Insights into VinFuture Prize

VINFUTURE PRIZE

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Dear Distinguished Scientists,

I am thrilled to present the fifth newsletter of the year 2023 from the VinFuture Foundation.

With the last quarter of 2023 now upon us, we are diligently preparing for the grand event - the VinFuture Prize Award Ceremony. At present, the majority of our Laureates have been selected, and we are eagerly approaching the moment when we can officially honor these exceptional individuals whose contributions have had a profound impact on our world.

Within this newsletter, I am delighted once again, to extend our congratulations to the 2021 VinFuture Grand Prize Laureates, Dr. Katalin Kariko and Prof. Drew Weissman, for having been honored with the 2023 Nobel Prize in Physiology or Medicine. In addition, I am excited to share several details regarding the upcoming Award Ceremony Week scheduled for December. Our agenda features an engaging lineup of events, including four thought-provoking "Science for Life" Symposia:

- Semiconductors Unleashed: The Backbone of Modern Innovation, chaired by Prof. Sir Richard Henry Friend, Cavendish Professorship of Physics at the University of Cambridge, Chair of the VinFuture Prize Council.
- Advancing Precision Immunology for the Treatment of Autoimmune Disorders, chaired by Prof. Chi Van Dang, Bloomberg Distinguished Professor of Cancer Medicine at Johns Hopkins University, Member of the VinFuture Prize Council.
- AI: Transformative Opportunities and Challenges, chaired by Dr. Xuedong Huang, Chief Technology Officer at Zoom Video Communications, Member of the VinFuture Prize Council.
- Sustainable Infrastructure and Green Transportation, chaired by Prof. Soumitra Dutta, Peter Mores Dean of the Said Business School at the University of Oxford, Member of the VinFuture Prize Council.

For our interested audience, please direct your inquiries and registration to our email at office@vinfutureprize.org.

We are also thrilled to extend a warm welcome to members of our Councils who will be attending the VinFuture Prize Award Ceremony in Vietnam for the first time. These distinguished individuals include Prof. Soumitra Dutta, Prof. Pascale Cossart, and Mr. Akihisa Kakimoto.

Please be mindful that nominations submitted after the May 15th deadline will automatically be considered for the following year's season. Therefore, I encourage you to contact our dedicated Secretariat at secretariat@vinfutureprize.org for any assistance you may require during the submission process.

We hope you find great pleasure in perusing this newsletter and we extend our heartfelt gratitude for your unwavering support in the advancement of the VinFuture Foundation and its Prize. In the meantime, stay tuned for important announcements on our VinFuture Prize fan pages, including Facebook and LinkedIn.

Warmest regards,
Dr. Thai-Ha Le
Managing Director

THE SEPTEMBER INNOVATALK:

Smart Transportation and Mobility Solutions for Urban Areas

The sixth webinar of the InnovaTalk series in 2023 was held on September 19th, 2023, in Hanoi, Vietnam (GMT+7). The purpose of the webinar was to explore the smart transportation and mobility solutions for urban areas.

The webinar was chaired by Dr. Padmanabhan Anandan, AI Matters Advisors LLC, Chairman of the Governing Board at Telangana AI Mission (T-AIM) and Member of the VinFuture Prize Council. The Distinguished Speaker was Prof. Alexandre Bayen from University of California, Berkeley, NASA Top 10 Innovators on Water Sustainability. Representing the Vietnamese scientific community was Dr. Le Nhan Tam, Chief Technology Officer of Microsoft Vietnam.

Speakers emphasized the potential impact of implementing the suitable mobility solutions to address the challenge of fast urbanization that many cities are facing. Furthermore, the distinguished speaker's presentation - Prof. Alexandre Bayen - provided a unique perspective on the sustainability of these solutions as well as the latest technological advances being utilized to further implement smart transportation.

The webinar drew nearly 100 attendees who were experts in technology and smart transportation from 10 nations, including South Korea, Singapore, USA, and others. This highlights the attraction and significance of smart transportation in the worldwide context of urbanization.

