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JETRO Switzerland Newsletter

Japan External Trade Organization

Discover Nagi Bioscience's Vision for Smarter Biological Testing

Interview with **Dr. Matteo Cornaglia**, CEO and co-founder of of *Nagi Bioscience*

Inside this issue

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INTERVIEW

Nagi Bioscience is pioneering a new generation of biotechnological solutions aimed at transforming how biological testing is done. In this interview, CEO and co-founder, Dr. Matteo Cornaglia, shares his views on how his company is actively shaping the future of life sciences.

Dr. Matteo Cornaglia is the CEO and co-founder of Nagi Bioscience © Switzerland Global Enterprise 2025

Dr. Cornaglia, *Nagi Bioscience* uses tiny worms called "*C. elegans*" to test how long they live, how healthy they stay, and their biological age with automated tools. What inspired you and your co-founders to choose these worms for aging research, and how does it improve old methods?

C. elegans is one of the most powerful models in aging biology. Despite being a tiny worm, it shares many conserved molecular pathways with humans, including those involved in metabolism, stress response, and longevity. It has a short lifespan of about two to three weeks, which allows us to measure lifespan and healthspan effects in days rather than years. What inspired us was the potential of *C.elegans* to bridge the gap between promising discoveries in academia and the need for scalable, reproducible testing tools for industry. Traditional methods are manual, low-throughput, and often rely on rodent models, which are costly, time-consuming, and ethically sensitive. At the same time, the market is increasingly moving toward alternative models that support faster decision-making and align with the 3Rs priciples. By combining *C. elegans* with automation, imaging, and AI-driven analysis, we transform a gold-standard academic model into a standardized industrial platform. This enables improved reproducibility, accelerated screening, and earlier biological insights for drug and supplement developers.

Can you explain the main differences between your Nagi C-Age and Nagi B-Age assays, and how their AI helps deliver quick results in just a few days?

Nagi C-Age and Nagi B-Age are complementary assays designed to quantify different dimensions of aging biology. Nagi C-Age focuses on lifespan and healthspan analysis. It automatically tracks survival, movement, and behavioral decline over time, generating statistically robust longevity data in a few weeks. These data can therefore validate whether an intervention truly improves healthspan in vivo. Nagi B-Age, in contrast, measures biological age through multidimensional phenotypic biomarkers. Using high-content imaging and AI-based feature extraction, it detects subtle morphological and behavioral changes that correlate with aging trajectories. This allows users to estimate biological age shifts within a few days, significantly accelerating screening workflows. Our AI algorithms standardize image analysis, reduce human bias, and extract complex phenotypic patterns that would be impossible to score manually. Beyond that, AI enables the integration of large datasets into predictive aging models, supporting faster and more objective early-stage decisions.

Your SydLab™ One system provides fully automated, large-scale testing right at customers' locations. How does this precision make results more reliable and reduce ethical issues compared to using mice?

SydLab™ One brings fully automated testing of anti-aging interventions directly into customer's laboratories. Environmental conditions, imaging, compound delivery, and data analysis are

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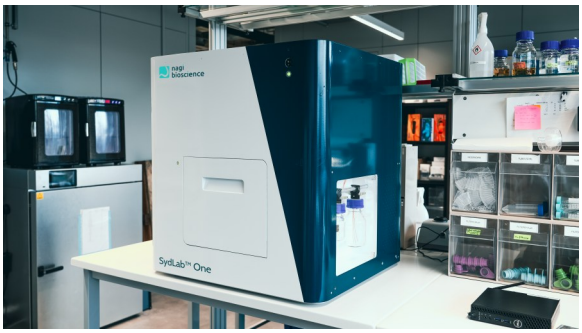

The Syd Lab™ One an automated lab-on-a-chip platform advancing next-generation biological testing. © Nagi Bioscience

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integrated into a single standardized workflow. This level of automation improves experimental precision and statistical robustness, adressing a key challenge in preclinical research: reproducibility. By minimizing human handling and variability, SydLab™ One generates consistent datasets suitable for industrial decision-making. At the same time, using *C. elegans* instead of vertebrate models significantly reduces ethical concerns, regulatory burden, costs, ans experimental timelines. While rodent studies remain important at later stages, our platform enables high-throughput in vivo screening at early stages. This not only aligns with the global 3Rs principles (Replace, Reduce, Refine) but also allows companies to prioritize only the most promising candidates for mammalian testing.

