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**Shanghai Center for Pujiang Innovation Forum**

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**2021 Pujiang Innovation Forum Bulletin I**

**Promote the Development of Global Science and Technology**

**Innovation, and Work Together for a Better Life**

**Editor's Note:** 2021 Pujiang Innovation Forum was held in Shanghai from May 31 to June 4. With the theme of “Innovation: for a Better Life”, and held in a combination of online and offline channels, the Forum included a “Plenary Session”, two special events, namely the “Global Tech-Matching Fair” and the “Symposium of Young Scientists”, and more than ten sub-forums on innovation policies, innovation and entrepreneurship, regional cooperation, future science and emerging technologies. Science and Technology Development Research will bring together the wonderful views and important discourses of the speakers at the Forum by issue, and share the fruits of the Forum. This bulletin is a summary based on the reports from the participating guests<sup>1</sup> of the Plenary Session, and is intended for reference.

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<sup>1</sup> Melinda Gates Foundation; Michael Levitt, 2013 Nobel Laureate in Chemistry, and Professor of Structural Biology, Stanford University.

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### **Facilitating Global Innovation and Development with Global Cooperation and Governance of Science and Technology Innovation**

General Secretary XI Jinping has put forward a new direction for scientists and scientific workers towards the deep and extensive exploration of science and technology, i.e., **regard “benefiting people’s lives and health” as the new direction of science and technology development, and profoundly interpret the values of “People first, life first”**. It is of great and practical significance to consider how to make innovation more open and inclusive, and better serve our lives, which will also provide new inspiration for Shanghai to promote the development of science and technology innovation and build a “city of people”.

#### **I. Important Consensus: A Better Life Will Never Be Realized without the Strong Support of Science and Technology Innovation**

**On one hand, a better life is both the starting point and standpoint of science and technology innovation.** Science and technology innovation offers inexhaustible power to promote the development of human society. Against the backdrop of the accelerated evolution of the new round of scientific and technological revolution and industrial transformation, digitalization and intellectualization have

become the leading forces in the transformation, profoundly changing the production pattern and lifestyle of humans. According to **WANG Zhigang, Minister, MOST, China**, the world today is undergoing profound changes unseen in a century, and a better life will never be realized without the strong support of science and technology innovation. We will thoroughly implement and put into practice the important instructions and guiding spirit of General Secretary XI Jinping on science and technology innovation, firmly seize the great strategic opportunities offered by the new round of scientific and technological revolution and industrial transformation, give full play to the key role of science and technology innovation in addressing major global challenges, strengthen the support and leading function of science and technology innovation for the new development pattern, commit to realizing the high-quality life of people, and resolve the contradiction of unbalanced and insufficient development through science and technology innovation. In the opinion of **GONG Zheng, Mayor of Shanghai**, Shanghai is profoundly putting into practice the spirit of the important speech made by General Secretary XI Jinping, rapidly heading towards a science and technology innovation center with global influence, and working hard to strengthen the source of science and technology innovation, to light up the path forward with innovation and let the fruits of scientific and technological advances benefit thousands of households.

**On the other hand, it is an important direction in the future to continuously and comprehensively promote the development of**

**science and technology innovation.** Facing new requirements and new challenges, we should make reform and innovation the underlying dynamics, strive to improve people's well-being with high-level science and technology supplies and contribute to a better life of all. As pointed out by **GONG Zheng**, we should focus more on benefiting our people with innovation, adhere to the dominant position of the public in urban construction and development, accelerate the digital transformation of cities and the smart city construction, enhance people's well-being with optimized science and technology solutions, provide people with more desirable innovation and entrepreneurship opportunities for their achievements, and set the new benchmark for a city of people in the new era. As expressed by **XIONG Xue, Vice Mayor of Chongqing**, with the theme of science and technology innovation, the 10th plenary session of the fifth CPC Chongqing Municipal Committee was held in Chongqing last month, which stated specifically the guiding principles, directions and blueprint for the science and technology innovation work of Chongqing during the 14th Five-Year Plan period and a future period of time. We will take science and technology innovation as the main driving force for high-quality development, big data and intelligentization as the main direction of science and technology innovation, the construction of a science and technology innovation center with national influence as the main goal, the industrial science and technology innovation as the main battlefield, the production, commercialization and application of scientific and technological achievements as the main entry point, and the optimization of science and technology innovation ecosystem as the main

task. Chongqing will make great and sustained efforts to contribute to the development of science and technology in China and even the world.

