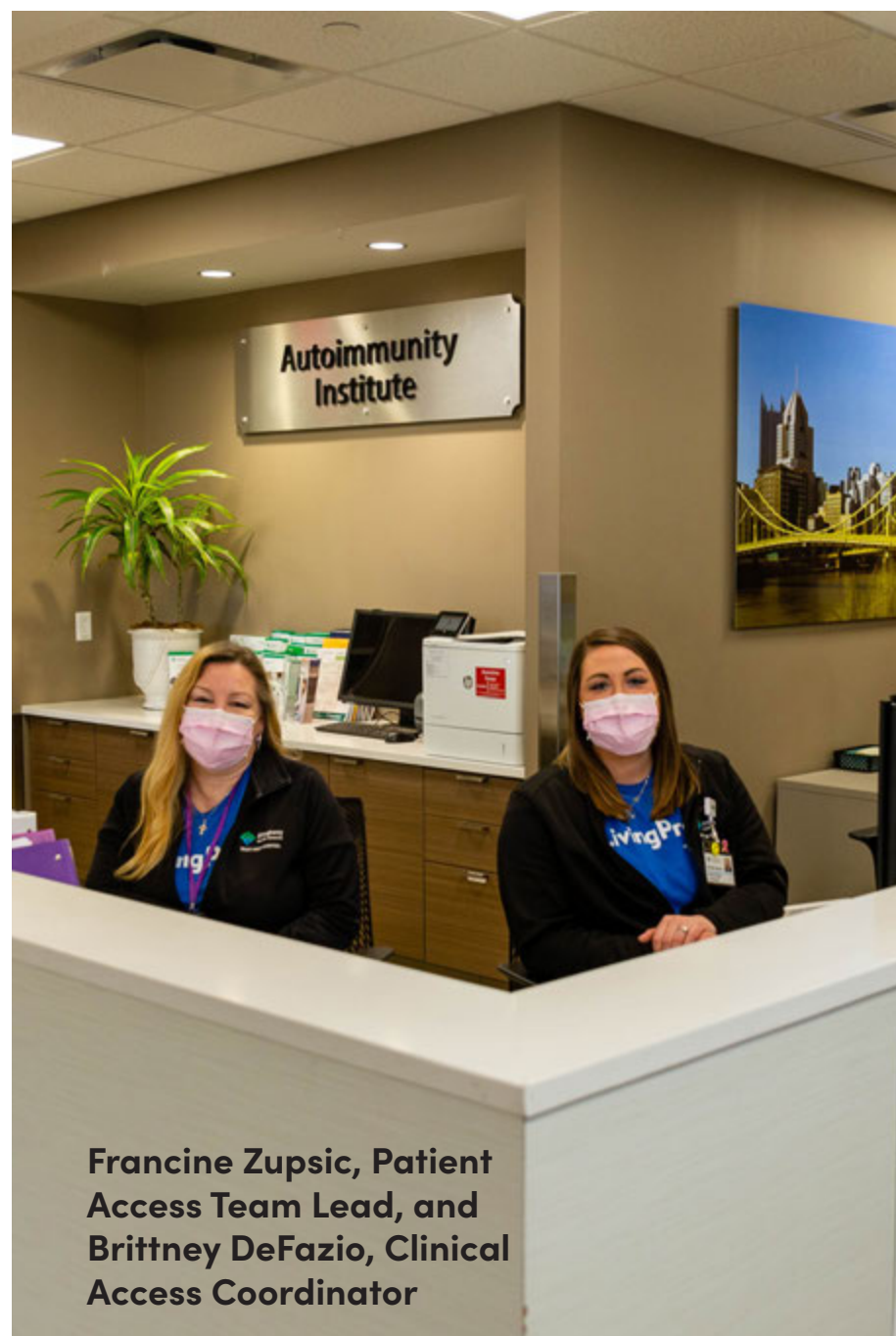
AHN

Autoimmunity Institute

C O M E T O G E T H E R



Annual Report 2021



Francine Zupsic, Patient Access Team Lead, and Brittney DeFazio, Clinical Access Coordinator

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COLLEAGUES, PATIENTS, FAMILIES, and FRIENDS:

Psoriatic arthritis...inflammatory bowel disease...depression...anxiety. In the setting of autoimmunity, chronic conditions often come together. Patients with autoimmune diseases may be diagnosed with more than one disorder – facing a constellation of symptoms and tasked with managing multiple medications. The cumulative impact of autoimmunity can leave a significant burden on both health and quality of life.