With over 15 years of experience helping more than 25 teams worldwide in drug development and nutritional supplements, what new mechanisms of drug action have your customers discovered using your tools?

Over the past 15 years, our team has supported more than 25 groups in biopharma and nutraceuticals. Using our *C. elegans* platforms, customers and collaborators have uncovered novel modes of action linked to mitochondrial function, stress resistance pathways, autophagy, and metabolic reprogramming. In several cases, compounds initially developed for other indications showed unexpected longevity or healthspan benefits. Our systems allow users not only to measure lifespan extension, but also to dissect how a compound affects functional parameters such as movement, resilience to stress, or age-related decline. This multidimensional phenotyping helps shift the focus from simply extending lifespan to understanding mechanisms that promote healthy aging, which is increasingly important in both drug development and the longevity supplement market.

What opportunities do you see for partnerships with Japanese firms in longevity or AI-driven biotech?

Japan is a global leader in longevity research and precision biotechnology. We see strong synergy with Japanese pharmaceutical companies, ingredient manufacturers, and AI-driven biotech firms seeking to accelerate validation of aging-related interventions. Our platform can serve as a rapid in vivo screening layer between cell-based assays and mammalian studies, reducing development timelines. In addition, collaborations in AI and data science could further enhance predictive modeling of biological age and compound efficacy. We believe partnerships in Japan could combine deep expertise in healthy aging research with our automated, scalable testing solutions to create new standards for longevity validation.

Japan leads in healthy aging research. Have you already collaborated with Japanese companies or researchers, and how might JETRO facilitate expansions here?

We have had scientific exchanges with researchers in Asia and strong interest from Japanese stakeholders in the longevity and functional food sectors. Japan's leadership in healthy aging and its advanced industrial ecosystem make it a particularly relevant market for our technology. JETRO could play a key role by facilitating introductions to strategic industrial partners, supporting pilot projects, and helping us navigate regulatory and business frameworks. Establishing local partnerships or demonstration sites in Japan would be an important step toward long-term expansion and bilateral innovation exchange.

What's next for you and your team?

Our next step is to further scale our applications portfolio and data integration. We are expanding our AI capabilities to move toward predictive aging models and more advanced biological age scoring. At the same time, we aim to grow internationally by forming strategic partnerships in key longevity markets, including Japan. Our vision is to make automated in vivo aging research a standard tool in early-stage development, accelerating the discovery of interventions that truly improve a healthy lifespan.

Thank you for the interview!

Switzerland to Host Global AI Summit in Geneva in 2027

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SITUATION

During the 2026 AI Summit in New Delhi, Swiss President Guy Parmelin announced that Switzerland will be the host of the next World Summit on Artificial Intelligence (AI) in the first half of 2027 in the city of Geneva. The event will be organized jointly by the Federal Department of the Environment, Transport, Energy and Communications (DETEC) and the Federal Department of Foreign Affairs (FDFA).

By hosting this global meeting, Switzerland aims to further strengthen its role in international digital policy and highlight its long-standing commitment to a rules-based and inclusive approach to emerging technologies. The initiative also reflects the country's ambition to remain at the forefront of innovation and research in artificial intelligence, fostering dialogue between public authorities, academic institutions, and the private sector.

President Parmelin underlined that the upcoming summit will provide a valuable platform for Geneva's international ecosystem to promote respect for international law and fundamental rights in the development of AI solutions. It is also expected to encourage exchanges among companies, civil society and researchers, creating new momentum for responsible innovation and illustrating how artificial intelligence can contribute to economic and social progress.

The Federal Council had previously expressed its intention to host the 2027 edition and confirmed earlier this year that the necessary funding and preparations are in place. The decision follows a series of high-level AI summits launched in recent years to address both the opportunities and the challenges of artificial intelligence. After the first meeting in the UK, subsequent editions were held in South Korea and France, each contributing to a broader international discussion on how artificial intelligence can advance fields such as healthcare, climate science, and sustainable agriculture.

