

JANUARY 2024 - ISSUE 28

# WAMJ

World Asian Medical Journal

Inspirational  
Asian Healthcare Leader

## Chi-Cheng Huang, MD, FACP, SHM

Executive Medical Director of General Medicine and Hospital  
Medicine Shared Services Wake Forest Baptist Health System

### SPECIAL REPORT I

Chronic hepatitis B (CHB) in the  
United States

### SPECIAL REPORT II

Stomach (Gastric) Cancer  
Disparities in the United States

### BIOPHARMA REPORT

Blending Biology and AI:  
Dr. Markus Gershater on the Future  
of Life Sciences



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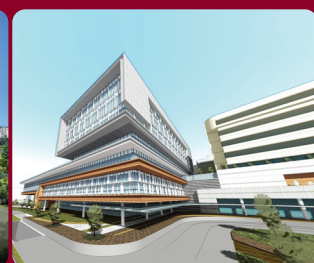
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World Asian Medical Journal is published bi-monthly by W Medical Strategy Group, 440 Sylvan Ave., Englewood Cliffs, NJ 07632. Tel. 201.408.5342, Email. wgroup@wmedical.org, Website www.wamj.org. Please send inquiries, subscription requests and address changes to the above address. Entire contents of this magazine are protected by copyright ©2020 WAMJ and may not be reproduced in whole or in part without express written consent. All rights reserved.



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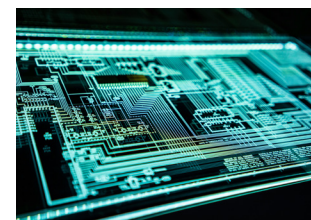
### Cover Story

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### Special Report

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- II Stomach(Gastric) Cancer Disparities in United States



### Biopharma Report

Blending Biology and AI: Dr. Markus Gershater on the  
Future of Life Sciences





## From the Publisher

### DoHyun Cho, PhD

Publisher  
President & CEO of W Medical Strategy Group  
Chairman of New York Health Forum

Welcome to the 28th edition of the World Asian Medical Journal. This issue encompasses a captivating cover story featuring an interview with Dr. Huang, a distinguished medical professional whose journey from Harvard Medical School to his current roles reflects a commitment to holistic care.

Dr. Huang's reflections on diverse hospital settings, including Critical Access Hospitals (CAH), highlight their paramount significance in addressing healthcare challenges in rural areas. As the Executive Medical Director, he shares innovative approaches taken at Atrium Wake Forest Baptist Health System to provide comprehensive care across multiple states.

In addition to his medical endeavors, Dr. Huang's philanthropic contributions, particularly the founding of the Bolivian Street Children Project/Kaya Children International, showcase a dedication to addressing the healthcare needs of vulnerable children. Readers are invited to support organizations like Project Suma, which continues this vital work.

The discussion on health inequities in the United States provides valuable insights, with Dr. Huang emphasizing the importance of addressing social determinants of health. His perspectives on cultural competence, mental health stigma, socioeconomic disparities, and language barriers contribute to the ongoing dialogue on improving population health.

In this issue, we focus on the bio-health industry's new trends, including insightful articles published by BiopharmaTrend, a specialized digital hub for news, articles, business intelligence and market research in the pharmaceutical, biotechnology and healthcare technology industries. Dr. Chul Hyun and Sabina Lee contributed to the edition by providing their viewpoints and insights.



## From the Editor-in-Chief

### Joseph P. McMenamin, MD, JD, FCLM

Editor in Chief  
EVP of W Medical Strategy Group  
Partner, Christian & Barton, LLP

The January issue of World Asian Medical Journal, #28, features a wide-ranging interview with Chi-Cheng Huang, MD, Section Chief of Hospital Medicine and Associate Professor of Hospital Medicine at Atrium Health Wake Forest Medical Center. Dr. Huang provides us with insights into his fascinating career, profoundly influenced as it was by his experience early on at a refugee camp in Serbia, under the aegis of United Nations High Commissioner for Refugees (UNHCR), and soon thereafter at an orphanage in Bolivia. His care of street children in La Paz and El Alto was particularly formative, and, it seems, harrowing; the understanding he developed prompted him to publish *When Invisible Children Sing* and, later, to build a home for them there.

Dr. Huang touches on his involvement with and the importance of community and critical access hospitals, and of academic medical centers. He stresses cultural competence, mental healthcare, punctuality, and addressing such challenges to care as language barriers and the social determinants of health.

As a result of his experiences early in life, young Chi Huang abandoned his original plan to become a diplomat like his father and to become a doctor instead. Dr. Huang's gratitude towards his parents, and for the opportunities they made possible for him, pervades his discussion, as he emphasizes his debt and his lifelong commitment to repaying it through service to others. Dr. Huang suggests it was this commitment that led to his being awarded the Taiwanese Humanitarian Award, and it's difficult to challenge his conclusion.

While we are confident you will enjoy reading Dr. Huang's interview, do not neglect any of the Journal's other offerings, such as Dr. Chul Hyun's comment on CDC's guidelines on chronic hepatitis B (CHB) here in the United States, Sabina Lee's book review of (no relation) Peter Lee's "The AI Revolution in Medicine: GPT-4 and Beyond," or the issues' biopharma reports. You'll be glad you did.

Happy new year, and happy reading.



Please send inquiries and subscription requests to [wgroup@wmedical.org](mailto:wgroup@wmedical.org)

## WAMJ Recap of the Last Issue



### Cover Story

**Karen E. Kim, MD, MS**

Dean-Designate of Penn State College of Medicine

Vice Provost for Research at the University of Chicago

Dr. Karen E. Kim, a distinguished physician, cancer researcher, and an advocate for reducing Asian health disparities, shares insights into her remarkable career and future endeavors. From childhood aspirations inspired by "Marcus Welby, M.D." to overcoming challenges in medical school, Dr. Kim's journey led her to specialize in Gastroenterology. Emphasizing the role of technology in patient care, she highlights the need for inclusive AI algorithms, especially for understudied populations like Asians. Dr. Kim addresses health disparities, notably in Hepatitis B and mental health among Asian Americans, advocating for disaggregated research. Appointed as the Dean of Penn State College of Medicine, she aims to address disparities, enhance rural health, and promote diversity in leadership. As the founder of the Asian Health Coalition, Dr. Kim discusses the organization's impact and ongoing efforts to tackle health challenges in Asian communities, concluding with a message to pursue passion and dreams while fostering inclusivity in leadership.

### Special Report I

**Asia Rising at BIO International Convention 2023**

The 2023 BIO International Convention in Boston showcased Asia's growing influence in the biopharma sector. With Boston hailed as an innovation hub, East Asian stakeholders, notably led by Samsung Biologics, demonstrated a strong presence. Korea, with over 500 companies, stood out, reflecting the government's commitment to boosting biotech competitiveness. AI and ML dominated discussions, with optimism about their impact on future therapies tempered by concerns of misuse. Asia, including India, Korea, and China, emerged as a hotbed for fast deal-making, with a shift towards leveraging big data for innovation. Trust-building and effective transnational networking were highlighted as crucial for global biopharma relationships, emphasizing the need for Asian companies to develop compelling narratives for success on the global stage.

### Biopharma Report I

**Companies Making Automated Drug Discovery a Reality**

In the biopharmaceutical landscape, AI-driven drug discovery is gaining momentum, with companies like Recursion Pharmaceuticals, Insitro, Exscientia, Insilico Medicine, Deep Genomics, Valo Health, and Relay Therapeutics leading the way. These "digital biotechs" aim to revolutionize drug discovery, reducing timelines and costs through integrated AI-driven processes. However, reliance on community-generated data poses challenges due to issues like poor reproducibility and lack of standardization. To address this, companies are emerging with automated drug discovery solutions, including Strateos, focusing on on-site, fully automated cloud labs; Emerald Cloud Lab, providing customizable experiments; Culture Biosciences, optimizing bioreactor experiments; and Synthace, offering a user-friendly, cloud-based R&D platform. These companies play a pivotal role in overcoming data generation bottlenecks and driving the industrialization of drug discovery.



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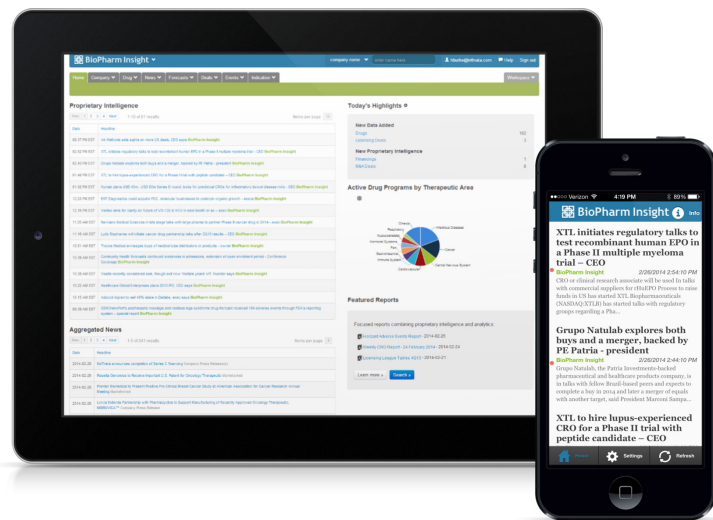


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Inspirational Asian  
Healthcare Leader  
**Chi-Cheng Huang,  
MD, FACP, SHM**

Executive Medical Director of General Medicine and Hospital Medicine  
Sahred Services Wake Forest Baptist Health System

1. You earned your medical degree at Harvard Medical School and completed your residency training at the Harvard Combined Internal Medicine/Pediatric Program. What initially sparked your interest in pursuing a career as a physician, and how did you decide to specialize in your field?

