GCRI INTERVIEW

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How can basic research better include clinical needs to find the best solutions for patients?

In order to defeat diseases it is essential to carry out basic research on these diseases in tandem with clinical research. In addition, all of the basic research needs to be integrated closely with patient cases care. To embed basic and clinical research with patients' care may ensure that the research is connected and channeled to clinical needs.

What are the current challenges in medical prevention, diagnosis and therapy? And how can the Berlin Institute of Health help overcome these challenges?

Across the industrialized world, healthcare systems are facing a fundamental change. People are living longer, and as a result, the burden of progressive and chronic disease is increasing. Healthcare costs are rising while the quality of life and productivity are falling. This demands a far-reaching change in the way patients are treated. Furthermore, as scientists gain more knowledge about genetic and environmental risks and mechanisms of disease development, the concept of tailoring healthcare to individual groups of patients is gaining ground. This is why the Berlin Institute of Health focuses on reward-oriented, personalized healthcare by performing translational research and innovation.

What are the best approaches to bridge the gap between basic research and clinical application?

An integrative and interdisciplinary systems medicine approach is crucial to overcome the gaps. Furthermore, an entrepreneurial culture of innovation will also lead to more medical achievements.

Can you please share one example of how the Berlin Institute of Health transforms advances in biomedical research into benefits for patients?

One of our cancer research projects has made significant progress. Several teams of scientists are working on a T-cell therapy that specifically targets the mutations in the genome in order to fight tumors. In the not-too-distant future, cancer patients may be treated with personalized and highly specific T-cell therapies.

In your opinion, which frameworks are needed to foster and promote translation-minded scientists and clinicians?

Biomedical research institutions need to promote creative environments that will foster innovation and entrepreneurship in health research. This will also improve the prediction of diseases, and the development and use of medicinal products for therapies. Likewise, it is essential to develop a new cross-discipline biomedical entrepreneur career path for basic researchers and clinician scientists with flexible entry from different career phases and paths.

What is your vision for the Berlin Institute of Health and the translational medicine landscape in Germany?

It is the aim of BIH to be a pioneer for reward-oriented, personalized healthcare by performing translational research and innovation. We want to maintain and restore the quality of life for people with progressive diseases.

Based on your experience, what are the biggest challenges in personalized medicine today?

There are various challenges in personalized medicine today, but the most daunting challenge is handling all health-related data. This includes sharing data from different institutions and patients, getting information technology systems to work together such as integrating the electronic health record with genetic databases and other data warehouses, and analyzing the multi-parameter datasets of patients.

Which new horizons in translational medicine and research does Berlin Institute of Health want to conquer?

We have defined two strategic priorities. On the one hand, we want to improve prediction of progressive diseases via personalized medicine. On the other hand, we want to develop and apply medicinal products for advanced and regenerative therapies for the personalized treatment of progressive diseases in cases of unmet medical needs.

How did you get involved with translational research and how has your experience researching and practicing in the U.S. influenced your work in Berlin?

I have always been fascinated by translational research. My research has been driven by the idea of accelerating innovation for patients. I was the director of The Charles Bronfman Institute for Personalized Medicine at Icahn School of Medicine at Mount Sinai for seven years. The experience I gained in the U.S. has been a valuable contribution to the “BIH Strategy 2026”, a driving factor to enable BIH to set global trends in medicine and research as well as maintain quality of life for patients with progressive diseases.