名古屋大学医学部 150周年記念
150th anniversary of foundation of Nagoya University 創基

In 2021, Nagoya University School of Medicine is celebrating its 150th anniversary.
While looking back over the long history of the School of Medicine, KADOMATSU Kenji,
Dean of the Graduate School of Medicine and KIMURA Hiroshi, Vice-Dean of the Graduate School of Medicine
spoke with us regarding initiatives related to the 150th anniversary of the foundation and future
of Nagoya University Graduate School of Medicine.

A leap forward on the 150th anniversary of the foundation

On this anniversary, we will improve the infrastructure and leap forward to become a world-class research university

【Talk】

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Supported by the local community through a turbulent history of 150 years

Kadomatsu: The Nagoya University School of Medicine has its roots in the temporary hospital and the temporary medical school of the Nagoya clan, which was established in 1871. Since that time, the institution has experienced an eventful history, including the abolition of the feudal domain during the Meiji Restoration, the Nobi Earthquake, and World War II, and celebrates its 150th anniversary in 2021. Looking back on how the university developed into its current form, a major event was the founding of Nagoya Imperial University in 1939. It was the last imperial university to be established, and for the region, it was the birth of a comprehensive university, a long-held dream for the region. Most of the facilities were built with donations from Aichi Prefecture, so we can say that we are here today thanks to the support of the local community.

Kimura: After the establishment of the temporary hospital and the temporary medical school, the school continued to exist while changing its name, and in 1901 it became the Aichi Prefectural Medical School, which suggests that it received generous support from Aichi Prefecture from that time. Going back further in history, I heard that many of the medical schools with a history of more than 150 years, including our medical school, originated from the establishment of vaccination institutes that treated and vaccinated against smallpox. At that time, each clan mainly relied on Chinese Oriental medicine, but the vaccination institute served as an opportunity to introduce Western medicine.

Kadomatsu: Exactly. It is thought that the beginning of the University's Faculty of Medicine also dates back to 1852 when the Owari Clan opened a vaccination center. However, no actual records remain, so the temporary hospital and the temporary medical school are considered the date this institution was founded. Smallpox was a horrible infectious disease for people in those days. The smallpox vaccination institute provided vaccinations to prevent this disease which led people to recognize that hospitals and medical schools were indispensable to society. This led to the establishment of temporary hospitals and temporary medical schools. Smallpox was also the first infectious disease conquered with the development of a vaccine, and in this sense, I feel it is meaningful that we are celebrating the 150th anniversary at a time when the battle against a new infectious disease continues.

In celebration of the 150th anniversary of the School of Medicine Developing a campus that provides a spiritual base

Kadomatsu: We are planning a variety of projects as part of our efforts to commemorate our 150th anniversary, and one of them is to improve our campus and forge an identity.

Kimura: Although plans are currently underway to improve the campus, the Tsurumai Campus has continued to grow since it was moved from Tennozaki-cho along the Horikawa River to its current location in 1914. However, because the site is lined with modern buildings and few structures are available to serve as a base for students and faculty, we would like to strengthen those particular functions. The avenue lined with dawn redwood trees was planted with donations from alumni and is a landmark of the Tsurumai Campus. We are planning to make use of this landmark to create a new main street for the School of Medicine, with the main gate serving as the entrance and have a student plaza at the end of the street where students can gather casually.

Kadomatsu: Our medical school is one of the oldest in Japan, but the buildings on the Tsurumai campus have repeatedly been expanded and reconstructed, and only a few of the structures have been around for more than 100 years. However, we need to establish our identity as a medical school. When I think about symbols for that identity, I feel that the avenue of dawn redwood trees will remain untouched even in the next 100 years. I would love to create a landscape that provides an identity for our graduates.