My parents immigrated from Taiwan, and we resided in Columbia, South Carolina and College Station, Texas during my childhood. Growing up in an immigrant family, I bore witness to the unwavering dedication of my parents to their children, as they shouldered multiple jobs to support our daily lives and provide us with the best opportunities in education and upward mobility as a lower middle-class family. This formative experience profoundly ingrained in me the conviction that I contribute to the communal tapestry, extending assistance to those less fortunate than me, and aspiring to emerge as a constructive member of society locally and globally. Consequently, during my early years, two distinct occupational callings crystallized in my mind: the path of a physician or that of a foreign diplomat.

As a junior at Texas A&M University, I spent a week with an NGO and visited a refugee camp in the former Yugoslavia run by the United Nations High Commissioner for Refugees (UNHCR). I had a poignant and emotionally difficult encounter with a child whose father was conscripted into the Yugoslavian War. "Tatiana" left an indelible mark on how I see the world. Witnessing the involuntary conscription of numerous individuals into the throes of war and human conflicts proved to be a transformative juncture. Consequently, my aspirations of becoming a foreign diplomat and potential involvement in war and conflicts were relinquished. Instead, I resolved to pursue the medical profession, envisioning a trajectory wherein care would be dispensed irrespective of one's background, status, or geographic location.

My trajectory towards a medical career unfolded with a resolute objective: to provide care that transcends socio-cultural boundaries. I appreciated

the holistic approach in the field of medicine, guided by the principles of inclusivity and the pursuit of the greater well-being of diverse individuals.

2. Throughout your extensive career, you've worked in various hospital settings. Could you share your thoughts and perspectives on different types of hospitals such as Academic Medical Centers, Community Hospitals and Critical Access Hospitals (CAH)?

First and foremost, I wish to underscore the paramount significance of Critical Access Hospitals (CAH) and rural health communities. Having worked in Critical Access Hospitals situated on an island, amid mountainous terrain, and in various rural locales across the United States, I contend that the absence of these institutions will precipitate more substantial population health and healthcare challenges in the United States. The data revealing higher mortality and morbidity rates in rural areas accentuates the compelling demand for Critical Access Hospitals and more primary care clinicians and public health services nationwide. Furthermore, I also would like to emphasize the pivotal role played by Academic Medical Centers. These institutions serve as crucibles for medical innovation through rigorous research and development endeavors. Equally important is their role in shaping the next generation of healthcare professionals, who will assume the mantle



Chi-Cheng Huang was actively involved in volunteering activities



of responsibility for future medical services. The Association of American Medical Colleges (AAMC) has projected a significant deficit in healthcare personnel in the United States by 2024, a shortage that will be exacerbated by an 11% surge in the population aged over 65 by 2034. A proactive approach to educating the succeeding generation of healthcare professionals, physicians, physician assistants, nurse practitioners, nurses, paramedics, and EMTs, is imperative to avert substantial problems in the United States healthcare system.

In addition, community hospitals stand as vital entities, responding to the needs of their communities that are often neglected and do not get the resources that they need. The preference for proximity to home is evident among patients and families in rural towns, provided exemplary care is assured. However, the quest for exemplary care necessitates a form of 'innovation.' I posit that innovation holds the key to resolving myriad healthcare issues in the United States. A transformative area that beckons innovation is collaboration among healthcare service providers, spanning physicians, nurse practitioners, and physician assistants. This synergy is crucial in meeting community and patient needs. A foundational innovation in this realm is the advent of virtual medicine platforms, hospital(ist) at home, virtual hospital, and virtual consultation.

For instance, at the Atrium Wake Forest Health System – Advocate Health System where I am affiliated, innovation takes the form of a substantial incorporation of virtual health and telemedicine into community hospital settings. Virtual hospitals enable practitioners to remotely oversee patients at multiple locations, mitigating clinician shortages. Initiatives such as "Hospitalist at Home" hark back to the concept of house calls, where paramedics visit patients at their residences post-discharge or when isolation necessitates attention.

### 3. As the Executive Medical Director of General Medicine and Hospital Medicine Shared Services and as the Section Chief of Hospital

### Medicine at Atrium Wake Forest Baptist Health System, what are your primary responsibilities, and how do you envision advancing healthcare in these roles?

Over the past three years, our institutional landscape has undergone strategic integration. Commencing as Wake Forest Health System, we transitioned into Atrium Wake, and subsequently engaged in a broader integration with Atrium Charlotte in North Carolina and Atrium Floyd-Atrium Navicent in Georgia and Alabama. Currently, our purview extends to approximately 22 hospitals, and our hospital medicine section manages an average daily caseload of around 2,500 patients.

Operating across three states presents a complex yet advantageous scenario. Firstly, leveraging virtual telehealth enables us to extend care to rural health and critical access sites with limited clinician resources. Secondly, our expansive organizational footprint facilitates impactful research initiatives, exploring potential differences in Learning Health System interventions. Thirdly, the sheer size of our system allows for seamless patient transfers to academic centers, fostering immediate access to specialized surgical or medical interventions when urgently needed. This extensive scope dismantles barriers that often impede health systems of lesser size.

Lastly, our position as an academic medical center (AMC) allows our Advocate Health System a synergy to work in collaborative fashion and move quicker with innovation. We serve as a crucible to provide specialized platforms for the education of advanced practitioner students, including physician assistants and nurse practitioners, alongside medical students, interns, and residents. This comprehensive educational approach caters to diverse aspirations within our cohort. Whether these individuals wish to remain in their communities, rural, urban, or community health settings, we have tailored our teaching programs to accommodate and alleviate potential tensions. This approach not only imparts practical knowledge but also equips the next generation of healthcare professionals with the requisite background to navigate their diverse practice environments.

### 4. You founded and operated the Bolivian Street Children Project/Kaya Children International. Can you share some insights into how you began this project and how it addresses the needs of the children it serves?

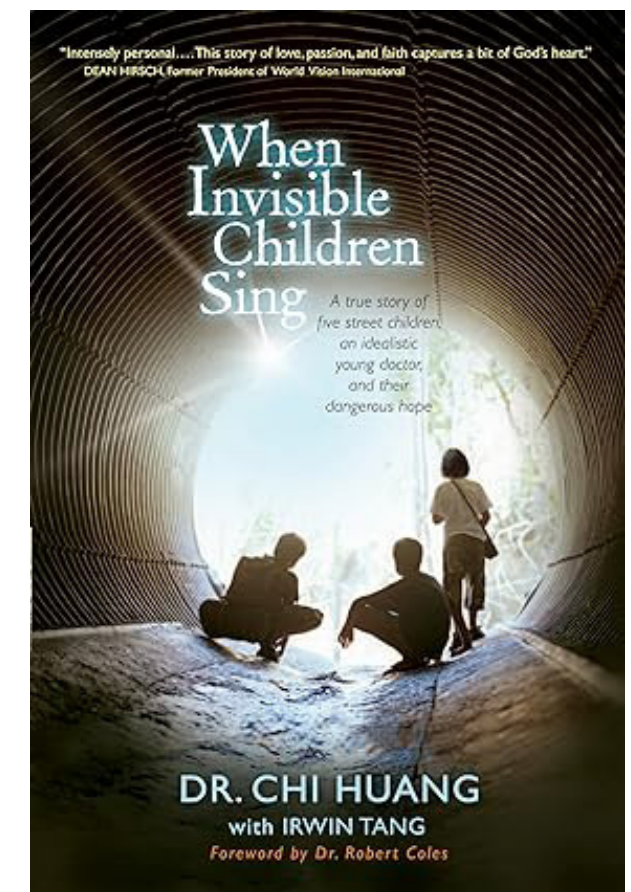
My experience in the former Yugoslavia country in 1992 very briefly at a refugee camp was a pivotal experience for me to decide on medicine as a career and more importantly as a small way that I can make change in our world. Upon the culmination of my four-year medical education, I opted for a one-year sabbatical, a sort of 'fifth year,' to take the next step in the arc service to others that are less fortunate than me. During this period, I proactively reached out to approximately fifty organizations, seeking opportunities for a medical student. Among the responses, three organizations captured my attention: one in Kenya, another in Taiwan, and the last in Bolivia.

Despite my Taiwanese heritage, I was driven by its focus on addressing the healthcare needs of vulnerable children and children of the streets coupled with my proficiency in Spanish. Upon my arrival in Bolivia, specifically in La Paz and El Alto, the pressing need for healthcare intervention among street children was evident and their need for food and shelter was overwhelming. The first 12 months in 1997 were marked by uncertainty, as my understanding of the challenges faced by these children on the streets was limited and we were staffed as a number of 1 to the care that these children needed.

Starting with my efforts with daily walks at night through the streets, I sought to know the children residing in sewers, abandoned houses, abandoned warehouses, underneath bridges and on the streets. What began as simple interactions, such as playing soccer and addressing their basic medical needs, evolved into a greater mission as the staggering realities of their plight unfolded. The mortality rate among these street babies was alarmingly high, with a shocking 30% succumbing to conditions exacerbated by malnutrition, dehydration, and the harsh living conditions at altitudes reaching up to 10,000 feet. Tragically, some children had perished from exposure

during frigid nights, forcing them to navigate the streets in darkness to stay warm while seeking shelter during the day to sleep.