Rewatch the webinar here:
https://youtu.be/HqKlfdWP5QE?si=Pjzo3fj_WW6yD90r

THE OCTOBER INNOVATALK:

Smart Materials for Energy Harvesting and Storage

The latest webinar of the InnovaTalk series in 2023 was held on October 10th, 2023, in Hanoi, Vietnam (GMT+7). The purpose of the webinar was to explore the potential of smart materials in energy harvesting and storage.

The webinar was chaired by Prof. Sir Kostya Novoselov, Laureate of the 2010 Nobel Prize in Physics and Member of the VinFuture Prize Council. The Distinguished Speaker was Prof. Antonio Castro Neto from National University of Singapore. Representing the Vietnamese scientific community was Dr. Nguyen Trong Hieu from the Australian National University, Laureate of The 2021 Vietnam Golden Globe Awards in Science and Technology for Young Scientists, and one of the Ten Outstanding Young Faces of Vietnam 2021.

Speakers and guests discussed the feasibility of developing smart materials for energy storage in order to achieve a more sustainable future. Furthermore, the distinguished speaker, Professor Neto, provided a fresh viewpoint on the future of energy, notably solid-state batteries. Professor Neto also contributes his viewpoints through electrochemistry research and advances in solid state physics.

The webinar drew nearly 200 attendees who were experts in materials and energy from over 20 nations, including South Korea, Singapore, USA, United Kingdom, Germany, Australia and others.

Rewatch the webinar here:
https://youtu.be/-qEL7lLQ1Qw?si=Z7ufTYVKBPjtHm-5

Prize Categories

A Grand Prize of

US$3,000,000

is awarded annually to proven breakthrough

Three additional special VinFuture Prizes **valued at US$500,000 each**

Innovators from Developing Countries

Female Innovators

Innovators with Outstanding Achievements in Emerging Fields

Role of Nominators

Nominators are invited to nominate researchers, inventors, innovators in science, engineering, technology, or multi-disciplinary approaches to the VinFuture Prize.

Nominators contribute voluntarily to the development of science by nominating inventions to the Prize.

One nominator can make more than one nomination for each of the four prize categories, including the Grand Prize and three Special Prizes for Female Innovators, Innovators from Developing Countries, and Innovators with Outstanding Achievements in Emerging Fields.

The 2021 VinFuture Grand Prize Laureates Win 2023 Nobel Prize in Medicine

On the afternoon of October 2, 2023 (Vietnam time), Dr. Katalin Karikó and Professor Drew Weissman, co-Laureates of the esteemed 2021 VinFuture Grand Prize, were honored with the prestigious 2023 Nobel Prize in Physiology or Medicine.

This distinguished recognition was bestowed upon them for their groundbreaking research on nucleoside modifications, which has played an instrumental role in the development of mRNA vaccines against COVID-19. By shedding light on the interplay between mRNA and the immune system, their remarkable findings have laid a solid foundation for the exploration of novel, swifter, and more efficacious strategies for vaccination and immunity.

The Nobel Prize in Physiology or Medicine 2023, announced on October 2nd, was awarded to Dr. Karikó and Prof. Weissman for their pioneering research on mRNA nucleoside modifications, enabling the development of effective COVID-19 vaccines. Their innovations have significantly enhanced the stability and reduced the immunogenicity of the mRNA, marking a milestone in the development of this platform as a therapeutic option for major human diseases.

Their work has not only provided a robust defense against the pandemic but also promises advancements in the development of vaccines against HIV, cancer, autoimmune disorders, and genetic diseases, potentially saving the lives of billions of people in the future.

Before their Nobel Prize acknowledgment, the 2021 VinFuture Prize had honored Dr. Karikó and Prof. Weissman, highlighting the prize's commitment to recognizing world-changing innovations. Furthermore, the VinFuture Prize evaluates work at a broader scale, including many related discoveries to create comprehensive impacts.

Sharing the 2021 VinFuture Grand Prize with Dr. Karikó and Prof. Weissman was Professor Pieter R. Cullis (Canada), whose breakthroughs in developing lipid nanoparticles were essential for delivering mRNA vaccines. His contributions have expanded the possibilities of nucleic acid technology for preventing and treating various diseases.

