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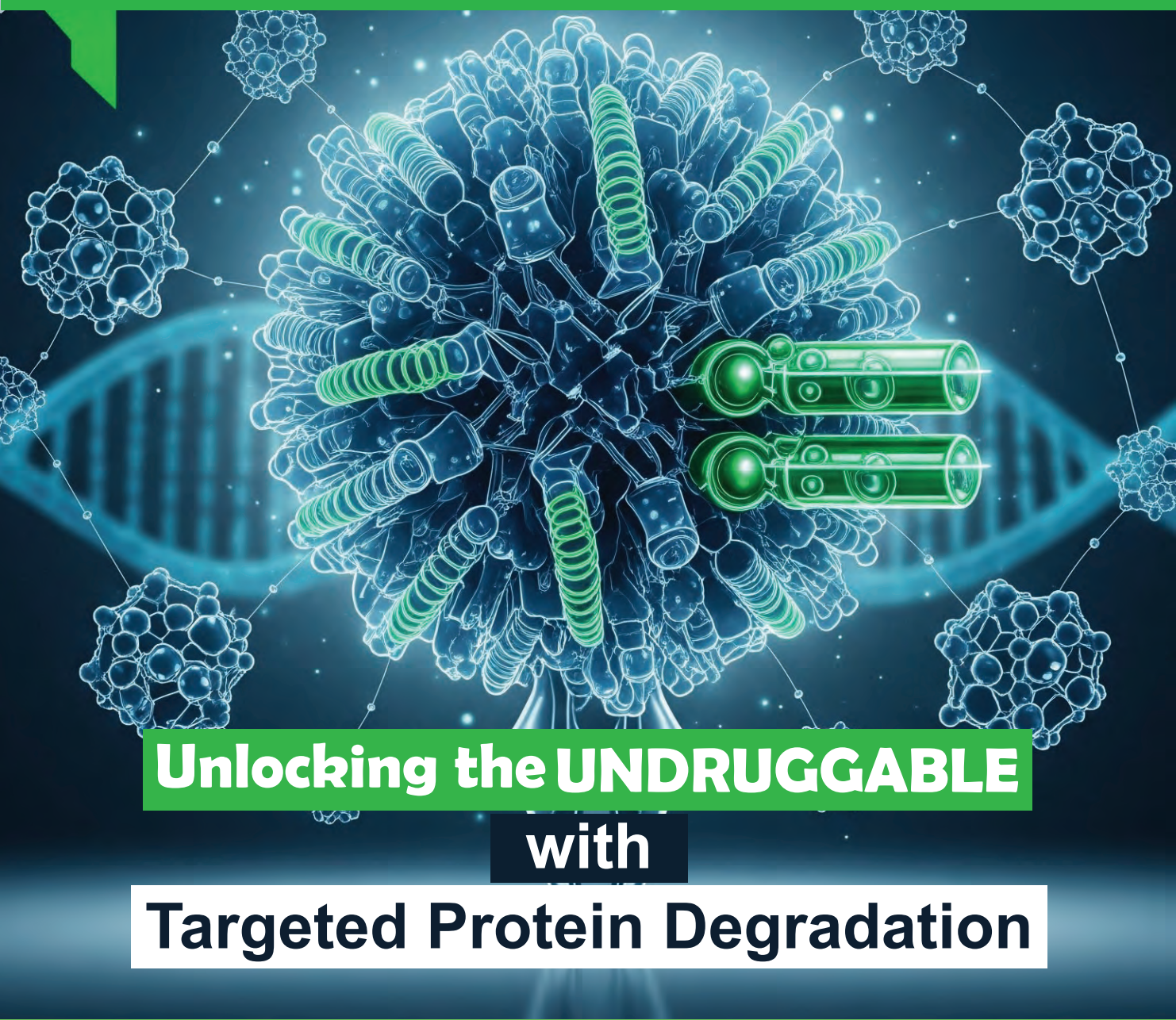

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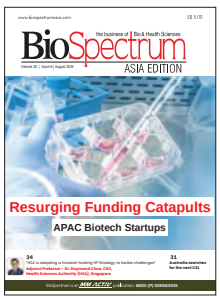

Acknowledgement/ Feedback

Thank you for the interview feature on Connietec. It keeps us more motivated to supply better products through continuous supplementation and development.

-Aden, South Korea

Thank you so much for publishing the article- 'The Future Formula: What's Driving Recruitment Innovation in Pharma.' Looking forward to future collaboration.

-Shriya Dhar, India

Thanks for publishing the BioDlink interview in the August edition of BioSpectrum Asia.

-Jaxon, China

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Letter from Publisher

Ravindra Boratkar
Publisher &
Managing Editor,
MD, MM Activ Sci-Tech
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Dear Readers,

Targeted Protein Degradation (TPD) is a new therapeutic strategy that removes disease-causing proteins once thought "undruggable," opening major opportunities in cancer, immune, and hard-to-treat diseases. The field, built on discoveries from the 2000s–2010s, is now showing clinical proof with three approved therapies, ~60 clinical-stage assets, and 200 research programmes worldwide. Oncology leads development, but non-oncology areas are growing quickly. Backed by heavy investment and pharma partnerships, TPD is reaching commercial maturity.

In the Asia-Pacific (APAC) region, China and South Korea have emerged as key hubs for TPD research, with Japan, Australia, and Singapore also pursuing opportunities. South Korea stands out as its leading pharmaceutical companies accelerate growth in this field through acquisitions, collaborations, and pipeline expansion. Our lead story examines why TPD is attracting global interest—from APAC's rising biotech innovators to multinational giants competing to develop the next blockbuster degrader.

The World Health Organization (WHO) estimates that poor vision leads to over $400 billion in lost productivity annually. Asia Pacific (APAC) bears the burden of vision impairment more heavily than any other region. APAC represents 51 per cent of the global population, yet the region accounts for nearly two-thirds of moderate-to-severe vision impairment cases worldwide. Furthermore, the region also has a high prevalence of diabetes and diabetes-related eye diseases – diabetes alone increases the risk of vision impairment by 25 times. Our team has focussed on this key issue and how nations are prioritising vision health by bridging eye care gaps in the region.

Hong Kong has emerged as a major biotechnology fundraising hub after the implementation of Chapter 18A in 2018, which provided pre-revenue businesses with their first public market access. By allowing high-growth biopharma businesses that would have otherwise found it difficult to meet standard profitability rules, the reform helped the Hong Kong Stock Exchange (HKEX) compete with Shanghai and Nasdaq. It seems that these efforts have been fruitful. Since 75 biotech companies have listed under Chapter 18A to date, Hong Kong has surpassed the US as the world's second-largest biotech fundraising destination. An in depth piece examines the state of biotech initial public offerings (IPOs) today and how the city can continue to serve as a global centre for capital and innovation.

Given the lengthy timelines of drug development, it is challenging to predict how international trade dynamics and regulations may evolve by the time a therapy hits the market. Even with changes in R&D priorities, collaboration remains highly appealing. By pooling resources and sharing both risks and benefits, biotech and pharma companies can achieve more together than individually; points out an expert. Such partnerships enable penetration into new markets, manage escalating costs, and deliver innovative treatments to patients worldwide.

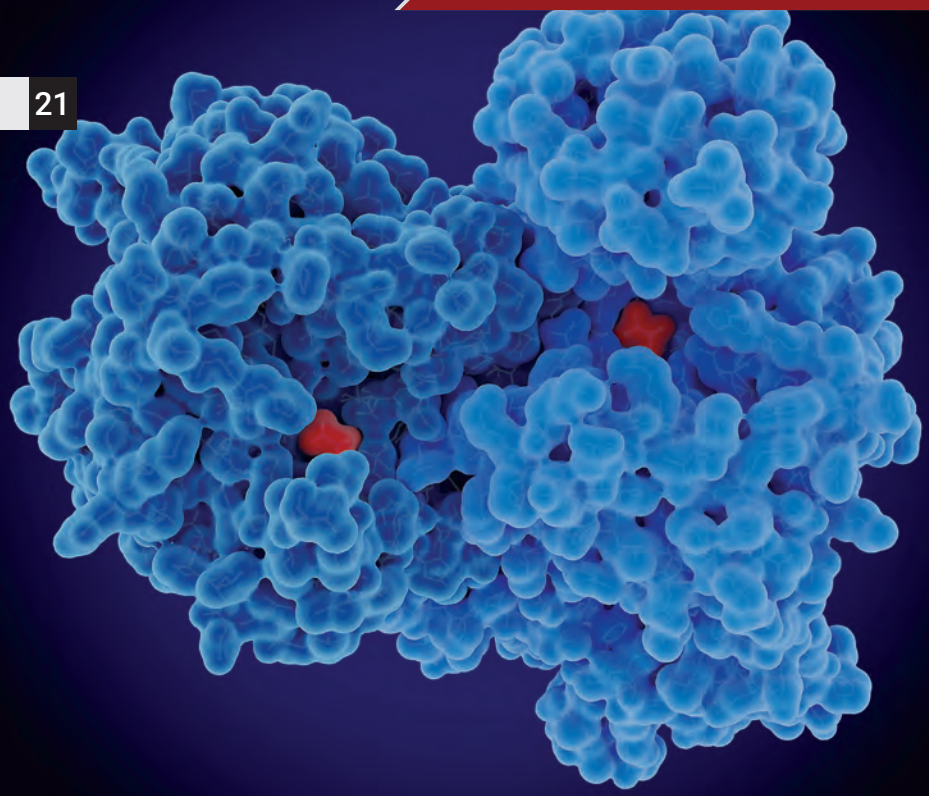
Each generation experiences a breakthrough in diagnostic technology—from the microscope to MRI to artificial intelligence. Quantum computing may be the next major leap, offering not just speed but also smarter, more integrated, and highly precise solutions. Rather than replacing classical systems, its strength lies in addressing specific bottlenecks such as multi-omics analysis, imaging interpretation, and molecular simulation. As one expert observed in an article, the choices companies make in the coming years will determine whether they remain on the sidelines or emerge as leading players in the future of diagnostics and medicine.

I am sure you will find this edition a great read.

Thanks & Regards,

Ravindra Boratkar
Publisher & Managing Editor

COVER 21



Why TPD Is Biotech's Next Big Bet

Targeted Protein Degradation (TPD) is an emerging therapeutic approach that allows the removal of disease-causing proteins once considered 'undruggable'. These proteins, which make up almost 80 per cent of the human proteome, cannot be addressed using traditional small-molecule binding strategies. By making it possible to eliminate such challenging targets, TPD is opening new opportunities for drug development in cancer, immune conditions, and other hard-to-treat diseases, and is increasingly viewed as a cornerstone for future drug discovery. Today, TPD boasts three approved therapies, nearly 60 clinical-stage assets, and around 200 active research programmes worldwide, according to a report from Nature. With big pharma pouring billions into partnerships, acquisitions, and platform deals, the field is entering a new phase of commercial maturity. In this story, we explore why TPD is commanding global attention from emerging biotech innovators in APAC to multinational players racing to secure the next blockbuster degrader.

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"APAC is one of the fastestgrowing photodynamic therapy markets globally"

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"We aim to position Korea among the global top 3 in clinical trial competitiveness and establish it as Asia's central research hub"

Dr Inseok Park,
President, KoNECT, South Korea

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"Singapore has been a great launchpad, owing to its structured safety frameworks"

Aashish Mehta,
Co-Founder and Chief Executive Officer,
TacnIQ AI, Singapore

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CHINA-SOUTH KOREA BIOPHARMA OVERSHADOW WEST

Dr Milind Kokje
Chief Editor
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South Korea has rapidly positioned itself as a rising force in the global biopharmaceutical sector, fast becoming a focal point for drug licensing activity. According to GlobalData's recent Pharmaceutical Centre Deals Database, innovator drug licensing agreements in South Korea surged by 113 per cent in 2025 compared to the previous year, with deal values jumping from $3.6 billion in 2024 to $7.8 billion in 2025. In January 2025, the country launched the Bio Committee, an advisory body tasked with steering South Korea's biotech and life sciences industry. Its mission is to strengthen global competitiveness in novel drug and advanced biopharma technology, with the ambitious goal of ranking among the world's top five bio-industry leaders by 2035.

One of the Committee's concrete targets is to cut drug development timelines from 13.7 years to just six, and reduce average costs from $1.44 billion (₩2 trillion) to $741 million (₩1 trillion). If achieved, these efficiencies could make South Korea a preferred destination for drug development. Industry experts note that this transformation marks South Korea's shift from being primarily known for generics and biosimilars to becoming a sought-after partner in cutting-edge biologics, novel drug discovery, and advanced therapeutic technologies. The surge in licensing activity reflects the country's growing combination of scientific excellence, regulatory agility, and commercial sophistication, making it attractive for both in-licensing and out-licensing agreements.

Policy reforms have also played a major role. The Ministry of Food and Drug Safety has introduced faster approval pathways, clearer biosimilar and Cell & Gene Therapy (CGT) regulations, and stronger alignment with the International Council for Harmonisation (ICH) standards — cutting the time from lab research to global clinical trials. Meanwhile, government programmes have prioritised translational research and technology transfer from universities and research institutes. South Korea's deep expertise in biosimilars has also been instrumental in this rise, sharpening its capabilities in process engineering, comparability analytics, and global regulatory navigation. It appears that South Korea developed the licensing engine of policy, people, plants and platforms and then pointed it at the most partner-hungry corners of modern biopharma. That combination has made the country not only a prolific source of licensable assets, but also a hub in the true sense. Its ascent puts it in direct competition with China, Asia's largest player in drug licensing. The value of US licensing deals for innovator drug candidates from Chinese biopharma companies has risen by 280 per cent since 2020. China now accounts for 18 per cent of all global licensing deals — a record high — with one-third of deal value coming from Chinese-developed assets. Recent highlights included AstraZeneca's $13.6 billion deals with Chinese biotechs and Pfizer's $6 billion deal with 3Sbio for a cancer drug. In fact, one-third of all compounds licensed by large pharmaceutical companies last year originated from China, up sharply from just 12 per cent two years ago.

China's rapid rise is driven partly by faster and more cost-effective clinical trials. Trials can begin within months, and results — positive or negative — are available far quicker than in many other countries. This is enabled by the large patient pool, high participation rates, driven by free access to trial drugs, and streamlined recruitment processes. However, some analysts warn that trial oversight and ethical standards in China may not match those of more tightly regulated markets. China's momentum has prompted the US to call for a minimum $15 billion investment over the next five years to remain competitive with China in biotech innovation. Washington is also debating the Biosecure Act, which would block Chinese companies from accessing US funding and collaborating with American pharma firms, citing national security risks. For Western countries to keep pace with both China and South Korea, analysts argue that funding alone is not enough — regulatory flexibility will be essential. Accelerating development and testing, while maintaining reliability in regulation and sophistication in deal-making, will be the key to staying ahead in the race. BS

Malaysia leads way in medical device regulatory reliance

The Ministry of Health Malaysia has announced a historic advancement in international regulatory collaboration with the launch of the Medical Device Regulatory Reliance Programme between Malaysia and China. This world-first initiative represents a strategic breakthrough in accelerating access to safe and innovative medical technologies while reinforcing Malaysia's position as a global regulatory leader. A Memorandum of Understanding was signed between the Medical Device Authority (MDA) and China's National Medical Products Administration (NMPA) in November 2023, enabling both countries to recognise each other's regulatory decisions for pre-market approvals. Malaysian IVD devices now qualify for China's Green Channel, and Chinese IVD devices may use Malaysia's Verification Pathway, reducing approval timelines to 60 and 30 working days respectively. This arrangement reduces regulatory duplication, accelerates market access, and improves patient access to quality healthcare technologies.

Japan launches nationwide gastric health initiative

In a significant advancement for public health, Japan's 93rd Prime Minister Yukio Hatoyama has launched a nationwide public health initiative focused on gastric health and early detection of gastric cancer. The initiative will leverage GASTROClear, a novel non-invasive microRNA-based blood test developed by Mirxes. This initiative aims to raise public awareness and improve gastric cancer screening rates; provide wider access to innovative, non-invasive blood-based screening; and reduce strain on hospitals and conventional screening facilities. Japan has a high incidence of gastric cancer, with over 120,000 new cases annually, ranking second globally after China's 350,000. Japan is a pioneer in gastric cancer screening worldwide. In 1983, Japan's Health Services Act began promoting upper gastrointestinal barium x-ray examinations for gastric cancer screening in adults over 40. Later, in 1994, gastric cancer screening was incorporated into the National Cancer Screening Program, with endoscopy becoming the preferred method for gastric cancer detection. Despite these initiatives, the 2022 data from the National Cancer Centre Japan (Ganjoho) indicated gastric cancer screening rates of 45.7 per cent for men and 36.5 per cent for women, often hampered by factors such as lack of time, fear of discomfort, and economic concerns.

Singapore's Health Sciences Authority signs MoU with Hong Kong Department of Health

Singapore's Health Sciences Authority (HSA) and the Department of Health (DoH), Hong Kong Special Administrative Region (HKSAR), have signed a Memorandum of Understanding (MoU) for cooperation in healthcare regulatory matters pertaining to health products. This MoU marks an important milestone in strengthening ties between the two regulatory authorities. The MoU encompasses technical cooperation and mutual exchange of information, best practices and expertise pertaining to healthcare regulatory matters across a broad spectrum of health products, including pharmaceuticals, medical devices, advanced therapy products and traditional medicines. The agreement also facilitates the sharing of regulatory information and enforcement approaches towards tobacco products and vaping devices. To support these objectives, the MoU enables exchange of regulatory experts and staff, participation in meetings and scientific conferences, as well as collaboration in training courses and joint projects.

UAE strengthens partnerships with Private Hospitals to enhance national newborn screening programme

The Ministry of Health and Prevention (MoHAP) in the United Arab Emirates (UAE) recently held a coordination meeting with representatives from private hospitals to discuss ways to improve the national newborn screening programme and ensure its alignment with the UAE's approved national standards in accordance with federal health legislation. These measures are implemented in line with the Cabinet Resolution on newborn medical screening

and the directives issued by the Health Regulation Sector, which define the procedures, standards, and regulatory framework for newborn examinations. They include ongoing monitoring and validation of tests to ensure accuracy, alongside comprehensive clinical and biochemical assessments. The platform enhances patient safety, improves efficiency and service quality, and facilitates timely access to patient records, supporting informed clinical decision-making and advancing MoHAP's preventive health and service improvement objectives.

India unveils national initiative to benchmark and strengthen state drug regulatory systems

Union Health Secretary, Punya Salila Srivastava, virtually launched the State Health Regulatory Excellence Index (SHRESTH), a first-of-its-kind national initiative to benchmark and strengthen state drug regulatory systems through a transparent, data-driven framework in the presence of Dr Rajeev Singh Raghuvanshi, Drug Controller General of India (DCGI). The initiative, proposed by the Central Drugs Standard Control Organisation (CDSCO), Government of India, aims to drive improvements in the performance of state drug regulatory authorities across India, ensuring drug safety and quality standards are consistently met. The SHRESTH Index will enable targeted improvements in human resources, infrastructure, and digitisation across states, ensuring drug safety is guaranteed for every Indian, regardless of geography. It will also promote cross-learning of best practices and foster collaborative spirit. The Index, developed after detailed deliberations with the states, will regularly assess the states on several parameters such as human resources, strength of lab testing capacities, extent of digitisation of various approvals and licenses, rigour of inspection and surveillance activities, and responsiveness towards grievances received from citizens.