After the first year in 1997-1998, we recognized the imperative to eventually establish a non-profit organization dedicated solely to addressing the myriad needs of these vulnerable children. Through this initiative and other goals, we successfully constructed three homes, a drop-in center, and a facility designed to alleviate the health challenges faced by these children. Our journey is documented in the book titled "When Invisible Children Sing," published in English, Mandarin, and German in 2011. This poignant narrative encapsulates our endeavors during our first year on the streets, providing a comprehensive account of our efforts in caring for and understanding the plight of these marginalized children.



When Invisible People Children Sing written by Chi-Cheng Huang.



**Are there any ways for our readers to support your activities or non-profit organizations?**

There are a few great organizations deserving of readers' support. One such entity is Project Suma (<https://www.projectsuma.org/>). Project Suma provides care to women trapped in the sex industry, along with their offspring. During our tenure in Bolivia, we work collaboratively with this organization. Regrettably, a disheartening consequence of many children on the streets is that they get trapped into prostitution during their teenage years.

**5. There are numerous health inequity problems in the United States that indicate the importance of social determinants of health. Please provide your thoughts on any significant issues that you believe are crucial for improving population health in the US.**

In addressing the critical issue of health inequities in the United States, particularly from an Asian American perspective, it becomes evident that the social determinants of health play a pivotal role in shaping the landscape of population well-being. A nuanced exploration of various facets reveals significant challenges and opportunities for improvement.

One prominent health inequity issue is the lack of culturally competent healthcare. Asian Americans, encompassing diverse ethnic backgrounds and languages, often encounter barriers in accessing healthcare services tailored to their unique needs. Enhancing cultural competency among healthcare professionals and increasing language accessibility can bridge this gap. Moreover, promoting diversity in the healthcare workforce and within healthcare leadership's C suite can contribute to a more inclusive and understanding environment for patients.

Mental health within the Asian American community is another pressing concern. Stigmas surrounding mental health conditions persist, hindering individuals from seeking necessary support. Culturally sensitive mental health awareness campaigns and accessible resources can help destigmatize mental health discussions and encourage seeking assistance when needed. Recognizing the diverse cultural factors

influencing mental health perceptions is crucial in crafting effective interventions.

Additionally, socioeconomic factors significantly contribute to health disparities. Many Asian American communities face difficulties related to income inequality, limited access to education, and employment disparities. Addressing these social determinants necessitates targeted policies that focus on economic empowerment, educational opportunities, and employment equity. By fostering economic stability and social mobility, the foundation for improved population health is strengthened.

Language barriers present another obstacle to accessing quality healthcare for many Asian Americans. Limited proficiency in English can lead to misunderstandings, misdiagnoses, and inadequate healthcare. Implementing language assistance programs, providing language-concordant healthcare services, and promoting language diversity in health communications can enhance healthcare accessibility and quality for linguistically diverse communities.

Furthermore, the model minority stereotype often obscures the unique health headaches faced by certain Asian American subgroups, AAPI, South Asian and Asian groups. Recognizing and addressing the heterogeneity within the Asian population is crucial for targeted health interventions. Tailoring public health initiatives to account for specific cultural, linguistic, and socioeconomic factors within different Asian communities will contribute to more effective outcomes.

In conclusion, tackling health inequities in the United States demands a comprehensive understanding of the social determinants of health. From a nuanced Asian American and Asian perspective, addressing issues such as cultural competence, mental health stigma, socioeconomic disparities, language barriers, and subgroup-specific health challenges can pave the way for a more equitable and inclusive healthcare landscape. By prioritizing these areas, we can work towards a healthier, more resilient nation that embraces the diversity inherent in its population.

**6. You've received numerous awards for your community service, teaching, and leadership.**



(Left) Chi-Cheng and his family. (Right) Chi-Cheng attends to patients with critical care needs.

**Which of these awards holds the greatest significance for you, and why?**

One of my most treasured accolades is the Taiwanese Humanitarian Award, an honor bestowed upon me nearly a decade ago. This distinction holds profound significance for me, as it reflects the culmination of familial values instilled by my upbringing. My parents, through numerous sacrifices, paved the way for my opportunities, and this award symbolizes a reciprocation of their efforts.

The acknowledgment from my own ethnic community amplifies the weight of this honor. It serves as a testament not merely to my commitment to community service but also as an expression of gratitude to my parents. Their sacrifices facilitated my trajectory towards the opportunity towards making a difference in other less fortunate than me,

However, my commitment extends beyond the confines of the Taiwanese community. Embracing a colorblind ethos, my philanthropic endeavors are dedicated to the betterment of others at large. In essence, our genetic makeup underscores our shared humanity, with a staggering 99% similarity in DNA among us. Thus, irrespective of cultural, ethnic, religious, or sexual orientation distinctions, we are

fundamentally kin.

Reflecting on my circumstances, I find myself contemplating the capriciousness of fate. The providence that led to my birth in the United States, a land of relative peace and prosperity, contrasts starkly with the plight of those born in regions marred by conflict, such as the Middle East, Central America, South America, Africa, and Eastern Europe. Grappling with the arbitrariness of such fortunes, I acknowledge the magnitude of my responsibility in light of the advantages bestowed upon me.

In embracing the ethos of "much given, much expected," I recognize the weightiness of my obligations. The sacrifices of my parents and the fortuity of my birthplace amplify my sense of duty to contribute meaningfully to society. Consequently, the Taiwanese Humanitarian Award not only represents a personal achievement but also underscores the imperative to fulfill my role to try to make a positive impact on a local, national, and global scale.

**7. Have you any advice for young people considering a future in healthcare generally, or in medicine in particular?**

Engaging in any pursuit demands an intrinsic love



COVER STORY

for the career and that is imperative: If the passion is absent, the pursuit is best left untouched. Personally, my passion lies in serving people, delivering exemplary care to my patients, and an unwavering commitment that persists even after several decades in the field of medicine. One of my mentors, Paul Farmer, saying was "I am happiest when I am with patients."

I am content and joyful when I can make a difference in others. I continue to have that fervent desire or fire to mitigate the suffering of others, whether it is the realm of healthcare, medicine, business, engineering, law, or the culinary arts, the underlying principle remains that one must possess an enduring love for her or his chosen path, a quality that allows us to sustain ourselves over a lifetime.

While an inherent passion augments one's journey, it's recognized that not everyone finds that passion in his professional pursuits. My one piece of advice to the younger generation is that effort and hard work is not necessarily genetic. Irrespective of the chosen field, diligence becomes the linchpin for success. Commitment, showing up, and a tenacious work ethic are indispensable.

The unequivocal mantra is clear: love what you do, embody passion, work assiduously, and, above all, consistently show up and work hard.

How would you articulate to young readers

that healthcare can indeed be a profession they come to cherish?

In my formative years, my aspirations leaned towards becoming an athlete, a pursuit limited by my height and a lack of innate genetic advantages. As I often counsel my own children, early exposure to a broad spectrum of experiences is pivotal. I deliberately avoid exclusively immersing them in the realm of medicine; rather, my wife and I expose them to diverse domains encompassing liberal arts, business, science, and the arts. This multifaceted exposure allows them to discern their inclinations and preferences.

Encouraging youngsters to explore diverse fields is paramount. Exposure to various disciplines, facilitated by mentors and observational learning, enables them to evaluate their proclivities. Whether aspiring to delve into any domain, immersing oneself in that environment is imperative to ascertain genuine interest. Skills and passions, once identified, can be cultivated through intentional exposure.

In essence, cultivating a profound appreciation for the healthcare profession necessitates a deliberate and exploratory approach during one's formative years. Through exposure, mentorship, and an understanding of personal passions, young individuals can discern the path that resonates with their passions and aspirations.

