Dr. Gabriel Seidman, our new Director of the Institute’s Policy Department, will harness our expertise and work with governments, nonprofits, and the private sector to drive actionable change that benefits patients. Dr. Seidman joins us from Boston Consulting Group.

Dr. Seidman brings his extensive experience in strategic, public-private partnerships, policy for policy changes in the cancer and broader healthcare spaces.

“The Institute does amazing research and clinical work, and I’m thrilled that our Policy team can help augment and amplify the work our experts do on the front lines of the pandemic,” said Dr. Seidman.

The Policy Department builds on the Ellison Institute’s commitment to harnessing the power of local and global health issues and will allow us to engage thoughtfully with a range of issues including precision medicine, health technology, value-based healthcare, and global health security.

The department’s first project is the recently announced Global Health Security Consortium, a partnership between the Ellison Institute, Tony Blair Institute for Global Change, and a range of academic institutions around the world to help them deal with today’s pandemic as well as the challenges of tomorrow.

“This research is critical to building global capacity for responding to future pandemics,” said Dr. Seidman.

A Passion for Policy: Katie Guion, ’21

Katie Guion worked on the Applied Proteomics, Organizational Learning and Outcomes (APOLLO) network, a national effort that uses public available datasets to uncover patterns in cancer molecular data. Inspired by her findings, Guion co-founded a Public Data Analysis Student Group that provides students with a computational approach to finding evidence of potential drug resistance in the same datasets used by the APOLLO network. Guion will be attending USC’s Keck School of Medicine in the fall. With her developing technical skill and future knowledge of clinical care, it is her goal to impact the landscape of data analysis and patient care.

A Collaborative Spirit: Jonathan Le, ’21

Jonathan Le has worked on a number of more spectrometry-based projects in the molecular analytical lab. His recent project focused on developing a program using the data visualization and analysis platform “S” to facilitate the automatic analysis of mass spectra. In his free time around campus, he’s worked to provide new insights into a novel drug compound and how it interacts with a DRED myeloma protein target to enhance personalized drug resistance in non-small cell lung cancer. This team found that a molecular pathway known as AKTOS plays a role in drug resistance that correlates with differences in patient outcomes. Their research was recently published in Cancer Letters. Demetriou will be returning to USC in Fall to develop and focus on glottis tumours (glottis research through the Project Demetriou initiative). She looks forward to working with thought leaders in the GQM space to make progress against this terrible disease.

JOIN THE FIGHT AGAINST CANCER!

Each gift matters in the fight against cancer. By supporting our disruptive, multi-disciplinary research and programs, you will help change the face of cancer and improve human health.

Dear Friends,

The past 18 months have taught us all a lot about our capacity for resilience and perseverance. We are immensely proud that the Ellison Institute team pushed through challenges big and small and continued to work on the other side stronger and even more determined to work collaboratively to fight cancer and improve human health in that spirit. I am excited to embark on the next phase of the Ellison Institute. We have created a new structure which enables the independent governance of the Institute and the ability to accelerate delivering innovation and impact worldwide. An important part of this is the transformation of the Ellison Institute for Transformative Medicine of USC Research Foundation, our new nonprofit.

One of the Foundation’s first actions is the formation of a Policy Department, headed by our Director of Policy, Gabriel Seidman. The Ellison Institute’s mission to include a range of public health issues that are affecting our global community.

During the pandemic our team has kept pressing forward, securing million-dollar grants, creating innovative scientific programming, and monitoring the next generation of scientific minds. If you haven’t yet seen our new video, which recognizes our new phase, please visit: www.ellison.org/about.

I am extremely excited about this next journey that we are taking together. As always, thank you for your support and commitment.

Respectfully,

Dr. Daniel Agis and Dr. Gabriel Seidman
The Ellison Institute for Science in Society (Ellison Institute) is built on the principle that science is a conversation, and that conversations change minds. The Institute is designed to enable debate, open dialogue, and facilitate knowledge and evidence-based problem-solving. To that end, the Ellison Institute sponsors the annual Insights Forum, which brings together experts in their fields and the general public to collectively explore ideas, and offer ideas for solving some of the most pressing questions of our time.

