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How Asia is Pioneering Longevity Biotech

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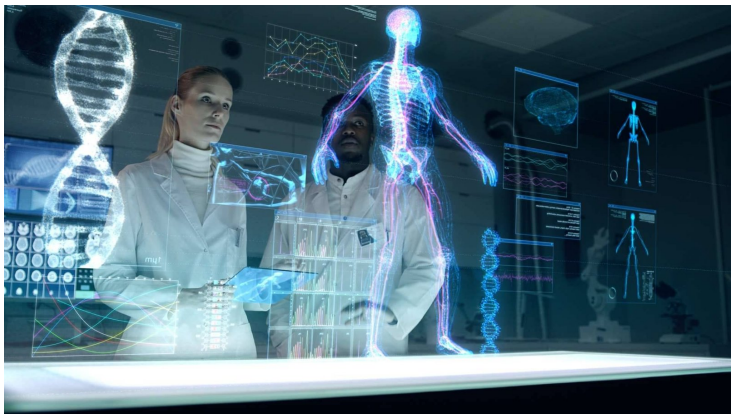
Ageing is fast emerging as a focus area in Asia, with 2025 witnessing a flurry of activity across startups, research initiatives, and investment. As the region positions itself in the longevity biotech space, the key question is what drivers and initiatives are shaping its growth and what it will take to build a globally competitive ecosystem. Let's find out.



Ageing — the elusive truth of life, has long been debated by philosophers and tapped by the cosmetic industry. More recently, tech leaders such as Jeff Bezos and Sam Altman have invested heavily in extending human life, even exploring the idea of immortality. Today, however, the focus is shifting beyond treating signs and age-related diseases, with a growing number of biotech companies pursuing interventions that target the biological processes of ageing. This shift is especially relevant in the Asia-Pacific region, which is experiencing a rapid ageing population.

By 2050, one in four people will be over 60, with the older population projected to nearly triple from 2010 levels to 1.3 billion, according to a UNFPA report. Yet while life expectancy is rising, healthy longevity is not keeping pace, creating long-term challenges for healthcare, productivity, and social support systems. In response, APAC countries are launching various initiatives and investments aimed at developing the longevity biotech sector and supporting healthy ageing.

Key Drivers and Initiatives

The Asia-Pacific region is framing ageing and healthy longevity as both public health challenges and economic opportunities, with China, Singapore, and Japan leading the way. Singapore, in particular, is making strong efforts to build a world?class longevity biotech ecosystem.

“Singapore has positioned itself as a global hub for longevity science through strong government support and world-class research centers, as projections suggest one in four Singaporeans will be 65 or above by 2030. Life Biosciences recently entered into a collaboration with SingHealth Duke-NUS Regenerative Medicine Institute of Singapore (REMEDIS) that exemplifies this dynamic. By integrating Life Biosciences’ expertise in cellular rejuvenation with SingHealth’s extensive clinical network, we are enabling translational research that accelerates the development of novel therapeutics to reverse ageing. This partnership reflects a broader trend in Asia where cross-sector collaboration is essential to move discoveries from bench to bedside efficiently,” said Dr Michael Ringel, Chief Operating Officer at Life Biosciences, Inc. Life Bio is a biotechnology company pioneering cellular rejuvenation therapies to reverse and prevent multiple diseases of aging.

Similarly, China is witnessing rapid growth in longevity biotech. “Substantial capital is flowing into hard science and technology sectors. The government’s ability to rapidly implement longevity-focused and biotech-friendly policies—including favourable taxation and regulatory frameworks—is accelerating industry growth, generating significant momentum in both funding and regulatory support,” said **Boyang Wang, Founder, Immortal Dragons**, a purpose-driven longevity fund that wants to make death optional.

Launched in August 2025, Singapore-based Immortal Dragons began operations with $40 million under management, mostly contributed by Wang himself, and is focusing on early-stage companies developing treatments to extend life.

In April 2025, another dedicated fund, Seveno Capital, officially launched with a $70 million commitment from its founder, entrepreneur Allen Law. The Singapore-based firm is focused on investing in early and growth-stage ventures that support the extension of human healthspan, underscoring the growing momentum of private investment in the sector.

Research institutes are also expanding rapidly to support Asia’s growing longevity biotech ecosystem. In February 2025, China launched the Sirio Institute for Anti-Aging (SIA) to advance research on cellular, gut, muscle, and reproductive health, aiming to develop innovative therapies that translate scientific breakthroughs into evidence-based solutions for healthy ageing. Earlier in January 2025, Japanese firm Renascience signed a joint research agreement on ageing with Prof. Douglas E. Vaughan, Director of the Potocsnak Longevity Institute at Northwestern University (USA), and announced plans to open a branch at the Tohoku University Renascience Open Innovation Lab (TREx), reinforcing cross-border collaboration in longevity research.

Several longitudinal studies have been launched to better understand ageing populations. In South Korea, the Korean Longitudinal Healthy Aging Study aims to explore the needs of the new older generation and produce evidence to inform policies that promote healthy ageing. Complementing this, the Korean Medicine for Aging Cohort (KoMAC) is a multicenter, prospective study designed to identify markers for Korean Medicine (KM) phenotypes associated with healthy ageing.

India has also entered the field, with the Indian Institute of Science (IISc) ‘Longevity India Initiative’ pioneering ageing research and large-scale studies aimed at extending healthy life expectancy, or ‘healthspan,’ through innovative research and technology development.