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## Chi-Cheng Huang

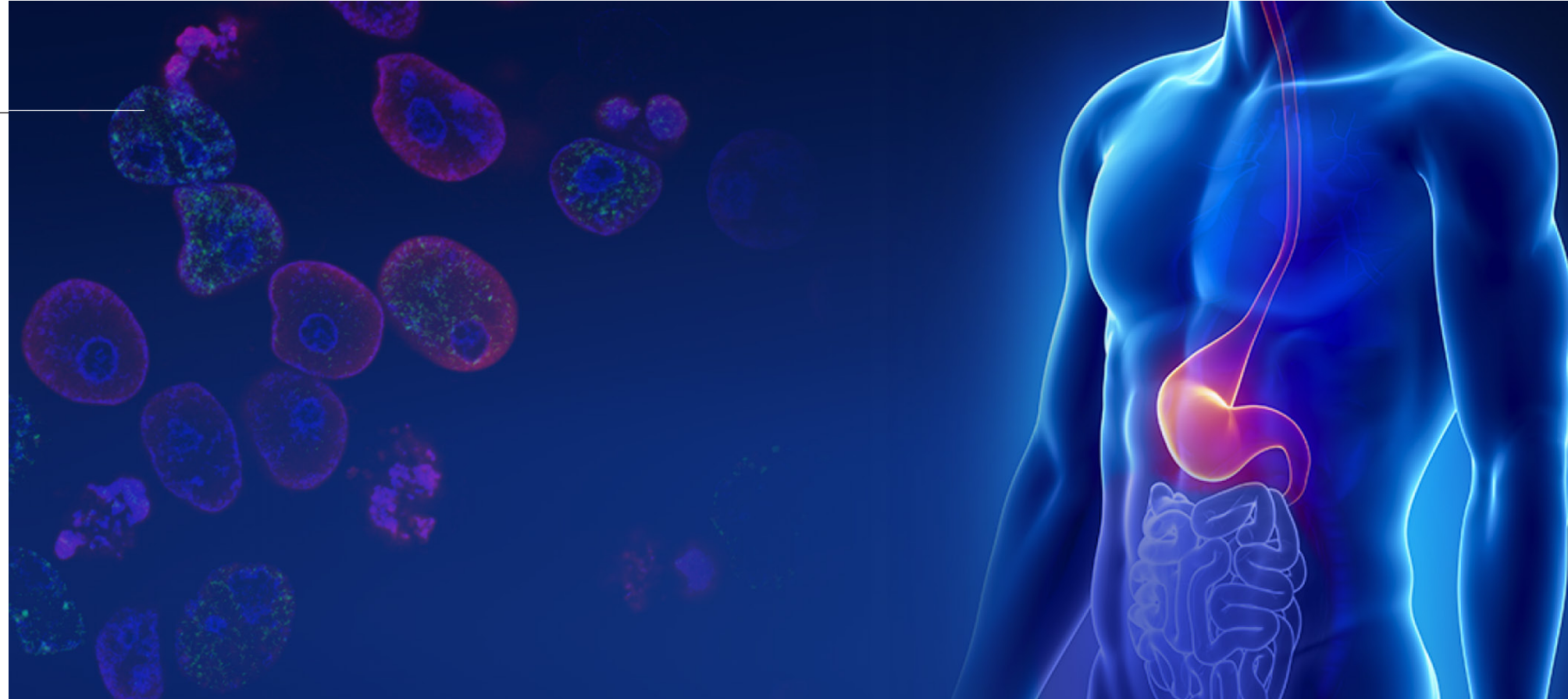
Executive Medical Device of General Medicine and Hospital Medicine Shared Services Wake Forest Baptist Health System

Dr. Chi Huang earned an undergraduate degree in biology from Texas A&M University and graduated cum laude in 1998 from Harvard Medical School. He is an assistant professor in pediatrics, medical director of inpatient pediatrics, director of the pediatric global health initiative, and internal medicine hospitalist attending at Boston Medical Center, Boston University School of Medicine. He has spent the last 15 years advocating for the lives of street children in developing countries; was influential in cofounding Casa Bernabe, a home for Bolivian street children, in 2001; and is the founder of Kaya Children International, a 501(c)(3) nonprofit. Dr. Huang has received numerous awards and recognition for his work. He and his wife, Kristin, have three daughters.



# Chronic Hepatitis B (CHB) in the United States

BY CHUL S.HYUN, MD, PHD



Hepatitis B Virus (HBV) is a leading cause of chronic liver diseases, causing cirrhosis and hepatocellular carcinoma (HCC). Approximately 296 million people are chronically infected with HBV worldwide, with 1.5 million new infections each year, and it is estimated that up to a quarter of infected persons may develop severe complications of the infection. HBV is responsible for 30% of all deaths from cirrhosis and 40% of all deaths from HCC globally. In 2019, chronic hepatitis B (CHB) resulted in 820,000 deaths, mostly from cirrhosis and HCC.

The most significant percentage of hepatitis B is found in Asia and Africa, followed by the Eastern Mediterranean regions, Europe, and America. While the World Health Organization (WHO) aims to eliminate viral hepatitis by 2030 by minimizing new infections and deaths, many challenges highlight the need for innovative initiatives consisting of primary prevention, screening, and the earliest possible intervention for infected individuals.

Although it has been reported in the US that an estimated 880,000 to 1.89 million people are chronically infected with HBV, a recent study has

suggested that the number may be as high as 2.4 million. This apparent increase in chronically infected people living in the US may be multifactorial. First, there has been a continuous influx of immigrants from countries with moderate and high prevalence levels. Secondly, the CHB prevalence of naturalized US citizens might have been underestimated. Thirdly, diagnosis and treatment rates have not improved significantly during the past decade. These facts underscore the importance of raising awareness of CHB and the need for more effective implementation of screening and linkage-to-care programs in the US, thus calling for a strategy for CHB eradication efforts.

HBV is a public health issue historically underprioritized in the United States. Many barriers have hindered the development and success of interventions. In the US, about 75% of chronic HBV infections occur in immigrants born in countries where HBV is endemic. More than half of the individuals living with chronic hepatitis B (CHB) in the US are Asian Americans. Not only are immigrant populations more significantly infected with HBV, but they are also more susceptible to poor health outcomes resulting from CHB.

## New CDC recommendation- Improvement but still falls short of achieving the UN's 2030 goal

CDC reported in 2023 new recommendations on screening for Hepatitis B Virus Infection, which includes hepatitis B screening using three-panel tests (Hepatitis B surface antigen, Hepatitis B surface antibody, and Hepatitis B core antibody) at least once during a lifetime for adults aged  $\geq 18$  years. The updated recommendation also includes the following individuals: those who request HBV testing, persons who have been incarcerated in a jail or other detention setting, persons who have had HCV infection in the past, and persons who have or had STIs or multiple sex partners.

The new recommendations from the CDC are expected to aid in reducing the current challenges in diagnosing and treating CHB in the US. However, it may require additional measures to eliminate CHB by 2030 as the United Nations General Assembly has set the control and eradication of viral hepatitis as its target for that year.

## 1. Universal HBV screening in the US.

Recent research suggests that the number of people with HBV in the US may be significantly underestimated due to the inaccurate assessment of HBV-infected immigrant populations. Since risk-based screening often fails to identify people living with HBV and is also not efficient for healthcare providers to implement, it is crucial to screen everyone regardless of age, including all immigrants and their families, irrespective of age.

## 2. Reevaluation of antiviral treatment guideline

Antiviral therapy, while not curative in most cases, is safe and inexpensive and can control viral replication, prevent mother-to-child transmission, and lower the risk of developing cirrhosis and HCC. All individuals infected with HBV and a detectable viral load are at risk of complications and can potentially spread the virus. Expanding the indications for HBV treatment to include all individuals with detectable HBV DNA could be considered an effective strategy for reducing morbidity and mortality associated with HBV as well as controlling the spread of HBV and bringing us closer to achieving the UN's 2030 goal.



## SPECIAL REPORT I

### 3. Community approach to effectively screen and facilitate linkage-to-care (LTC)

Current levels of diagnosis and treatment of hepatitis B are inadequate. The cost of antiviral agents is not a barrier. Lack of access to community and referrals presents a more significant obstacle than the low cost of drugs.

There are numerous and complex obstacles to screening and treatment for CHB. These include a lack of awareness about the disease, language and cultural barriers, and financial challenges. Additionally, US public health systems often struggle to cater to the needs of diverse populations. Poor communication between healthcare providers and patients from different cultural, ethnic, or racial backgrounds is another issue, which results in inadequate healthcare access for minority groups.

There are evidence-based initiatives that aim to improve health outcomes and reduce health disparities by using community-level approaches. Many large-scale community-based hepatitis B initiatives have shown that campaigns to educate and screen at-risk communities are effective. These community programs can help overcome many barriers to reduce the significant burden of disease.

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### Chul S. Hyun, MD, PhD

New York-Presbyterian/Weill Cornell

Chul S. Hyun received his B.A. from Johns Hopkins University, M.D. from the University of Miami School of Medicine and completed his Internal Medicine Internship and Residency at Georgetown University Medical Center. Subsequently, he pursued a Gastroenterology and Liver Fellowship at Yale University School of Medicine. He holds a Ph.D. in Biophysics from the University of Rochester School of Medicine and an MPH from Columbia University. He furthered his research with a postdoctoral fellowship in Physiology at the University of Chicago School of Medicine. He is Board-certified in Gastroenterology and has been a faculty in the Division of Gastroenterology and Hepatology at Weill Cornell Medical College since 1996. Dr. Hyun has served as a Board Member of the New Jersey State Board of Medical Examiners (2017- 2018). He has also served as the president of the Korean American Medical Association (2011-2013) and is the founding President of the World Korean Medical Organization (2012-2015). He has founded several nonprofit health organizations such as the Center for Viral Hepatitis and Asian American Stomach Cancer Task Force, and published articles on ethnic health disparities in the US. He is currently the chair of the New York Health Forum (NYHF).