At the Allegheny Health Network (AHN) Autoimmunity Institute, physicians come together with nurse navigators, dietitians, and behavioral health consultants, working in parallel to deliver coordinated care. Our specialists collaborate under one roof so that all of our patients' medical records reside in one place. We create individualized health plans unique to each patient, with holistic benchmarks that target both body and mind. Together, we are transforming autoimmune care because we understand that effectively treating a systemic disease means caring for the whole patient.

As we watch these goals come together, we start to see a vision of a world where autoimmunity is firmly engrained in the public conversation; where diagnosis is cinched early, minimizing the downstream effects of these diseases; and where treatment is standardized, targeted, and equitable. We've made remarkable progress this past year, but there are countless more achievements ahead as we come together to conquer autoimmunity.

COME /

The Allegheny Health Network (AHN) Autoimmunity Institute is focused on advancing the diagnosis, treatment, prevention and cure of all autoimmune diseases through collaborative multi-specialty care, cutting-edge research, advocacy and education. We strive to treat the disease and care for the patient.

TOGETHER

Joseph Ahearn, MD
Chair

Paul Lebovitz, MD
Chief of Clinical Transformation

Linda Santelices, MS
Director of Research



Our Care Transformation Team of pharmacists, dietitians, social workers and behavioral health consultants come together to pool their knowledge and create a holistic, personalized health plan for each patient who walks through our doors.

P A T I E N T /

At the Autoimmunity Institute, we treat all autoimmune conditions: the common, the ultra-rare, and everything in between. **A total of 17 specialties collaborate under one roof to surround each patient with support.** Our team makes scheduling easy, allowing patients to see multiple specialists in one visit. All of our providers work together to deliver coordinated, multi-disciplinary care—and all of our patients' medical records are in one place. In addition to our expert team of doctors, nurses, and medical assistants, our Care Transformation Team works closely together to create a unique and comprehensive health plan for each and every patient.

Our specialties include Clinical Immunology, Cardiology, Dermatology, Endocrinology, Gastroenterology, Hepatology, Integrated Medicine: Massage & Acupuncture, Nephrology, Neurology, Orthopedics, Pulmonary, Psychiatry, Psychology and Rheumatology.

Kristy Rosenberry,
MSN, MBA
Nurse Navigator

P R O V I D E R





At the Autoimmunity Institute, the path from bench to bedside is only a short walk down the hall. While our providers come together with patients to make real-world observations, our on-site, full-time research team is pushing these discoveries even further.

BENCH /

Observations we make with our patients quickly spark new research in the lab as we work to better understand how these features relate to autoimmunity. Similarly, the discoveries we make in the lab only enhance the care we deliver in the clinic. Together, this dual work aims to reveal the mysteries that contribute to autoimmunity, allowing us to diagnose patients more quickly, monitor their disease more reliably, treat them more effectively, and ultimately one day uncover a cure.

This year has seen tremendous progress in research activity, with **51** publications in the medical literature; **42** active protocols launched and **80** pipeline protocols vetted; and **520** subject visits leading to **196** subject enrollments.

Paige Rutter, MS
Senior Clinical
Research Coordinator



BEDSIDE



*Our specialists
come together
to treat the
secondary effects
that autoimmune
diseases may have
on the body and
the mind, such as
anxiety, depression,
fatigue, managing
multiple
medications, and
optimizing health
and nutrition to
minimize symptoms.*

MIND



Treating autoimmunity means treating the body and the mind. For our patients with Inflammatory Bowel Disease (IBD), this approach entails **targeting the gut-brain axis**—where information processes from the intestine to the brain and back. It's because of the gut-brain axis that techniques like stress reduction, yoga, mind-body work and progressive muscle relaxation can reduce abdominal pain and improve bowel habits. Accumulating research suggests that to treat and prevent illness at an even deeper level, management techniques must **target the microbiome**, where billions of bacteria, fungi and viruses live in the intestine. Data on this mind-body connection show that individuals with anxiety disorders and depression have different microbiomes than other patients—indicating distinct processes happening at the gut level.