Being one of the first to honor the work of Dr. Karikó and Prof. Weissman in 2021, the VinFuture Prize has demonstrated its vision of creating meaningful change in the everyday lives of millions of people by honoring transformational technological innovations. The VinFuture Prize focuses on technologies with the potential to create large-scale positive impact, contributing to the resolution of global issues.

2023
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PRIZE

"SCIENCE FOR LIFE" SYMPOSIUM

COMING SOON

VinFuture's "Science for Life" Symposium is Returning!

The "Science for Life" Symposium, an integral and unmissable part of the upcoming 2023 VinFuture Sci-Tech Week, will officially return this December with four panel discussions on Artificial Intelligence, Autoimmune Diseases, Sustainable Infrastructure, and Semiconductors, bringing together some of the world's most outstanding minds in science and technology. This is also an unparalleled opportunity for researchers and the Vietnamese public to interact and directly engage with world-renowned scientists.

Stay tuned for additional information and how to register for the event posted on the VinFuture Prize fanpage, which will take place on the 18th and 19th of December!

PANEL 1:

Semiconductors Unleashed: The Backbone of Modern Innovation

9:00 - 10:15 AM **December 18th, 2023**

Almaz Convention Center

Semiconductors, indispensable in many industries, are essential for advances in computing, telecommunications, home appliances, banking, security, healthcare, transportation (especially electric vehicles), manufacturing, solutions intelligence, and many other fields. Advances in the fields of artificial intelligence, 5G telecommunications, supercomputers and self-driving cars all rely on the increasingly strong development of semiconductor devices. This forum will share the latest information and technology of semiconductors globally, and provide guidance to help developing countries including Vietnam, develop a suitable strategy for the semiconductor industry in the context of international integration.

Chair: Prof. Richard Friend, Chair of the VinFuture Prize Council, Director of the Winton Programme for the Physics of Sustainability of the Maxwell Centre, Cambridge University (UK). He owns more than 140 patents and has written or co-authored over 1,100 prestigious scientific publications worldwide. He received the Millennium Technology Prize for the development of plastic electronics in 2010.

PANEL 2:

Advancing Precision Immunotherapy for the Treatment of Autoimmune Disorders

1:30 - 2:45 PM **December 18th, 2023**

Almaz Convention Center

The Science for Life Symposium focuses on discussing the application and development of precision immunotherapy in the treatment of autoimmune disorders, one of the most complex diseases that pose many common challenges to the world. The symposium aims to promote knowledge exchange and dialogue to bring hope to patients around the world and particularly in Vietnam. By establishing a platform for multidisciplinary collaboration, experts from various fields including immunology, genetics, bioinformatics, pharmacology, and clinical practice can come together to share insights, discuss challenges, and highlight groundbreaking advancements in the treatment of autoimmune disorders.

Chair: Prof. Chi Van Dang, Member of the VinFuture Prize Council, Scientific Director of the Ludwig Institute for Cancer Research, and Bloomberg Distinguished Professor of Cancer Medicine at Johns Hopkins. He is a scientist and physician who established the first mechanistic link between a cancer gene (MYC) and cellular energy metabolism. Prof. Chi served on the Biden Cancer Moonshot Blue Ribbon panel, is Chair of the NCI Board of Scientific Advisors.

PANEL 3:

Sustainable Infrastructure and Green Transportation

9:00 – 10:15 AM **December 19th, 2023**

Almaz Convention Center

As the detrimental impacts of climate change intensify globally, the symposium focuses on scientific, technological, and policy-driven solutions that promote a green and sustainable future. The symposium explores the transformative potential of renewable energy technologies in enhancing energy capture and storage efficiency; discusses strategies for building sustainable infrastructure and green transportation; and seeks feasible solutions to address peculiar challenges posed by climate change that countries around the world, including Vietnam, are facing.