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# Biopharma Report

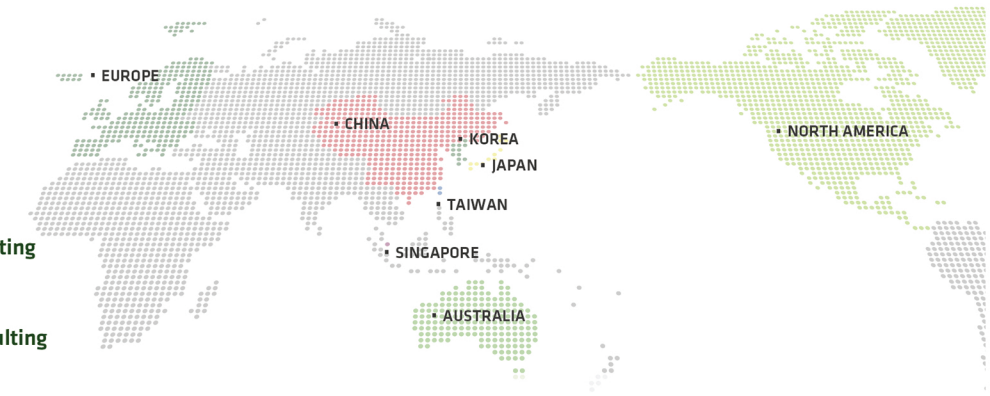
## BIOPHARMA REPORT

Blending Biology and AI:  
Dr. Markus Gershater on the Future of  
Life Sciences

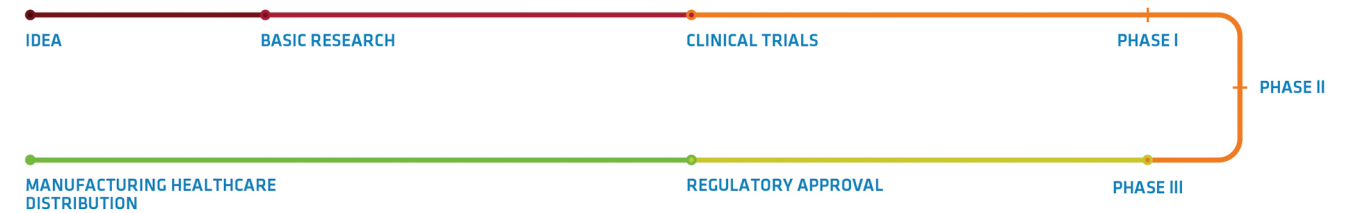


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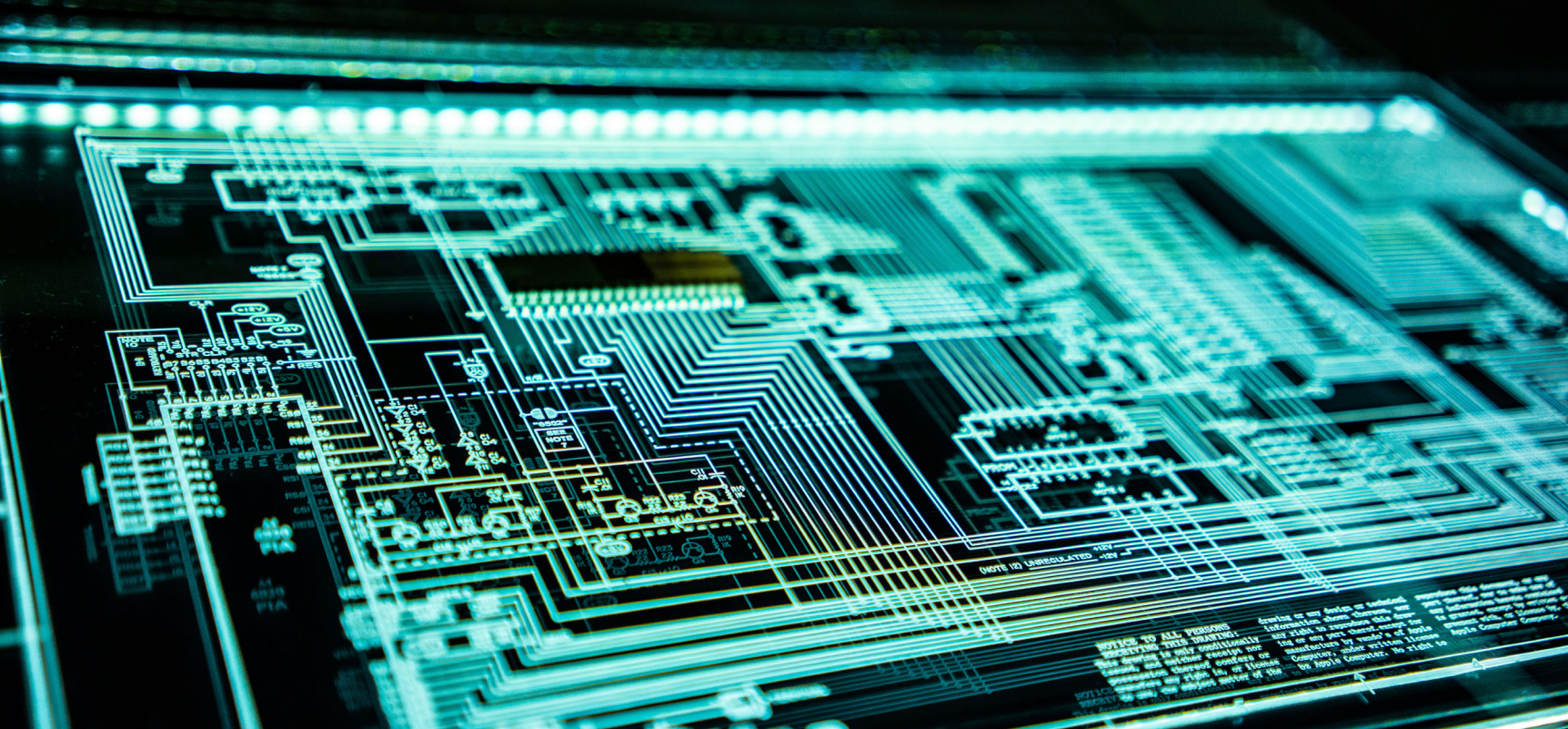
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## Blending Biology and AI: Dr. Markus Gershater on the Future of Life Sciences

BY ANDRII BUVAILO



In the dynamic field of life sciences, both biological research and AI are coming together to alter our perspective on life at its most basic level. Dr. Markus Gershater, Co-founder and Chief Science Officer of Synthace, sheds light on the challenges and opportunities this union presents. Synthace, a UK-based no-code platform, allows for the design and execution of experiments, subsequently producing and analyzing structured data. With AI's potential to revolutionize our approach to biological systems, it also highlights the need for a change in our scientific methods and thinking. As past technological shifts like electrification have taught us, simply adopting new technology isn't the end game. The true value emerges when technology is paired with new approaches and perspectives. In this interview, Dr. Gershater discusses a future where AI becomes an integral part of biology, not just an adjunct.

**Dr. Gershater, you've got your feet in both biochemistry and synthetic biology while navigating a fast-paced tech world. In your view, what's the most exciting promise that AI holds for biotech?**

The promise is that, quite simply, AI will give us insights into biology that are currently impossible and that we can't yet begin to imagine. Also exciting, but secondary to this, is how it will prompt changes in the way we work. The reason I say this is because my underlying

belief here is that, right now, AI and biological research don't yet fit together properly.

AI is a technology that fundamentally demands change from the people who want to use it, so for AI to have a fundamental impact on biology, we really have to change the way we approach the process of science in the first place. It seems to me that organizations and teams will have to adopt new mindsets, new processes, and new tooling.

There are some companies who, today, already exhibit many of the required characteristics of companies that are looking to the future in terms of how they think about the way we gather data about biological systems. Think of companies like Recursion and Insitro, that have built whole automated platforms around this. Fully digitized, they are built to systematically create a greater understanding of biological systems.

They give us a glimpse of what the future may look like: the routine generation of high-quality, large, varied, multidimensional data, in the full context of rich metadata. Data that provides the foundation for AI, and a step change in our ability to understand and work with biological systems.

**Of course, every silver lining has a cloud. What do you see as the biggest challenges in bringing AI into the world of bioengineering? How can the industry, Synthace included, best tackle these hurdles?**

We recently ran some research that found a staggering 43% of R&D decision-makers have low confidence in the quality of their experiment data. This is concerning because it doesn't just demand we improve our means of recording experiment data, it also demands we perform experiments that generate higher quality data in the first place. It follows that to understand this data correctly we also require a high level of granularity about how it was created: metadata about experimentation should be automatically collected as much as possible.

In the context of AI, this is a problem. The scope of possible uses for AI in biotech is massive and can be applied in a myriad of ways across every aspect

of the value chain. Saying "we need to use AI" is like saying "we need to use electricity": obvious and useless unless you talk specifics. Much more meaningful is "we need to apply large language models to improve the user interfaces for our complex equipment and methodologies," or "we should use active learning to optimize the development of assays for early discovery."

"We need to use AI" is in danger of being a kind of an empty call to arms, with no acknowledgment of all the change that will be needed to make the touted revolution come about. In the second industrial revolution, electricity was insufficient by itself to increase productivity. People needed to first realize that it offered a way of changing the way they worked. Factories no longer had to be arranged around massive drive-shafts powered by steam engines. Instead, they could be arranged into production lines. It was the combination of new technology (electrification) and new ways of working (production lines and separation of labor) that enabled the step-change in productivity.

For Synthace, our focus is firmly on the experiment itself. How can we gather, generate, and structure high-quality data for export into systems that are able to make more use of it than the frankly limited and limiting data available today. To continue the above analogy, how can we adapt the factory floor to make the best use of electricity?

**Speaking of challenges, there's no denying that the complexity of biological systems makes for a dizzying amount of data. What's your take on the best approach to handle this data overload, and where does AI come into the picture?**

Biology's complexity emerges from the interactions of its simpler components, giving rise to unique properties and behaviors. These emergent features can't be reliably predicted from individual components, necessitating a comprehensive and interconnected dataset for a deeper understanding of biological systems.