Australia invests $21.5 M to strengthen aged care workforce

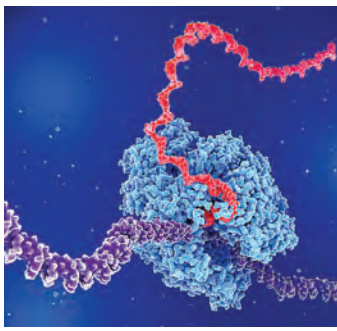
The Australian government is backing its dedicated aged care workforce across Australia, investing $21.5 million in scholarships to help aged care workers and nurses progress in their careers. The Aged Care Nursing Scholarships Programme will support nurses and aged care workers to complete education and training, making sure they have the skills to deliver high-quality aged care that prioritises the complex needs of older people. Scholarship participants can complete formal qualifications in aged care ranging from a Certificate III to a Masters or undertake training in specialised areas such as clinical leadership, palliative care, dementia care and infection prevention and control. Over 1,000 scholarships are available, with guaranteed places for Aboriginal and Torres Strait Islander aged care workers and nurses. The Australian College of Nurse Practitioners will deliver the Aged Care Nursing Scholarships Programme until June 2027. These scholarships are expected to attract more nurses and aged care workers to the sector and help those already working to build on their skills and deliver the world-class care older people deserve.

Astria licenses rare disease drug Navenibart to Japan's Kaken Pharma in $32 M deal

Astria Therapeutics, Inc. a US-based biopharmaceutical company, has exclusively licensed development and commercialisation rights in Japan to Kaken Pharmaceutical, a Japanese specialty pharmaceutical company, for navenibart, a long-acting investigational monoclonal antibody inhibitor of plasma kallikrein, in Phase 3 development for the preventative treatment of the rare disease hereditary angioedema (HAE). Hereditary angioedema is a rare genetic disorder characterised by recurrent episodes of severe swelling, often affecting the face, extremities, gastrointestinal tract, and airways. Under the agreement, Astria will receive an upfront payment of $16 million, with the potential for an additional $16 million in total commercialisation and sales milestones. In addition to these payments, Astria is also eligible for tiered royalties with the royalty rate as a percentage of net sales up to 30 per cent, and partial Phase 3 cost reimbursement. Kaken will also provide support for the ALPHA-ORBIT Phase 3 trial in Japan, be responsible for regulatory submissions in Japan, and will reimburse Astria for a portion of the costs of the navenibart Phase 3 programme.

Dx&Vx signs $220 M pact with US firm for mRNA cancer vaccine development

South Korea-based Dx&Vx (DXVX) has signed its first-ever global out-licensing agreement since its establishment. DXVX has entered into a co-development and license agreement valued at approximately $220 million with a US-based biotech company for its mRNA-based cancer vaccine. Revenue sharing post-commercialisation will be handled separately.



Through this agreement, DXVX will grant its partner exclusive global rights to its patented mRNA-based cancer vaccine. The partner company will pay DXVX a total of approximately $220 million in development milestones and, following commercialisation, sales-based milestone payments exceeding 10 per cent of cumulative sales over a period of more than 15 years. Given the vast size and growth potential of the global oncology and cancer vaccine markets and the expected market share, DXVX projects that post-commercialisation sales milestone revenues could exceed $940 million.

XtalPi and DoveTree announce landmark AI drug discovery collaboration worth $6 B

XtalPi, a China-based technology company in integrating artificial intelligence (AI) and robotics for drug and materials discovery, has announced a transformative strategic collaboration with DoveTree Medicines, a biotechnology pioneer founded by renowned drug developer D. Gregory Verdine. The collaboration, worth up to $5.99 billion, represents one of the largest commitments to date for AI- and robotics-driven

pharmaceutical R&D. Under the agreement, DoveTree gains exclusive global rights to develop and commercialise a portfolio of innovative therapeutics generated through the partnership. XtalPi has received an upfront payment of $51 million and is eligible for $49 million in additional near-term payments, plus development and commercial milestones, as well as tiered royalties totaling up to $5.89 billion. This collaboration merges XtalPi's integrated drug discovery capabilities with DoveTree's deep biological expertise in selecting and validating novel targets of high therapeutic potential.

Cohance Lifesciences invests $10 M in cGMP Bioconjugation Suite in US

India-based Cohance Lifesciences, a leading global Contract Research, Development & Manufacturing Organisation (CRDMO), has announced a strategic investment of $10 million to expand cGMP bioconjugation capabilities at its US based subsidiary, NJ Bio. Aligned with the company's long-term strategy, this investment advances Cohance's global expansion in niche technology-led modalities, enhancing its ability

to support innovators from early development through late-phase clinical supply. The build-out of a state-of-the-art, cGMP compliant bioconjugation suite at NJ Bio's Princeton, New Jersey facility significantly strengthens the company's capabilities to deliver fully integrated Antibody-Drug Conjugate (ADC) solutions - from early-phase payload-linker synthesis through to complete ADC manufacturing for clinical supply. NJ Bio is currently executing a major new programme for an existing innovator customer with multiple ADC candidates in their pipeline.

Sanofi acquires next-gen vaccine biotech Vicebio for $1.6 B

Vicebio, a biopharmaceutical company with operations in Australia, UK and Belgium, has entered an exclusive, definitive agreement to be acquired by Sanofi. Under the terms of the agreement, subject to customary conditions, Vicebio shareholders will receive up to a total of $1.6 billion, including an upfront payment of $1.15 billion as well as development and regulatory milestones payments of $450 million. Vicebio was created by Medicxi to develop next-generation vaccines for respiratory viruses utilising its proprietary Molecular Clamp technology, discovered at The University of Queensland, Australia. This technology uniquely stabilises viral glycoproteins to elicit strong protective immune responses and enables high-yield production for ready-to-use liquid multivalent formulations. The Molecular Clamp technology is applicable to a wide range of viruses including Respiratory Syncytial Virus (RSV), Human Metapneumovirus (hMPV), Parainfluenza viruses, Influenza and Coronaviruses. Vicebio is currently running an exploratory Phase 1 clinical trial with lead asset VXB-241, a bivalent vaccine targeting both RSV and hMPV viruses, pathogens that are a significant burden in the elderly and those with a weakened immune system.

Frencken marks groundbreaking for new facility worth S$63 M in Singapore

Frencken Group Limited, a global integrated technology solutions company, recently held a groundbreaking ceremony at the site of its upcoming manufacturing facility in Kaki Bukit Avenue 5, Singapore. This marks the development of a larger and improved facility to expand and consolidate the Group's Mechatronics operations in Singapore. Construction of the New Facility is slated to start in the third quarter of 2025 and complete in the first quarter of 2027. Upon completion, the relocation and consolidation of Mechatronics Singapore's operations to the new site will be carried out in phases. Entailing an estimated development cost of around S$63 million, the New Facility is expected to yield a gross floor area of 28,594 square metres which will be around 1.4 times the size of Mechatronics Singapore's current combined operations situated at Changi North and Seletar Aerospace Link. With the expanded manufacturing capacity and enhancement of its local capabilities, Frencken will be able to better serve global markets and high-growth industries like semiconductor and life sciences, from Singapore.

Sanofi strengthens efforts to prevent Chronic Respiratory Diseases in UAE

The Ministry of Health and Prevention (MoHAP) in the UAE has signed a Memorandum of Understanding (MoU) with Sanofi, to promote healthy lifestyles, advance early detection of noncommunicable diseases (NCDs), and address their associated risk factors. The agreement is part of MoHAP's efforts to develop institutional partnerships that strengthen the quality of public health and improve the efficiency of the preventive care system. It will contribute to developing innovative programmes that boost the UAE's global competitiveness in health indicators, while advancing the objectives of the National Strategy for Wellbeing 2031. The partnership aims to promote collaboration to prevent chronic respiratory diseases, particularly chronic obstructive pulmonary disease (COPD) and bronchial asthma, while addressing tobacco consumption, the primary cause of these illnesses. It also aims to improve early identification of related complications and reduce incidence rates.

Cartherics unveils cleanroom facility for cell therapy manufacturing in Australia

Cartherics, an Australia-based biotechnology company developing off-the-shelf immune stem cell therapies focusing on high-impact women's diseases, with lead programmes in ovarian cancer and endometriosis, has unveiled its new, state-of-the-art cleanroom facility for clinical-scale manufacturing of cell therapy products. Once validated, the facility will be used for manufacturing of clinical batches of the company's lead cell therapy product, CTH-401, for which the first clinical indication will be relapsed and refractory ovarian cancer. Cartherics is working towards its mission to transform care in women's health with innovative off-the-shelf immunotherapies, offering new hope for conditions like ovarian cancer, triple negative breast cancer, endometriosis, and other underserved diseases. It anticipates submitting an IND for CTH-401 to the US FDA in mid-2026. The new facility is equipped with comprehensive environmental control systems which monitor particle counts, airflows, air pressures, humidity, and temperature. It incorporates advanced manufacturing technologies, including closed processing systems, bioreactors, cleanroom-grade incubators and a bioburden testing facility.

Olympus joins hand with Revival Healthcare to develop endoluminal gastrointestinal robotics

Japan-based medtech company Olympus Corporation has signed a partnership with Revival Healthcare Capital to advance endoluminal robotics. US-based Swan EndoSurgical is a new company created by Olympus and Revival that aims to develop a robotic system that will revolutionise gastrointestinal (GI) patient care in the future. Endoluminal robotics aims to empower more physicians to safely perform innovative techniques, enhancing patient access to treatment options that support safety and improved recovery times. This groundbreaking advancement has the potential to create new and significantly enhanced minimally invasive treatment options for major unmet medical needs by boosting precision and efficiency in procedures addressing ergonomic strain for healthcare professionals. Endoluminal robots' ability to maneuver within the digestive tract and deploy flexible arms may enable more patients to benefit from safe and effective procedures, potentially avoiding invasive surgery.

Pfizer introduces 20-valent Pneumococcal Conjugate Vaccine (PCV20) for adults in India

Pfizer has announced the launch of its next-generation 20-valent pneumococcal conjugate vaccine (PCV20) for adults in India. With broader serotype coverage, Pfizer's vaccine marks a significant advancement in protection against pneumococcal disease in adults. Pfizer's vaccine helps protect against clinically relevant 20 serotypes responsible for a majority of invasive and non-invasive pneumococcal disease. It enables timely and proactive protection for all adults, including those living with chronic conditions. PCV20 will be available as a single shot vaccine and those vaccinated with PCV20 may not need a second dose. Adults over 50 years of age, as well as individuals with comorbidities such as asthma, COPD (Chronic Obstructive Pulmonary Disease), chronic kidney disease, and diabetes, face a higher risk of developing pneumococcal infections, which can result in complications, hospitalisation, and even death.

Quasar Medical unveils new global headquarters in Singapore

Quasar Medical, a global leader in manufacturing interventional and minimally invasive medical devices, has announced the opening of its Global Headquarters in Singapore. Quasar has operated out of Hong Kong since its founding in 1988 and will continue to maintain comprehensive business operations there as part of its global presence. Relocating the headquarters from Hong Kong to Singapore strategically positions the company at the heart of Asia's MedTech ecosystem—a region at the forefront of medical technology and healthcare innovation. The expanded two-floor facility, acquired in 2021, adds 7,000 square feet to its existing 35,000 square feet and is designed to foster collaboration, accelerate innovation, and meet the needs of customers worldwide. With enhanced extrusion, braiding, balloon manufacturing, advanced assembly automation, and cutting-edge inspection systems, the new headquarters strengthens Quasar's ability to deliver high-volume production, customised catheter solutions, exceptional quality control, and greater supply chain flexibility.

Hugel launches botulinum toxin Letybo in Malaysia

South Korea-based Hugel Inc., a leading global medical aesthetics company, has officially launched its botulinum toxin product Letybo in Malaysia – an emerging market for medical aesthetics in Southeast Asia. The company's Malaysian partner Venusys Medical Sdn Bhd introduced Letybo at the Aesthetic Medicine & Surgery Conference & Exhibition (AMSC), the largest medical aesthetics conference in Malaysia, held from August 6 to 7. Venusys Medical, headquartered in Malaysia and operating across Malaysia and Singapore, is a distributor of medical aesthetic products and a long-standing partner of various global brands. As the market leader in injectable aesthetics in South Korea, Hugel is the only South Korean company with regulatory approvals in the world's three largest botulinum toxin markets: the US, China, and Europe.

Alloy Therapeutics partners with Kansai Startup Academia Coalition in Japan

Alloy Therapeutics Co. has announced the signing of a Memorandum of Understanding (MoU) with the Kansai Startup Academia Coalition (KSAC), represented by Kyoto University, to foster the global expansion of university-affiliated life science startups across Japan. This strategic collaboration is designed to accelerate research and development (R&D) activities by providing critical support and connecting academic innovations with the global biopharmaceutical industry. KSAC is a coalition of more than 90 academic institutions located in western Japan, formed under the leadership of Kyoto University and with support from Japan's Ministry of Education, Culture, Sports, Science and Technology (MEXT). Through this MoU, Alloy Japan and KSAC will collaborate to connect promising academic seeds from Japan to global Biopharma markets, while also bringing valuable insights from the global community back to strengthen Japan's startup ecosystem.

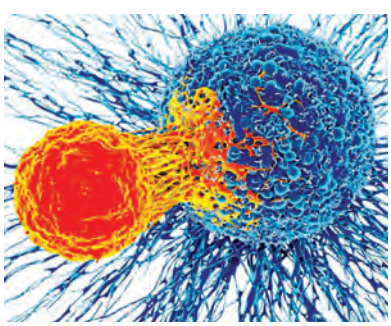
PharmNXT acquires DTR to bring European Bioprocess Engineering to India

In a landmark development for India's biopharmaceutical sector, Indian startup PharmNXT Biotech has acquired Defined Tubing Routing (DTR), a globally recognised player from Ireland, working in advanced bioprocess tubing solutions. This move enables PharmNXT to access technology solutions related to single-use systems, strengthening its capacity to serve pharmaceutical and biopharma clients with more tailored and technically aligned offerings.

With the addition of DTR's modular tubing systems, capable of supporting bioprocess volumes from 20 L to 500 L and custom spans up to 2.9 meters, PharmNXT significantly expands its engineering capabilities, faster turnaround, enhanced customisation, and stronger compliance. DTR systems are increasingly being adopted in biopharmaceutical manufacturing, especially within single-use technology setups where efficient tubing management is critical. These systems help reduce operational risks by minimising trip hazards and clearly outlining flow paths, thereby supporting safety and compliance.

Elpis Biopharma signs MoU with NCCS to conduct translational cell therapy research in Singapore

US-based startup Elpis Biopharmaceuticals, a clinical-stage cell therapy company developing bispecific armoured CAR-T therapies for solid tumours, has announced the signing of a Memorandum of Understanding (MoU) with the National Cancer Centre Singapore (NCCS). The partnership aims to support collaborative cell therapy research and clinical trials for the treatment of a variety of cancers, including colorectal, pancreatic and ovarian cancers. CAR-T cell therapy is a



form of immunotherapy that is currently only approved for use to treat blood cancers, such as certain types of lymphomas and multiple myeloma. As part of the agreement, Elpis will contribute clinically validated technologies for cancer treatment, including multi-mechanism armour, bispecific targeting antibodies, cytokine cocktails, and a rapid mRNA display discovery engine, to drive the development of next-generation cell therapies. These technologies are already being investigated in Elpis' global clinical trials of EPC 002 and EPC-003, with the goal of expanding their translational relevance across multiple tumour types.

PhnyX Lab secures $4 M to transform life sciences sector

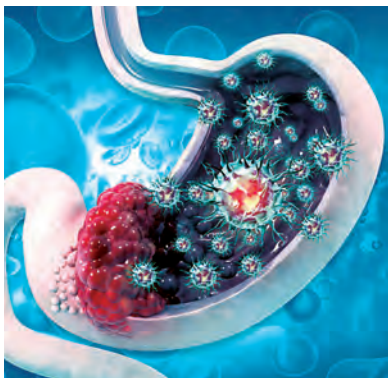
PhnyX Lab, a pioneering GenAI startup from South Korea transforming how life science companies operate, has announced the successful closing of a $4 million seed round through a Simple Agreement for Future Equity (SAFE). The round was led by SK Networks, with participation from several prominent angel investors—including Aidan Gomez, co-founder and CEO of Cohere, and Illia Polosukhin, co-founder of NEAR Protocol—both of whom are original co-authors of "Attention Is All You Need," the paradigm-shifting work that ushered in the transformer era and laid the foundation for today's generative AI models, including ChatGPT. Their involvement follows extensive discussions with both Sung-hwan Choi, Executive Advisor to PhnyX Lab and COO of SK Networks, and Min-seok Bae, CEO of PhnyX Lab—reflecting a shared conviction in the transformative role of AI. PhnyX Lab's flagship platform, Cheiron, launched in December 2024, is already gaining strong traction across industry with over 60 companies, including all of Korea's top 10 pharmaceutical companies by revenue, using Cheiron to streamline complex workflows such as research paper and clinical trial searches.

Mirugen secures upto A$4.5 M seed funding for pioneering cell reprogramming

Mirugen, a preclinical biotechnology startup (re)programming cells to unlock innate cellular repair mechanisms, has announced the successful close of a seed financing round, and the appointment of Charlotte Casebourne Stock as Executive Chair. To date, Mirugen has raised A$7.1 million, with this A$4.5 million Seed Round building on significant non-dilutive funding awards from CUREator, bringing together a syndicate of investors comprising Brandon Capital, Tin Alley Ventures, and the University of Melbourne Genesis Pre-Seed Fund. The proceeds from this financing round support the development of Mirugen's core technology, and its lead Retinitis Pigmentosa programme through translational development. A spin-out from the Centre for Eye Research Australia, Mirugen leverages the co-founders' deep expertise in the fundamental biology of retinal repair for their lead Retinitis Pigmentosa programme.

Thailand approves AI Medical Service's gastric AI-based endoscopic diagnosis support system

AI Medical Service Inc (AIM), a Japan-based medical startup specialising in the development of diagnostic endoscopic AI, has received medical device approval from the Thai Food and Drug Administration (Thai FDA). The approval is for its endoscopic image diagnosis support software, the "gastroAI-model G." This system utilises artificial intelligence (AI) to assist physicians in differentiating between neoplastic and non-neoplastic gastric lesions within



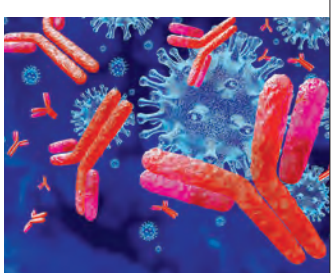
endoscopic images. This marks the first time in Thailand that an AI-powered diagnostic support system for the upper gastrointestinal tract, equipped with lesion differentiation capabilities, has received regulatory approval. Gastric cancer is the fifth most common cancer in the world, with more than 1 million people contracting gastric cancer and approximately 600,000 people dying from the disease each year. Gastric cancer is characterised by a mortality rate that increases significantly with disease progression.