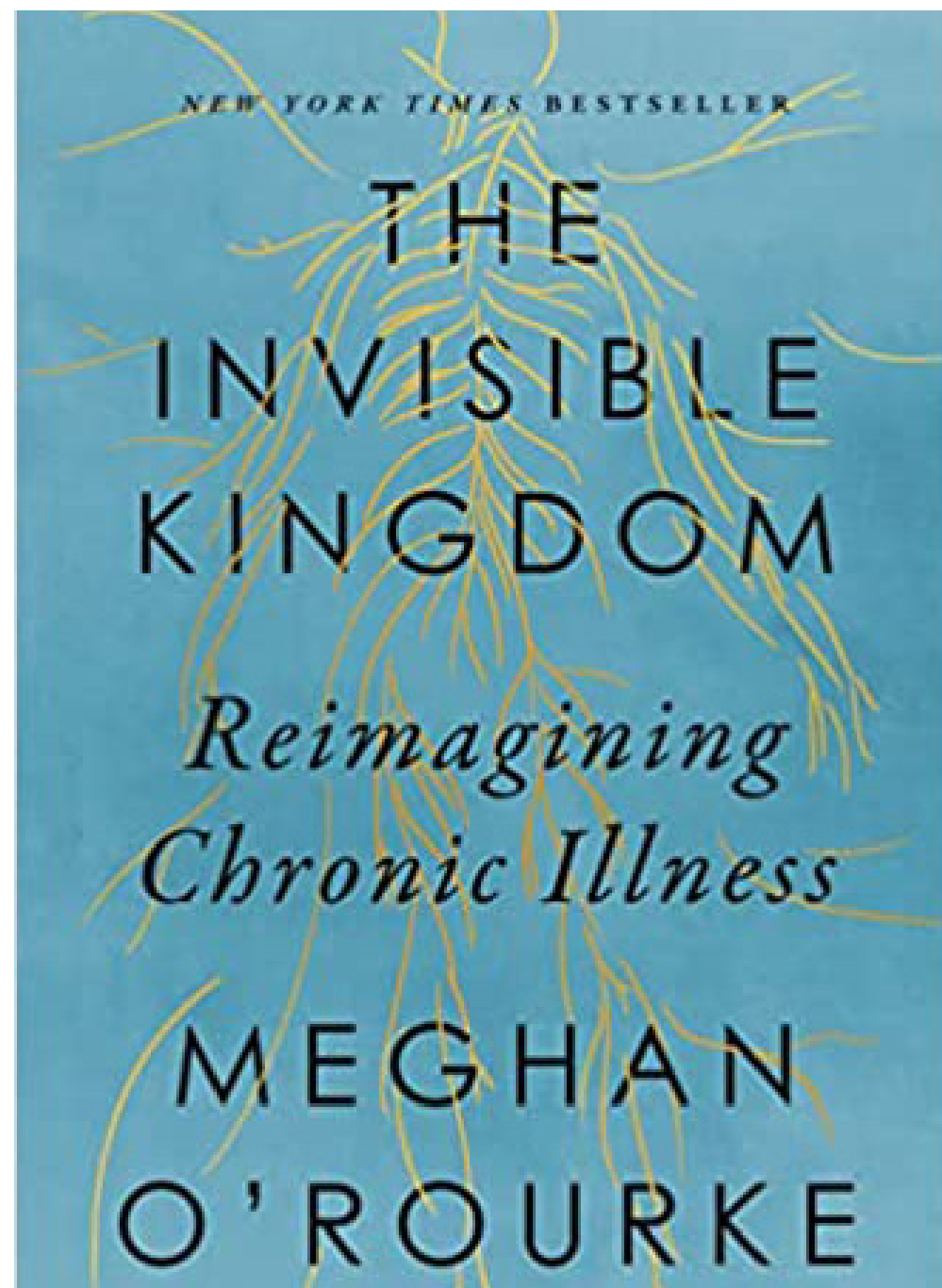
At the Autoimmunity Institute, **a Behavioral Health specialist screens each of our patients to evaluate their mental health and identify other potential comorbidities.** Our Care Transformation Team then comes together to create a holistic health plan that addresses the cumulative impact of autoimmunity.

Paul Lebovitz, MD, is a passionate proponent of team-based care.



BODY

“To have a patient destination where we coordinate a rheumatologist, a dermatologist, a gastroenterologist, and a primary care physician, and have the patient at the center of that—it’s the golden chalice. As we optimize multi-disciplinary care, together with the research that our team is doing to advance therapy, the Autoimmunity Institute is moving towards improving patients’ lives significantly.”



The Autoimmunity Institute is proud to come together with award-winning author Meghan O'Rourke, and to be recognized in her New York Times bestselling memoir

The Invisible Kingdom, which has received critical acclaim from The Wall Street Journal, The L.A. Times, Vogue, Oprah Daily, Slate, The Today Show and others.

