

A visionary medical centre

THE NEW KOBE EYE CENTER combines cutting-edge disease research and comprehensive vision care

Ophthalmologists in Kobe have been trailblazers in using induced pluripotent stem (iPS) cells to treat degenerative eye diseases. But it was not until recently that they had a research hospital dedicated to eye and vision care to call their own.

The Kobe Eye Center opened its doors in December 2017. Gleaming with glass curtain walls that illuminate interior spaces — much as regenerative eye therapies restore light sensitivity to the retinas of people with macular degeneration — the new centre now serves as Japan's foremost hub for the advance of cutting-edge therapies for people with

intractable eye diseases and other visual impairments.

Situated on Kobe's Port Island, in the heart of the city's biomedical innovation cluster, the seven-floor facility includes a cell-processing centre, a research institute and a 30-bed ward, plus outpatient clinics for routine eye exams and other low-vision care services.

Having all these resources in one building will help scientists and doctors involved in the world's first-ever human studies of iPS cell-derived tissue transplants to accelerate research and better integrate new regenerative therapies with other social and behavioural aspects of patient

care, says Masayo Takahashi, head of the RIKEN Laboratory for Retinal Regeneration who helped lead construction of the ¥4 billion (approximately US\$36 million) centre.

Previously, these endeavours were spread across labs and clinical sites at the Kobe City Medical Center General Hospital, the Institute of Biomedical Research and Innovation, and the RIKEN Center for Biosystems Dynamics Research. "It's now easier to communicate among the groups by having them under the same roof," says Takahashi, who is leading the iPS studies, along with Yasuo Kurimoto, director of the Kobe Eye Center Hospital.

As well as pushing the boundaries of regenerative medicine and developing new kinds of diagnostic techniques, clinicians at the centre — which includes 11 full-time doctors, 12 part-time affiliates and another 12 research scientists — are using state-of-the-art technologies to promote rehabilitation for people with visual impairment. Patients can practise walking around an obstacle course to make the fullest use of their

remaining sight, and there's a driving simulator for people to assess whether it is still safe to get behind the wheel.

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It is all part of an effort to create a hub for ophthalmological services in Japan, a country with an ageing demographic and where the rates of people expected to suffer from glaucoma, degenerative myopia, cataracts or other causes of visual impairment are set to soar within the next few decades. "It's imperative we connect medical interventions with improving the daily lives and welfare of our patients," says Takahashi. ■

 **Kobe Eye Center**

Kobe Eye Center

Tel: +81-78-381-9876

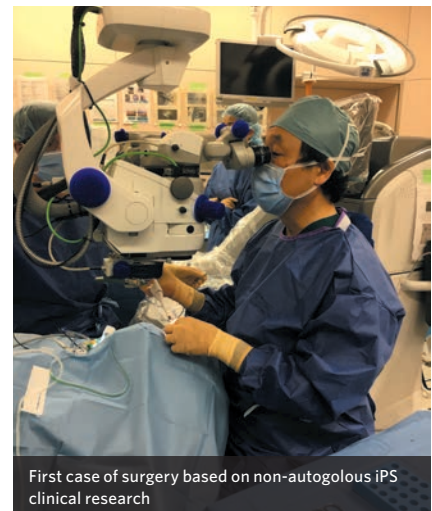
Web: www.kobeyecenter.jp/english/



Kobe Eye Center at Port Island



Vision Park provides low-vision care services



First case of surgery based on non-autologous iPS clinical research

Kobe City Medical Center General Hospital