Kenya eliminates Human African Trypanosomiasis as public health problem

Kenya's Ministry of Health (MoH) recently announced that the country has successfully eliminated human African trypanosomiasis (HAT), commonly known as "sleeping sickness", as a public health problem. Switzerland-based Foundation for Innovative New Diagnostics (FIND) has worked hand in hand with the MoH since 2020 to strengthen the country's capacity for diagnosis and surveillance of HAT in the endemic regions of the country. Historically, diagnosing the disease and monitoring its spread – crucial steps for any elimination effort – have been a challenge, because many of the communities most vulnerable to HAT live in remote, rural settings. Through FIND's support, all health facilities in the HAT-endemic regions were mapped and the laboratory infrastructure was upgraded, which included the installation of appropriate diagnostic equipment in strategically located health facilities. All health workers (both clinicians and lab workers) were re-trained in the clinical diagnosis and treatment of HAT. This was supported by a campaign to raise awareness in communities, health care workers, and policymakers about HAT, its manifestation, and where to report for testing.

CEPI & PATH join hands to create playbooks to map immune markers in deadly diseases

The global health organisations Coalition for Epidemic Preparedness Innovations (CEPI) and Program for Appropriate Technology in Health (PATH) are joining forces to create pivotal playbooks that map all available research into specific immune markers that indicate protection against target viruses with epidemic or pandemic potential.



Supported by $8 million in funding from CEPI, these research and development (R&D) manuals could hold important insights for scientists, vaccine developers and regulators to more quickly and easily determine whether a vaccine candidate will generate protective immunity against certain deadly pathogens. This includes viruses like monkeypox, Lassa, Zaire ebolavirus, Sudan ebolavirus, and Marburg. The playbooks will consolidate current knowledge of the immune markers for specific diseases, providing guidance to accelerate vaccine R&D and support licensure. More streamlined and easily accessible information on correlates of protection (CoP) associated with an outbreak disease could aid regulators and offer a potential alternative pathway for vaccine licensure.

Guinea introduces malaria vaccine into routine immunisation

Under the leadership of the Ministry of Health and Public Hygiene, and with the support of Gavi, the Vaccine Alliance, the World Health Organization (WHO), UNICEF and PATH, Guinea has officially introduced the malaria vaccine into its Expanded Programme on Immunisation (EPI). This historic milestone marks a major turning point in the fight against malaria, which remains the leading cause of child morbidity and mortality in the country. In 2023, Guinea recorded an estimated 4.43 million malaria cases, according to the 2024 WHO World Malaria Report, underscoring the country's continued high burden of the disease. Malaria accounts for more than a third of consultations and hospitalisations in public health facilities and remains the leading cause of death among children under five. In 2023, the parasite prevalence was 17 per cent among children under five years of age, reaching more than 30 per cent in some areas such as Guinea Forestière. Faced with this scourge, the introduction of the RTS, S malaria vaccine is a major public health response.

US FDA announces new PreCheck Programme to boost local drug manufacturing

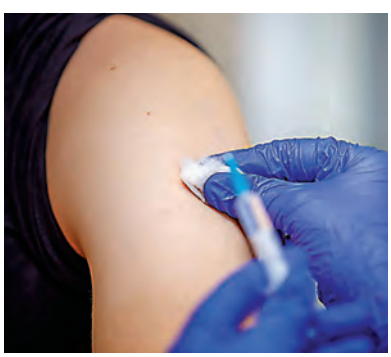
The US Food and Drug Administration (FDA) has announced PreCheck, a new programme to strengthen the domestic pharmaceutical supply chain by increasing regulatory predictability and facilitating the construction of manufacturing sites in the United States (US). More than half of pharmaceuticals distributed in the US are manufactured overseas. Further, the US is reliant on overseas sources for active pharmaceutical ingredients (APIs). Of the manufacturers that produce APIs used in FDA-approved products, only 11 per cent are US manufacturers. FDA PreCheck has been developed in response to Executive Order 14293, 'Regulatory Relief to Promote Domestic Production of Critical Medicines', which directs FDA to streamline review of domestic pharmaceutical manufacturing and eliminate unnecessary regulatory requirements while maximising review timeliness and predictability. The PreCheck programme introduces an innovative two-phase approach to facilitate new US drug manufacturing facilities.

Africa CDC and European Commission to strengthen Mpox testing

The Africa Centres for Disease Control and Prevention (Africa CDC) and the European Commission have announced the launch of the Partnership to Accelerate Mpox Testing and Sequencing in Africa (PAMTA), a landmark initiative to boost diagnostics and outbreak response capabilities in Mpox-affected African countries. Co-funded under the EU4Health 2024 Work Programme, PAMTA reflects the growing momentum of Africa–EU health cooperation and aims to reinforce the continent's resilience against current and future health threats. The initiative will accelerate testing, sequencing, capacity building, and local manufacturing efforts for mpox and other priority pathogens across Africa through a €9.4 million to Africa CDC and the African Society for Laboratory Medicine (ASLM), managed by the European Health and Digital Executive Agency (HaDEA). The project officially began on June 1, 2025 and will be implemented over three years.

UK begins roll-out of world-first gonorrhoea vaccine programme

People at highest risk of infection with gonorrhoea will now be better protected from the disease, as the National Health Service (NHS) and local authorities begin the roll-out of a world-first vaccination programme in England. Sexual health clinics will be able to offer a free vaccine to patients at highest risk of the sexually transmitted infection (STI), including gay and bisexual men who have a recent history of multiple sexual partners and a bacterial STI in the previous 12 months. The 4CMenB vaccine will help shield those most at risk of gonorrhoea - potentially averting up to 100,000 cases of the disease, while easing pressure on vital NHS services. The ground-breaking vaccination programme comes at a critical time, with diagnoses of gonorrhoea reaching



their highest levels since records began. In 2023, a record 85,000 cases of the disease were reported in England - 3 times higher than in 2012.

WHO urges action on hepatitis, announcing hepatitis D as carcinogenic

The World Health Organisation (WHO) calls on governments and partners to urgently accelerate efforts to eliminate viral hepatitis as a public health threat and reduce liver cancer deaths. Viral hepatitis – types A, B, C, D, and E – are major causes of acute liver infection. Among these only hepatitis B, C, and D can lead to chronic infections that significantly increase the risk of cirrhosis, liver failure, or liver cancer. Yet most people with hepatitis don't know they're infected. Types B, C, and D affect over 300 million people globally and cause more than 1.3 million deaths each year, mainly from liver cirrhosis and cancer. The International Agency for Research on Cancer (IARC) recently classified hepatitis D as carcinogenic to humans, just like hepatitis B and C. Hepatitis D, which only affects individuals infected with hepatitis B, is associated with a two- to six-fold higher risk of liver cancer compared to hepatitis B alone. This reclassification marks a critical step in global efforts to raise awareness, improve screening, and expand access to new treatments for hepatitis D. Treatment with oral medicine can cure hepatitis C within 2 to 3 months and effectively suppress hepatitis B with life-long therapy. Treatment options for hepatitis D are evolving.

WHO strengthens global access to quality-assured medical products

The World Health Organization (WHO) has officially designated Health Canada, the Ministry of Health, Labour and Welfare/Pharmaceuticals and Medical Devices Agency (MHLW/PMDA) of Japan, and the Medicines and Healthcare products Regulatory Agency (MHRA) of the United Kingdom as WHO-Listed Authorities (WLAs), a status granted to national authorities that meet the highest international regulatory standards for medical products. With these latest designations, WHO expands the growing list of WLAs, now involving 39 agencies across the world, supporting faster and broader access to quality-assured medical products, particularly in low- and middle-income countries (LMICs). In addition, the Republic of Korea's Ministry of Food and Drug Safety (MFDS) – one of the first regulatory authorities to complete the WLA assessment for both medicines and vaccines in October 2023 – has had its listing scope successfully expanded, now covering all regulatory functions.

WHO certifies Timor-Leste as malaria-free

The World Health Organization (WHO) has certified Timor-Leste as malaria-free, a remarkable achievement for a country that prioritised the disease and embarked on a concerted, nation-wide response shortly after gaining independence in 2002. With this announcement, a total of 47 countries and 1 territory have been certified as malaria-free by WHO. Timor-Leste is the third country to be certified in the WHO South-East Asia region, joining Maldives and Sri Lanka which were certified in 2015 and 2016 respectively. Certification of malaria elimination is granted by WHO when a country has proven, beyond reasonable doubt, that the chain of indigenous transmission has been interrupted nationwide for at least the previous three consecutive years. Timor-Leste's success in eliminating malaria was driven by the Ministry of Health's swift action in 2003 to establish the National Malaria Programme, a dedicated programme for planning, implementing, and monitoring malaria control efforts nationwide.

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ASIA EDITION

Innovations in Asia-Pacific Cold Chain Logistics: Building Resilient, Digitally-Enabled Supply Chains in Life Sciences

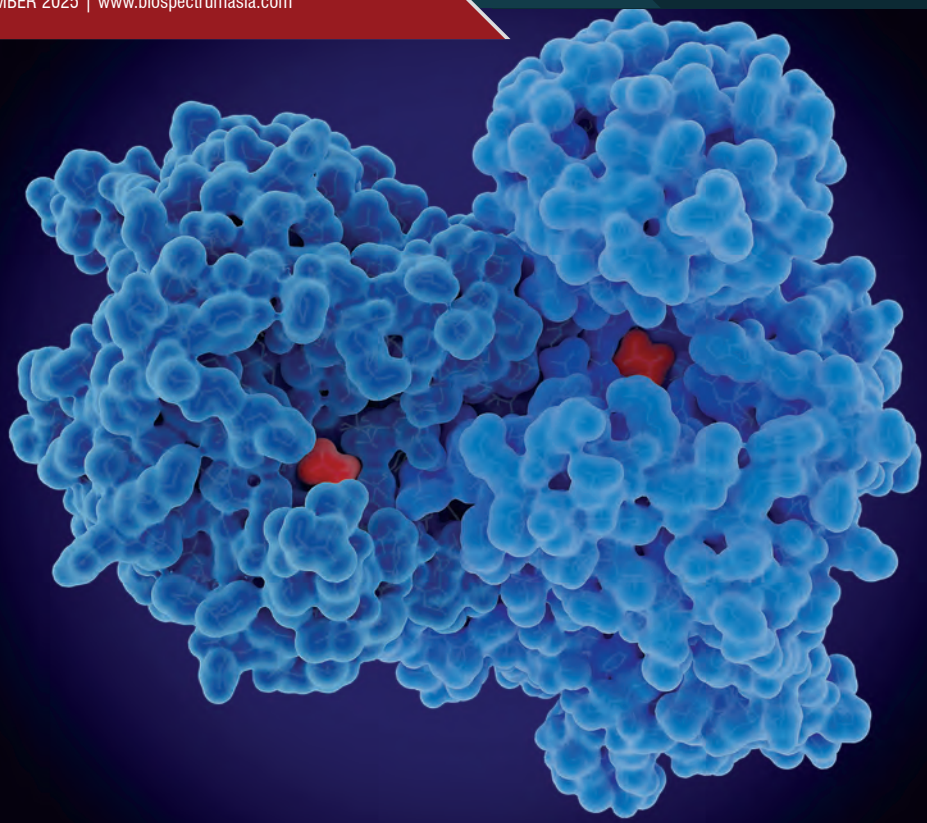
Synopsis

The Asia-Pacific region is experiencing an unprecedented boom in life sciences and healthcare. With this growth comes an urgent demand for advanced cold chain solutions that can safely transport pharmaceuticals, vaccines, biologics, and other temperature-sensitive products.

What's Inside the Special Report

- **DHL Strategy 2030** – €500 million investment into Asia-Pacific healthcare logistics, new pharma hubs, and sustainable cold chain expansion.
- **FedEx** – CEIV Pharma-certified hubs in China and Japan, AI-driven "intelligent cold chain" with real-time monitoring.
- **UPS Healthcare** – Integrated freezer farms, UPS® Premier smart-tracking, and $250M expansion across Asia-Pacific.
- **EVA Air Cargo (Taiwan)** – CEIV Pharma-certified pharma transport and rapid growth in regional vaccine distribution.
- **DB Schenker** – One of the largest GDP-certified pharma logistics networks worldwide with digital oversight tools.
- **Agility Logistics** – Innovative cold chain solutions in emerging markets, including India's pioneering pharma hubs.
- **Bolloré Logistics** – Global control towers and certified facilities ensuring real-time visibility for sensitive shipments.
- **Maersk Pharma Logistics** – Seamless integration of ocean, air, and digital tracking for pharma supply chains.
- **CEVA Logistics** – Expanding its healthcare network with advanced FOR PATIENTS solutions and control tower technology.
- **SF Express (China)** – Nationwide cold chain services tailored for pharma and clinical trial logistics.
- **Yusen Logistics (Japan)** – Precision handling backed by certified hubs and adherence to global quality standards.
- **World Courier (Cencora)** – Exclusive insights on 650+ ongoing cell and gene therapy trials in Asia-Pacific and the logistics needed to support them.

***Download* the Full Report and explore how Asia-Pacific is becoming the world's most dynamic hub for healthcare logistics**



Why TPD Is Biotech's Next Big Bet

Targeted Protein Degradation (TPD) is an emerging therapeutic approach that allows the removal of disease-causing proteins once considered 'undruggable'. These proteins, which make up almost 80 per cent of the human proteome, cannot be addressed using traditional small-molecule binding strategies. By making it possible to eliminate such challenging targets, TPD is opening new opportunities for drug development in cancer, immune conditions, and other hard-to-treat diseases, and is increasingly viewed as a cornerstone for future drug discovery. Today, TPD boasts three approved therapies, nearly 60 clinical-stage assets, and around 200 active research programmes worldwide, according to a report from Nature. With big pharma pouring billions into partnerships, acquisitions, and platform deals, the field is entering a new phase of commercial maturity. In this story, we explore why TPD is commanding global attention from emerging biotech innovators in APAC to multinational players racing to secure the next blockbuster degrader.

Targeted protein degraders (TPD) are rapidly moving from niche science to mainstream drug development, with few therapies approved and many more advancing through late-stage trials.

TPD today rests on two pillars: PROTACs and molecular glues. PROTACs (proteolysis-targeting chimeras), proposed over two decades ago, work by bringing disease-causing proteins into proximity with the cell's degradation machinery. While none have yet reached the market, the field is gaining momentum with more than 40 candidates in clinical testing for cancers and autoimmune disorders, according to Biopharma PEG blog. These include inhibitors targeting the androgen receptor (AR), estrogen receptor (ER), Bruton's tyrosine kinase (BTK), and IRAK4. Three PROTACs are already in late-stage trials: Arvinas/Pfizer's ARV-471 (ER), Bristol Myers Squibb's BMS-986365 (AR), and BeiGene's BGB-16673 (BTK). Industry is closely watching Arvinas/ Pfizer's ARV-471, with USFDA acceptance of its NDA in August 2025 and approval expected by June 2026. If approved, ARV-471 could become the first PROTAC therapy to reach the market, marking a major milestone for targeted protein degradation.

In contrast, molecular glues have already carved out a commercial foothold. These small molecules modulate protein–protein interactions to degrade, stabilise, or activate targets. Natural glues like thalidomide, discovered serendipitously, became the basis for multiple myeloma therapies developed by Bristol Myers Squibb (BMS). BMS remains the only company with approved molecular glue products—Revlimid, Pomalyst, and Thalomid—approved for adult multiple myeloma patients, though pediatric safety remains unconfirmed. The landscape has since expanded, with over 50 companies advancing more than 60 molecular glues, according to DelveInsight, a leading healthcare-focused market research and consulting firm. Leading candidates include BMS's mezigdomide and golcadomide, Eisai's E7820, Nurix's NX-5948 and NX-2127, and many others.

Big Pharma bets on TPD

Big pharma has caught on in a big way in the TPD field. The space is now attracting multi-billion-dollar commitments from some of the world's largest drugmakers. From AbbVie and Takeda to Novartis and Biogen, major players are betting that molecular glues and degraders can finally unlock 'undruggable' targets in oncology and immunology.

In January 2025, AbbVie struck a partnership with U.S. biotech Neomorph, giving it an option to license molecular glue degraders across oncology and immunology. The deal, valued at up to $1.64 billion, will see Neomorph lead early discovery while AbbVie takes forward clinical development and commercialisation. During the same period, HealZen Therapeutics, working with China's Shanghai Institute of Materia Medica, signed a global licensing agreement with Johnson & Johnson to develop BTK degraders for multiple diseases. Around the same time, Denmark's LEO Pharma entered into a $1.7 billion alliance with Gilead Sciences to advance STAT6 inhibitors and degraders for inflammatory diseases, while Magnet Biomedicine partnered with Eli Lilly in March 2025 in a tie-up worth $1.25 billion to apply its TrueGlue platform in oncology. In April 2025, Nurix Therapeutics also out-licensed an undisclosed degrader programme to Sanofi for autoimmune conditions, a deal that could bring in up to $465 million in milestones plus royalties.

Several high-profile agreements in late 2024 paved the way for these blockbuster transactions. Takeda committed up to $1.2 billion in May 2024 for a collaboration with China's Degron Therapeutics. In August 2024, Eisai struck a $1.5 billion-plus research pact with SEED Therapeutics. In October 2024, Novartis secured global rights to Monte Rosa's

Approved Degraders and Selected Degraders in Clinical Trials

Drug	Degrader Modality	Company or Sponsor	Lead Indication	Phase of Development
Thalidomide (Thalomid)	Molecular glue	Bristol Myers Squibb/ Celgene	Multiple myeloma	Approved (1998)
Lenalidomide (Revlimid)	Molecular glue	Bristol Myers Squibb/ Celgene	Multiple myeloma	Approved (2005)
Pomalidomide (Pomalyst)	Molecular glue	Bristol Myers Squibb/ Celgene	Multiple myeloma	Approved (2013)
ARV-471 (Vepdegestrant)	Heterobifunctional	Arvinas/ Pfizer	Breast cancer	Phase 3 (Fast-track designation by FDA)
CC-220	Molecular glue	Bristol Myers Squibb/ Celgene	Solid tumors	Phase 3
CC-92480 (Mezigdomide)	CELMoD	Bristol Myers Squibb/ Celgene	Multiple myeloma	Phase 3
CC-99282	CELMoD	Bristol Myers Squibb/ Celgene	Lymphoma	Phase 3
BGB-16673	cDAC	BeiGene	(R/R) CLL/SLL	Phase 3
AR-LDD (CC-94676)	Heterobifunctional	Bristol Myers Squibb	mCRPC	Phase 3

Source: NJ Bio, Inc.

MRT-6160, a phase 1 molecular glue degrader, paying $150 million upfront with the potential to exceed $2.1 billion in milestones. In the same month, Biogen entered into a $1.45 billion collaboration with Neomorph to access its glue discovery platform. Companies such as Merck, Roche, and Novo Nordisk were early movers in the targeted protein degradation space, signing initial agreements to explore the technology way back in 2022–23.

The APAC Landscape

In the Asia-Pacific region, China and South Korea are emerging as leading hubs for TPD research and development, while Japan, Australia, and Singapore are also actively exploring opportunities in this space. South Korea, in particular, has seen its major pharmaceutical players actively expand into this space through acquisitions, partnerships, and pipeline building. SK Biopharmaceuticals entered TPD by acquiring a 60 per cent stake in Proteovant Sciences (now SK Life Sciences Labs). The subsidiary is focused on developing novel anti-cancer and central nervous system (CNS) therapies, leveraging an AI-enabled target identification platform, degrader drug-hunting expertise, and its proprietary MOPED molecular glue screening technology.

