



Pandemic Research & Infection Medicine: Roche and Fraunhofer in Penzberg

Interview with Claus Haberda, Managing Director, Roche Diagnostics GmbH

A new campus for infection, immune and pandemic research is planned in Penzberg, Germany, south of Munich. The new facility of the Fraunhofer-Gesellschaft wants to investigate the role of the immune system in infectious diseases, in cooperation with Roche Diagnostics and the Ludwig-Maximilians-Universität München.

Bio^M: At the beginning of 2021, the Fraunhofer Society presented the plans for the project, along with its future partners and political representatives. As one of the largest biotechnology centers in Europe, what role does Roche Penzberg play in setting up this new institute as a strategic partner?

Claus Haberda: As a strategic partner, we have three roles to play in this constellation. On the one hand, we see ourselves as obstetricians, among many. The original idea of locating a Fraunhofer Institute in Penzberg in the Nonnenwald next to Roche arose on May 4, 2020, when Roche launched a necessary antibody test for COVID-19 in just 4 weeks, after a very, very fast development period, and communicated this to Penzberg. Politicians have become aware of how beneficial it is when important players in the health care system work closely together and cooperate with each other. This led to the birth of this idea. The second role as a strategic partner is, of course, that we are now also getting involved in specific projects, and indeed attempting to answer epidemiological and immunological questions that arise in the context of a pandemic. And the third role is now, actually to get the whole thing going. We are providing space on our campus, infrastructure and laboratory rooms for the first working groups. Fraunhofer will need another year or two before they have really built a new research institute here in the Nonnenwald.

A total of around EUR 80 million is to be invested in the implementation of the concept. The federal government and the state of Bavaria are sharing the costs equally. What goals and opportunities do you see for the Roche Penzberg site and also for the Munich Metropolitan Region?

We are a location with 7,000 employees, but are somewhat isolated from Munich in Penzberg, and anticipate a different level of visibility through the involvement of the Fraunhofer Institute. I believe that we can really position Penzberg as a science location and then contribute to making the existing jobs more attractive, but also future jobs – that we may also serve as a magnet for the settlement of other players such as startups or other research institutes. I think this simply creates a certain attractiveness, while benefiting the



city, the region, and also Roche and Fraunhofer. And then ‘innovation made in Bavaria’, of course.

The goal of the planned facility is researching infectious and immune diseases. To what extent was the coronavirus pandemic a driver for the concept?

I think that’s the logical consequence of what we’ve learned over the last year and a half. We have seen that there is a very high innovation dynamic in medical research. BioNTech’s and Moderna’s new mRNA-based vaccines have truly made a groundbreaking contribution to fighting the pandemic. In this respect, I think it was an obvious conclusion to continue this innovation dynamic by bringing together players such as Roche, with pharmaceuticals, and diagnostics, with Fraunhofer, on one campus.

As you mentioned it briefly, is there currently a focus on any certain indications?

Our first strategic project with Fraunhofer will now be the identification of new pandemic pathogens. “What might be possible candidates?” is, I believe, an important question if you want to fight pandemics and then also accompany them epidemiologically. Which viruses, which pathogens are next door, so to speak? And for this, we want to develop a toolbox that helps to diagnose and identify the whole thing.

At the presentation, you described the project as a showcase project, both in terms of content and speed. What does the further implementation of the plan look like in concrete terms?

What impressed me at the time and still impresses me today is really the speed with which politicians reacted to the situation and saw this opportunity to establish a Fraunhofer Institute in Penzberg, and how quickly financial resources were made available and how quickly we also made progress in terms of content in describing the first concrete projects. We would now like to maintain this momentum. This is why we are planning the first research activities this year. To support this, the Fraunhofer Institute will set up the first working groups on the Roche Campus, because Fraunhofer will not be able to build its own research building in Penzberg in Nonnenwald that quickly. It just takes three or four years. In this respect, we really want to continue to use the momentum created by the pandemic and start working this year.

What does the alliance with Fraunhofer, but also with the Ludwig-Maximilians-Universität Munich, mean for Roche? How will the cooperation work in concrete terms?

Specifically, we are looking forward to getting new partners at the Penzberg location. Through the Fraunhofer Institute, we also have access to the Ludwig-Maximilians-Universität München (LMU). They, in turn have a very, very large number of clinical beds, which will then be available for us. This is the so-called “test bed”, with which we can then also work.