A R T

/

In *The Invisible Kingdom*, **Meghan O'Rourke** writes about her experience living with an “unseen” chronic illness and cites how **the unique multidisciplinary model of care offered at the A H N A utoimmunity Institute is changing the patient experience for those living with autoimmune diseases**. In many ways, Meghan’s powerful memoir is the story of why we created the Autoimmunity Institute: the winding path to diagnosis, the dismissal of inchoate symptoms, the frustration of uncertainty. When Meghan heard about the coordinated care offered at the Autoimmunity Institute, she noted that “it sounded too good to be true.” She recently came together with the Autoimmunity Institute for a virtual panel discussion on living with chronic illness and her hopes for the future of autoimmune care.

Read more about Meghan’s journey in the [Pittsburgh Post Gazette](#), featuring Joseph Ahearn, MD, Chair of the Autoimmunity Institute, and Susan Manzi, MD, MPH, Chair of the Medicine Institute.

Meghan O'Rourke,
best-selling author of
The Invisible Kingdom



“Physicians [at the Autoimmunity Institute] may spend hours talking to patients and one another...On the research front, the Institute invests in cutting-edge attempts to create better diagnostic tools...while the clinical arm aims ‘not to put patients into diagnostic boxes’...When I got acutely sick, I could only dream of such a scenario!”

–Meghan O'Rourke, *The Invisible Kingdom*



Greater representation in healthcare and research is one of the surest ways to improve autoimmune care for the most patients. This year, the Autoimmunity Institute came together to further develop an equitable work environment, to reach out to diverse research participants, and to offer remarkable care to our growing patient population.