Yuhan Corporation has taken a partnership-driven approach, collaborating with biotech firms such as Uppthera, Cyrus Therapeutics, Kanaph Therapeutics, Ubix Therapeutics, and Fraser Therapeutics to access new TPD technologies and expand its pipeline. Daewoong Pharmaceutical also entered the field in 2023 through a partnership with Pin Therapeutics, a biotech developing novel E3 ligases and molecular glue degraders. Pin's lead candidate, PIN-5018 — a first-in-class CK1α molecular glue degrader cleared for IND in May 2025 is being advanced for colorectal cancer, adenoid cystic carcinoma (ACC), and relapsed/refractory AML.

Dong-A ST has been expanding its research footprint with both acquisitions and partnerships. The company acquired ADC firm Abtis in 2023 and in August 2025 partnered with an AI drug discovery company XtalPi to strengthen its R&D in immunology and inflammation, while also exploring new directions in degrader-based drug discovery.

Beyond the large pharma groups, several South Korean biotech firms are progressing their own TPD pipelines. Ubix Therapeutics received IND approval for UBX-303-1 from the U.S. FDA in December 2023 and the Korean MFDS in September 2023, and is now conducting global clinical trials. The company has signed multiple partnerships with both large pharma and smaller firms, the most recent in February 2025 with Y-Biologics to co-develop degrader antibody conjugates.

Orum Therapeutics, which raised ₩50 billion in a Korea Exchange IPO in February 2025, is developing ORM-1153, a GSPT1 degrader for acute myeloid leukaemia, with preclinical data expected this year and an IND filing in 2026. Orum gained international attention when Bristol Myers Squibb acquired rights to its oncology asset ORM-6151 in late 2023.

Meanwhile, newer biotech entrants are moving toward clinical readiness. Cyrus Therapeutics is advancing CYRS1542, a GSPT1 molecular glue degrader (US IND 174397), for multiple neuroendocrine cancers including small cell lung

Big pharma deals

No	Date	Big Pharma / Partner	Deal Details / Focus Area	Deal Value / Notes
1	Apr 2025	Nurix Therapeutics / Sanofi	Out-licensed degrader programme for autoimmune conditions	Up to $465 million in milestones plus royalties
2	Mar 2025	Magnet Biomedicine / Eli Lilly	TrueGlue platform application in oncology	$1.25 billion
3	Jan 2025	AbbVie / Neomorph	Option to license molecular glue degraders across oncology and immunology	Up to $1.64 billion
4	Jan 2025	HealZen Therapeutics / J&J	BTK degraders for multiple diseases	Global licensing agreement
5	Jan 2025	LEO Pharma / Gilead Sciences	STAT6 inhibitors and degraders for inflammatory diseases	$1.7 billion
6	Oct 2024	Novartis / Monte Rosa	MRT-6160 Phase 1 molecular glue degrader	$150 million upfront; potential >$2.1 billion in milestones
7	Oct 2024	Biogen / Neomorph	Access to glue discovery platform	$1.45 billion
8	Aug 2024	Eisai / SEED Therapeutics	Research pact on degrader development	$1.5 billion+
9	May 2024	Takeda / Degron Therapeutics	Collaboration on degrader development	Up to $1.2 billion

"There is explosive growth in novel degradation strategies that go beyond traditional PROTACs, expanding the modalities available for TPD and enhancing its versatility. The rapid advances in computational tools and AI are helping us design molecules that can not only form the ternary complex but also reach their targets deeper in tissues—two of the toughest challenges in TPD development."

- Chinatsu Sakata,
Head of Oncology Research, Astellas Pharma

cancer, large cell neuroendocrine carcinoma, neuroendocrine prostate cancer, and metastatic castration-resistant prostate cancer. Prazer Therapeutics is similarly building a pipeline based on TPD technology, with early-stage drug discovery efforts underway.

Besides Korea, China too is rapidly establishing itself as a hub for TPD, with several firms actively developing innovative therapies, some of which are already in late-stage trials. BeiGene is advancing its Chimeric Degradation Activation Compound (cDAC) for patients with relapsed or refractory chronic lymphocytic leukaemia (CLL) and small lymphocytic lymphoma (SLL). The candidate is currently in phase 3 clinical trials, with several other candidates at various stages of development.

Kintor Pharma has pioneered GT20029, claimed to be the world's first dermatological topical AR degrader, which in September 2024 met its Phase II primary endpoint in China, showing significant efficacy in treating male androgenetic alopecia (AGA). The company is now preparing for Phase III trials.

Jiangsu HengRui is developing HRS-5041, an ER-targeting degrader for metastatic castration-resistant prostate cancer (mCRPC), and HRS-1358, an AR-targeting degrader for breast cancer, with both candidates currently in Phase II trials.

Ranok Therapeutics is advancing RNK-05047, a BRD4-targeting degrader for advanced solid tumours, including diffuse large B-cell lymphoma (DLBCL), which is currently in phase II trials.

Hinova Pharma is leveraging PROTAC and deuteration technologies to develop therapies for cancers and metabolic syndromes. Its pipeline includes HP518, an orally bioavailable chimeric degrader targeting AR, which has completed phase I trials for metastatic castration-resistant prostate cancer (mCRPC).

Gluetacs Therapeutics, the first biotech incubated by ShanghaiTech University, focuses on small-molecule oral protein degraders. Officially operational since March 2021, Gluetacs has advanced two candidates into clinical trials, demonstrating the efficiency of its GlueTacs platform. The company has independently developed molecular glue (GLUE) and bifunctional degrader (GLUETAC) platforms, filed and received over 100 patents globally, and established AI-driven virtual screening, in vitro drug screening, pharmacokinetic, proteomics, and in vivo efficacy testing platforms to cover the full drug discovery process.

GluBio Therapeutics Inc., a clinical-stage TPD biotech, has completed phase I of its trial for GLB-002, an IKZF1/3-selective molecular glue degrader, in patients with relapsed or refractory non-Hodgkin lymphoma. The trial demonstrated strong pharmacokinetics, pharmacodynamics, safety, and target degradation. Phase II is now open for patient recruitment. Degron Therapeutics is preparing a phase I study of its HuR-targeting degrader DEG6498 following US IND clearance.

US-based Photys Therapeutics in-licensed HPB-143 from Hangzhou Polymed Biopharmaceuticals in February 2025, securing global rights outside Greater China and Southeast Asia for its Phase 1-ready IRAK4 degrader. Kangpu Biopharma is advancing molecular glue-based candidates through its NeoMIDES, gDACS, and X-SYNERGY platforms. Several other Chinese companies also have phase I targeted protein degradation candidates, including Qilu Pharmaceutical (SMARCA2 for prostate cancer), JAR (SHR-3591 for mCRPC), Simcere Pharma (SIM-0270 for ER+ /HER2– breast cancer), and Chia Tai Tianqing Pharmaceutical (TQB-3019 targeting BTK in advanced malignant tumours).

In Japan, several firms are actively advancing targeted protein degradation (TPD) programmes. Leading among them is Astellas, which has integrated state-of-the-art AI, molecular simulation, and robotics into its drug discovery efforts. Its lead TPD asset, ASP3082, a phase 1 protein degrader targeting KRAS G12D, was discovered and optimised in significantly shorter timelines than historical precedent. Robotics-driven synthesis has further streamlined development, enabling the company to respond with agility to the unique challenges of TPD.

Other Japanese companies are also making strides. PeptiDream and Ono Pharmaceutical are pursuing TPD programmes, with Ono forming multiple collaborations including a drug discovery

Companies working on Targeted Protein Degradation in APAC			
No	**Country**	**Company / Sponsor**	**Phase / Development Status**
1	South Korea	SK Biopharmaceuticals / SK Life Sciences Labs	Discovery / Preclinical
2	South Korea	Yuhan Corporation	Partnership / Pipeline expansion
3	South Korea	Daewoong Pharmaceutical	Partnership / Early-stage
4	South Korea	Pin Therapeutics	IND cleared May 2025
5	South Korea	Dong-A ST	Partnership / Preclinical
6	South Korea	Ubix Therapeutics	IND APPROVED (US FDA DEC 2023, MFDS SEP 2023)
7	South Korea	Orum Therapeutics	Preclinical / IND filing planned 2026
8	South Korea	Cyrus Therapeutics	Preclinical / IND 174397
9	South Korea	Prazer Therapeutics	Early-stage drug discovery
10	China	BeiGene	Phase 3
11	China	Kintor Pharma	Phase III planned
12	China	Jiangsu HengRui	Phase II
13	China	Ranok Therapeutics	Phase II
14	China	Hinova Pharma	Phase I completed
15	China	Gluetacs Therapeutics	Phase I / Clinical
16	China	GluBio Therapeutics	Phase I completed, Phase II recruiting
17	China	Degron Therapeutics	Phase I planned
18	China	Hangzhou Polymed Biopharmaceuticals	Phase I ready
19	China	Kangpu Biopharma	Preclinical / Early-stage
20	China	Qilu Pharmaceutical	Phase I
21	China	Jiangsu HengRui Pharma	Phase I
22	China	Simcere Pharma	Phase I
23	China	Chia Tai Tianqing Pharmaceutical	Phase I
24	Japan	Astellas	Phase I
25	Japan	PeptiDream	Discovery / Collaboration
26	Japan	Ono Pharmaceutical	Collaboration
27	Japan	Eisai	Investigator-initiated clinical studies
28	Japan / US	Mitsubishi Tanabe Pharma America Inc.	Phase I/II
29	Japan	FIMECS / RaQualia Pharma	Discovery / Preclinical
30	Singapore	EDDC / RDP Pharma AG	Discovery / Preclinical
31	Singapore	Ligature	Discovery / Preclinical
32	Singapore	Automera	Preclinical / Early-stage
33	Australia	Ternarx	Discovery / Preclinical

agreement with Captor Therapeutics for small molecule degraders in neurodegenerative diseases and a partnership with Sibylla Biotech to generate novel candidates for neurological disorders. Eisai has advanced its own efforts, with investigator-initiated clinical studies planned following confirmation of tumour shrinkage induced by its degrader E7820 in Japanese patient-derived tissue transplantation models (J-PDX). Mitsubishi Tanabe Pharma America Inc. is developing MT-4561, a BRD4-targeting degrader for advanced solid tumours, currently in phase I/II clinical trials. Meanwhile, FIMECS, founded in 2018 by Takeda researchers under its venture support programme, has pursued targeted proteolysis inducers for undruggable targets and was later acquired by RaQualia Pharma.

In Singapore, EDDC (Experimental Drug Development Centre) is collaborating with the Swiss biotech RDP Pharma AG to develop a monovalent degrader for anti-inflammatory therapies. Ligature, spun out of EDDC with Lightstone Singapore, has licensed A*STAR's protein degradation technologies to build its pipeline. Another company, Automera, launched in 2023, is advancing its AUTAC platform across multiple disease areas. In Australia, the launch of Ternarx has marked a significant step in

"We have made significant advances in our understanding of the chemical features governing neo-substrate recruitment with CRBN-based molecular glues and PROTACs, aiding more rational design of selective degraders. Additionally, advances in methods for proteomic and chemoproteomic profiling, combined with improvements in throughput and analysis, are enabling screening on the proteome scale."

- Kristin Riching,
Senior Research Scientist, Promega

the country's entry into next-generation medicines. Spun out of WEHI, Ternarx is the first Australian company dedicated to developing targeted protein degrader therapeutics and technologies, with a focus on tackling hard-to-treat cancers.

What's driving TPD progress

The current momentum in TPD stems from foundational discoveries in the early 2000s and 2010s, particularly the identification of versatile binders to E3 ligases such as VHL (Von Hippel–Lindau,) and CRBN (Cereblon). These breakthroughs catalysed a wave of innovation, attracting new players and elevating research across the industry.

"We have made significant advances in our understanding of the chemical features governing neo-substrate recruitment with CRBN-based molecular glues and PROTACs, aiding more rational design of selective degraders. Additionally, advances in methods for proteomic and chemoproteomic profiling, combined with improvements in throughput and analysis, are enabling screening on the proteome scale," said Kristin Riching, Senior Research Scientist at Promega.

Building on this foundation, the field has begun to see proof in the clinic. Several TPD assets have shown clear efficacy, significantly boosting confidence and expanding interest across both biotech and pharma.

"There is explosive growth in novel degradation strategies that go beyond traditional PROTACs, expanding the modalities available for TPD and enhancing its versatility," said Chinatsu Sakata, Head of Oncology Research, Astellas Pharma, adding that "rapid advances in computational tools and AI are helping us design molecules that can not only form the ternary complex but also reach their targets deeper in tissues—two of the toughest challenges in TPD development."

These technological advances are complemented by the maturing ecosystem. "The rise of specialised CROs, particularly in Asia–Pacific, has shortened development cycles and lowered barriers for startups and smaller biotechs to enter the space. Together, these advances are propelling TPD into a new phase of growth," said Chinatsu.

What's next

The clinical landscape for targeted protein degradation (TPD) is beginning to take shape. As more TPD assets progress through trials and approach regulatory milestones, the modality is entering a decisive phase where real-world data will help define its potential. Oncology remains the most active area, but non-oncology indications are rapidly gaining traction.

Chinatsu noted that this phase will also sharpen scientific understanding. She said, "This next chapter will bring greater clarity on resistance mechanisms, informing more refined development strategies and helping identify optimal patient populations. Advances in molecular design and optimisation will produce assets with significantly improved pharmacological and safety profiles. We expect continued expansion of heterobifunctional molecules and growing interest in molecular glue-type degraders, both of which offer promising avenues for enhanced efficacy and broader disease applicability. These innovations will further accelerate progress and position TPD as a core small-molecule modality."

Looking ahead, experts believe the field is poised for a new wave of technical sophistication. Kristin highlighted advances in computational tools as a key driver. She said, "In the coming years, we will likely see expanded use of modelling approaches that integrate ternary complex docking and molecular dynamics simulations within the context of the full Cullin-RING ligase complex. These tools will enable more accurate prediction of ubiquitination and degradation efficiency, accelerating degrader discovery and optimisation."

Such scientific and technological progress is directly reflected in the market outlook. Currently valued at $1 billion, the global TPD market is expected to surge to $6.94 billion by 2035. With this rapid growth on the horizon, companies worldwide are racing to establish themselves as leaders, developing innovative therapies and platforms to capture a larger share of the emerging market. BS

Ayesha Siddiqui

APAC focuses on bridging eye care gaps

Roche APAC Vision Health Survey in 2025 reveals a stark disconnect between vision health concerns and preventive action across Asia Pacific (APAC) – while 91 per cent of adults over 40 express concerns about their vision health, only 28 per cent report undergoing annual or more frequent eye exams. Despite significant advancements in eye care, technological breakthroughs, and increasing global awareness, vast inequities persist in access to quality vision services. Thus, there is a clear need to include eye care in public health plans with coordinated, and accountable pathways. Let's take a look at the current challenges and future possibilities for all stakeholders to prioritise and invest in eye healthcare in APAC.

Over 2.2 billion people globally live with some form of vision impairment or blindness, and alarmingly, at least 1 billion of these cases could have been prevented or are still unaddressed. The challenge is not merely about understanding the scope of the problem, but about transforming insights into practical, scalable, and sustainable solutions. Turning data, research, and innovations into meaningful action lies at the heart of efforts to advance vision health globally.

At the macro level, the World Health Organization (WHO) estimates that poor vision leads to over $400 billion in lost productivity annually. The economic and social costs extend further when factoring in caregiving burdens and reduced independence among older adults. Many eye diseases that develop with age are impossible for individuals to detect on their own without proper vision screening, such as a dilated eye exam. As people get older, those who suffer from vision loss face an increasing overall burden from it.

Asia Pacific bears the burden of vision impairment more heavily than any other region. APAC represents 51 per cent of the global population, yet the region accounts for nearly two-thirds of moderate-to-severe vision impairment cases worldwide. APAC's population over 60 is projected to double to 1.3 billion by 2050, adding significant vision health risk. In fact, South Korea joined Japan on the list of countries with a super-aged society, defined as a population where more than 20 per cent of its citizens are aged 65 or older, in December 2024 and Singapore is set to do the same by 2026.

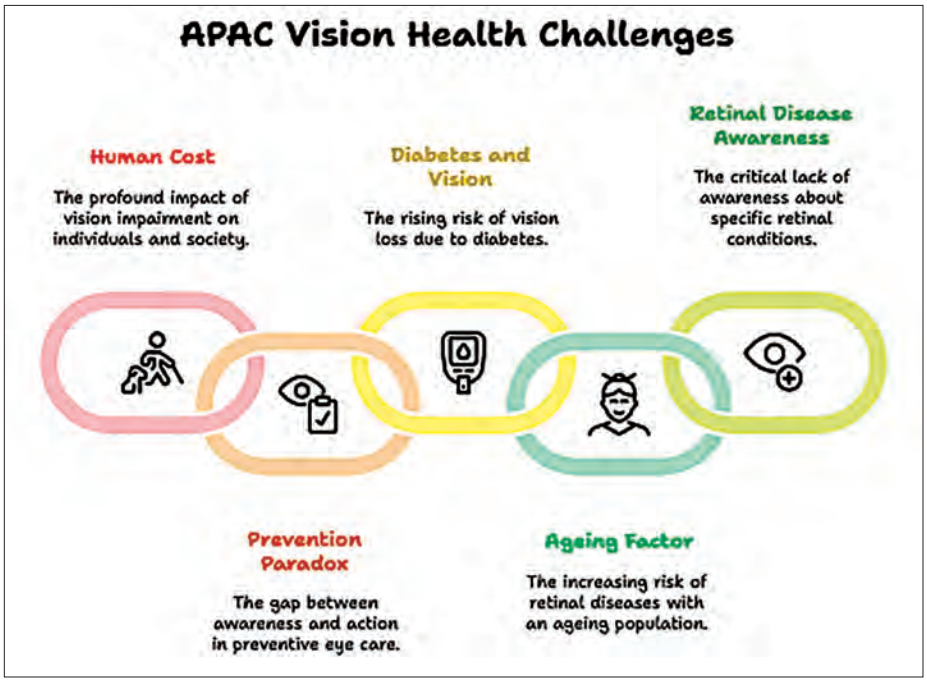
Furthermore, the region also has a high prevalence of diabetes and diabetes-related eye diseases – diabetes alone increases the risk of vision impairment by 25 times. These two factors make addressing preventable vision impairment particularly urgent in the region.

"There is both an urgent need and a clear opportunity for the healthcare community to develop more effective approaches to eye health. It means integrating vision care into existing healthcare frameworks life diabetes and ageing management and using technology to create more accessible pathways," said ***Professor Andrew Chang, Vitreoretinal Surgeon and Ophthalmologist, Sydney Eye Hospital, and Secretary-General of the Asia Pacific Vitreo-retina Society (APVRS), Australia.***

According to APAC Vision Health Survey 2025, commissioned by Roche, two-thirds of global ophthalmologists are in 13 countries, with only three of those in Asia Pacific and a particularly severe shortage in Southeast Asia. The survey also reveals that despite widespread awareness of vision risks like ageing and diabetes, knowledge of specific retinal diseases remains critically low across APAC. For instance, the lack of awareness about the importance of eye exams is higher in Malaysia, South Korea, and Thailand. Also, diabetes-related vision loss most significantly impacts people from the Philippines and Hong Kong, with 89 per cent and 81 per cent respectively reporting daily challenges, as per the survey.