This is also attractive because modern medical research is also digital research. The data generated there offers enormous added value to accelerate research and development. With 3,000 beds, LMU is really a very important strategic partner in this network of LMU, Fraunhofer and Roche.

The partnership between Fraunhofer and Roche or the LMU is intended to be a seeding mechanism for the settlement of further companies, and thus further cooperation partners. From your point of view, how can the region become such an innovation ecosystem? Do locations such as the Martinsried campus also play a role here?

I really see this as an ecosystem, and ecosystems can also be large-scale. We have now also learned that you can bridge distances and design a lot virtually. Nevertheless, the daily exchanges between researchers on campus and the spontaneous, creative innovation that arises when you run into someone in the hallway is very important to encourage dynamic innovation. In this respect, we should really see this close spatial proximity in Nonnenwald and in Penzberg between Fraunhofer and Roche as a seeding engine for something that can then expand and grow. I see it a bit like the spider in the web. We are now forming the inner spider web here, and then hoping that an ecosystem will develop around it. And Martinsried certainly belongs to this ecosystem, as does LMU. We also cooperate with the Technical University of Munich. We are extremely versatile and have no dogmas about who we work with and who we don't. In the end, it is the cutting-edge science that really counts, which hopefully makes everything meaningful for the patient.

With the concept of the new Fraunhofer Institute for Infection, Immune and Pandemic Research in Penzberg, a forward-looking bundling of therapeutics, diagnostics and digitization is going to take place. Where do you see Roche's strengths and competencies in efficiently connecting these areas?

Here we see ourselves more or less as a natural partner. Roche has been around for 125 years, and the Penzberg site has been around for 50 years. What we do in Penzberg is research, development and production for therapy and diagnosis. We refer to this whole concept using the term personalized medicine and personalized healthcare. These three pillars of research, development, production for diagnosis and therapy is exactly what we need now to be able to fight pandemics. In this respect, we see a huge synergy potential here to further advance something like this with Fraunhofer in Penzberg, because we actually have everything we need at the location.

So it's the sum of the strengths that makes it so?

Yes, and new strengths will be added. For example, the topic of digitization. I've just recently attempted to address this. If, of course, we can access a lot of valid patient data together and use it to validate our research hypotheses, then perhaps even another pillar will



emerge. I believe that the topic of digital health can also be further developed extremely well from Penzberg.

To what extent will Roche itself invest money in the project?

Clearly, we will also spend money on the project. However, not for the construction of the new Fraunhofer institute building. Fraunhofer will finance this independently – of course supported by state and federal funds. After all, the EUR 80 million is also budgeted for the next five years. But, for example, Roche is of course also financing the joint research projects. We will provide employees, resources and infrastructure, and thus indirectly invest in this joint cooperation.

How well are you connected with your partners? How often do you have contact with each other and exchange ideas?

At the start of the joint research cooperation, we were in very regular weekly, sometimes even daily, contact with the various stakeholders, who of course now have to create the research content and also develop concrete initial projects – but simultaneously also all the activities for the establishment of the Fraunhofer Institute. Now, for example, when it's about land purchases, the city of Penzberg also plays a key role. Very intensive discussions are taking place because, as I said, we got such momentum from the pandemic last year and this year. It has only been a year since the creation of the idea of co-locating the Fraunhofer Institute and the financing, with the realization of concrete projects at the end of this year, so we do not want to let up on the throttle now. So, intense conversations more or less every day.

How do you see the longer-term development of the project, i.e. beyond the next 5 years?

I hope that this joint cooperation will also attract new fields of work to the location. On the Roche side, we have anchored the topic of gene therapy in Penzberg and will invest EUR 65 million in this over the next two years. Perhaps the cooperation with Fraunhofer and LMU will also raise new questions at the location. This can only help as a nucleus, really like a magnet to bring other institutes, startups and stakeholders to the location. In the end, it is of course great for the region, for the Penzberg site, but also for Roche, if cutting-edge research takes place in Penzberg. And imagine when really top-class researchers and developers work in Penzberg, when symposiums and other events take place and other players move into the area. I really see a nucleus of a new science center in Penzberg beginning to germinate here.