In China, the PENG ZU Study on Healthy Aging (PENG ZU Cohort) seeks to understand the natural progression of health among the ageing population. The study focuses on identifying and validating multidimensional ageing markers, uncovering mechanisms of systemic ageing and functional decline, and developing strategies to delay functional deterioration while maintaining overall health.

“Due to the strong investments in R&D in the region, organisations such as Chi-Longevity can successfully translate research and use novel diagnostics as well as therapies for personalised health assessments and interventions that aim to slow down biological aging. Furthermore, Alage in China can leverage the momentum by translating aging longevity research into commercial products,” said **Dr Anna Erat, Medical Expert, Independent Board Member, Mentor ETH, Faculty University of St. Gallen**.

Building Right Ecosystem

Despite growing momentum in markets like Singapore, China, and Japan; Asia faces several major structural, scientific, and ecosystem-level challenges**.**

One of the major challenges is capital. “One challenge is insufficient early-stage capital and short-term mindsets. While there are major funds (e.g. *Hevolution* in Saudi and VC in Singapore), seed-stage funding and angel investor participation is limited in many countries,” said Dr. Erat.

Wang echoes similar sentiments, “Asian government funding faces bureaucratic challenges and political risks, as fund performance is closely linked to officials' political careers. Poor outcomes are poorly tolerated and may result in political repercussions. However, a significant wave of serial entrepreneurs—particularly former tech founders in their 40s seeking healthier, longer lifespans—represents a crucial alternative. These private investments operate independently of government funding but are essential to identify and secure, given the long-term development cycles inherent in longevity technologies.”

Beyond funding, scientific and regulatory gaps continue to hold back the sector’s progress. “The lack of validated aging biomarkers and a limited pipeline of true longevity therapeutics remain challenges for true progress in the biotech ecosystem. And most R&D activity is around diagnostics, lifestyle, or repurposing. Asia needs more deep biotech companies that tackle core aging hallmarks. To ensure high quality and evidence-based longevity or gero-medicine, robust research studies are crucial. Both academic research institutions and long-term funding is needed to insure sustainable scientific development as highlighted by the *Longevity Science Foundation*,” said Dr Erat.

Maxim Kholin, Co-founder, Gero highlights the need for clearer approval pathways.“For longevity biotech to thrive, we need clearer pathways for therapies that don’t fit neatly into today’s categories (preventive vs therapeutic). We should recognise ageing as a disease and agree on the biomarkers of ageing that will serve as surrogate endpoints for therapies approval.”

One of the leading players in the longevity biotech space, Gero, recently signed a potentially multi-billion-dollar deal with Roche’s Chugai. The company had previously collaborated with Pfizer based on its published findings that human ageing is irreversible and should be filtered out from the data to identify new therapeutic targets. These partnerships further demonstrate that Asia is capable of generating science robust enough to attract major pharmaceutical players. Gero’s Large Health Model, trained on over 100 million electronic health records and multi-omics data, is one of the largest AI models of human health. The platform enables the discovery of ‘pipeline-in-a-pill’ therapies that simultaneously target multiple age-related diseases, positioning Asia at the forefront of longevity innovation.

“The field of longevity science is still in its early stages, and long-term success will depend on early investments across a diverse range of approaches. Japan, for example, is building a dynamic ecosystem that supports early-stage research into age-related diseases. To further unlock the potential of this field, investment must span the entire drug-development cycle—from basic research to clinical trials. Equally as important is building regulatory and clinical frameworks to ensure results can be applied effectively across regions,” said Dr Ringel.

Talent is another critical factor shaping the future of longevity biotech. “Recruiting specialised talent with expertise is critical to advance these efforts. Given the shrinking workforce in many regions, prioritising investment in early-stage research and the recruitment of skilled scientists ensures continued progress in developing effective new therapies,” said Dr Ringel.

While Asia has a strong base of scientific expertise, building multidisciplinary teams remains a challenge. “Asia has outstanding researchers, but longevity biotech requires hybrid teams spanning physics, AI, and drug development. Building such teams — as we’ve done at Gero by combining scientists from Pfizer, Google AI, and BenevolentAI — is still the exception, not the norm,” said Kholin

Some experts feel that beyond these challenges, one of the main hurdles is cultural acceptance. “Furthermore, cultural, ethical and market barriers also exist. Particularly in religious and traditional societies, the idea of extending life via biotech is met with scepticism or caution, and companies sometimes fail to localise interventions to specific ageing patterns in Asian populations. Simultaneously, few cross-border clinical trial networks exist to validate longevity interventions across diverse populations. Clearly also gender-specific R&D is needed, which is the reason why leading organisations such as the *Women’s Brain Foundation* are increasingly supporting research in the Asian region,” said Dr Erat.

Kholin agrees, “Longevity interventions challenge cultural and regulatory comfort zones. Education — for regulators, clinicians, and the public — will be key to making Asia not just a fast follower but a global leader.” Targeting aging is the next biggest frontier in both science and business, one that will transform healthcare, economies, and daily life.

“It’s important to note that biotech is a long game. These innovations demand large, sustained investments, but ultimately generate outsized returns that can change the economics of an entire nation—such as what we’ve seen in Denmark from GLP-1 therapies. But the outsized returns from sustained investment clashes with traditional funding models in Asia, which often rely on quicker returns. At the end of the day, Asia has the potential to be a major contributor to longevity biotech, but getting there means smart policies, flexible regulations, and strategic workforce moves,” signs off Dr Ringel.

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