"Expanding access to vision care through technology, such as telehealth and artificial intelligence (AI), is critical for addressing barriers like geographical isolation and limited availability of specialists. These innovations enable earlier

Source: Napkin AI



detection of conditions such as diabetic retinopathy, age-related macular degeneration", said ***Dr Paisan Ruamviboonsuk, Clinical Professor of Ophthalmology, College of Medicine, Rangsit University, Rajavithi Hospital, Bangkok, Thailand.***

Sharing his perspective on the current scenario, ***Ahmed Elhusseiny, Area Head, Roche Pharmaceuticals, Asia Pacific, Singapore*** said, "The economic and human costs of delayed intervention are simply too high. What's clear is that we need innovative approaches to bridge the awareness-action gap and strengthen prevention efforts, helping more people access the care they need and preserve their vision for longer."

National initiatives & gaps across APAC

As China approaches the final year of its 14th Five-Year National Eye Health Plan (2021–2025), technological advancements, especially in AI, are increasingly pivotal in the prevention and treatment of eye-related conditions. A prominent illustration of this technological advancement is the "CC-Cruiser" system, an AI-driven cloud platform designed for the diagnosis and treatment of cataracts, developed by the Zhongshan Ophthalmic Center of Sun Yat-sen University. On the other hand, public ophthalmology services across Australia are under-resourced to meet the needs of the population they serve, with long waitlists to access outpatient and inpatient (elective surgery) services.

Looking at Japan, the country is in the final stages of approving the first induced pluripotent stem cell (iPS cell) treatment for coverage under its national health care system. The treatment targets a rare but currently incurable eye disease (retinitis pigmentosa) that causes vision loss over time.

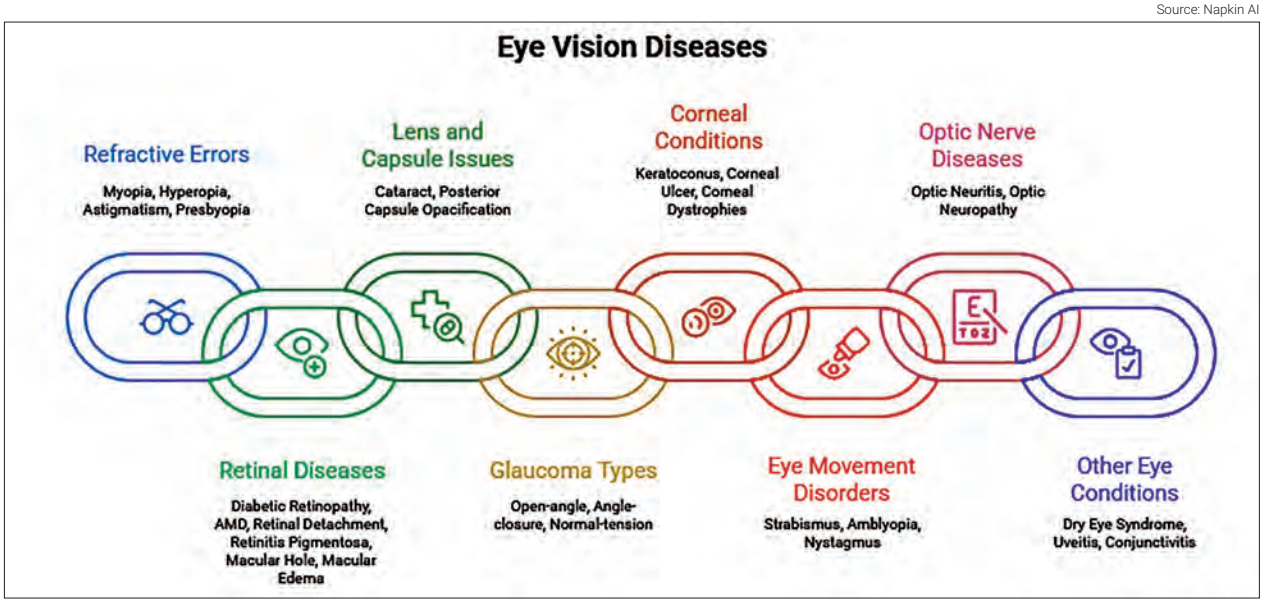
Japan has also very recently approved the production and marketing of the first eye drop for controlling myopia progression, but it is not included in the national health insurance drug price standard and is not covered by health insurance. With three major blinding diseases- macular degeneration, diabetic retinopathy, and glaucoma- on the rise due to population ageing, the Korean Ophthalmological Society (KOS) and the Korean Retina Society (KRS) have proposed the 'National Eye Reassurance Project'.

Reports have stated that the annual socioeconomic cost of macular degeneration in Korea is estimated to be 694.3 billion won ($504.1 million), of which formal medical expenses are about 410.2 billion won, informal medical expenses are 90.7 billion won, caregiving expenses are 40.1 billion won, and productivity losses are about 132.5 billion won.

As WHO recommends preventing blinding diseases through fundus examinations, this test is only included in examinations at university hospitals and some private screening centres in Korea, and not included in the national health examination.

On this note, ***Dr Seung Young Yu, Professor, College of Medicine, Kyung Hee University, South Korea*** said, "Integrating fundus examinations into routine diabetes management is crucial for the early detection of conditions such as diabetic macular edema which can lead to vision loss. With enhanced public awareness, integrated diabetes care pathways, and supportive policies, vision health can become a routine part of

Source: Napkin AI



overall healthcare across APAC."

But in Singapore, for instance, a fundus examination-based diabetic retinopathy screening programme is in operation. Additionally, Singapore National Eye Centre (SNEC) has been designated as the World Health Organization (WHO) Collaborating Centre for the Prevention of Blindness and Vision Impairment, marking the first centre of its kind in Southeast Asia. As a result, SNEC is supportive in building the capacity of the eye care workforce in Southeast Asia and provides safe and accessible ophthalmic and optometry services.

Furthermore, the Health Ministry in Malaysia is planning to increase ophthalmology services, particularly in the rural areas. A few months ago, the Tun Hussein Onn National Eye Hospital, Malaysia's first and only dedicated eye hospital, in partnership with the Ministry of Health Malaysia, hosted its inaugural Cataract Carnival, which provided free cataract surgeries.

"Innovation and collaboration are essential to transform vision care in Asia Pacific. Through collective efforts across the healthcare ecosystem, we can break down barriers to build a future where preventable vision loss is effectively managed", said ***Dr Kenneth Fong Choong Sian, Consultant Ophthalmologist, Vitreoretinal Surgeon, Malaysia.***

Focusing on India, the National Programme for Control of Blindness and Visual Impairment has been into existence for a very long time. However, according to experts, the country right now has only 1.8-1.9 ophthalmologists for every 100,000 people, while the actual requirement is approximately 8-9 per 300,000 people. This shortage poses a significant challenge to meet the growing demand for eye care services in India.

Amidst these challenges, a positive development was announced earlier this year by the Vietnam government, that Trachoma, once affecting 90 per cent of Vietnamese people, has officially been declared eliminated after seven decades of national effort. Trachoma is an infectious disease which causes trichiasis in 15 per cent of patients, leading to blindness in 2 per cent of the rural population.

Simultaneously, UAE has recently launched its first National Eye Disease Epidemiology Study, under the leadership of Emirates Society of Ophthalmology and Emirates Medical Association, to advance eye disease research, enhance patient care, and map the prevalence of ocular diseases across the nation.

Adding to the list, Thailand has taken a major step forward to overhaul its national eye health by launching the 'WHO SPECS 2030 initiative' with a clear focus on Service design, Personnel development, Public education, Costing, Surveillance and research.

As vision health continues to emerge as a neglected crisis in APAC, countries must work towards integrating eye care into national health strategies and policies, emphasising preventive services; invest in training and capacity building to develop a skilled and well-distributed eye care workforce; and utilise the power of digital solutions, such as telehealth and AI-assisted screening, to address geographical barriers and bridge care gaps. BS

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Hong Kong Betting Big on Biotech IPOs

Hong Kong has become one of the preferred destinations for biotech IPOs, attracting both mainland Chinese and international firms. Since the introduction of Chapter 18A in 2018, which opened public capital markets to pre-revenue biotech companies, the city has accelerated growth in its capital markets and supported sector-wide innovation. In May 2025, regulators had also launched the Technology Enterprises Channel (TECH), a new platform for biotech listings that provides greater flexibility for issuers. In this story, we explore the current landscape of biotech IPOs and how the city can sustain its role as a global hub for innovation and capital.

Since the introduction of Chapter 18A in 2018, Hong Kong has become an important fundraising hub for biotechnology, giving pre-revenue companies access to public markets for the first time. The reform helped the Hong Kong Stock Exchange (HKEX) compete with Nasdaq and Shanghai by opening the door to high-growth biopharma companies that would otherwise have struggled to meet traditional profitability requirements. These efforts appear to have paid off. Hong Kong is now the second-largest IPO market after the United States for biotech companies.

"Chapter 18A positioned Hong Kong as Asia's premier venue for pre-revenue biotech listings, a space that had previously been largely limited to U.S. exchanges. This gave the city a clear first-mover advantage, drawing a steady pipeline of Chinese biotechs and positioning it as a capital-raising alternative for global investors," said ***Kimberly Ha is the Founder and CEO of KKH Advisors.***

The impact has been significant. "To date, 75 biotech firms have listed under Chapter 18A, propelling Hong Kong to become the world's second-largest biotech fundraising hub. The healthcare sector is now our fastest-growing, with its overall market capitalisation tripling since 2018, with biotech accounting for a quarter of that growth. We are seeing robust momentum in Hong Kong's capital markets, with the city ranking first in the world in terms of IPO funds raised. Our pipeline, with over 200 active listing applications—20 per cent from healthcare—reflects strong sustained investor interest," said ***Johnson Chui, HKEX Head of Global Issuer Services.***

Prof. Christopher CHAO, Vice President (Research and Innovation) and Director of Policy Research Centre for Innovation and Technology of The Hong Kong Polytechnic University echoes the same sentiment. "I've seen Hong Kong evolve into Asia's leading and one of the world's top biotech financing hubs since HKEX launched Chapter 18A in 2018. By June 2025, 73 biotech companies had listed in Hong Kong, channeling patient capital to pre-revenue innovators and reinforcing a high-quality pipeline. This sits within a broader upswing—Hong Kong ranked first globally by IPO proceeds in the first half of 2025—underscoring market depth and resilience that benefit biotech issuance."

To further support this growth, in May 2025 the Securities and Futures Commission (SFC) and the Stock Exchange of Hong Kong Limited (the Exchange), a wholly-owned subsidiary of HKEX, jointly launched the TECH. This dedicated platform is designed to streamline new listing applications from Specialist Technology Companies and Biotech Companies, complemented by a confidential filing option that provides greater flexibility for issuers.

Policy and regulatory infrastructure

Hong Kong has rolled out significant regulatory reforms to ease drug development and registration. The '1+' mechanism allows new drugs, vaccines, and advanced therapies to be registered locally once recognised by a reference authority and backed by local data. Hong Kong is also establishing its own Centre for Medical Products Regulation with the ambition of becoming an internationally recognised authority. Complementing this are special arrangements with the National Medical Products Administration that

permit selected Mainland GBA institutions to use innovative medicines and devices already approved in Hong Kong.

The government has invested billions into life and health technology. Flagship programmes such as the RAISe+ Scheme, the InnoHK research clusters (now 29 centres spanning health tech, AI, and robotics), and subsidies for new university-led health institutes demonstrate sustained financial commitment. Over $250 million has been allocated to the Hong Kong Park of the Co-operation Zone to house InnoHK clusters, alongside $25 million earmarked for life and health startups.

Hong Kong's integration with the Guangdong–Hong Kong–Macao Greater Bay Area (GBA) provides access to a market of 86 million people with a combined GDP of $2 trillion. Hong Kong-registered drugs and devices benefit from streamlined entry into the GBA. The Greater Bay Area International Clinical Trial Institute, recently launched in the Hong Kong Park of the Co-operation Zone, is expected to coordinate more than 70 cross-boundary clinical trials in its first year, while a new Real-World Study and Application Centre will accelerate approvals through shared medical data. These initiatives underline Hong Kong's dual position as both a financial hub and a translational bridge linking international standards with mainland clinical and regulatory systems.

The future of biotech IPOs

Building on these regulatory foundations, momentum on the capital markets side is increasingly evident. The SFC and HKEX have rolled out measures to strengthen Hong Kong's listing appeal.

"The 2025 reforms introduced by HKEX and the SFC have been transformative, particularly the confidential IPO framework and the TECH. These initiatives allow startups to protect sensitive data until late in the process, an attractive feature for biotech, AI, and semiconductor firms that need to safeguard intellectual property and competitive strategies. Nearly half of biotech and tech issuers are already choosing this route. At the same time, institutional investors now dominate allocations, helping to reduce the volatility once driven by retail speculation," said Kimberly.

Recent listing activity reflects this shift. Chinese biotechs such as Sichuan Biokin Pharmaceutical and Shanghai Bao Pharmaceuticals have filed to list in Hong Kong, while Jiangsu Hengrui Pharmaceuticals is preparing a $1.27 billion IPO and Leads Biolabs has raised $189 million.

"In total, 34 mainland biotechs filed for Hong Kong IPOs in the first half of 2025 alone. Looking ahead, platforms like the LEAP East conference in Hong Kong (July 8–10, 2026), where I will be speaking, are also designed to attract overseas innovators into the region, further reinforcing Hong Kong's role as a global bridge for capital and technology," said Kimberly.

Universities are also shaping the pipeline of biotech innovation. Hong Kong Polytechnic University (PolyU), for example, has built a university–hospital–CRO/CDMO innovation ecosystem that accelerates bench-to-bedside translation.

"Hong Kong's tertiary institutions, such as The PolyU, serve as translational research powerhouses, bridging the gap between academic discovery and market-ready innovation. PolyU's university–hospital–CRO/CDMO biotech innovation ecosystem accelerates the bench-to-bedside journey, exemplified by flagship platforms like the University's Centre for Eye and Vision Research and the Department of Biomedical Engineering, which have produced clinic-ready innovations such as Scolioscan. It is a standout example that progressed from PolyU labs to commercial manufacturing. By leveraging our Shenzhen Research Institute (SZRI) and GBA network, PolyU efficiently links spinouts with leading CROs for preclinical/clinical operations and CDMOs for GMP manufacturing, reducing time-to-clinic and de-risking scale-up," said Prof. Christopher CHAO.

The HKEX emphasises that its evolving framework will be central to sustaining competitiveness. "What sets Hong Kong apart — and will help us sustain this momentum – is our commitment to continuously innovate and progress our listing franchise, as demonstrated by the launch of Chapter 18A, 18C, and most recently, the TECH in May 2025," said Chui.

He added, "Looking ahead, HKEX is committed to further elevating market vibrancy and attractiveness, ensuring Hong Kong's position as a dynamic IPO destination."

Still, sustaining momentum will require more than regulatory tools or new listings. "To maintain this momentum, Hong Kong will need to continue expanding its sophisticated biotech investor base, provide regulatory clarity and consistency, and strengthen post-listing support mechanisms such as liquidity and research coverage to ensure long-term success beyond the IPO," signs off Kimberly. BS

Ayesha Siddiqui

“Despite advances, access to innovative treatments can be limited, particularly for rare cancers”

« **Stephen Doyle,**
Chief Executive Officer,
QBiotics,
Australia

Specialised in the discovery and development of novel cell signalling small molecules to treat complex medical conditions, Australian life sciences company QBiotics is currently focusing on novel treatments for cancer and debilitating chronic wounds, along with an early-stage antibiotics programme. While the company is known for its lead product, tigilanol tiglate, which is undergoing clinical trials for various cancers, QBiotics is also actively preparing for a potential IPO on the Australian Securities Exchange (ASX) within this calendar year. To find out more about how QBiotics is tackling some of the most pressing and underserved challenges in global health, BioSpectrum Asia spoke to Stephen Doyle, Chief Executive Officer at QBiotics. ***Edited excerpts;***

What are the major challenges that QBiotics is addressing through its research projects within Australia and globally?

Many solid tumours, especially rare cancers like soft tissue sarcomas (STS), lack effective, targeted therapies. Existing standards of care – surgery, radiation, and chemotherapy – are often associated with significant morbidity and limited efficacy. Through our tigilanol tiglate programme, we aim to provide a novel, minimally invasive treatment option with the potential to improve patient outcomes and quality of life. Chronic wounds represent a silent epidemic, affecting millions worldwide, and placing immense strain on healthcare systems. Approximately 10 per cent of chronic wounds fail to heal, and with only one new wound healing drug approved in the US in more than two decades, innovation is urgently needed. EBC-1013, our first-in-class small molecule, is designed to activate multiple tissue repair pathways, offering hope for true healing rather than mere wound management. Our early-stage antibiotics programme addresses the growing threat of drug-resistant infections, a looming crisis with profound public health implications. By focusing on these areas, QBiotics is positioned to deliver transformative therapies that address critical gaps in current medical practice, worldwide.

What are the major research projects taking place at QBiotics in 2025? Please share details.

In 2025, we are advancing several pivotal research programmes, each targeting areas of urgent unmet medical need, including:

Soft Tissue Sarcoma (STS) – Phase IIa Human Clinical Trial (QB46C-H07): Our lead oncology asset, tigilanol tiglate, is currently being evaluated in a Phase IIa trial for patients living with soft tissue sarcoma. Stage 1 of this trial, conducted at Memorial Sloan Kettering Cancer Center in New York, delivered encouraging results. 8 out of 10 evaluable patients experienced either complete ablation (100 per cent reduction in tumour volume) or partial ablation (≥30 per cent reduction). In February 2024, tigilanol tiglate was granted Orphan Drug Designation by the US FDA for STS, underscoring its potential to address a critical unmet need. Stage 2 of this trial is scheduled to commence in Q3 2025, further evaluating efficacy and safety in a broader cohort.

Head and Neck Cancer – Phase II Efficacy Trial (QB46C-H08): We are also conducting an open-label, single-arm Phase II study assessing tigilanol tiglate in up to 37 patients with various solid tumours in the head and neck region. Recruitment is ongoing at leading clinical sites across the UK and Australia, with the aim of expanding therapeutic options for these challenging cancers.

Wound Healing – Phase I Dose Escalation Trial (QB1013C-H201): Our wound healing candidate, EBC-1013, is currently being evaluated in a first-in-human, placebo-controlled, multi-centre Phase I clinical trial in Australia. This study

is assessing the safety and tolerability of EBC-1013 in patients living with venous leg ulcers – a chronic, debilitating condition with limited, effective therapies.

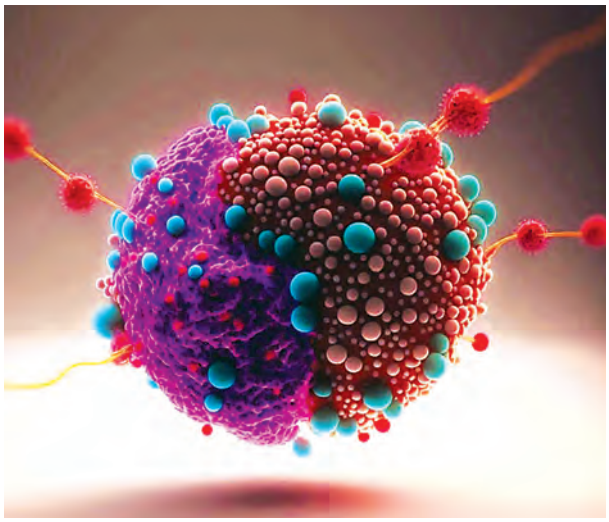
Early-Stage Antibiotics Programme: Recognising the global threat of antimicrobial resistance, QBiotics is advancing an early-stage antibiotics programme, currently in lead optimisation. This initiative reflects our commitment to addressing emerging health challenges beyond oncology and wound care.

