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blockbuster or revolutionary breakthrough – some radical technology that changes the world. For decades, the pharmaceutical industry business model has been built around the discovery and development of breakthrough medicines, and while we continue our search for cures and better treatments, our business model and our concept of research and development (R&D) need to change.

The old business model focused on trying to recoup investments in brilliant discoveries by "selling" those discoveries through a push

Changing Our Conception of R&D for the Benefit of Patients and Healthcare

model. At Sanofi, we have made it our mission to let go of this traditional model, to become part of a collaborative effort to derive optimal results from precious healthcare resources. This effort involves all partners – governments, healthcare professionals and patients themselves – working together to ensure that our science, systems, processes, negotiations and values always put patients first.

Putting patients first means changing our conception of R&D as well. It means complementing our medical research with social research, extracting more knowledge from our clinical trials and investing in improvements to healthcare delivery – to better serve patient needs.

For example, Sanofi has started to map the "patient journey" in oncology to gain insights on how patients and their families could be better served and supported. We've

looked at the barriers patients face in that journey: barriers to physicians, to information, to psychosocial support, to medicines. And we are searching deep and wide to determine how we can deliver the right mix of solutions – education, home care, online resources – that treat the entire patient.

Clinical trials give Canadian patients access to the latest medicines at no cost and are also accompanied by a unique level of care and follow-up. In addition, these clinical trials contribute to the development of our country's own researchers and healthcare professionals, which helps create a local knowledge-based economy that encourages and attracts further research activity.

Incidentally, clinical trial activity in Canada has declined significantly in recent years because the research infrastructure is becoming less competitive in terms of cost and performance. We need to lighten the administrative red tape involved in initiating clinical trials and improve the operational efficiency of research, since these are barriers to R&D investment in Canada. Ideally, we should be striving to integrate health research and care delivery as opposed to having them function separately.

Creating a research environment that puts the patient experience at the centre is also fertile ground for what our industry calls incremental innovations, where many small improvements or breakthroughs culminate in the development of major advances over time. Health administrators in Canada currently have policies that reward "true" or "radical" innovations at the expense of these incremental innovations, which are arguably the dominant source of new ideas and just as meaningful for the patient.

For example, insulin was discovered in Canada 90 years ago.

Our company's Canadian history includes the world's first large-scale insulin production site, but we continue to push forward with insulin innovations. We now provide a 24-hour insulin that is making a significant difference in the lives of people living with diabetes.

All of these new ways of doing research contribute to our knowledge of patients and should be part of our larger conception of R&D in Canada – especially since they put patients first and because they fully leverage the resources, not just drugs, that our industry offers – people, experience, collective knowledge and proven ingenuity.

This is why the current Canada-European Union Comprehensive Economic and Trade Agreement (CETA) negotiations, especially the discussion around intellectual property protection, are so crucial to R&D in Canada. We need to ensure that Canada offers worldclass intellectual property protection so that our country remains an attractive place to do clinical research, innovate and launch new products. The more innovative products launched in Canada, the greater our knowledge base will be and the easier it will be to attract broader R&D opportunities.

The pharmaceutical industry is the largest R&D investor in the world and at Sanofi, we are aiming to better leverage the R&D we are doing. Let's make sure these investments stay in Canada by showing that our country offers the same advantages as other countries in areas such as intellectual property protection, the efficiency of clinical trials and the integration into patient care of innovations stemming from research. That way we will continue to create the jobs and develop the knowledge economy so coveted by emerging and developed economies alike.