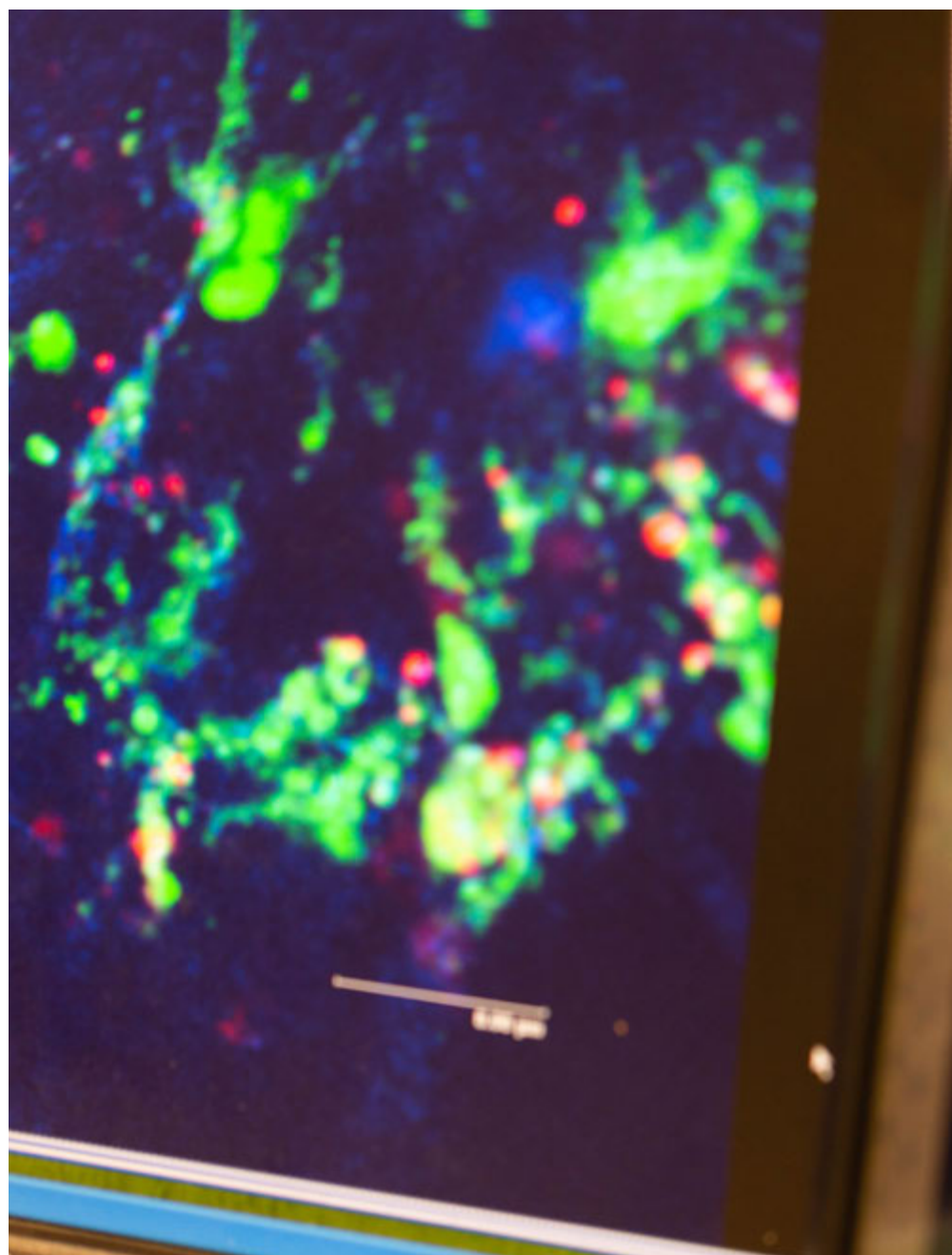
DIVERSITY /

This year, **Nicole Wilson**, Associate Director of Bioinformatics for the Medicine Institute Research Program, was invited by **Margaret Larkins-Pettigrew, MD**, Highmark's first Chief Clinical Diversity and Inclusion Officer, and **Susan Manzi, MD**, Chair of the Medicine Institute, to join the Enterprise Equitable Health Institute's (EEHI) Diversity, Equity and Inclusion (DEI) Committee as an Equity Officer of the Medicine Institute and AHN Research Institute (AHNRI). **In this enterprise-wide initiative, representatives like Nicole are trained in the fundamentals of diversity, equity, and inclusion, then share these learnings with the entire team and work towards building relevant DEI programs.** This strategy aims to equip all team members with the tools and best practices to work meaningfully in an inclusive setting and deliver the best care possible to our growing patient population.

INCLUSION



Nicole Wilson,
Associate Director
of Bioinformatics for
the Medicine Institute
Research Program and
Equity Officer of the
MIRP and AHNRI



The FDA recently approved anifrolumab-fnia, the first new biologic therapy for lupus in more than a decade. The Autoimmunity Institute came together with other medical centers to participate in the research that led to this important milestone.

RESEARCH / DEVELOPMENT

Anifrolumab-fnia is now approved for the treatment of adult patients with moderate-to-severe systemic lupus erythematosus (SLE) receiving standard therapy. The Autoimmunity Institute was proud to participate in the clinical trial testing that led to this approval under the leadership of **Mary Chester Wasko, MD, MSc**. Anifrolumab is only the fourth drug to receive FDA approval for the treatment of SLE in the past 60 years, and the third since 2011.

This isn't the first time the Autoimmunity Institute has contributed to a landmark in lupus treatment advances. Our investigators and patients were also involved in the **development of belimumab, the only other approved lupus biologic therapy**. Under the leadership of **Sonia Manocha, MD**, AHN is pushing this work further by participating in a new clinical trial that will evaluate the subcutaneous administration of anifrolumab in patients with SLE.





Cassie Dolecki,
Pharm D

Patients living with autoimmune conditions face an increased risk of infection, whether it's due to an immunosuppressive medication or to the disease itself. To further protect our patients from infection, we came together to create the Autoimmunity Institute Vaccine Clinic.

S H O T /

At each Autoimmunity Institute appointment, our medical assistants (MAs) screen patients to determine if they are up to date on their vaccines for common viral diseases like pneumonia, shingles, and Hepatitis B. Each year, the Centers for Disease Control and Prevention (CDC) put forth vaccination recommendations, both for the general public and for specific patient subpopulations, such as those with autoimmune diseases. In the midst of the COVID-19 pandemic, the **CDC has recommended pre-exposure prophylaxis with a new vaccine for immunocompromised patients.** These individuals often have a reduced humoral response, meaning that even a vaccination may leave them vulnerable to severe infection. For these patients, tixagevimab and cilgavimab, a monoclonal antibody combination, offers additional immunity to help prevent COVID-19. **The Autoimmunity Institute Vaccine Clinic has distributed over 100 doses to date.** Cassie Dolecki, our in-house pharmacy and vaccine expert, makes herself available to patients to help them take the next step in their health.



A R M



Anja Kammesheidt, PhD, Exagen Chief Scientific Officer; Mark Hazeltine, Exagen Chief Operating Officer; Debra Jeske-Zack, MD, PhD, Exagen Chief Medical Officer; Keith Lejeune, PhD, AHN Senior Vice President Research; Susan Manzi, MD, MPH, AHN Chair, Medicine Institute; Ron Rocca, Exagen President and CEO; Matthew Brown, Exagen Director of Business Development; Joseph Ahearn, MD, AHN Chair, Autoimmunity Institute

The Autoimmunity Institute came together with Exagen Inc., a leading provider of autoimmune testing solutions, to initiate a 3-year research collaboration and an exclusive license agreement.