Sources: admin.ch; Handelszeitung

Key Findings of the 2026 Swiss Venture Capital Report

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TREND

The 2026 Swiss Venture Capital Report shows that venture capital investments in Swiss start-ups increased significantly in 2025, rising by 23.9% compared with the previous year to reach CHF 2.95 billion. This growth signals a rebound after 2 challenging years of declining financing that followed the overheated period of 2022 and 2023. While the total amount of capital grew, the number of financing rounds remained high but showed little change.

A key driver of the recovery was the ICT sector, where start-ups captured nearly two and a half times more financing than in 2024, rising from CHF 315.9 million to CHF 773.6 million. This marks a return to pre-crisis levels last seen in 2019 and makes up for losses from the weak 2024 cycle. The biotech industry also reached a new peak: with CHF 946.4 million invested, it exceeded the previous record from 2020 by about a quarter, continuing its three-year growth streak.

Investment activity shifted more strongly toward early-stage financing. Start-ups at this stage attracted CHF 1.116 billion, representing a year-on-year rise of 73%, while seed-stage funding grew 23.8% to CHF 298 million. Later-stage activity remained largely stable. Deals exceeding CHF 20 million hit an all-time high, with 32 transactions crossing that mark, which is a sign of an increasing number of established growth companies. However, the largest rounds accounted for a relatively smaller share of the total, suggesting a broader distribution of capital across firms.

From a geographic perspective, Zurich saw the largest upswing in 2025, with funding almost doubling (+89.5%) to CHF 1.19 billion. Basel-City benefited from its strength in biotech, also reaching a record with CHF 572.3 million. Vaud maintained solid results with CHF 578.9 million in total investments, its second-best year after 2021 and representing nearly one-fifth of total national venture funding. Zug's activity stayed steady, while Geneva registered fewer large rounds but a record number of deals overall.

The Swiss Venture Capital Report is compiled each year by startupticker.ch and the Swiss Private Equity & Corporate Finance Association (SECA), in partnership with startup.ch.

Source: startupticker.ch

Switzerland Launches 6 New Research Centers

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INNOVATION

Swiss President Guy Parmelin, who also leads the Federal Department of Economic Affairs, Education and Research (EAER), approved 6 new National Centres of Competence in Research (NCCRs) to advance top-tier research initiatives. These centers will secure CHF 98.7 million in federal funding from 2026 to 2029, matched by contributions from participating universities and research institutes.

The initiative draws long-term commitment from the leadership of 4 cantonal universities, namely Basel, Bern, Lausanne, and Zurich, as well as ETH Zurich, EPFL, and the Paul Scherrer Institute (PSI). Additional higher education institutions and research partners will collaborate to pool expertise across disciplines.

Launching in spring 2026, the NCCRs are: **'Children & Cancer'** to optimizing child cancer treatments, **'CLIM+'** to look at climate extremes adaptation, **'Genesis'** to investigate the origins of life, **'Muoniverse'** for muon physics, **'Precision'** for time/frequency measurements, and **'Separations'** for the development of new separation technologies (chemistry) and optimization of technology transfer to industry.

This 6th NCCR series emerged from a late-2023 call for proposals managed by the Swiss National Science Foundation (SNSF) on behalf of the State Secretariat for Education, Research and Innovation (SERI). The SNSF evaluated over 75 applications in several rounds with help from international experts, narrowing to 11 standout projects for SERI's policy review. Ultimately, EAER selected six based on strategic fit and available funds.

NCCRs foster sustainable research ecosystems through interdisciplinary efforts on pressing scientific, societal, and economic issues, while prioritizing early-career researchers and gender equity in science. They qualify for up to 12 years of federal backing, a model in place since 2001 to champion high-impact work. The current priorities target fields like medicine, quantum technologies, and climate to elevate Swiss innovation.

The Swiss government seeks to bolster research and innovation in key strategic fields, including medicine, quantum technologies, and climate.

Sources: swissinfo; admin.ch

Agenda

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AGENDA

✓ **Stay tuned!**

JETRO is a government-related organization that works to promote mutual trade and investment between Japan and the rest of the world. Originally established in 1958 to promote Japanese exports abroad, JETRO's core focus in the 21st century has shifted toward promoting foreign direct investment into Japan and helping small to medium size Japanese firms maximize their global export potential.

The JETRO Switzerland Newsletter can also be viewed and/or downloaded online: http://www.jetro.go.jp/switzerland/newsletter

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