In 2015, Dr. David E. Byrd called for the first Insights Forum. "We need to stress to the community of scientists that there is a need to find solutions to some of the tough questions in cancer research," Byrd said. "The question is: Given the millions of dollars invested in cancer research, and the millions of dollars spent on developing clinical treatments, why are patient outcomes not better? And if we are going to understand what is going on in the cancer genome, then we need to understand the human genome: The Human Genome Project focused on three major areas: mapping the human genome; the link between our genome and the diseases it causes; and temporal scales of cancer progression." The first Insights Forum brought together a panel of experts from various fields, including medicine, biology, economics, and policy, to discuss the current state of cancer research and potential solutions. The forum was a success, and the second Insights Forum brought together even more experts to continue the conversation.

In 1990, researchers at the National Cancer Institute (NCI) to develop a model of colorectal cancer that more accurately mirrored the disease in vivo. This project was directed to finding solutions to some of the most challenging questions of our time such as: Can we use cancer models to predict and diagnose cancer? Can we use cancer models to improve patient outcomes? And if we are going to understand what is going on in the cancer genome, then we need to understand the human genome: The Human Genome Project.

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Recent advances in cancer therapies have included the use of organ-on-a-chip models, which mimic the microenvironment of a diseased organ to study the development and progression of cancer. These models, such as those developed by the Ellison Institute, are designed to enable debate, open dogma-challenging questions. They bring together big thinkers to offer innovative, game-changing ideas.

Scientists at the Ellison Institute have been working on developing organ-on-a-chip models to better understand the progression of diseases like colorectal cancer. These models can be used to study the behavior of tumor cells in a more realistic environment.

The Ellison Institute Insights Forum, led by Dr. Heinz-Josef Lenz, M.D., Provost Professor of Biological Sciences at the USC Norris Institute for Cancer Research and Clinical Sciences at the USC Keck School of Medicine, is designed to enable debate, open dogma-challenging questions. It brings together big thinkers to offer innovative, game-changing ideas.

The first Ellison Institute Insights Forum, held in 2019, brought together experts from various disciplines to discuss how to prevent and diagnose COVID-19 using various models. The forum aimed to bring together experts from various disciplines to discuss how to prevent and diagnose COVID-19 using various models.

The second Ellison Institute Insights Forum, held in 2020, focused on the role of genomics in understanding cancer. The forum aimed to bring together experts from various disciplines to discuss how to prevent and diagnose COVID-19 using various models.

The third Ellison Institute Insights Forum, held in 2021, focused on the role of genomics in understanding cancer. The forum aimed to bring together experts from various disciplines to discuss how to prevent and diagnose COVID-19 using various models.

The most recent Ellison Institute Insights Forum, held in 2022, focused on the role of genomics in understanding cancer. The forum aimed to bring together experts from various disciplines to discuss how to prevent and diagnose COVID-19 using various models.

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Dr. Agus was inspired to obtain a copy of the genome by his place in the history of medicine, and he saw it as a trigger, “while the total genome can be represented in less than half of an inch on paper, the same approach can obtain draft files and original maps describing the interpersonal relationships that would be required for the Project from Darrell Kaiser, PhD, The Regenerative Medicine Project, and what the Human Genome Foundation and the Ellisons and others are doing.” Completing the Human Genome Project was a catalyst for the discovery and treatment of cancer. “The discovery of new treatments ... to move food through the digestive ... a remarkable tool for studying cancer in its native human organ environment and better understanding cancer treatment responses. Yet these functions have not yet been recast in other laboratory-based model systems.

The idea of arranging drugs and drug targets by allowing researchers to home in on pathways. The group discussed the question: Can we use the microengineered cancer models to prevent and delay COVID-19 (as well as other diseases)?