What are the company's future plans for the next 5 years?

Our core business strategy is to advance drug candidates through early human trials (up to proof-of-concept Phase IIb), thereby de-risking assets before seeking strategic partnerships for late-stage development and commercialisation. We are actively preparing for a potential IPO on the Australian Securities Exchange (ASX) within this calendar year. Jefferies (Australia) Pty Ltd and Bell Potter Securities Limited have been appointed as Joint Lead Managers to guide this process. We will continue to expand the clinical development of tigilanol tiglate across multiple tumour types, and progress EBC-1013 through clinical trials for chronic wounds and burns, targeting both regulatory approval and commercial readiness. QBiotics aims to secure licensing or co-development agreements for our lead assets, facilitating global commercialisation. These partnerships are expected to generate upfront, milestone, and royalty payments, providing sustainable revenue streams for reinvestment in our R&D pipeline.

How much revenue was generated in 2024? How much growth are you expecting this year?

As a research-driven biotechnology company, QBiotics' primary focus is on advancing novel therapeutics through early-stage clinical development. While we are not yet reliant on human pharmaceutical sales, we have established a revenue stream through our approved veterinary product, STELFONTA, indicated for the treatment of canine mast cell tumours. For the financial year ending June 30, 2024, QBiotics recorded revenue of A$ 1,284,777, attributed to sales of STELFONTA. We anticipate continued growth in STELFONTA sales as global veterinary adoption increases. However, our primary value inflection points in the coming years will be driven by clinical milestones, regulatory approvals, and strategic partnerships for our human health assets.



How many funds have you raised so far? Are you planning to raise more funds this year or beyond?

To date, QBiotics has raised a total of A$194 million. We are actively exploring additional capital raising opportunities, including a potential IPO on the ASX in the near term. This will provide the resources necessary to advance our clinical programmes, expand our pipeline, and accelerate global commercialisation efforts.

What is the current scenario of the oncology market in Australia, including the challenges and opportunities?

Australia's oncology sector is characterised by world-class research infrastructure, a skilled clinical workforce, and robust regulatory frameworks. However, significant challenges remain, particularly in the treatment of rare, aggressive, and refractory cancers. There is a strong appetite for novel therapies, especially those that can address unmet needs in rare cancers and improve patient-centric outcomes. Australia's collaborative research environment fosters partnerships between academia, industry, and healthcare providers, accelerating clinical translation.

Despite advances, access to innovative treatments can be limited, particularly for rare cancers. Early-stage biotech companies face challenges in securing sustained funding for high-risk, high-reward research. QBiotics is leveraging these opportunities by advancing tigilanol tiglate in clinical trials for soft tissue sarcoma and head and neck cancers, with the aim of delivering new treatment options and setting new standards of care. BS

Dr Manbeena Chawla
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"APAC is one of the fastest-growing photodynamic therapy markets globally"

«

Thian Chew,
Chief Executive Officer,
Invion Group,
Australia

Australia's Invion Group is emerging as a leader in the development of next generation precision photodynamic technology (PDT), known as Photosoft, for a range of cancers and other diseases. The minimally invasive treatment promises to provide a potentially more affordable option for millions of people in developed and developing markets. At the recently held BioAsia Taiwan 2025 event, which highlighted the ongoing demand for precision oncology solutions in underserved Asian markets, BioSpectrum Asia took the opportunity to interact with Thian Chew, Chief Executive Officer, Invion Group to find out more about how the company is revolutionising the oncology market with its new products and technology. ***Edited excerpts-***

What are the major highlights at Invion Group in 2025? Are you planning to launch new products this year and beyond?

Photosoft is a platform technology and Invion has an active clinical pipeline, which is validating multiple applications of our lead cancer drug candidate INV043 across several indications. We now have human data on two distinct cancers – prostate cancer and non-melanoma skin cancer (NMSC). This makes our technology unique because it is unusual to see one drug showing promise on more than one type of cancer. The investigator-led Phase II prostate cancer trial in Melbourne, Australia, demonstrated a 40–44 per cent response rate and the treatment only had mild side effects and was well tolerated by participants who underwent six rounds of the treatment administered systemically.

Invion has also commenced a Phase I/II NMSC trial in Queensland, Australia, and early results look promising. The findings found no adverse events or pain in the first six patients, and they responded positively to the treatment with an observable reduction in the NMSC lesion size after just one round of treatment. Additionally, the potential to use INV043 as a diagnostic tool was further demonstrated during trial. While red light of 660nm would activate INV043 to generate Reactive Oxygen Species (ROS) to kill the cancer, violet light of 405nm causes cancer cells to fluoresce. Having an effective diagnostic tool may help surgeons more accurately identify and remove cancers to minimise the risk of either missing some of the cancer margin or cutting too much of the healthy tissue. The human data from the two trials support the preclinical findings. In vivo studies showed INV043 was safe, non-scarring and non-toxic and only accumulates in cancer cells and not healthy tissue. The next exciting major development will be the launch of our anogenital cancer trial in partnership with the world-renowned Peter MacCallum Cancer Centre (Peter Mac) in Melbourne. Anogenital cancers, which includes penile, vulvar and anal cancers, are rare cancers with limited treatment options. As such, this gives Invion the opportunity to explore the possibility of obtaining "orphan drug designation" from the United States Food and Drug Administration (FDA) to fast track future trials in the US.

How is the company strengthening its presence in the Asia-Pacific market?

The Asia Pacific is a key market for us. The company has secured a number of partnerships in the region and is looking for other opportunities for collaboration to advance the development of our platform technology, Photosoft. In South Korea, we have partnered with a leading pharmaceutical group, Hanlim Pharm. Co., Ltd. to fund and undertake preclinical studies targeting glioblastoma and oesophageal cancer.

Invion also struck a similar agreement with Dr.inB Co., Ltd. to fund and conduct preclinical studies and human Proof-of-Concept trials on Human Papillomavirus (HPV). There is no cure for HPV, which is linked to cervical and anogenital cancers. These agreements align with our strategy to partner with companies that can provide expertise and non-dilutive funding to advance the development of Photosoft across multiple opportunities. These include exploring avenues to partner beyond human cancers as well.

What are the current challenges facing the photodynamic therapy (PDT) market globally? Where does the Asia Pacific region stand?

PDTs have been around for decades, and some old photosensitisers have been approved by the US FDA. It involves the use of a photosensitive drug and a light source to activate the drug, but severe side effects (such as pain, toxicity, etc.) and other limitations of these earlier generation drugs have hampered their widespread use.

Invion's Photosoft technology has the potential to overcome many of these shortcomings. Initial results from the first six patients in the Phase I/II NMSC trial did not find any adverse events or pain, and patients responded positively to the treatment with an observable reduction in the NMSC lesion size.

Recently, we have observed interest returning to the PDT market, driven by rising cancer rates and demand for minimally invasive treatments. Some of the challenges we face are limited awareness among clinicians, inconsistent treatment protocols across geographies and uneven reimbursement structures, particularly in emerging markets.

Asia-Pacific is one of the fastest-growing photodynamic therapy markets globally. Factors driving this growth include rising cancer rates in high-population countries, such as China and India, and the growing need for more cost-effective targeted therapies.

The costs of new FDA approved drugs in 2023 jumped 35 per cent from the previous year to a median price of $300K. The nature of many new therapies that often are highly personalised to small number of patients (sometimes even one), are harder to scale and therefore become more expensive options. With government budgets and consumers under pressure during these challenging economic times, we believe Photosoft will help address a substantial unmet need since it is a small molecule that works across multiple cancers, and therefore, is a highly scalable solution.

How is Invion Group leveraging new opportunities in PDT compared to competitors?

Invion is pioneering a new generation of PDT. Unlike earlier versions of PDT, our Photosoft platform is engineered for superior tumour selectivity, immune system engagement and real-time imaging and diagnostic integration. These features allow us to offer a safer, more effective, and more precise alternative to other PDT agents — positioning us ahead in a competitive and fast-growing market.

Preclinical results undertaken by our research partners, Peter Mac and Hudson Institute of Medical Research, showed that our technology completely regressed a range of cancers, such as triple negative breast and ovarian cancers and stimulated the body's immune system to continue fighting the cancer.

Invion has developed a portfolio of patent protected compounds. Its lead drug candidate is INV043, a novel photosensitiser which has the potential to work as a theragnostic (therapy and a diagnostic) tool. Red light activates the photosensitive drug while violet light causes the cancers to fluoresce.

Invion Group is focusing on cancers, atherosclerosis, and infectious diseases. Are you exploring new disease categories?

Yes. In addition to trials in prostate, NMSC, and anogenital cancers, we've partnered with leading companies in Asia to explore Photosoft's utility in brain cancer, oesophageal cancer and HPV-related diseases.

Do you have plans to enter emerging markets, such as India?

Emerging markets like India represent a potential significant strategic opportunity for Invion to expand the global reach of our Photosoft technology. India's large and growing population, increasing cancer burden, and rising healthcare investment create a strong demand for accessible and effective treatments.

Importantly, healthcare systems in emerging markets are actively seeking cost-efficient solutions that can be deployed at scale. Photosoft, with its non-invasive, light-activated mechanism of action, offers a compelling alternative to expensive personalised treatments, such as immunotherapies and targeted biologics, which are often unaffordable and logistically complex in low-to-middle-income regions. BS

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“We aim to position Korea among the global top 3 in clinical trial competitiveness and establish it as Asia’s central research hub”

« **Dr Inseok Park,** President, KoNECT, South Korea

With streamlined regulatory pathways, globally aligned infrastructure, and strong patient engagement, Korea is fast emerging as a preferred hub for clinical development in Asia. At the centre of this shift is KoNECT — a government-funded, non-profit organisation under the Ministry of Health and Welfare of Korea tasked with accelerating both domestic and global clinical trial activity. President Dr. Inseok Park discusses how the agency is driving international investment, deepening cross-border collaborations, and preparing Korea’s research workforce for the next phase of global clinical trials. ***Edited excerpts:***

KoNECT was established to strengthen Korea’s global competitiveness in clinical research. What are the key milestones achieved since its foundation, and how has your role evolved with recent government designations (e.g., as National Center for Clinical Research Service)?

Since its establishment in 2014, KoNECT has been dedicated to enhancing Korea’s global competitiveness in clinical research by improving trial capabilities and advancing clinical infrastructure. In 2020, KoNECT was officially designated by the government as the National Center for Clinical Research Service, responsible for supporting the overall clinical trial industry—including infrastructure development, ongoing curriculum design and implementation as an educational institute, and attracting both domestic and international investment. Following this designation, KoNECT’s role has significantly expanded. We now support policy formulation, act as a bridge connecting government, academia, and industry stakeholders, and lead initiatives to cultivate specialised professionals and advance clinical trial digitalization.

Our flagship annual event, the KoNECT International Conference (KIC), serves as a platform to showcase Korea’s global leadership in the field of clinical trials. We have also implemented practical initiatives, including the free distribution of Clinical Trial Management Systems (CTMS), the launch of the 'Korean Clinical Trials Participation Portal' to enhance participant access, and the establishment of a hands-on training center for clinical professionals. Importantly, KoNECT has responded proactively to public health emergencies such as COVID-19. We established the Infectious Disease Clinical Trial Center to support the rapid launch of infectious disease trials, along with a dedicated Investigator-Initiated Trial Support Unit to strengthen research capacity and support non-commercial clinical studies. These efforts have led to significant outcomes—Korea ranked 4th globally in the number of clinical trials in 2023 and has maintained the world’s top city-level trial density for seven consecutive years since 2017. Most recently, KoNECT has been spearheading the development of a centralised clinical trial platform (from 2025 onwards), aimed at improving access to regulatory intelligence, investigator networks, and national resources—laying the foundation for a fully integrated, nationwide clinical research ecosystem.

Could you elaborate on KoNECT’s role in attracting foreign investment into Korean clinical trials? What collaborations or partnerships with global pharma or CROs have had the most impact?

To support the attraction of global clinical trials to Korea, KoNECT actively promotes the country’s drug development capabilities and clinical trial infrastructure to global developers—particularly those not yet operating in Korea or seeking to expand into Asia. This includes introducing KoNECT’s range of support services and providing expert consultations on regulatory pathways. As part of this initiative, KoNECT organises and supports Korean clinical trial delegations comprising pharmaceutical

companies, CROs, and other organisations involved in clinical trials to major international congresses such as the American Society of Clinical Oncology (ASCO) and the European Society for Medical Oncology (ESMO) Congress, enabling direct engagement with key global stakeholders. In 2024, KoNECT successfully attracted 14 multi-regional clinical trials from six companies. In parallel, KoNECT spearheads high-level global investment strategy forums aimed at helping Korean biotech companies attract global investment. These forums serve as a strategic platform for in-depth dialogue on evolving global financing trends, capital access challenges, and cross-border collaboration models. By bringing together leading investors, multinational biopharma executives, and Korean biotech innovators, the events foster meaningful connections and pave the way for sustained global partnerships. More concretely, KoNECT provides Korean biotechs with opportunities to present their technologies through investor relations (IR) pitches, and facilitates one-on-one meetings for global investment and clinical development consulting. These efforts have led to tangible outcomes, including 1 signed Confidential Disclosure Agreement (CDA) and 6 follow-up discussions with four global companies.

Are there any ongoing initiatives or dialogues involving KoNECT aimed at cross-border clinical trial networks or regional regulatory convergence in Asia?

Yes, KoNECT is actively engaged in cross-border collaboration and regulatory convergence efforts across Asia. We have been officially designated as a Center of Excellence (CoE) by the APEC Regulatory Harmonization Steering Committee (RHSC) and provide annual training programmes on regulatory harmonisation for regulators, industry stakeholders, and academic institutions throughout the Asia-Pacific region. In 2023, KoNECT and Japan jointly launched the Asian Clinical Research Infrastructure Network (A-CRIN), an initiative aimed at strengthening regional cooperation through regulatory alignment, data sharing, and support for multinational clinical trial collaboration across Asia.

You've been designated as an institution for training and certification of clinical trial experts. What gaps still exist in Korea's clinical research workforce, and how is KoNECT addressing them?

Despite Korea's strong presence in clinical research, several structural challenges remain—a shortage of globally trained, skilled professionals with practical, hands-on experience; limited expertise in digital trial methodologies; and regional disparities in the clinical research workforce. To address these challenges, KoNECT is developing and implementing globally aligned training programmes, including ICH-GCP, while expanding practical education in areas such as AI applications, real-world data (RWD), CDISC standards, and decentralised clinical trials (DCTs). We also operate a national certification system for clinical trial professionals, provide hands-on training through dedicated institutions, and strengthen regional training efforts to build clinical research capacity nationwide.

We're seeing a clear shift of global sponsors toward running more trials across Asia. How do you see Korea's role evolving within this regional clinical research ecosystem over the next 5 years?

With global pharmaceutical companies increasingly expanding their trials across Asia, and the rise of innovative trial designs such as DCTs, Korea is well-positioned to lead this regional evolution. Leveraging our key strengths—rapid trial initiation, strong patient engagement, and robust safety and ethics oversight—Korea is reinforcing its capabilities under the current government's strategic agenda, which focuses on enhancing global collaboration, fostering convergence with advanced technologies, and training medical and scientific professionals. In the next five years, we aim to boost Korea's involvement in clinical trials across all phases and a wide range of therapeutic areas, with the goal of positioning the country among the global top three in clinical trial competitiveness and establishing it as a central research hub in Asia. BS

Ayesha Siddiqui

“Singapore has been a great launchpad, owing to its structured safety frameworks”

« **Aashish Mehta,** Co-Founder and Chief Executive Officer, TacnIQ AI, Singapore

The increasing prevalence of occupational injuries and illnesses is one of the primary factors fueling the growth of the occupational health market, valued at $5.45 billion in 2025, across the globe. With the Asia Pacific (APAC) region occupying the third-largest share in this market, after the US and Europe, we see a number of companies deploying technologies to unlock tremendous opportunities within the occupational health sector. Singapore-based startup TacnIQ AI is one such example, taking a proactive approach to address the health risks associated with workplace management, through technology. Their flagship product Backy is an artificial intelligence (AI)-powered wearable designed to prevent musculoskeletal injuries in physically demanding jobs. It delivers posture feedback in real time to workers, helping reduce back strain and injury risks. In an exclusive interview with BioSpectrum Asia, TacnIQ’s Co-Founder and Chief Executive Officer, Aashish Mehta, shares how the company is navigating product development, adoption challenges, and regulatory compliance as it expands into global markets. ***Edited excerpts-***

What are TacnIQ AI’s current and future milestones – in terms of product development, launches, partnerships, and global expansion?

Over the past year, we’ve moved quickly, from concept to pilot to production. Backy is already live with partners like DHL, where it’s helping reduce posture-related strain and injury risk by over 65 per cent. We're also working with hospitals to test applications in clinical and eldercare environments. In parallel, we’ve partnered with the British Standards Institution (BSI) to contribute to emerging digital safety standards.

Looking ahead, we’re focused on scaling and evolving the technology. The next version of Backy will feature smarter AI agents that can not only detect unsafe posture but also automatically generate safety guidance and reduce manual reporting.

Geographically, we’re expanding beyond Southeast Asia to Europe and North America, especially in logistics, aged care, and manufacturing. We’re also working to integrate Backy with insurers and enterprise EHS (Environmental Health and Safety) software so that it becomes a core part of workplace wellness and safety ecosystems, not just a standalone device.

Are you planning to raise more funds this year or next? Please share details.

Yes, we’re currently preparing for a new fundraising round later this year. The capital will support us in scaling commercial deployments, expanding R&D, and accelerating market entry in North America and Europe. We’ve had interest from investors who understand industrial automation, AI, and health tech. What we’re really looking for are long-term partners, those who understand our vision of combining agentic AI with human-centric safety design and who are committed to building value over time.

Workplace injuries often go unnoticed until they become chronic. They rarely make news headlines, but the impact is real, on workers, on families, and on the bottom line. TacnIQ is focused on changing that. By making risk visible before it causes harm, the company is turning safety into a continuous, measurable process rather than an occasional audit. Whether it’s a warehouse, hospital, or aged care facility, Backy is giving

workers the ability to improve how they move, on their own terms, in real time.

What challenges have you faced in gaining market traction or regulatory approvals, and how are you addressing them?

One of the more consistent challenges has been the perception that wearables are used for surveillance. But our mission is quite the opposite, we aim to empower employees by giving them tools to protect themselves from injury. We've had to invest time in educating safety and operations leaders, many of whom are used to reactive, checklist-based systems. Once we demonstrate how Backy works, and how it helps reduce strain and build safer habits, adoption becomes easier. On the regulatory front, Singapore has been a great launchpad, thanks to its structured safety frameworks. As we expand, we're aligning with General Data Protection Regulation (GDPR), Health Insurance Portability and Accountability Act (HIPAA), and regional Personal Data Protection Act (PDPA) guidelines. Because Backy is a non-medical and non-invasive device, it can be deployed with minimal friction, yet still has the flexibility to support clinical use cases when needed.

Can you tell us more about the core technology behind your AI-powered wearables? How does it monitor and mitigate workplace health risks?