CONCEPTION /

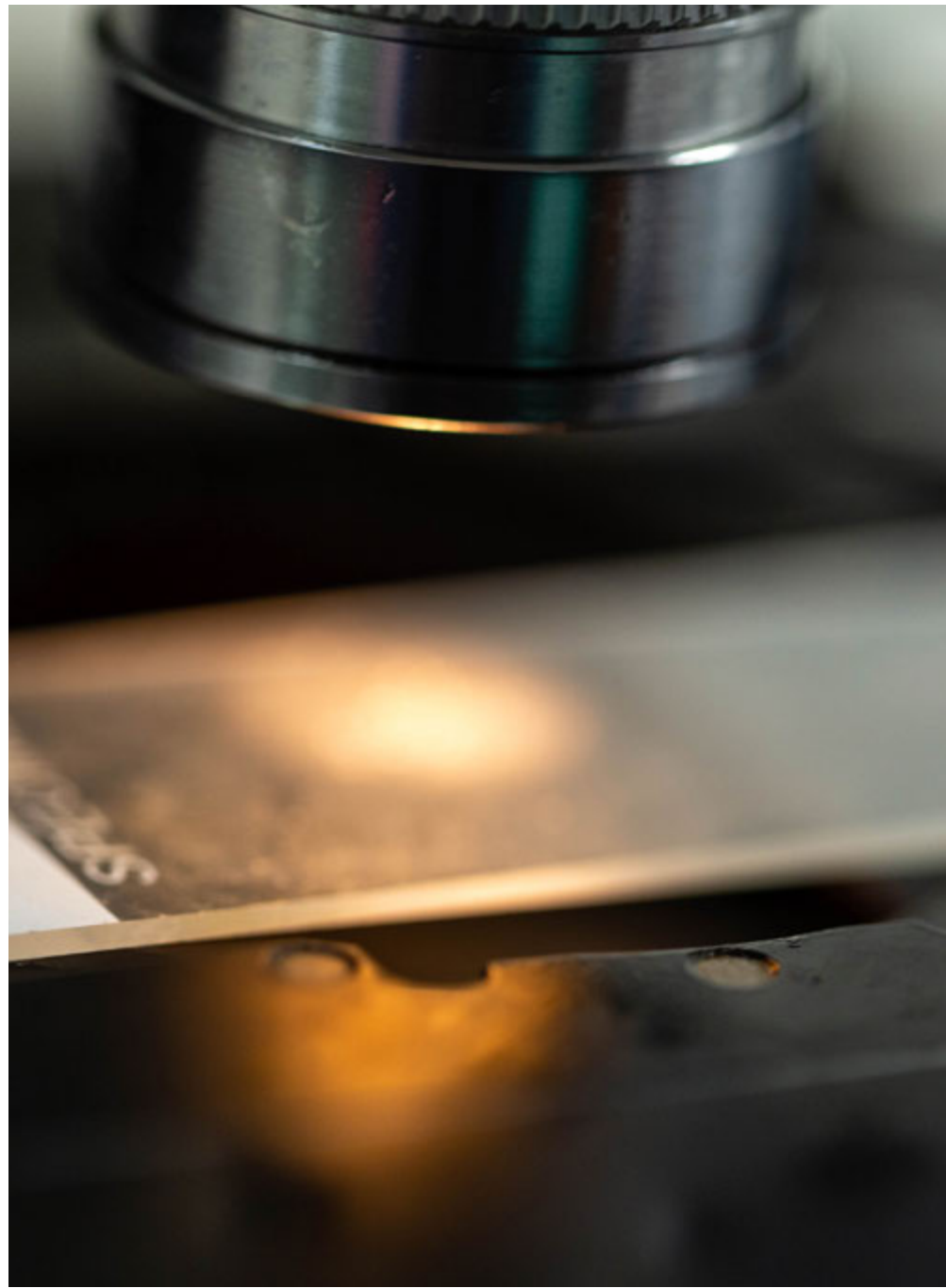
This partnership will focus on the development of novel patented biomarkers for diagnosis, prognosis and monitoring of autoimmune diseases, including systemic lupus erythematosus (SLE). Exagen will acquire a worldwide exclusive license to four distinct families of inventions from the laboratory of **Joseph Ahearn, MD, Chau-Ching Liu, MD and Susan Manzi, MD, MPH**. They will also have access to the Autoimmunity Institute's extensive biobank, which officially launched in May 2019.

