

SS2-2 Antibody Therapy — Current and Future

○Tatsumi YAMAZAKI¹

¹Chugai Pharmaceutical Co.Ltd

Since 1990, the market launch of antibody drugs, particularly in the area of oncology, has led to an intense competition in antibody drug development which continues to the present day. The targeted diseases for antibody drugs extend to not only the oncology area but also to intractable disease areas such as rheumatoid arthritis. In the midst of this competition, development is actively underway on second-generation antibody drugs that provide new added value compared with existing antibody drugs. Discovery is proceeding for not only antibody drugs with new antigen targets but also for toxin conjugated antibodies and modified antibodies, and the resulting molecular designs are exceedingly more advanced than the original antibodies. On the other hand, due to the increasing cases of successful molecular-targeted drugs based on small molecule compounds, especially in the disease area of oncology, the debate over antibody drugs is taking place from the standpoints of safety and pharmacoeconomic value as well as effectiveness. Consequently, because of the increasing demand for differentiated medicines, the future must be discussed in terms of personalized medicine, which involves selecting the most suitable drug combinations as well as the most suitable patients to use them. Due to the accumulation of revolutionary advancements in science and technology, evaluation results for existing antibody drugs and changes in the medical environment, the hurdles to drug development are increasingly higher, and drugs that offer breakthroughs will enhance their value as next-generation therapies.

From the viewpoint above, I will introduce actual examples from the R&D activities at Chugai Pharmaceutical and describe the current status and future of antibody drugs.