In an interview designed to spark new thinking, the second brought together a group of experts in medicine, biology, and society to discuss the future of medicine. The New York Times reported that the topic was “What would the future of medicine look like if we could apply specific principles from evolutionary biology to medicine?”

In 2019, the National Cancer Institute and the American Society for Testing and Materials held a conference focused on understanding the role of the cell in cancer regression. The conference was organized to bring together experts in the fields of biology, medicine, and social sciences to explore how the cell interacts with the extracellular matrix and how this interaction affects cancer progression. The conference aimed to enhance our understanding of the cell in cancer and to generate new ideas for cancer research.

In 1990, researchers at the National Institutes of Health and the University of Pennsylvania presented a model of cancer cell lines that were derived from human colon cancer. These cells were isolated from cancer patients and grown in culture. This model was designed to mimic the microenvironment of the human colon and to provide a tool for studying the mechanisms of cancer cell growth and dissemination. The model was also used to test the effectiveness of different drugs and drug combinations in inhibiting cancer cell proliferation. The model was found to be a valuable tool for studying the molecular mechanisms of cancer and for testing new drugs and therapies.

The project was designed to enable debate, open dogma-challenging questions. It brings together experts in their fields and collectively explore ideas, and their perspectives on the problem, thus improving laboratory models so that they more accurately reflect patient results, with the ultimate goal of developing better treatments.

A key to improving these models is understanding the local microenvironment—the “soil” to the tumor’s “seed”—which includes factors such as nutrients, oxygen, drugs, and interactions with adjacent non-tumor cells. Recent studies, including findings from research done in the Mumenthaler Lab, suggest that the microenvironment may be key to the development of drug resistance, which is a major obstacle for treating many cancer patients. Dr. Mumenthaler and her team have been collaborating with a group from Simula, Inc. to explore this research further, and they revealed a 5-year, $5.9 million Research Project

Human Institute book in 508 Books

More than 200 years ago, it was established that the cell is the basic unit of life and that all living organisms are composed of cells. Since then, research has revealed that cells are not static entities but are dynamic, constantly undergoing processes of growth, division, differentiation, and death. The study of cell biology has led to a better understanding of the fundamental mechanisms that regulate these processes and has provided insights into the causes and mechanisms of diseases such as cancer, infections, and neurodegenerative disorders.

In 1990, the Foundation for the National Institutes of Health (FNIH), a nonprofit organization based in Bethesda, Maryland, was established to raise funds to support research in the basic and clinical sciences. The FNIH has been instrumental in funding a number of important research projects, including the Human Genome Project, which was the largest and most ambitious scientific project in history. The project aimed to sequence and map all of the genes of the human genome, with the goal of understanding how these genes control the development and function of all living organisms.

The Human Genome Project was launched in 1990 and was completed in 2003, with the publication of the first draft genome sequence. The project was a collaborative effort involving more than 200 researchers from around the world, who used a variety of techniques to sequence the entire human genome. The completion of the Human Genome Project was a milestone in the history of science, as it provided a detailed map of all the genes in the human genome and opened up new avenues for research in genetics, medicine, and other fields.

In 2003, the complete genome data were published in the journal Nature, and the results were made available online through the National Center for Biotechnology Information (NCBI). Since then, the Human Genome Project has continued to evolve, with new discoveries being made and new technologies being developed. The project is now a part of the larger Human Genome Diversity Project, which is focused on understanding the genetic diversity of human populations around the world.
Ellison Institute Launches Policy Department

The Ellison Institute welcomes Gabriel Siedman, PhD, our new Director of the Policy Department. Dr. Siedman will work closely with Agus to build the Institute’s Policy Department, which will harness our expertise and work with governments, nonprofits, and the private sector to drive actionable change that benefits patients. Dr. Siedman joins us from Boston Consulting Group, where as a Principal, he worked on a range of issues including precision medicine, health value, public health, and policy in healthcare.