One of our end goals in this endeavor is to create and commercialize a suite of novel biomarker assays that will help simplify diagnosis when evaluating patients with suspected lupus. These tests will be developed using CB-CAPs, or Cell-Bound Complement Activation Products. **Researchers at the Autoimmunity Institute have extensively investigated the utility of CB-CAPs as biomarkers for diagnosis and monitoring of SLE**, focusing on the intricate roles of complement and circulating blood cells in the pathogenesis of autoimmune diseases.



INVENTION

The Autoimmunity Institute's extensive state-of-the-art biobank officially launched in May 2019. The Biobank combines optimally preserved biospecimens with highly annotated clinical and research data—a robust resource that supports a broad swath of scientific investigation.

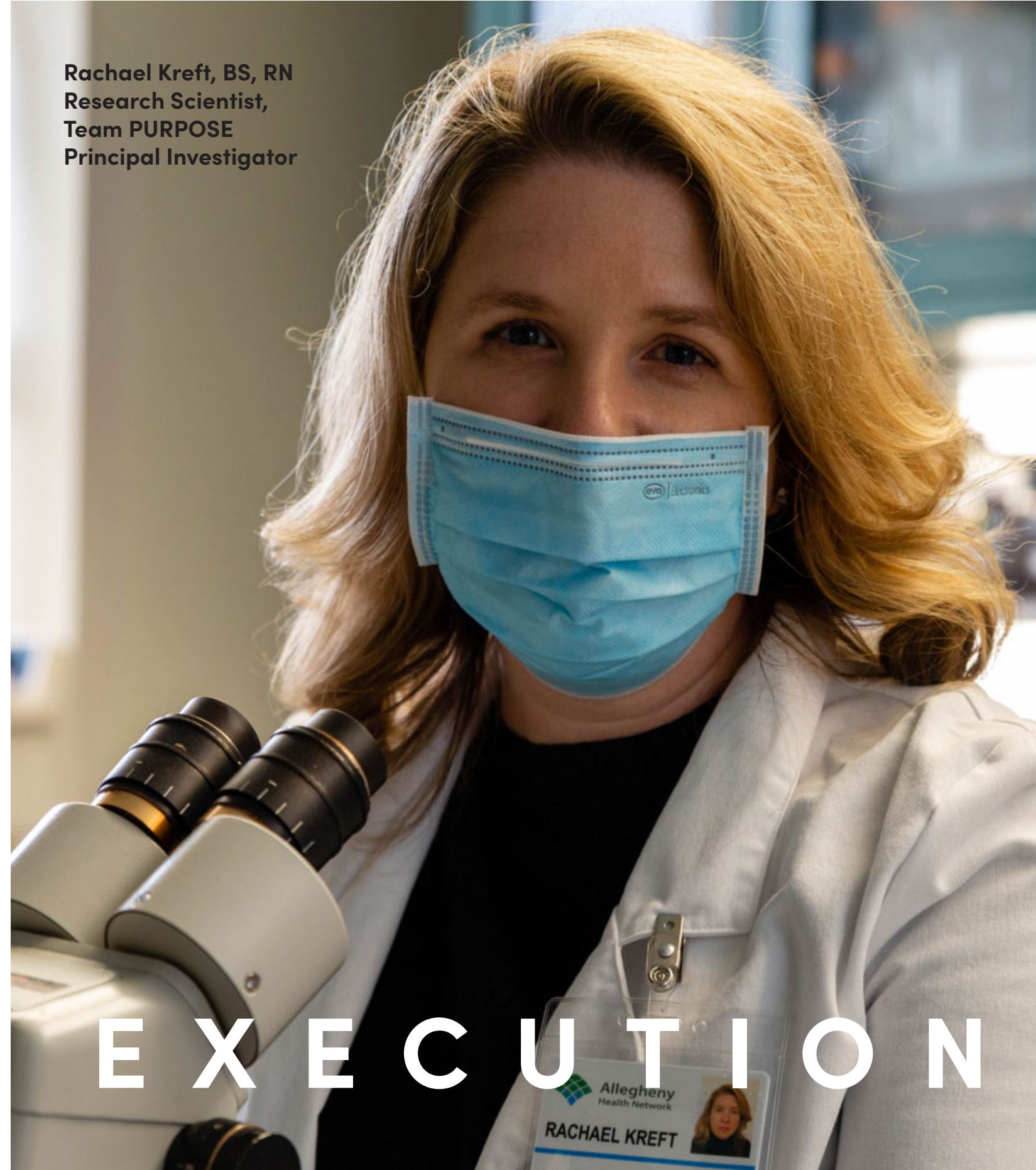


Autoimmune diseases share genetic and pathogenic mechanisms. If we can come together to solve the mysteries of one condition, discoveries related to other conditions may not be far behind.