## **II. Positive Results: Science and Technology Innovation Has Played a Key Role in Fighting against COVID-19.**

**Firstly, China has made great achievements in fighting against COVID-19 and contributed “the Power of China” to the health and well-being of all humans.** According to **Bill Gates, Co-Chair of Bill & Melinda Gates Foundation**, China’s achievements in securing the health and well-being of its people and the people around the world are inspiring, and China’s long-term and robust commitment to inclusive innovation will help the world end the pandemic as soon as possible. As pointed out by **Sultan Ahmed Al Jaber, Minister of Industry and Advanced Technology, UAE**, China developed the vaccines at a record-breaking speed, for which large-scale inoculation has been deployed across the UAE, making the UAE a country with the most extensive immunization coverage in the world. In the opinion of **CHEN Wei, Research Fellow of Chinese Academy of Military Sciences, Vice President of China Association for Science and Technology, Academician of Chinese Academy of Engineering**, China has provided 300 million doses of vaccines for the world, and will ensure continuous supply in the future. Meanwhile, we support Chinese vaccine enterprises to transfer their technologies to developing countries and conduct cooperative production with them, and also support the sharing of intellectual property.

**Secondly, science and technology innovation and development are the core weapon for the mankind against COVID-19 pandemic and other significant risks.** According to **Bill Gates**, COVID-19 has reminded the world once again that the mankind has a shared future, and innovation is central to overcoming any challenge. We should continue to work together, support inclusive innovation, and ensure nobody is left behind. He also pointed out that we didn't have any vaccine or drug for COVID-19 in the past year, but the scientists all around the world tried to solve the problem head-on. They conducted unprecedented scientific cooperation, shared genetic sequences online, and worked together on clinical trials, which accelerated the R&D of safe and effective vaccines against COVID-19. This spirit of collaborative innovation can also help us solve other global challenges. In the opinion of **CHEN Wei**, we need to be self-confident in science and technology. 2018 marks the 40th anniversary of the implementation of our National Immunization Program, and we can now produce 1 billion doses of domestic vaccines every year, achieving self-sufficiency. Our domestic vaccines have played an irreplaceable role in the overall planned immunity and the control and prevention of infectious diseases.

### **III. Core Issue: How to Further Promote Science and Technology Innovation to Serve the Better Life of Mankind**

**Firstly, increase the investment in and strengthen the layout of basic research.** As pointed out by **Michael Levitt, 2013 Nobel Laureate**

**in Chemistry, and Professor of Structural Biology, Stanford University**, making breakthroughs in basic science is like winning a lottery, whose mechanism is hard to puzzle out. However, first of all — you have to buy tickets. The chance to hit the jackpot will become higher if you buy lots of tickets. In addition, he also stressed that the Medical Research Council in University of Cambridge has made great achievements in basic research. What's special is that they normally provide an annual financial support of one million pounds for five people, with no visible bureaucracy in the mechanism or competitive bidding and so on. The recipients only need to bring a laptop to the location and make a presentation for them, and then they will receive financial support if it is regarded suitable. The Council is working hard to reduce bureaucracy as much as possible every day, which provides a very important lesson supporting basic research.

**Secondly, promote the development of and breakthroughs in frontier science and technology fields.** As pointed out by **PU Muming, Academician of Chinese Academy of Sciences, Foreign Member of National Academy of Sciences, Director of the Center for Excellence and Innovation in Brain Science and Intelligent Technology, Chinese Academy of Sciences, and Director of Shanghai Center for Brain Science and Brain-Inspired Intelligence Technology**, brain-inspired intelligence will be the forefront in AI a decade later. We need to prepare for it now, hoping to be at a leading position when the next trend appears. He also pointed out that the goal of brain science research is quite clear -

to clarify the neural basis and working principle of brain, and understand how it works. For one thing, we hope to get some enlightenment from the research into brain to simulate the brain and invent more advanced intelligent artificial devices, including intelligent robots. For another, we also hope to understand the normal and sick state of the brain with the help of the research, so as to diagnose and treat brain diseases and trauma. At the same time, we want to know how the intelligence of the brain develops, hoping to acquire some understandings of intelligence development.

**Thirdly, optimize the model of scientific research organization.**

According to **CHEN Wei**, biosafety is an important part of national security, which requires the help of various departments and the interactive development of various disciplines. In particular, we hope that with the help of our national laboratories, the just unveiled “National Technology Innovation Center of the Yangtze River Delta” and other strategic S&T forces, and the martial and local integration, we can construct our indestructible “Biological Great Wall”. As pointed out by **Michael Levitt**, it is common for Nobel laureates to cooperate with each other. In the United States, 40% of Nobel laureates have gotten in touch with other ones during their doctoral and postdoctoral period. The most important thing is that they are encouraged and establish the trust in the feasibility of their research.

**Fourthly, promote technological innovation and the development**

**of emerging industries.** According to **XU Zhijun, Vice President, Rotating Chairman of Huawei Technologies Co., Ltd.,** for an enterprise, in any period of growth, whether you are a pursuer, challenger or leader, you need continuous innovation based on customer needs. Only innovation can help us catch up and surpass others quickly. We often face a variety of choices in the process of innovation. We do not know the right path towards the long-term goal during the research into 5G. We take multi-path research, and the way we finally find may not be regarded optimistic in the initial stage. During research and exploration, we treat every team equally, especially those whose technologies are not adopted, as we think their contributions are equally great.

**Summarized by WU Yuting**