Fostering Young Scientists

Nurturing the next generation of scientists is a key component of the mission of the Ellison Institute. We strive to better a spirit of innovation, collaboration, and problem-solving in students, and are proud of what many of our undergraduate research accomplishments while they work at the Ellison Institute and beyond. Here’s how a few of our students have been working on:

A Passion for Data: Kate Goulon

Kate Goulon worked on the Applied Proteomics Organizational Learning and Outcomes (APOLLO) network, a national effort that uses publicly available data to uncover patterns in cancer molecular data. Inspired by her findings, Goulon co-founded a Public Data Analysis Student Group that provides students with a computational foundation through hands-on exploration of public and available datasets—some of the same datasets used by the APOLLO network. Goulon will be attending USC’s Keck School of Medicine in the fall. With her recent technical skill and future knowledge of clinical care, it is her goal to integrate data analysis and patient care.

A Collaborative Spirit: Jonathan Le

Jonathan Le has worked on a number of multi-stakeholder projects in the molecular analytics lab, but he pushed through challenges big and small, and that we have come out the other side stronger and even more determined to work together and inspire others.

JOIN THE FIGHT AGAINST CANCER!

Each gift matters in the fight against cancer. By supporting our research, we can help propel the next wave of scientific breakthroughs that will lead to new discoveries to vaccinate the world. To view these papers, visit the Institute’s global health-security-consortium platform to provide new insights into cancer patterns in molecular data.

—DR. AGUS

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Dr. David Agus, MD

Professor of Medicine and Engineering

Foundation Director and CEO

Laurence J. Ellison Institute for

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Rebels summer 2021

Debate us to see are on the world’s edge, through social injustice, and make our future brighter.

—DR. AGUS

Dr. Gabriel Siedman’s new role as Director of the Policy Department.
Prior, Dr. Seidman worked at the COVID-19 task forces of two different economic response for the national healthcare practices. Most recently, as a Principal, he worked with the World Economic Forum, the Global Fund for AIDS, TB, and Malaria and multiple peer-reviewed journals focused on leadership, management, and policy in healthcare.

Dr. Seidman brings his extensive experience in strategic thinking, public-private partnerships, policy for policy changes in the cancer and broader healthcare space.

“The Institute does outstanding research and clinical work, and I’m thrilled that our Policy team can help augment and amplify the impact of that work for broader population health.”

The Policy Department builds on the Ellison Institute’s commitment to harnessing unique local expertise on global health issues and will allow our faculty members to engage thoughtfully with a range of issues including precision medicine, health technology value, based public policies, and global health security.

The department’s first project is the recently announced Global Security and Stability Consortium, a partnership between the Ellison Institute, Trinity Institute for Global Change, and the University of Oxford. Informed by the need for new ways of working around the global pandemic, the consortium aims to provide insights analysis and support for leaders around the world to help them deal with today’s pandemic as well as prepare for the health security challenges of tomorrow.

The Consortium has already issued several white papers, including a recommendation for revolutionizing genomic sequencing and surveillance for infectious diseases, and a plan to develop a global public-private partnerships, policy focused on leadership, management, and policy in healthcare.

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Jonathan Le has worked on a number of more spectrometry-based projects in the molecular analysis lab with a focus on developing a platform using computational techniques such as siRNA, to investigate the molecular mechanism of cancer. Le has used his platform to develop new insights into a novel drug compound and how it interacts with a DRAJ protein target to enhance personalized drug resistance in non-small cell lung cancer. The team found that a molecular pathway known as AKT plays a role in drug resistance that correlates with differences in patient outcomes. Their research was ultimately published in Cancer Letters. Le will be returning to the University of Oxford to focus on glioblastoma multiforme research through the Project DeLorean initiative. She looks forward to working with thought leaders in the GMP space to make progress against this terrible disease.

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We look forward to more Policy Department, headed by our Director of Policy, Gabriel Seidman. Dr. Seidman will work with the Ellison Institute’s commitment to harnessing unique local expertise on global health issues and will allow our faculty members to engage thoughtfully with a range of issues including precision medicine, health technology value, based public policies, and global health security.

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