Backy is powered by what we call Physical AI, a real-time system that senses, processes, and responds to body movement. The device itself is worn on the lower back and houses motion and pressure sensors in a soft, lightweight form factor. These sensors track 3D posture and detect risky actions like improper lifting or repetitive twisting. Based on internal customer testing, we've achieved more than 80 per cent usability satisfaction, largely due to its comfort and unobtrusive design. The AI model, trained on real-world movement data, identifies unsafe motions and sends haptic feedback, like a soft nudge, to prompt correction. Over time, this helps users build safer movement habits, almost like having a personalised physiotherapist with them throughout the day.

How does TacnIQ AI ensure the accuracy, real-time analysis, and data privacy of the health metrics it collects?

We take all three areas- accuracy, latency, and privacy, very seriously. In terms of accuracy, we've validated our AI through lab-based trials and field testing across diverse settings, achieving over 94 per cent posture recognition accuracy, even during complex tasks. Privacy is equally important. We don't collect audio, video, GPS, or biometric data. The only data collected is motion-related, and everything is processed locally on the device. Any data shared with employers is fully anonymised. Our platform is compliant with GDPR and Singapore's PDPA, with encryption protocols built in from the ground up.

The APAC region is undergoing a transition. You've got an ageing workforce, rising injury related compensation costs, and a growing awareness that traditional safety audits and incident reporting aren't enough. While many companies are still operating reactively, the shift toward real-time, preventive safety tools is gaining momentum. We're seeing growing demand across Singapore and Australia, from both private sector firms and government-linked institutions. We're also exploring partnerships with insurance providers, who see value in using Backy to reduce claims and understand risk better.

How is the current scenario of the occupational health market in the APAC region? How do you plan to strengthen your presence in the market?

The APAC region is undergoing a transition. You've got an ageing workforce, rising injury-related compensation costs, and a growing awareness that traditional safety audits and incident reporting aren't enough. While many companies are still operating reactively, the shift toward real-time, preventive safety tools is gaining momentum. We're seeing growing demand across Singapore and Australia, from both private sector firms and government-linked institutions. We're also exploring partnerships with insurance providers, who see value in using Backy to reduce claims and understand risk better. Over time, we believe devices like Backy will become a standard part of onboarding, just like safety training videos or PPE, only smarter and more data-driven. BS

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Quantum Computing: Future of diagnostics is being coded today

« **Ayush Singh,**
Practice Member, Healthcare and Lifesciences, Praxis Global Alliance, India

A silent revolution is being built at the intersection of biology and quantum physics. After decades of pushing the boundaries of diagnostics with advanced imaging and AI, we are now approaching a hard computational wall. For complex conditions like Alzheimer's, Parkinson's, and many cancers, the interacting variables of genomics, proteomics, and real-world patient data are simply too vast for classical computers to master. This limitation caps the ability to move from merely spotting correlations to uncovering true causation. Unlike traditional AI, quantum computing can simulate underlying physical systems to derive precise solutions. The transition from correlational analysis to causal simulation will enable a more valuable and advanced frontier in diagnostics.

The global quantum computing in healthcare market, valued at $120 million in 2024, is projected to grow at a CAGR of 42.5 per cent, reaching $750 million by 2029. With the ability to process exponentially large datasets, simulate molecular structures, and identify subtle diagnostic signals at unprecedented speed, quantum technology is poised to redefine the limits of precision medicine.

Limitations of current diagnostic capabilities

- **Multi-omics overload:** A full human genome alone contains 3 billion base pairs, generating hundreds of gigabytes of raw data per individual. When proteomic and metabolomic data are layered on top, the resulting datasets quickly reach petabyte scales, overwhelming traditional computing systems and slowing the ability to process, store, and analyse this information efficiently
- **Imaging strain:** AI-driven medical imaging generates petabytes of data, straining storage and processing. High- resolution MRI and CT scans outpace the classical GPU capabilities, creating bottlenecks
- **Siloed systems:** Lab tests, medical imaging, and clinical records are often managed in disconnected systems, slowing diagnosis, duplicating effort, and diluting insights

New market areas for quantum value zone

The potential applications of quantum computing in diagnostics span a wide spectrum. Here are the most impactful ones:

- **Pre-symptomatic disease detection:** Quantum-enhanced analytics can identify subtle, pre-symptomatic signals across genomics, imaging, and lifestyle data before conventional thresholds are met. This accelerates the window for preventive action when interventions can most alter disease trajectories

Illustrative use cases: Spotting the cellular anomalies of cancer invisible to current scans or identifying the micro-biological shifts in neurodegenerative diseases (like Parkinson's & Alzheimer's) long before cognitive decline begins

- **R&D acceleration via in-silico trials:** Current path to market for a novel diagnostic is long and expensive. Quantum simulation will enable in-silico trials, testing a new diagnostic on millions of diverse, virtual patients

Illustrative use cases: A company developing a cancer screening tool or a treatment for a new disease can leverage a virtual cohort comprising millions of diverse patient profiles to simulate testing, validate performance, and reduce diagnostic bias, ultimately accelerating development timelines compared to conventional clinical trials

- **Unravelling complex biological systems:** Quantum simulations can model vast networks of molecular interactions simultaneously, revealing disease mechanisms hidden to classical models. This capability focuses research on the most critical pathways, reducing trial-and-error in experimentation

Illustrative use cases: Simulating the complex protein misfolding pathways to understand the root cause of conditions like Huntington's disease, or modeling the systemic impact of rare genetic mutations to guide future therapeutic development

• **Advanced personalized medicine:** Quantum-enabled data fusion explores exponentially many feature interactions across genome, clinical history, lifestyle, and environment to build truly individualised diagnostic profiles

Illustrative use cases: For an oncology patient, creating a 'digital twin' of their specific tumor to simulate the efficacy and toxicity of various chemotherapy regimens, allowing clinicians to select the optimal treatment path from day one

Key market drivers of quantum revolution

The competitive landscape is shaped by three forces that savvy leaders cannot ignore:

1. Strategic capital inflow: Over $4 billion in targeted capital has been invested into quantum computing in the last 24 months, with clear and growing allocation toward healthcare & life sciences applications. The healthcare quantum market is projected to grow from $120 million in 2024 to $750 million by 2029 (a 42.5 per cent CAGR)

2. Incumbent positioning: Major technology firms (Google, IBM, Microsoft) are establishing dedicated healthcare and life sciences divisions, while leading MedTech and pharmaceutical companies (Roche, Amgen) are forming strategic partnerships with quantum firms to address existing R&D challenges

3. Rise of a specialised ecosystem: A new class of companies is emerging at the intersection of quantum physics and computational biology. These are not general-purpose AI companies; they are hyper-specialised teams (like US-based PolarisQB or Finland's Algorithmiq) of PhDs tackling specific problems, from protein folding to simulating cellular interactions. They are the acquisition targets and strategic partners of tomorrow, and they are building their foundational IP today.

Over the period from 2020 to 2024, the average deal size of quantum funding showed a significant upward trend, culminating in a peak of $16.9 million in 2024 with total funding reaching $2600 million while suggesting a shift toward larger, more capital-intensive investments in later-stage ventures.

Addressing challenges and limitations of Quantum Diagnostics

Despite its immense potential, the path to widespread adoption of quantum computing in diagnostics is lined with significant hurdles, both technical and practical:

• **Hardware immaturity:** Current quantum computers remain in the early experimental stage, constrained by limited qubit counts, short coherence times, and high gate error rates. Achieving fault-tolerant quantum computation is essential for reliable medical use that requires major breakthroughs in quantum error correction and hardware stability

• **Algorithmic gaps:** While theoretical quantum algorithms show promise, many lack clinical relevance today. Real-world diagnostic problems require algorithms to be customised for complex biological data, ensuring speed advantages also deliver practical diagnostic value

• **High costs:** Building and operating quantum computers is still prohibitively expensive, involving cryogenic cooling systems, isolated environments, and specialised personnel. While costs are expected to decline over the next decade, short-term affordability remains a barrier for most healthcare institutions

• **Regulatory uncertainty:** Quantum diagnostics lack a clear regulatory pathway. Existing medical device frameworks (e.g., FDA, CE) are not equipped to assess quantum-enhanced algorithms or systems. Defining standards for safety, reliability, and clinical efficacy will be critical before these tools can be deployed at scale

Strategic mandate for healthcare leaders

The competitive landscape for the next decade is currently being shaped, and leaders must act decisively:

• **Form a quantum council:** A small, senior team to develop your strategy, monitor the ecosystem, and identify pilot opportunities.

• **Place strategic bets:** Engage in low-cost pilots with leading startups and academic centers to understand the technology and build proprietary insights from your data.

• **Build a quantum-ready data architecture:** The ultimate value will lie in high-quality, structured, multi-modal data. The work to prepare that asset must begin today

Conclusion

Every generation sees a leap in diagnostic capability: from microscopes to MRI to AI. Quantum computing could be that next revolution — not just faster, but smarter, more integrated, and profoundly more precise. Quantum computing is not about replacing classical systems — it's about enhancing specific bottlenecks in diagnostics like multi-omics analysis, imaging interpretation, and molecular simulation. The strategic decisions made in the next 18-24 months will determine whether your organisation is a spectator or a key competitor in this new era of diagnostics and medicine. BS

Collaborative R&D: Partnerships shaping the future of biopharma

« **Suhail Ali,**
Vice President & TA Head, Project Delivery, ICON, Singapore

Biotechs and pharma companies face rising costs of drug development, depleting R&D pipelines and diminishing returns on investment. By joining forces and exploring collaborative R&D partnerships it is possible to overcome these challenges. In addition to sharing risks, they share the potential rewards when their assets move further into clinical development or come to the market.

Collaborative R&D partnerships can be established between pharmas, or an established pharma and a biotech. While the former are declining steadily, the latter are much preferred. R&D partnerships are mutually beneficial for both sides. Collaborating is one of the most effective ways for pharmas to enrich their drug pipelines and co-share the risks associated with new drug development. Biotechs bring their risk-taking ability, or 'risk capital', to the partnership thereby reducing the pharma's risk spread. Smaller biotechs gain access to the expertise and resources they lack. Another advantage is that biotechs can leverage the large pharma's access to data to design better development programmes.

For companies following this route there are multiple structures available. These include co-development, in-licensing and public-private partnerships. Other conventional models include joint ventures, mergers and acquisitions, public-private partnerships between academic institutions and industry, and full-service outsourcing (FSO) or functional service provision (FSP) models.

There are challenges too

There are, of course, some barriers to successful collaboration. The competitive nature of the industry can impact trust-building. Concerns about IP protection, conflicts of interest and sometimes suboptimal data quality can contribute to mistrust. Robust due diligence can alleviate data concerns. Most partnerships clearly divide future marketing rights by geographic regions to avoid possible future conflict. For example, often a Chinese biotech will retain exclusive rights within China or greater China while their global partner holds the rights for the rest of the world. It is common to see Chinese biotechs funding the Chinese portion of the clinical development while their global partner finances the global clinical development.

The geopolitical climate inevitably impacts global partnerships. Drug development timelines are long, making it difficult to anticipate how the world, and international trade rules, will change by the time a drug is launched.

Trends and the path ahead

Overall, 2024 was a strong year for biopharma. The emphasis shifted to a preference for biotechs with assets in the clinical stage. This meant fewer but larger investments with the average deal value going up by $12 million compared to 2023. In Asia, China leads the biotech-pharma R&D collaboration race, the latest example being 3S Bio securing a $3.8 billion deal with Pfizer with an upfront payment of $1.25 billion. South Korea has emerged as a strong biosimilars hub and is seeing a continual inflow of biotechs too.

However, it does not match the scale of mainland China. When it comes to the biotech landscape, Taiwan always manages to punch above its weight. Listing on the Taiwan exchange is an attractive fundraising strategy for many biotech companies. India, while a powerhouse in the generics space, is still slow and small on the biotech front. Singapore is in the early stages of nurturing the biotech and pharma R&D ecosystem. It needs a shining startup success story to develop a reputation comparable to more established countries.

Despite the re-prioritisation of R&D portfolios, collaborative R&D remains an attractive option. By combining resources, sharing both risks and rewards, biotechs and pharmas can be greater than the sum of their parts. Working together they can access new markets, overcome rising costs and bring new therapies to patients across the world. BS

Hong Kong-Australia collaboration for advancing clinical education in physiotherapy

The Department of Rehabilitation Sciences at The Hong Kong Polytechnic University (PolyU) recently hosted the inaugural Clinical Education Conference, the first event of its kind in Hong Kong, aiming to promote the advancement of clinical education in physiotherapy and occupational therapy. During the Conference, PolyU signed a collaboration agreement with the University of Queensland, Australia to officially establish a Joint Health Professions Education Research Laboratory, with the aim of fostering collaborative research and innovation in healthcare professional education. The

Conference brought together over 300 clinical educators and experts in physiotherapy and occupational therapy from government agencies, non-governmental organisations and private practices. Prof. Marco PANG, Shun Hing Education and Charity Fund Professor in Rehabilitation Sciences, Chair Professor of Neurorehabilitation, Head of the Department of Rehabilitation Sciences, and Director of the University Research Facility in Behavioural and Systems Neuroscience at PolyU; and Prof. Sandy BRAUER, Deputy Executive Dean of the Faculty of Health, Medicine and Behavioural Sciences at The University of Queensland subsequently signed the collaboration agreement on behalf of both parties, symbolising the official establishment of the Joint Health Professions Education Research Laboratory and marking a significant step forward in their collaborative efforts in teaching and research.

National University of Singapore inks healthcare MoU with Germany's Robert Koch Institute

The Yong Loo Lin School of Medicine, National University of Singapore (NUS Medicine) and Robert Koch Institute (RKI), Berlin, Germany have entered a strategic partnership with the signing of a Memorandum of Understanding (MoU) to collaborate on joint operations in scientific, academic and training initiatives, focusing on pandemic preparedness and public health. This partnership marks a significant step forward in leveraging the strengths of both institutions to promote innovation, knowledge exchange, and applied research in advancing biomedical and public health research and training for combating biological threats and improving population health. The collaboration aims to enhance capacity building, develop cutting-edge solutions, and support sustainable practices through collaborative research and shared operational frameworks.

HOSMAC signs MoU with Gulf Medical University to strengthen healthcare education

HOSMAC, Asia's leading hospital planning, design, and management consultancy, has signed a Memorandum of Understanding (MoU) with Gulf Medical University (GMU), Ajman, UAE, to serve as an industry partner. This strategic academic-industry synergy aims to enrich healthcare education by integrating real-world exposure with academic learning. As part of the MoU, HOSMAC will offer internships and short-term placements to students of the Thumbay College of Management and AI in Healthcare (TCMAIH) at GMU. Senior leaders and domain experts from HOSMAC will also contribute as guest lecturers, guiding students on case studies and thesis work, and sharing on-ground perspectives from the healthcare infrastructure domain. Furthermore, the partnership will facilitate joint research initiatives, development of training modules in AI in healthcare, and faculty exchange programmes, furthering the shared mission of advancing healthcare innovation and leadership.

Healthium Medtech names Rajnish Damani as Group COO

India-based Healthium Medtech, a global player in medical devices, focused on products in the surgical and post-surgical ecosystem including wound closure, advanced wound care, arthroscopy and infection prevention segments, has announced the appointment of Rajnish Damani as Group Chief Operating Officer (COO). In this newly created leadership role, Damani will oversee Manufacturing, R&D, and Supply Chain operations across the Group, reporting directly to the CEO & MD, Anish Bafna. Damani joins Healthium with over 32 years of diverse experience across manufacturing, procurement, supply chain, quality and EHS. He has worked across sectors including automotive, healthcare, renewables, aviation, transportation, power and tire industries. Most recently, he served as Executive Director – Manufacturing Operations at Bridgestone India, where he led strategic manufacturing initiatives, including long-term investment planning, quality improvements, talent development and new product introductions.

Bio-Rad appoints Rajat Mehta as Executive Vice President of Global Commercial Operations

Bio-Rad Laboratories, Inc., a global leader in life science research and clinical diagnostics products, has announced the appointment of Rajat Mehta as its new Executive Vice President, Global Commercial Operations, effective August 4, 2025. Mehta will lead Bio-Rad's global commercial strategy and execution, succeeding Mike Crowley, who is retiring after a distinguished 26-year career with the company. Mehta brings extensive leadership and commercial expertise in biopharmaceutical, life science research, and diagnostics markets to Bio-Rad. He joins from Labcorp, where he served as Senior Vice President, overseeing large-scale commercial operations for the company's West Division. Prior to Labcorp, Mehta was Vice President and General Manager, Applied Technologies, at Thermo Fisher Scientific. In this role, he successfully managed a global business unit serving diverse markets. Earlier in his career, Mehta held commercial roles of increasing responsibility at Dow Chemical, where he designed and executed impactful commercial growth strategies.

Jeong Eun Kyeong steps in as Minister of Health and Welfare, South Korea

Jeong Eun Kyeong, a South Korean infectious disease and public health expert, has been appointed to serve as the Minister of Health and Welfare. She previously held office as the first commissioner of Korea Disease Control and Prevention Agency, from 2020 to 2022. After retiring from the Korea Disease Control and Prevention Agency in 2022, she was working as a clinical professor at Seoul National University School of Medicine. Since joining the National Institute of Health (the predecessor of the Korea Disease Control and Prevention Agency) in 1995, she has held positions such as Director of the Division of Infectious Disease Information Management, Director of the Disease Policy Division of the Ministry of Health and Welfare, and Director of the Disease Prevention Center at the Korea Centers for Disease Control and Prevention, actively working at the forefront of public health and infectious disease response.

AusBiotech on-boards Kerri Lee Sinclair as new Head of Investment

AusBiotech has announced the appointment of Kerri Lee Sinclair as its new Head of Investment, marking a significant step in strengthening investor engagement across Australia's life sciences sector. As Head of Investment, Kerri Lee will lead AusBiotech's investment strategy, building connections with the investment community and Australian life sciences to support greater flows of capital needed for companies to succeed and scale. She will oversee AusBiotech's flagship investment events — AusBiotech Invest and AusMedtech Invest — while working closely with industry, Australian investors and global partners to strengthen Australia's position as a destination for life sciences investment. Kerri Lee brings more than 25 years' experience in the global network of innovators and investors, spanning entrepreneurship, executive leadership, and venture capital. Co-founder of a startup acquired by Microsoft in 2007, she has held senior roles in leading Australian companies and, over the past decade, managed significant investment portfolios while serving on the boards of several high-growth businesses.

First Pacific woman to serve as public health director in NZ

The Ministry of Health in New Zealand (NZ) has appointed Dr Corina Grey as the new Director of Public Health this year, a landmark appointment for Pacific leadership. A public health physician, Dr Corina brings over two decades of experience in population health, health equity and Pacific health to the role. Her leadership has shaped national strategies and the appointment signals a strong commitment to improving outcomes for Pacific communities. She steps into the role following her tenure as Deputy Secretary, Policy and Insights at the Ministry for Pacific Peoples. Dr Corina is a member of the National Mortality Review Committee, the Public Health Research Committee at the Health Research Council, the NZ Committee of the Cardiac Society of Australia and NZ, and the Steering Committee of the Public Health Observatory of New Zealand.