Kimura: In terms of facilities, the Medical Museum was completed in April 2021 as part of the anniversary project. It contains valuable materials owned by the School of Medicine and is located within the library. For example, the "Human Perspiration Balance" project was developed by Professor Kuno Yasu, who was the first person in the world to conduct a full-scale study of human perspiration. The "Kirihara Flexble Gastroscope," a forerunner of today's endoscopes is also on display. A Nishiki-e (brocade picture) of Japan's first skin transplantation surgery by the foreign teacher L.H.Junghans, and the "Illustration of Surgical Operations at Aichi Prefectural Public Hospital in the Early Years of the Meiji Period" which depicts people associated with the School of Medicine are all shown here. The facility is also equipped with a virtual reality (VR) device that allows visitors to see the old school building and medical examinations of the past and will eventually be open to the public.

Carrying on the legacies of each department Documenting the heritage of our predecessors for the next generation

Kadomatsu: As another important project, we are compiling our 150-year history on this anniversary. When I was first appointed as a professor, I didn't know very much about the history of my department. Every department has maintained an annual record and this information, together with the histories of each department and the entire medical school, is being gathered into an archive. By reading this material, we can learn about how the faculty of medicine developed, I can understand the development of the medical school and the ideas of our predecessors. After all, it is very important to keep records and bequeath this history to future generations so that it will be useful for the next and coming generations. The medical school, in particular, has a long history of many departments, which has led to the establishment of the current departments.

Kimura: You're right. Each department has its individual history,

some more than a century old, and others much newer. However, each department has its annual history and alumni association, and it is only in medical schools that such a deep bond is forged among students. After all, it is important to record the annual history of each milestone, and I think it is a blessing to be able to look back on 150 years of history and leave it in this form.

Kadomatsu: This has been possible thanks to the support of the local community. I would like to thank you for your support, and I hope that we can invite you all to celebrate with us at our 150th-anniversary event.

Kimura: The commemoration event has been postponed until December due to COVID-19, but we will hold public lectures and an open campus to let the local community know what sort of research each department at Nagoya University is currently engaged in. In addition, a variety of events are being planned, including lectures by alumni, concerts performed by students, mini-concerts in the hospital by staff members, and commemorative lectures at Toyoda Auditorium.

Kadomatsu: To fund these projects and infrastructural development, the School of Medicine has established "The 150th Anniversary Support Project of Nagoya University Foundation for Development of Infrastructure of School of Medicine" and is asking for donations from alumni and citizens of the prefecture. We hope that you will support us in inheriting the history of the School of Medicine and aiming for further development of medicine and medical care.

A model for Japanese universities Tokai National Higher Education and Research System

Kadomatsu: As for our future, the first thing to be done is to promote the education and research activities of the Tokai National Higher Education and Research System (*1), which was established with Gifu University. Although we must overcome large barriers to work with other universities that come from a different culture, I also feel that there is great potential with this setup. The population of 18-year-olds is declining, and it is already impossible for all universities to survive this shortage of students. In the next 30 years, we will only need 70% of the current number of medical students. To survive as a research university in such a future, we need to take advantage of the economies of scale. Therefore, the School of Medicine studied and formulated the "Grand Design 2020" in cooperation with Gifu University. For the Tokai National Higher Education and Research System to succeed as a model for the changing Japanese university culture, we must learn to work closely together.

Kimura: We plan on collaborating in multiple ways throughout the entire university, but I believe that medical education will be the first place that we'll start. In particular, we believe that it is easy to work on this project in medical school because there are many common elements in education, and there's a good possibility that we'll see positive results.

Kadomatsu: In terms of research, I'm hoping we'll collaborate with Gifu on clinical research. At our university, we've made progress in medical research using AI and we've succeeded in diagnosing pulmonary fibrosis employing these methods. We are confident that sharing our research results with Gifu University will lead to further advances in our research.

Conducting Research that serves mankind and the world originating from Nagoya University

Kadomatsu: Considering our future as a research university, being selected as a Designated National University Corporations (*2) in 2018 was a significant event. Designated National University Corporations were conceived by the government as a brand to replace the former Imperial Universities. Universities are evaluated based on various indicators such as research capabilities, social cooperation, and international collaboration. National universities that are expected to develop world-class education and research activities are usually selected for these roles.

Kimura: Designated National University Corporations are the leading universities in Japan recognized by the government, and to compete with the world's leading universities in an internationally competitive environment, we are working to consolidate education and research and to concentrate our resources.