PURPOSE /

The Autoimmunity Institute is thrilled to partner with the Relapsing Polychondritis Foundation for the launch of the **Patients' Universal Relapsing Polychondritis Open Specimen Endeavor, or PURPOSE**. Because RP is a rare autoimmune disease, no single institution could readily collect enough data from their patients to identify its underlying mechanisms. PURPOSE is an unprecedented effort to create a centralized, state-of-the-art collection of clinical and research data from patients with RP, also known as a Biobank. Once enough biospecimens are collected, investigators throughout the United States—and eventually the world—will be able to use these data to support breakthrough research that makes a meaningful difference in the treatment of RP and related diseases. PURPOSE offers promise not just for patients with this one rare condition, but for all people living with autoimmune diseases. If we can uncover answers for RP, we know these insights may have a ripple effect—propelling research forward across the entire spectrum of autoimmunity.

Rachael Kreft, BS, RN
Research Scientist,
Team PURPOSE
Principal Investigator



EXECUTION

“At the Autoimmunity Institute, the research interest is broad, and we would love to expand to other disease types. RP is our proof of concept...Our goal is to build a world-renowned autoimmune Biobanking effort specifically for diagnostic biomarkers and therapeutic targets.”



Language accessibility and nondiscrimination

Allegheny Health Network (AHN) complies with applicable federal civil rights laws and does not discriminate on the basis of race, color, national origin, age, disability, or sex in its health programs and services. In order to treat individuals in a nondiscriminatory manner, AHN provides free communication aids and language assistance services.

Spanish

ATENCIÓN: si habla español, tiene a su disposición servicios gratuitos de asistencia lingüística. Llame al 412-359-3131.

Chinese

注意：如果您使用繁體中文，您可以免費獲得語言援助服務。請致電 412-359-3131。

Vietnamese

CHÚ Ý: Nếu bạn nói Tiếng Việt, có các dịch vụ hỗ trợ ngôn ngữ miễn phí dành cho bạn. Gọi số 412-359-3131.

Russian

ВНИМАНИЕ: Если вы говорите на русском языке, то вам доступны бесплатные услуги перевода. Звоните 412-359-3131.

Pennsylvania Dutch

Wann du Deitsch schwetzscht, kannscht du mitaus Koschte ebber gricke, ass dihr helft mit die englisch Schprooch. Ruf selli Nummer uff: call 412-359-3131.

Korean

주의: 한국어를 사용하시는 경우, 언어 지원 서비스를 무료로 이용하실 수 있습니다. 번으로 전화해 주십시오. 412-359-3131.

Italian

ATTENZIONE: In caso la lingua parlata sia l'italiano, sono disponibili servizi di assistenza linguistica gratuiti. Chiamare il numero 412-359-3131.

Arabic

ملحوظة: إذا كنت تتحدث اذكر اللغة، فإن خدمات المساعدة اللغوية تتوافر لك بالمجان. اتصل برقم 412-359-3131.

French

ATTENTION: Si vous parlez français, des services d'aide linguistique vous sont proposés gratuitement. Appelez le 412-359-3131.

German

ACHTUNG: Wenn Sie Deutsch sprechen, stehen Ihnen kostenlos sprachliche Hilfsdienstleistungen zur Verfügung. Rufnummer: 412-359-3131.

Gujarati

સુચના: જો તમે ગુજરાતી બોલતા હો, તો નિઃશુલ્ક ભાષા સહાય સેવાઓ તમારા માટે ઉપલબ્ધ છે. ફોન કરો 412-359-3131.

Polish

UWAGA: Jeżeli mówisz po polsku, możesz skorzystać z bezpłatnej pomocy językowej. Zadzwoń pod numer 412-359-3131.

French Creole

ATANSYON: Si w pale Kreyòl Ayisyen, gen sèvis èd pou lang ki disponib gratis pou ou. Rele 412-359-3131.

Mon-Khmer

ប្រយ័ត្ន: ប្រសិនបើអ្នកនិយាយ ភាសាខ្មែរ, ស្នំវាជំនួយជូនក្រុមភាសា ដោយមិនគិតលុយន្តល គឺអាចមានសារបំប្រែអ្នក។ ចូរ ទូរស័ព្ទ 412-359-3131.

Portuguese

ATENÇÃO: Se fala português, encontram-se disponíveis serviços linguísticos, grátis. Ligue para 412-359-3131.



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