Chair: Prof. Soumitra Dutta, Member of the VinFuture Prize Council and the Peter Moores Dean of the Said Business School, University of Oxford (UK). Previously, he was a Professor of Management and the Founding Dean of the SC Johnson College of Business at Cornell University (New York, USA). He is also the founder and President of Portulans Institute, a Washington, DC based non-partisan, non-profit institute. Prior to July 2012, he was the Roland Berger Chair Professor of Business and Technology at INSEAD (France) and the founding director of eLab@INSEAD, a center of excellence in the digital economy.

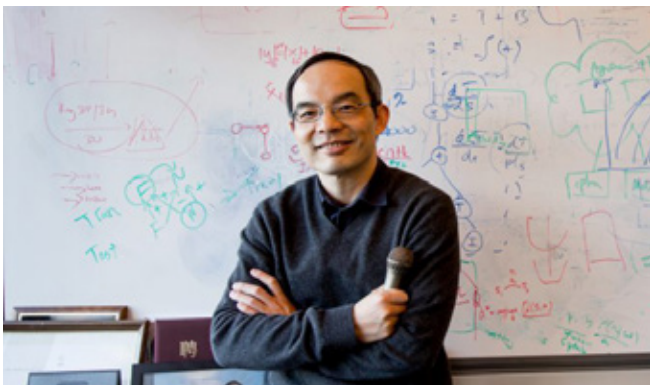
PANEL 4:

Artificial Intelligence: Transformative Opportunities and Challenges

1:30 – 2:45 PM **December 19th, 2023**

Almaz Convention Center

With the revolutionary advancements of large language models in 2022-2023, the world has increasingly turned its attention to the development and impact of artificial intelligence (AI) on every facet of life. In this context, the symposium offers the most in-depth knowledge and assessments of this field, including the history of AI's development, its influence on daily life, the employment landscape, academic research, as well as prevailing trends and governance strategies in the global AI sector, with a particular emphasis on Vietnam.



Chair: Dr. Xuedong David Huang, Member of the VinFuture Prize Council and the Chief Technology Officer at Zoom Video Communications (USA). Dr. Huang is a member of the US National Academy of Engineering and the American Academy of Arts and Sciences. With over 30 years of industrial experience in leading AI and Spoken Language Processing. Previously, he was a Microsoft Technical Fellow and Chief Technology Officer of Microsoft Azure AI.

WHAT TO EXPECT

InnovaTalk #8: Biosensors and Medical Devices

The VinFuture Foundation's November and final InnovaTalk webinar of 2023 will include a panel of notable specialists in the medical field. A Scientific Director of the Ludwig Institute for Cancer Research, A Fellow of the American Institute for Medical and Biological Engineering (USA) and World's Top 1% Scientists in the field of Physics and Materials Science.

DATE & TIME:

November 14th, 2023

- 9:00 PM - 10:00 PM Maryland, USA (GMT-5)
- 9:00 PM - 10:00 PM Florida, USA (GMT-5)

November 15th, 2023

- 9:00 AM - 10:00 AM Hanoi, Vietnam (GMT+7)

TOPIC:

Biosensors and Medical Devices

CHAIR:

Prof. Chi Van Dang, Johns Hopkins University (USA) and Member of the VinFuture Prize Council.

DISTINGUISHED SPEAKER:

Prof. Jeff Wang, Louis M. Sardella Professor in Mechanical Engineering, Johns Hopkins University (USA)

SPECIAL GUEST FROM VIETNAM:

Prof. Manh-Huong Phan, Professor of Physics, University of South Florida (USA)

LOCATION:

via **Zoom**

AUDIENCE:

Students, scientists, inventors and entrepreneurs in science and technology across the world

LANGUAGE:

English with Vietnamese translation provided.

REGISTER HERE:

https://forms.gle/2TYtwgsKqjSQ9TjH6

Please help spread the information to your network and let us know if you have any question by emailing us at **secretariat@vinfutureprize.org**

SUBMIT YOUR NOMINATION AT:
https://online.vinfutureprize.org/nomination

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Thank you very much for your support!

From the VinFuture Foundation