Much of the big data produced in biology are multi-omic studies: highly detailed molecular



## BIOPHARMA REPORT II

snapshots of a system. But apart from genomic data, all of these readouts are highly dynamic: they change over time and in response to a multitude of stimuli. To truly understand a biological system, we must understand its dynamics as any number of factors change. We can't just measure a lot of things, we have to measure them in the context of this multifactorial landscape, systematically running experiments that map the space, and allow AI to "see" what is going on.

Just sequencing something isn't enough; we must also look at how it works, interacts, and reacts to different stimuli. In our pursuit of comprehending the intricacies of biological processes, it's clear that one-dimensional data alone won't lead us far along this investigative path. Ideally we'd have large, varied, dynamic, high-quality data enriched with as much experimental context as possible, such that future as-yet-unimagined AI-driven analyses can make as much use of today's data as possible.

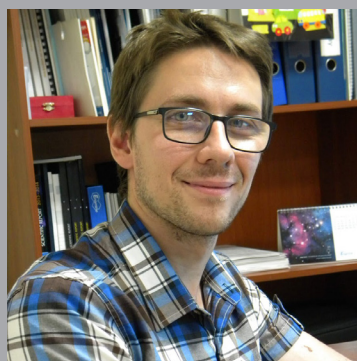
**Finally, the idea that AI might change our whole understanding of the universe is a bit of a head-spinner. Can you delve a bit deeper into that concept? How might AI transform the way we interact with everything from biological systems to the wider world around us?**

The buzz around AI/ML is remarkably strong and, without a doubt, it will be transformational in bringing

new insight to biology. But as I've said, we have yet to see the full realization of its potential. The work of biology and the data/metadata that it produces is difficult to represent in code and difficult to digitize. If we can't do it, AI/ML remains a pipe dream that remains the preserve of "big tech." The volume of data, and also the quality of data we can provide to those artificial intelligence and machine learning tools determines the likelihood of uncovering anything interesting.

Is there a way to enable and control the entire experiment lifecycle from end to end? Is there a way to enable multifactorial experimentation, sophisticated automation, and AI/ML with a single unifying standard? Is there a way to elevate the scientist so they can spend more time on what matters most, applying more of their individual talents to today's most difficult problems with the full power of modern computing?

In the event that we are able to adapt in the right ways to the possibilities created by these tools, we may begin to map entire biological landscapes overnight, using the resulting data and metadata to predict future outcomes. There will likely come a time in this decade when AI can predict the best possible experiment design before we even step into the lab. Should this come to pass, the upshot will be scientific breakthroughs that defy belief by today's standards.



### Andri Buvailo, Ph.D.

Co-Founder, Director, BiopharmaTrend

Andrii Buvailo is a pharmaceutical industry analyst and writer, focusing on emerging companies (startups), technologies and trends in drug discovery, and R&D outsourcing. He received a master's degree in Inorganic Chemistry and a PhD in Physical Chemistry from Kyiv National Taras Shevchenko University. His articles were published on Forbes.com, and market research reports were referenced by some of the leading life science organizations. He also participated in numerous scientific projects in Ukraine, Belgium, Germany, and the United States (DAAD, Horizon 2020, NATO, CRDF grants), and published in high-impact research journals.

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# Stomach (Gastric) Cancer Disparities in the United States

BY **CHUL HYUN, MD, PHD, MPH**  
PRESIDENT  
STOMACH CANCER TASK FORCE

Gastric cancer (GC) is the fifth most common form of cancer worldwide. In 2020, there were approximately 1.1 million new cases reported, making it a significant cause of cancer-related deaths. The prevalence of GC is high in Asia, followed by Latin America, Central and Eastern Europe, and other countries. GC is often fatal but can be cured if caught early. Unfortunately, it is frequently undetected until it has spread to other organs or lymph nodes. GC's global five-year survival rate is only 20%, while in the US, it's slightly better at 33%.

Although the incidence of GC, including cardia GC (CGC) and non-cardia GC (NCGC), is low in the United States, it varies significantly among different ethnicities and races. For example, the incidence is significantly higher in specific minority populations than in non-Hispanic white (NHW) populations. The highest number of cases of GC in the US is reported among Asian and Hispanic Americans. In subjects aged 50 and above, the incidence of NCGC adenocarcinoma was at least 1.8 to 7.3 times higher in non-white groups than in NHW. Compared to NHW,

the incidence of NCGC was up to 14.5 times higher in Korean American men and women. Additionally, there are notable differences in mortality rates between different racial and ethnic groups. For example, between 2000 and 2019, age-standardized mortality rates linked to GC were the highest among specific Asian and Black communities, while NHW had the lowest rates.

Despite the persistently high incidence and mortality from GC among these minority groups, the federal funding allocated to GC research is significantly lower than funding for other types of cancers found more commonly in NHW. These disparities in incidence, mortality, and funding may increase with the expected rise in the minority population due to immigration in the US.

It is concerning that high-risk populations in the United States lack an organized screening system for GC. To address this issue, it is essential to understand why these minority groups are more susceptible to GC. This may involve addressing social and political

barriers and improving infrastructure to reduce disparities and risk of GC in specific populations.

Developing a strategy to facilitate research, screen for GC, and increase primary prevention accessibility in high-risk populations is crucial. It is essential to allocate more funds for basic and clinical research and studies to assess the cost-effectiveness of regular screening for GC in high-risk populations. In addition, we need a multidimensional grassroots campaign involving the community, healthcare professionals, and policymakers to encourage local and national governments to implement strategies for GC screening in these minority populations.

## Stomach Cancer Task Force (SCTF)

The SCTF is a US 501c3 Not-for-profit organization, established to engage the community to battle the GC disparities in the US. Its mission is to bring together communities and physicians to work towards creating innovative approaches for stomach cancer awareness campaigns.

The specific objectives of SCTF are (A) to effectively campaign to raise public and healthcare provider awareness of stomach cancer and its disparities in the United States; (B) to provide patients afflicted with stomach cancer with support and to link them with clinical care, especially for those that are economically disadvantaged; (C) to support stomach cancer research and provide patients access to the fruits of such research; and (D) to reduce the impact of stomach cancer by making stomach cancer screening and early detection more accessible to high-risk populations, focusing on equity.

A successful GC campaign should have the following three specific objectives. First, it should increase public awareness of GC and its disparities. We need a multi-faceted grassroots approach involving communities, physicians and other healthcare providers (HCPs), and policymakers to achieve these



goals. The primary community component would be education, increasing awareness of GC and its risk in specific populations. It is crucial to spread information to the affected ethnic minority populations, where language, culture, and financial barriers may preclude them from accessing appropriate care.

Second, it is essential to reach out to HCPs in the community. They need to know the level of risk their communities have in developing GC. This could be through seminars and forums for physicians with the most frequent contact with at-risk communities, including Asian and Hispanic Americans. In addition to updating HCPs on GC disparities, screening, treatments, and monitoring, these educational activities can help motivate providers to participate in community outreach.



## SPECIAL REPORT II

Finally, there exists a significant knowledge gap among policymakers regarding GC risk in minority populations, like the knowledge gap present in the general public and HCP communities. According to an informal survey conducted by SCTF in 2023, only one of 17 policymakers (including 2 federal senators, 6 federal congressmen, 3 state senators, 4 state assemblymen, and 2 mayors in metropolitan NY) knew about the high incidence of GC among the Asian and Hispanic populations. Six participants were people of color.

Policymakers and government agencies must have a solid understanding of the incidence and mortality rates of GC in specific minority groups and the disparities associated with them. For this to happen, the current epidemiologic facts, disparities in funding, and health and financial burdens caused by GC in affected minority groups must be effectively communicated to

policymakers. While this information may be presented in various formats, including academic papers and social media, one of the most impactful methods for the community to communicate its concerns and findings to policymakers is in person.

SCTF aims to identify the gaps between the affected community and policymakers and provide direction that increases the translation of clinical evidence into effective policy and planning, focusing on reducing the burden from GC and potential financial loss. Improving health equity cannot be achieved by the government's health agencies alone. The key to achieving health equity is to engage communities by seeking their input, listening to their needs, and collaborating with them. In SCTF, it is paramount to consider the community's viewpoints in all of its endeavors.



Chul S. Hyun leads a session discussion at the 23rd New York Health Forum - Fight Stomach Cancer.

# CVH

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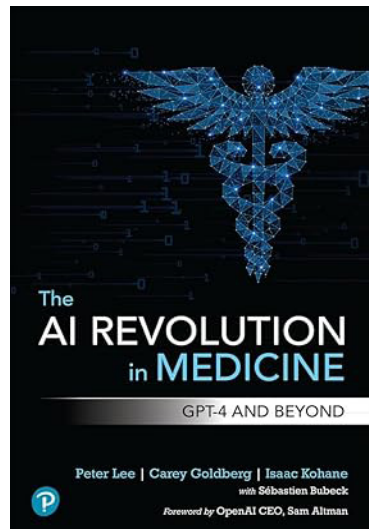
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## BOOK REVIEW

# The AI Revolution in Medicine: GPT-4 and Beyond

BY **SABINA LEE**

In 2022, ChatGPT amazed millions with its abilities but also had some strange quirks. Now, GPT-4 is here, smarter and more accurate, poised to revolutionize medicine. This book explores what AI can and can't do, its ethical boundaries, and real-life applications. Insider perspectives reveal its potential in diagnoses, patient interactions, research, and more. You'll encounter unfiltered GPT-4 dialogues, learn about trust-building, patient empowerment, cost reduction, and regulatory insights. Discover AI's impact on healthcare and be prepared for its transformative effects, whether you're a healthcare professional, patient, or policymaker.