Jessica Cowden takes charge as Deputy Director General of CARE unit at IVI

Dr Jessica Cowden has been appointed Deputy Director General of the Clinical, Assessment, Regulatory, Evaluation (CARE) unit at South Korea-headquartered International Vaccine Institute (IVI). She will continue to be based at IVI's Europe Regional Office in Stockholm, Sweden. Dr Jessica brings nearly 25 years of experience in infectious diseases, clinical trials, regulatory engagement, and vaccine development. Since joining IVI in 2024 as Associate Director General of CARE, she has led efforts to strengthen the quality and efficiency of clinical programs, support regulatory strategy across IVI's vaccine portfolio, and develop new programmatic and funding opportunities. In recent months, she has also served as Acting Deputy Director General of CARE, demonstrating strong leadership and a deep commitment to IVI's mission. As Deputy Director General, Dr Jessica will oversee the strategic direction and implementation of IVI's clinical research, ensuring scientific rigor, ethical integrity, and operational excellence. She will also play a key role in advancing IVI's partnerships and funding efforts, while fostering collaboration with global stakeholders.

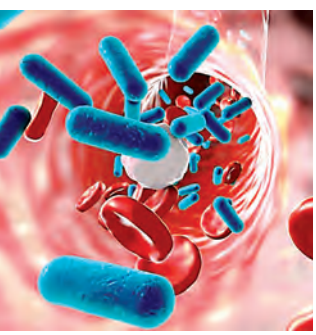
Australia designs smart wound monitor to improve chronic infection care

Researchers from Australia's RMIT University have developed a wearable wound monitoring device with integrated sensors that could reduce infection risks by minimising the need for frequent physical contact. Standard methods require regular removal of wound dressings for assessments, often delaying crucial interventions, whereas this invention monitors healing remotely via a Bluetooth connection. The proof-of-concept device is designed for reuse,

making it more cost-effective and practical than disposable smart bandages and other emerging wound monitoring technologies. Globally, millions of people suffer from chronic wounds, impacting their quality of life and incurring significant healthcare costs. In Australia, about 500,000 people are affected, costing the healthcare system $3 billion annually.
The device used advanced integrated sensor technology – including inflammation, pH and temperature sensors – to continuously track key healing indicators. High temperatures signal inflammation or infection, while changes in pH levels can indicate different stages of wound healing.

India builds nano-sensor to detect deadly infections in minutes

A team of scientists at the National Institute of Technology (NIT) Calicut in India has developed a new highly sensitive, low-cost, point-of-care device with an electrochemical biosensor that could help early diagnosis of sepsis at the bedside of the patient. Sepsis is a serious medical condition caused by an infection that can lead to multiple organ failure, shock and even death. Endotoxin, a toxic component of the outer membrane of Gram-negative bacteria, acts as a key biomarker, signalling the presence of an infection that could lead to sepsis. The scientists have developed eight distinct sensor architectures and a sensitive device for detecting endotoxins rapidly. In a paper published in the journal Langmuir, the team has demonstrated a highly sensitive electrochemical sensor chip designed for the selective detection of Lipopolysaccharide (LPS), which is compatible with a portable analyser for on-site detection. The sensor is fabricated using functionalised CNT (fCNT) and copper(I) oxide nanoparticles (Cu2O). The specific binding of endotoxin to LPS-binding Aptamers or polymyxin B was used to improve selectivity.



Hong Kong conducts study to reshape treatment landscape for hepatocellular carcinoma

Researchers from the School of Biomedical Sciences at the LKS Faculty of Medicine, the University of Hong Kong (HKUMed), have made a significant advancement that could reshape the treatment landscape for hepatocellular carcinoma (HCC), the most common type of liver cancer, which often resists treatment and recurs. This cancer is especially prevalent in Southeast Asia and China. The research has revealed a previously unknown mechanism that allows HCC to grow more aggressively and evade existing therapies. The team also developed a new small molecule inhibitor that could improve treatment options for HCC patients.
The pathway involves a protein called AGPAT4, which is abundant in both embryonic stem cells and HCC tumour cells, but is rarely found in normal tissues. The new data show that AGPAT4 acts like a switch that makes cancer cells more flexible and aggressive. This flexibility, known as tumour plasticity, is linked to a higher chance of the cancer to recur, spread and resist existing treatments like sorafenib, a widely used drug for liver cancer.

Japan predicts stem cell-derived organoid quality with machine learning

A research team at Kyoto University, Japan has developed a machine learning model that enables early prediction of hypothalamus-pituitary organoid formation from human Induced pluripotent stem (iPS) cells, thus aiding organoid research and regenerative medicine. The induction of these organoids typically requires over two months of culture and often results in variable quality, making the process both time-consuming and resource-intensive. To address this bottleneck, the researchers trained a convolutional neural network using phase-contrast images taken during the early stages of organoid development. The model achieved 79 per cent accuracy in predicting pituitary cell differentiation at day 40 using images from day 9, demonstrating its potential to guide experimental decisions before committing to lengthy protocols. Unlike earlier studies that relied on concurrent training and evaluation data, this model forecasts long-term differentiation outcomes based on early-stage imaging, offering a rare predictive capability in organoid biology.

Korea explores possibility of developing next-gen drugs for neurodegenerative diseases

Herpotrichone is a natural substance that has been evaluated highly for its excellent ability to suppress inflammation in the brain and protect nerve cells, displaying significant potential to be developed as a therapeutic agent for neurodegenerative brain diseases such as Alzheimer's disease and Parkinson's disease. This substance could only be obtained in minute quantities from fungi that are symbiotic with isopods. However, researchers at Korea Advanced Institute of Science & Technology (KAIST) have succeeded in chemically synthesising this rare natural product, thereby presenting the possibility for the development of next-generation drugs for neurodegenerative diseases. According to researchers, this is the first total synthesis of a rare natural product with pharmacological activity related to neurodegenerative diseases and systematically presents the principle of biomimetic synthesis of complex natural products. It is expected to contribute to the development of novel natural product-based anti-neuroinflammatory therapeutics and biosynthesis research of this group of natural products.

Singapore develops blood test to improve prediction of gestational diabetes

Researchers from the Global Centre for Asian Women's Health (GloW) and the Department of Obstetrics and Gynecology at the Yong Loo Lin School of Medicine, National University of Singapore (NUS Medicine) have found that selected maternal biomarkers from first-trimester random blood samples can effectively predict a woman's risk of gestational diabetes mellitus (GDM). In Singapore, GDM — which affects one in five pregnant women—is typically diagnosed with a three-point oral glucose tolerance test between 24 and 28 weeks of pregnancy.

The test requires overnight fasting and takes around 2-3 hours. The team found that just seven first-trimester biomarkers from random blood samples — including common tests like HbA1c (a measure of blood sugar over time), certain hormone and fat-related proteins, and specific fatty and amino acids — could significantly improve GDM risk prediction beyond conventional factors such as maternal age, pre-pregnancy body mass index, and family history of diabetes.

Sartorius and Nanotein ink $3 M partnership to advance cell therapy manufacturing

France headquartered Sartorius Stedim Biotech, a leading partner to the biopharmaceutical industry, and US-based startup Nanotein Technologies, a developer of next-generation immune cell activation reagents, have entered into a partnership. As part of the collaboration, Sartorius will invest up to $3 million in a minority shareholding in Nanotein Technologies to support the commercialisation and joint development of solutions based on its NanoSpark platform. Under the exclusive distribution agreement, Sartorius will offer Nanotein's lead products to customers worldwide: the NanoSpark STEM-T Soluble T Cell Activator and NanoSpark GROW-NK Soluble Activator. These reagents are designed to enhance the expansion and quantity of T cells and natural killer (NK) cells – two key immune cell types used in a range of cell therapy applications, including CAR-T and NK-based cancer therapies. Producing effective cell therapies begins with the activation of immune cells to trigger expansion and generate large numbers of high-quality cells. In the process, developers face challenges such as the reliance on feeder cells or inconsistent yields.

Revvity unveils innovative reagent technology to accelerate therapeutics development

US-based Revvity, Inc. has announced the launch of pHSense reagents, a powerful technology designed to advance internalisation studies in drug discovery. pHSense reagents are designed for high-throughput, plate-based workflows and intended for researchers studying G protein-coupled receptors (GPCRs) or antibody-drug conjugates (ADCs). They offer a scalable, accurate, and easy-to-implement solution for monitoring antibody, ADC, or receptor internalisation. Developed for use with standard plate readers, pHSense reagents combine a pH-sensitive dye and a time-resolved fluorescence (TRF) readout to allow for the delivery of robust kinetics of internalisation and high signal-to-background—even at low endogenous receptor expression levels. Fully compatible with Revvity's multimode detection platforms, pHSense reagents have the potential to significantly enhance detection capability while simplifying integration into existing drug discovery workflows.

Shimadzu launches particle analysis system in Japan and overseas for analysis of microplastics

Shimadzu has launched a particle analysis system in Japan and overseas, specialising in the analysis of microplastics, at global scale. This system can quickly calculate the number of particles, area, volume, mass, and individual particle qualities of microplastics based on the measurement results from an infrared microscope or an infrared Raman microscope. This is the first analytical instrument in the world that can automatically analyse the mass and volume of microplastics using an infrared microscope or an infrared/Raman microscope. This system is based on an infrared/Raman microscope or an infrared microscope, and is used together with the dedicated software AMsolution, which additionally includes a newly developed Particle Analysis Programme. Analysis of various data on plastic particles is essential to understand their distribution. The infrared/Raman microscope AIRsight is the world's first microscope system that combines infrared spectroscopy and Raman spectroscopy.

Agilent expands Dako Omnis Family with 3 new models to meet evolving pathology lab needs

Agilent Technologies Inc. has announced the introduction of its Dako Omnis family of instruments with three new models- Agilent Dako Omnis 110, 165, and 165 Duo- designed to meet the evolving needs of pathology laboratories of all sizes. These new instruments provide labs with the flexibility to tailor their staining solutions according to volume, workflow, and diagnostic requirements. With the launch of the Agilent Dako Omnis family, Agilent transitions beyond a one-size-fits-all model to offer a tailored portfolio, empowering labs to select the configuration that best meets their needs. Dako Omnis 110- Built for precision in low-medium volume labs, delivering up to 110 IHC slides per day with dependable performance; Dako Omnis 165- Engineered for efficiency in medium-high volume labs, delivering up to 165 IHC slides per day with seamless consistency; Dako Omnis 165 Duo- Designed for ultimate flexibility in medium-high volume labs, delivering simultaneous Immunohistochemistry (IHC) and in situ hybridisation (ISH) with maximum throughput and confidence.

DKSH acquires Eppendorf's direct presence in Thailand

DKSH has signed an agreement to acquire Eppendorf's direct business in Thailand. Eppendorf is a leading international life science company that develops, manufactures, and distributes instruments, consumables, and services for use in laboratories around the world and employs around 4,500 people in more than 30 countries. In Thailand, Eppendorf is a local market leader for liquid handling (pipettes), centrifuges, and general laboratory equipment. The transaction includes the takeover of Eppendorf (Thailand) Co., Ltd. employees, as well as an exclusive right to distribute Eppendorf's products in Thailand. Through this transaction, DKSH will further solidify its position as a leading market expansion services provider in the field of Scientific Solutions in Asia and beyond. In fiscal year 2024, the Eppendorf Group recorded consolidated revenue of €980.3 million and invested €69 million in research and development (R&D), while DKSH operates in 36 markets with 28,060 specialists, generating net sales of CHF 11.1 billion in 2024.

Thermo Fisher launches Scios 3 and Talos 12 Electron Microscopes

Thermo Fisher Scientific has announced the launch of two new electron microscopes. The Thermo Scientific Scios 3 is a focused ion beam (FIB) scanning electron microscope (SEM) with automation to dramatically improve site-specific quality control. The Scios 3 FIB-SEM offers increased productivity for both industry and academia with enhanced lamella preparation, due to advances in FIB column performance. Ease-of-use upgrades will benefit microscopists of all experience levels. On the other hand, Talos 12 adapts to researchers across disciplines and experience levels. Thermo Fisher has evolved the popular Talos transmission electron microscope (TEM) design, culminating in the Thermo Scientific Talos 12 TEM, making leading-edge sample analysis more accessible than ever for biological research, pathology and drug development. TEM systems often require highly skilled specialists, but Talos 12 lowers those requirements with new enhancements to improve ease of use while maintaining high quality imaging with high reproducibility.

Addressing Widespread Mental Health Disorders

World Mental Health Day, observed annually on October 10, is a global campaign designed to spotlight mental health issues and inspire collective action to improve access to care. It offers a crucial moment for governments, health professionals, advocates, and communities to showcase progress, identify gaps, and call for stronger commitments to ensure mental health support is available for everyone. The urgency is because mental health conditions remain widespread and under-treated, creating significant health, social, and economic burdens.

In the WHO South-East Asia Region alone, more than 289 million people live with mental, neurological, or substance use disorders, and close to 208,000 lives are lost to suicide each year. Conditions such as depression, anxiety, schizophrenia, migraines, autism, and dementia are among the leading causes of disability, affecting both adults and children. Across the broader Asia-Pacific, one in five adults in countries like Thailand, Vietnam, Australia, and New Zealand experience a diagnosable mental health condition annually. Beyond the human toll, the economic impact is striking: mental illness is responsible for over 20 per cent of years lived with disability and nearly 9 per cent of disability-adjusted life years (DALYs). In high-income countries such as Australia and New Zealand, untreated mental health conditions cost economies up to 5 per cent of GDP.

Despite the severity of this burden, most people still go without care. Even in wealthier nations such as Singapore and Australia, more than half of those in need remain untreated. In upper-middle-income countries, including Malaysia, China, and Thailand, the treatment gap is close to 90 per cent, and in lower-middle-income nations such as India, Indonesia, Vietnam, and the Philippines, it ranges from 76 to 90 per cent. In low-income countries, the World Health Organization (WHO) estimates an average treatment gap of 89 per cent. Across the region, even the best-resourced health systems fail to reach half of those in need, while in poorer contexts, nearly nine in ten receive no support at all.

Several factors drive these disparities. Persistent stigma and discrimination discourage individuals from seeking help and often exclude them from education, employment, and social life. Structural barriers—such as inadequate funding, too few mental health professionals, and limited integration of services into community and primary care—further limit access. Many countries still rely on outdated, hospital-based systems of care, which not only fail to meet international human rights standards but also leave vulnerable groups—including children, older adults, and those in crisis-affected settings—without adequate protection. To close these gaps, the WHO has rolled out several important initiatives. In July 2025, the WHO launched the Mental, Neurological, Substance Use, and Self-harm (MNSS) Dashboard in South-East Asia, giving policymakers and researchers access to real-time data to design and evaluate evidence-based services. Recognising mental health needs in emergencies, WHO also introduced the Mental Health and Psychosocial Support Minimum Service Package (MSP), which helps humanitarian workers deliver coordinated, essential care to the more than 300 million people worldwide affected by conflict, disasters, and displacement.

The WHO has also issued global policy guidance, urging governments to replace outdated institutional care with community-centred, rights-based services. In October 2024, the WHO introduced an integrated operational framework linking mental health, brain health, and substance use, highlighting their interconnectedness and their relationship with overall health and well-being. Alongside this, a global advocacy strategy was launched to strengthen inclusion, protect human rights, expand access to primary and community-based care, and prepare systems for future challenges.

Even with these advances, however, mental health services remain chronically underfunded and fragmented. Millions worldwide continue to go without treatment, especially in low- and middle-income settings. Addressing this crisis requires sustained investment, greater political commitment, anti-stigma campaigns, better workforce training, and culturally sensitive strategies tailored to local contexts. As World Mental Health Day reminds us, improving mental health is not only a public health necessity but also a matter of human rights, equity, and sustainable development. Building inclusive, community-based systems is essential to creating healthier and more resilient societies where mental well-being is recognised as a core element of overall health. BS

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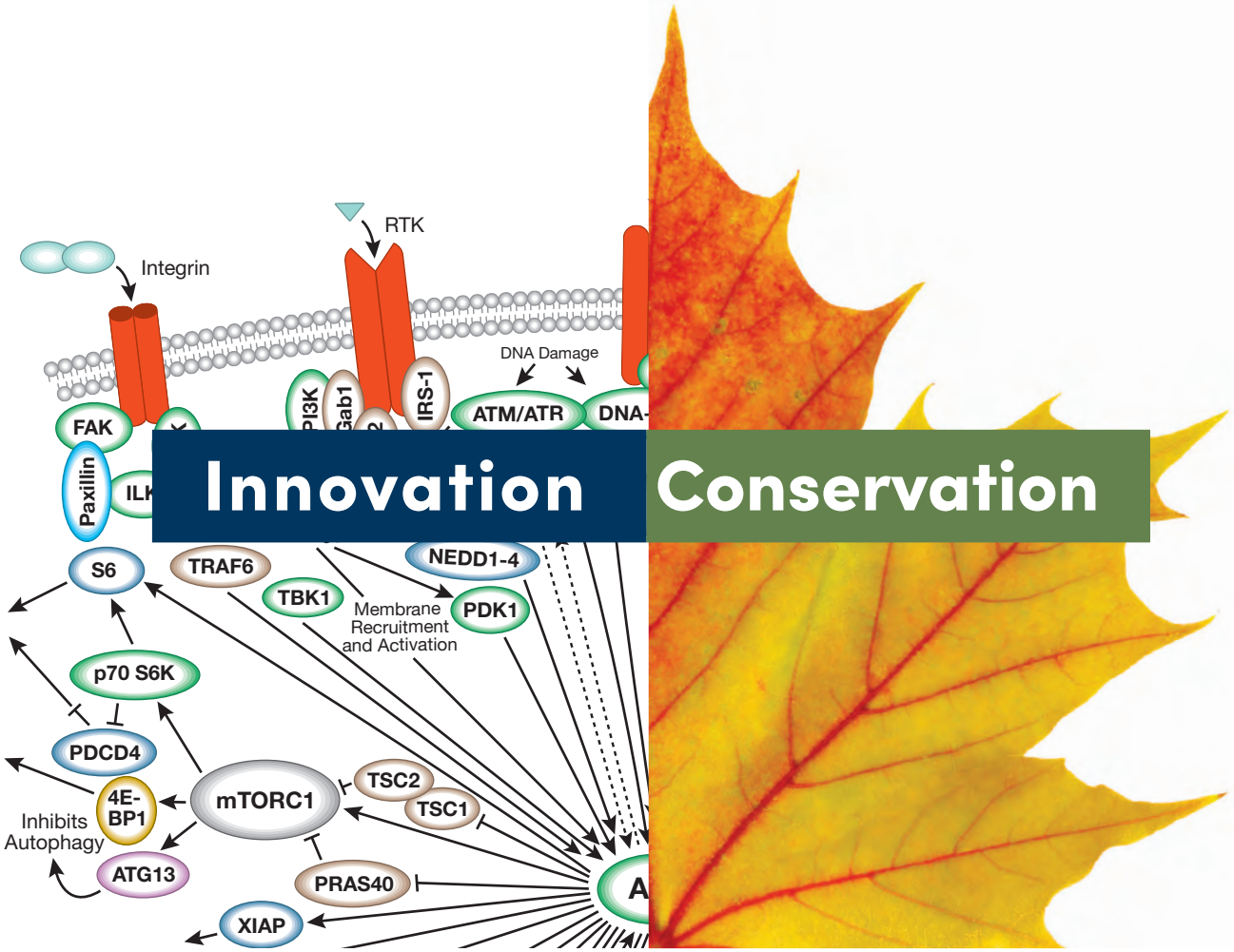

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