Kadomatsu: The mission of our medical school is to contribute to community medicine, which has been handed down since the days of the temporary hospital and the temporary medical school, and we will continue to maintain this mission. However, it is also our mission to promote the development of new drugs and medical treatment as a leading research university in Japan, and we must fulfill this role.

Kimura: A variety of research projects are currently underway, but I think it would be easiest to take a breakthrough approach to drug discovery and the development of new medical treatments in areas in which our university is strong, such as neurological diseases and cancer. I expect that the development of infrastructure for the 150th anniversary will further stimulate research activities and accelerate translational research that links basic and clinical research.

Kadomatsu: Looking back at our history, I feel that our medical school provides a rich soil in which to pioneer new drugs and medical treatment. As I mentioned when I talked about the Medical Museum, Dr. Yasu Kuno, who researched perspiration, has been nominated as a candidate for the Nobel Prize at least three times for his research findings. Dr. Shinji Takahashi from our university proposed the idea of rotatory cross-sectional radiography, which is the origin of computed tomography. Our predecessors have left their mark in various fields, such as bone marrow transplantation, a treatment our university pioneered in Japan. We would like to follow in their footsteps, but to do so, faculty members and physicians must always have the mentality to aim high in everything, including research and education. Under the slogan of "Traiblazing Frontiersin Medicine and Hearthcare," we intend to foster a mindset and culture that says, "We will accomplish this, and we will transmit it from Nagoya.

Kimura: Looking at the 150 years of history, it is wonderful to see that there are eminent people among our alumni. We are proud of this history, and at the same time, we must work even harder to nurture students who will follow in the footsteps of our seniors.

Kadomatsu: I hope to produce Nobel laureates as proof of our research capabilities, and I always encourage new professors to aim for the Nobel Prize. Of course, this is not to win the prize, but for the hope that they will contribute to humanity and work to change the world in a significant way, as symbolized by the Nobel Prize. Our university has already produced six Nobel laureates, so there is no doubt that the prize itself is well within our reach. However, the Tsurumai Campus, ie, the School of Medicine, has not yet produced an award winner, so we would like to produce one.

Kimura: In my opinion, I feel that the environment is also conducive to making Nobel Prize-level discoveries. The Higashiyama Campus, home to the Faculty of Science and the Faculty of Engineering, both of which have produced Nobel laureates, is surrounded by a lush green belt where students grow and develop. I believe that a variety of leeway is necessary to nurture students who can research with free ideas. The campus environment is also important for creating a relaxed atmosphere, and as I mentioned earlier, we would like to develop spaces such as the student plaza so that students can relax and think.

Kadomatsu: That may be true. Japan's government also launched the Fusion Oriented REsearch for disruptive Science and Technology (*3) in 2020 to support research based on unconventional ideas amid intensifying competition with the rest of the world. Five people, a diverse range from assistant professors to associate professors from the School of Medicine have been selected. Many other talented researchers are present, so by providing these young people with a place to conduct research and establishing a common office where they can come together, I hope to see a future where innovations are born from diversity and fusion. This 150th anniversary is our first step in continuing to improve the campus environment, support researchers, allowing the Tokai National Higher Education and Research System to will certainly send out research that will change the world for the better from here.

※1 **Tokai National Higher Education and Research System**
Nagoya University and Gifu University were integrated into a single corporation. Both shared their strengths and contribute to regional revitalization aiming for development into a global leader in academic research. Established in April 2020.

※2 **Designated National University Corporations**
To significantly improve the quality of education and research and encourage innovation, these national university corporations have been designated to develop world-class education and research programs. Designated universities will be able to expand their discretionary authority to invest in a broader scope of companies. Nine universities have now been designated.

※3 **Fusion Oriented REsearch for disruptive Science and Technology**
To promote "Fusion Oriented REsearch for disruptive Science and Technology" which aims to create seeds that will lead to disruptive innovation through diversity and fusion without setting specific themes or short-term goals, the program will support free, challenging, and fusion-oriented research unconstrained by existing frameworks for 7 years, up to a maximum of 10 years.