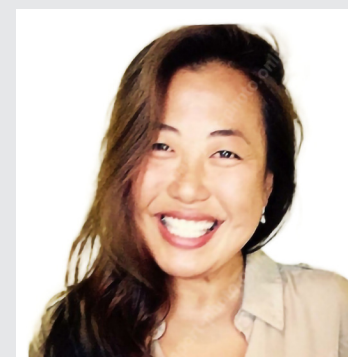
Since the rollout of ChatGPT in November 2022, the debate on artificial intelligence (AI) and its impact on humanity has intensified. In an instant, ChatGPT appears to have reshaped the world as we know it, but AI has been steadily evolving since its inception in 1957. Its profound and lasting implications across all industries, from entertainment to healthcare to education and elsewhere, are palpable for everyone with varying degrees of tech proficiency. While experts grapple with whether AI is a Pandora's Box or a panacea, there is a clear consensus that it stands as one of the monumental human inventions comparable to the internet and electricity. The revolutionary power of AI to transform lives is both awe-inspiring and daunting at once.

AI's most significant application became evident in the realm of medicine and pharmaceuticals. In 2023, Peter Lee, corporate vice president of Microsoft Healthcare; Carey Goldberg, a longstanding medical and science journalist; and Isaac Kohane, MD, PhD, professor at the Department of Biomedical Informatics at Harvard University, collaborated to publish "The AI Revolution in Medicine: GPT-4 and Beyond." The book provides a fascinating overview of early observations and experiences with what is now known as GPT-4, a multimodal large language model (LLM) created by OpenAI in its fourth series of GPT foundation models. The use of AI has propelled groundbreaking research and innovations in healthcare, employing LLMs – a type of AI algorithm utilizing deep learning techniques and

extensive datasets to swiftly understand, summarize, generate, and predict new content. For example, it is unthinkable to consider cost-effective drug discovery and development today without incorporating AI into the process. The powerful impact of this technology on physicians and patients alike could mean the difference between life and death in some cases. How will this technology revolutionize healthcare? Can we trust its output? Drawing from the authors' conversations with GPT-4, the book explores the fundamentals of LLM and machine learning, delving into AI's capabilities and opportunities in basic medical quests, including its aid in diagnosis and clinical notes. It also addresses the pitfalls of endless data capture, ethical concerns, and the lack of regulatory compliance processes.

"Medicine traditionally refers to a sacred relationship between a doctor and a patient – a twosome, a dyad. "And I'm proposing that now we move to a triad," he said, with an AI entity like GPT-4 as the third leg of that triangle."

The book asserts that the potential of AI is genuinely life-altering. As technology continues to advance, envisioning an empathetic AI physician by our bedside isn't far-fetched. Featuring Sam Altman, Kevin Scott, and others who are today's influential voices in AI, the authors paint an optimistic outlook for AI in medicine, while offering food for thought as humanity stands at the precipice of an enormous crossroad with the wide deployment of AI and LLMs, prompting contemplation on our future in medicine and beyond.



## Sabina Lee, M.A.

Senior Consultant, W Medical Strategy Group

Building on her international experience, she helps clients navigate complex issues management and cross-cultural PR and marcomms in the global environments. She has worked with a range of clients in varied sectors, including high-profile institutions, government agencies and corporations in New York, Washington D.C., Beijing, Paris and Seoul. Sabina previously served as chief media strategist for the Pulitzer Prizes and senior public affairs officer for Cornell and Columbia Universities. A graduate of Pratt Institute in New York, she attended the Middlebury Institute of International Studies in California for her M.A. in International Policy and Development.





# Conference Alert

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The BIO CEO & Investor Conference is one of the largest investor conferences focused on established and emerging publicly traded, late-stage private biotech companies. Because our mission is to support industry-wide success, we present a broad and unbiased view of investment opportunities.

### MD&M West 2024

February 6-8, 2024 | Anaheim Convention Center, Anaheim, C

Website: <https://www.imengineeringwest.com/en/home.html>  
Contact: [registration.ime@informa.com](mailto:registration.ime@informa.com)

MD&M West Anaheim is an annual medical expo in Southern California. The show hosts 1,400+ exhibitors and 13,000+ attendees from the medical device industry.

## Europe

### PHARMACY EXPO 2024

Feb. 13 - 15, 2024 | Ptak Warsaw Expo, Warsaw, Poland

Website: <https://pharmacyexpoland.com/en>  
Contact: [info@warsawexpo.eu](mailto:info@warsawexpo.eu)

Polish International Pharmacy Trade Fair. Pharmacy Expo Poland is an event where companies showcase their pharmaceutical products and innovations. It's a meeting place for industry representatives, doctors and research specialists.

### Bio Europe Spring

March 18-20, 2024 | Barcelona, Spain

Website: <https://informaconnect.com/bioeurope-spring/>  
Contact: [EBDcustomerservice@ebdgroup.com](mailto:EBDcustomerservice@ebdgroup.com)

BIO-Europe Spring, the premier springtime partnering event, brings together over 3,700 attendees from 2,000+ companies to engage in 20,000 one-to-one meetings.

## North America

### JPM 2024, 42nd Annual Healthcare Conference

January 8 - 11, 2024 | San Francisco, California

Website: <https://2024.jpmhealthcareconference.org>  
Contact: [office@jpmannualhealthcareconference.org](mailto:office@jpmannualhealthcareconference.org)

16th AACR Conference on The Science of Cancer Health Disparities in Racial/Ethnic Minorities and the Medically Underserved advances the understanding of, and ultimately helps to eliminate, the disparities that represent a major public health problem. Reflecting this transdisciplinary field, professionals from academia, industry, government, and the community are brought together to promote the exchange of novel ideas, discuss the latest findings in the field, and stimulate the development of new research on cancer health disparities.

### CES 2024, Consumer Electronics Show

Jan 9-12, 2024 | Las Vegas, Nevada

Website: <https://www.ces.tech/about-ces.aspx>  
Contact: 703-907-7600 (U.S.)

CES® is the most powerful tech event in the world – the proving ground for breakthrough technologies and global innovators. This is where brands get business done, meet new partners and where the industry's sharpest minds take the stage to unveil their latest releases and boldest breakthroughs. Owned and produced by the Consumer Technology Association (CTA)®, CES is the only trade show that showcases the entire tech landscape at one event.

### ASCO Gastrointestinal Cancers Symposium

January 18-20, 2024 | Moscone West • San Francisco, CA & Online

Website: <https://conferences.asco.org/gi/attend>  
Contact: [ascoregistration@asco.org](mailto:ascoregistration@asco.org)

This meeting is hosted by the American Society of Clinical Oncology (ASCO) and is the only global GI oncology meeting with dedicated multidisciplinary committees and faculty. It will bring together oncology thought leaders, practicing clinicians, novel drug developers, and GI specialists from around the world.

### Cosmoprof North America

January 23 - 25, 2024 | Miami Beach Convention Center, Miami, Florida



## CONFERENCE ALERT

### Cosmoprof Worldwide Bologna 2024

March 21~25, 2024 | Bologna Fiera, Bologna, Italy

Website: <https://www.cosmoprof.com/en/>  
Contact: [Info@COSMOPROF.IT](mailto:Info@COSMOPROF.IT)

Cosmoprof Worldwide Bologna has been the premier event for the global cosmetics trade since 1967. Every year, Bologna Fiera turns into a meeting spot for notable cosmetics brands and experts worldwide. 3000+ exhibitors every year and 260,000+ visitors worldwide.

## Asia

### KIMES 2024, Korea International Medical & Hospital Equipment Show

March 14~17, 2024 | Coex, Seoul Korea

Website: <https://kimes.kr/eng/>  
Contact: [KIMES@KIMES.KR](mailto:KIMES@KIMES.KR)

KIMES provides you with the opportunity to identify and confirm the great potential and prospect of the future medical industry as well as the latest medical industry trend as a venue where 1,200 domestic and overseas manufacturers show the new technology and new products. It will become the venue for the communication to present that latest medical information and technology to keep up with the fast developing medical market.

### Medical Korea 2024

March 14~17, 2024 | Coex, Seoul Korea

Website: <https://www.mkconf.org/fairDash.do>  
Contact: [mkconf2024@gmail.com](mailto:mkconf2024@gmail.com)

The "Medical Korea 2024" is an international event held since 2010 to specialize in international medical business activation and medical tourism. Medical Korea 2024 offers opportunities to enhance global healthcare insight and provide networking.

### Beautyworld Japan

May 13 - 15, 2024 | Tokyo Big Sight, Tokyo, Japan

Website: <https://beautyworld-japan.jp.messefrankfurt.com/tokyo/en.html>  
Contact: [info@beautyworldjapan.com](mailto:info@beautyworldjapan.com)

Beautyworld Japan is the largest trade fair for the beauty & spa industries in Japan. This trade show is the ideal platform for discovering exciting new products and spotting the latest trends in the beauty industry. As the one-stop fair for the beauty industry and a platform for new trends, Beautyworld Japan remains in the spotlight as it attracts over 500 exhibitors and 65,000 trend-conscious visitors from around the world.



### W Medical Strategy Group

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Tel. 201 408 5342

[www.wmedicalstrategy.org](http://www.wmedicalstrategy.org)



# Latest Healthcare Industry News

OCTOBER 2024 - DECEMBER 2024



## 1. FDA to form advisory committee for digital health and AI

The FDA plans to establish a new advisory committee in 2024 focused on digital health, covering areas such as artificial intelligence, therapeutic apps, wearable devices, remote patient monitoring, and virtual and augmented reality tools. The committee will provide counsel on cross-cutting technical and scientific issues, as well as potential interactions with agency policies and regulatory proposals. Troy Tazbaz, director of the FDA's Digital Health Center of Excellence, emphasized the need for ongoing dialogue with the industry to address significant health needs. The committee, with nine core members and temporary specialists, will operate independently of the FDA's device-focused center and aims to hold its first meeting in 2024.

<https://www.fiercebiotech.com/medtech/fda-form-advisory-committee-digital-health-and-ai>

## 2. Rite Aid files for bankruptcy

Rite Aid filed for Chapter 11 bankruptcy protection due to a challenging environment for drug stores, intensified by legal battles over alleged unlawful opioid prescriptions. While CVS and Walgreens face similar issues, Rite Aid, in worse financial shape, couldn't withstand industry challenges. The company expected significant losses in the past quarter, having accumulated nearly \$3 billion in losses over six years. Rite Aid, with \$135.5 million in cash and \$3.3 billion in debt, filed for bankruptcy after being unable to submit its latest financial report. The company secured \$3.5 billion in financing to navigate bankruptcy, accelerate store closures, and address legal disputes.

<https://www.cnn.com/2023/10/15/business/rite-aid-bankruptcy-hnk-intl/index.html>

## 3. Novartis Inks Potential \$1.3B Contract with Korean Biotech for Small Molecule

Novartis has entered a technology export contract with Korean biotech firm Chong Kun Dang Pharmaceutical for the early-stage HDAC6 inhibitor CKD-510. Novartis will pay an upfront fee of \$80 million, with potential additional payments reaching nearly \$1.23 billion in development and regulatory milestones. CKD-510, currently positioned for potential use in Charcot-Marie-Tooth disease, cleared a Phase I study in 2021. While indications are not specified, preclinical studies also suggest its potential against atrial fibrillation. Novartis has been streamlining its business, shedding assets and franchises, and this deal follows a series of partnerships and discontinuations in its development pipeline.

<https://www.biospace.com/article/novartis-inks-potential-1-3b-contract-with-korean-biotech-for-small-molecule/>

## 4. Council On Supply Chain Resilience Tasked With Strengthening Domestic Supply Chains And Limiting Reliance On Foreign Medical Supplies

On November 27, 2023, the White House Council on Supply Chain Resilience held its inaugural meeting, marking the beginning of the Biden-Harris Administration's initiative to enhance domestic access to critical

medicines and vaccines. The focus is on strengthening national supply chains, boosting economic and national security, and reducing reliance on foreign suppliers. The President plans to issue a Presidential Determination broadening the Department of Health and Human Services' authority under the Defense Production Act, enabling increased investment in essential medicine and countermeasure manufacturing. This move aims to ensure the U.S. has the resources to meet domestic needs and respond to public health emergencies, with a quadrennial supply chain review expected by December 31, 2024.

<https://www.natlawreview.com/article/council-supply-chain-resilience-tasked-strengthening-domestic-supply-chains-and>

## 5. Eli Lilly obesity drug now available in US pharmacies

Eli Lilly's newly approved obesity treatment, Zepbound, is now available in U.S. pharmacies at a potential monthly cost of \$550 for uninsured customers, half its list price. Zepbound enters the growing weight-loss drug market projected to reach \$100 billion by the decade's end. Analysts anticipate Zepbound's 2024 sales at \$2 billion, competing with Novo Nordisk's Wegovy, expected to reach \$7.5 billion in sales. Both drugs, GLP-1 agonists originally for diabetes, reduce cravings and slow stomach emptying. Pfizer abandoned its oral obesity drug, while Zepbound, added to Express Scripts' preferred medicines list, may cost as little as \$25 for insured patients.

<https://www.reuters.com/business/healthcare-pharmaceuticals/eli-lillys-obesity-drug-now-available-us-pharmacies-2023-12-05/>

## 6. AI could fuel Biden's cancer moonshot

The White House is incorporating artificial intelligence (AI) into its Cancer Moonshot initiative, aiming to reduce the cancer death rate by half over 25 years and enhance the lives of patients and caregivers. Catherine Young, Assistant Director for Cancer Moonshot Engagement and Policy, emphasized the ambitious yet achievable goals and highlighted the role of AI in advancing the initiative. Key areas for AI implementation include aiding radiologists in faster cancer diagnosis, processing large data quantities, streamlining drug discovery and testing, and evaluating new drugs' effectiveness. Young stressed the need for proper controls to avoid exacerbating healthcare inequalities and biases in AI applications.

<https://www.politico.com/newsletters/future-pulse/2023/12/06/sacramento-preps-washington-putters-on-ai-00130170>

## 7. AbbVie to buy Cerevel Therapeutics in \$8.7 billion all-cash deal

AbbVie Inc. is set to acquire Cerevel Therapeutics Holdings Inc. for \$8.7 billion, emphasizing Cerevel's robust neuroscience pipeline for psychiatric and neurological illnesses. The deal values Cerevel at \$45.00 per share in cash. Cerevel's stock rose 14%, with AbbVie's dropping 1.3%. The acquisition includes Cerevel's clinical



## LATEST HEALTHCARE INDUSTRY NEWS

and preclinical-stage medications targeting diseases like schizophrenia, Parkinson's, and mood disorders. AbbVie anticipates the deal, subject to shareholder approval, to close in mid-2024. The collaboration, including late-stage trials for medications like emraclidine, is seen as a growth opportunity for both companies and is expected to contribute to AbbVie's adjusted earnings by 2030.

<https://www.marketwatch.com/story/abbvie-to-buy-cerevel-therapeutics-in-8-7-billion-all-cash-deal-c1f4d96d>

### 8. F.D.A. Approves Sickle Cell Treatments, Including One That Uses CRISPR

The FDA has approved the first gene editing therapy, Casgevy, for sickle cell disease, offering hope to the 100,000 Americans, mainly Black individuals, afflicted by this debilitating blood disorder. Another approved treatment, Lyfgenia, uses conventional gene therapy. However, widespread adoption faces challenges, including limited authorized medical centers, individualized gene editing requirements, onerous procedures, and high costs (Casgevy: \$2.2 million, Lyfgenia: \$3.1 million). The intricate process involves bone marrow stem cell collection, CRISPR editing, and reintroduction, with few centers possessing the capability. Insurance hurdles and uncertainties about long-term effects further impede accessibility, limiting the initial beneficiaries to a small fraction of eligible patients.

<https://www.nytimes.com/2023/12/08/health/fda-sickle-cell-crispr.html>

### 9. AdvaMed confirms GE HealthCare CEO Arduini as chair, launches imaging lobbying division

Peter Arduini, President and CEO of GE HealthCare, has been chosen as the new chair of the board of directors for AdvaMed, the medical device trade association. Arduini will serve a two-year term, effective immediately. AdvaMed announced that it will become the "new home" for federal- and state-level advocacy duties, previously handled by the Medical Imaging & Technology Alliance (MITA). Patrick Hope, former executive director of MITA, will now be the executive director of AdvaMed's imaging division. AdvaMed recently expanded into imaging technology and established a digital health division, both led by mini-boards of directors composed of industry executives.

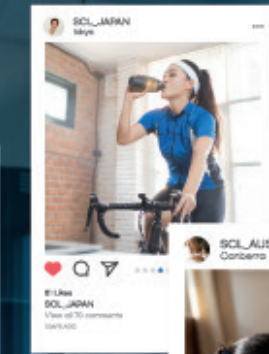
<https://www.fiercebiotech.com/medtech/advamed-confirms-ge-healthcare-ceo-arduini-chair-launches-imaging-lobbying-division>

### 10. Done deal: Pfizer completes \$43B acquisition of Seagen, doubling its oncology pipeline

Pfizer has completed its \$43 billion acquisition of Seagen, marking the biopharma industry's largest M&A deal since AbbVie's 2019 acquisition of Allergan. The purchase of Seagen, an antibody-drug conjugate (ADC) specialist, has doubled Pfizer's pipeline to 60 programs and added four FDA-approved cancer drugs. With nine oncology medications in its portfolio, Pfizer anticipates \$3.1 billion in Seagen-related revenue by 2024, growing to \$10 billion by 2030. The deal faced scrutiny from the Federal Trade Commission, and to secure approval, Pfizer agreed to donate royalties on Bavencio sales to the American Association for Cancer Research. The acquisition positions Pfizer as a leader in ADC therapies, a trend followed by other major pharmaceutical companies. Pfizer's move comes after the success of its COVID-19 products in 2021-22, though its share price has since dropped by nearly 49%.

<https://www.fiercepharma.com/pharma/done-deal-pfizer-completes-43b-acquisition-seagen-doubling-its-oncology-pipeline>

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