

230 2023 Annual Report, Japanese Brain Bank Network for Neuroscience Research

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ABSTRACT

In 1999, Brain Bank for Aging Research (BBAR) was established in Tokyo Metropolitan Institute of Gerontology and Geriatrics (TMIGG), the first institute dedicated for aging population in Japan. The BBAR Project comprised longitudinal clinical studies of clinical findings, neuroimages and biomarkers, in addition to the coordination to brain donation and final recovery of postmortem brains, spinal cords, peripheral nerves, skeletal muscles and general organs.

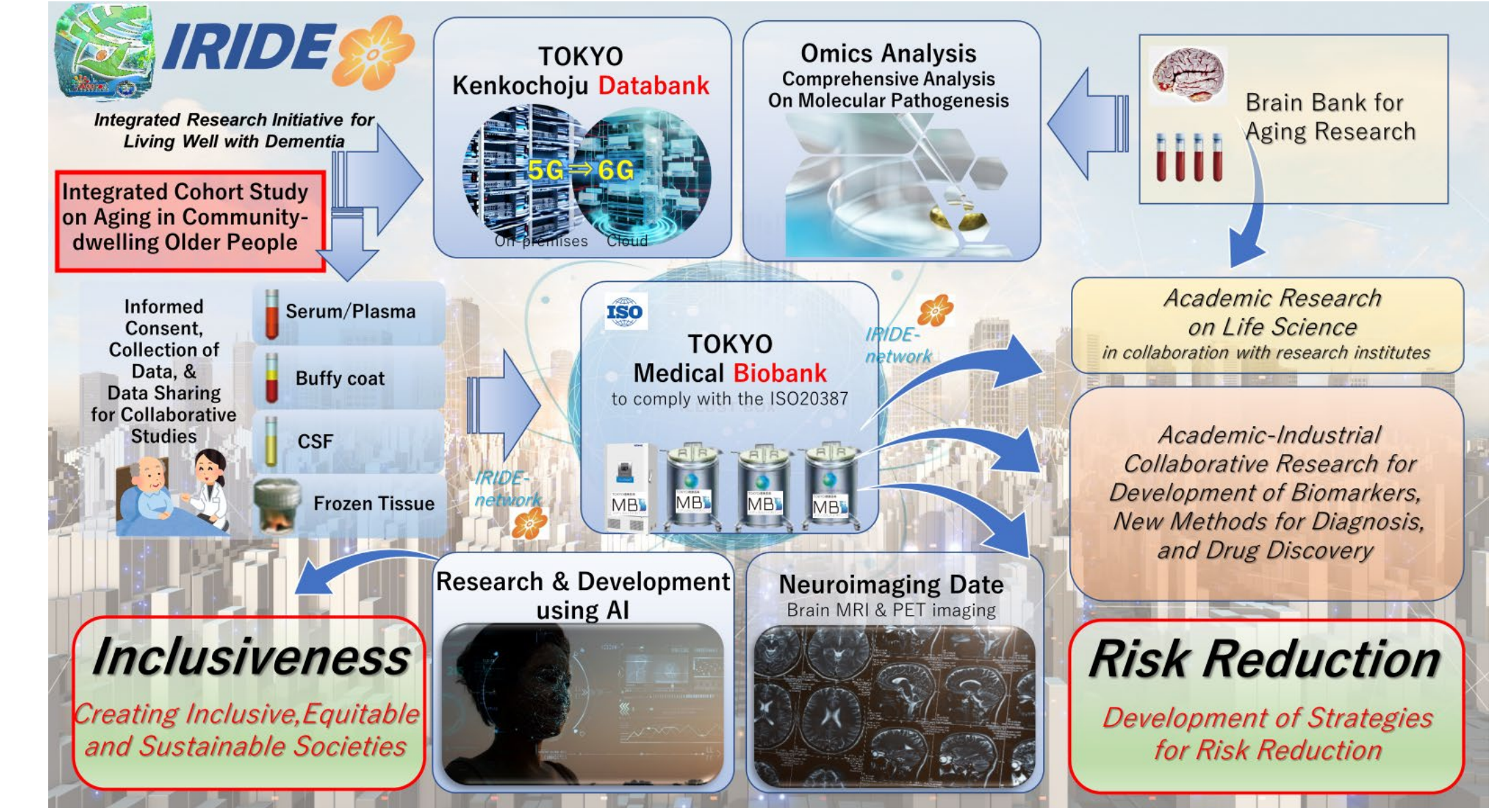
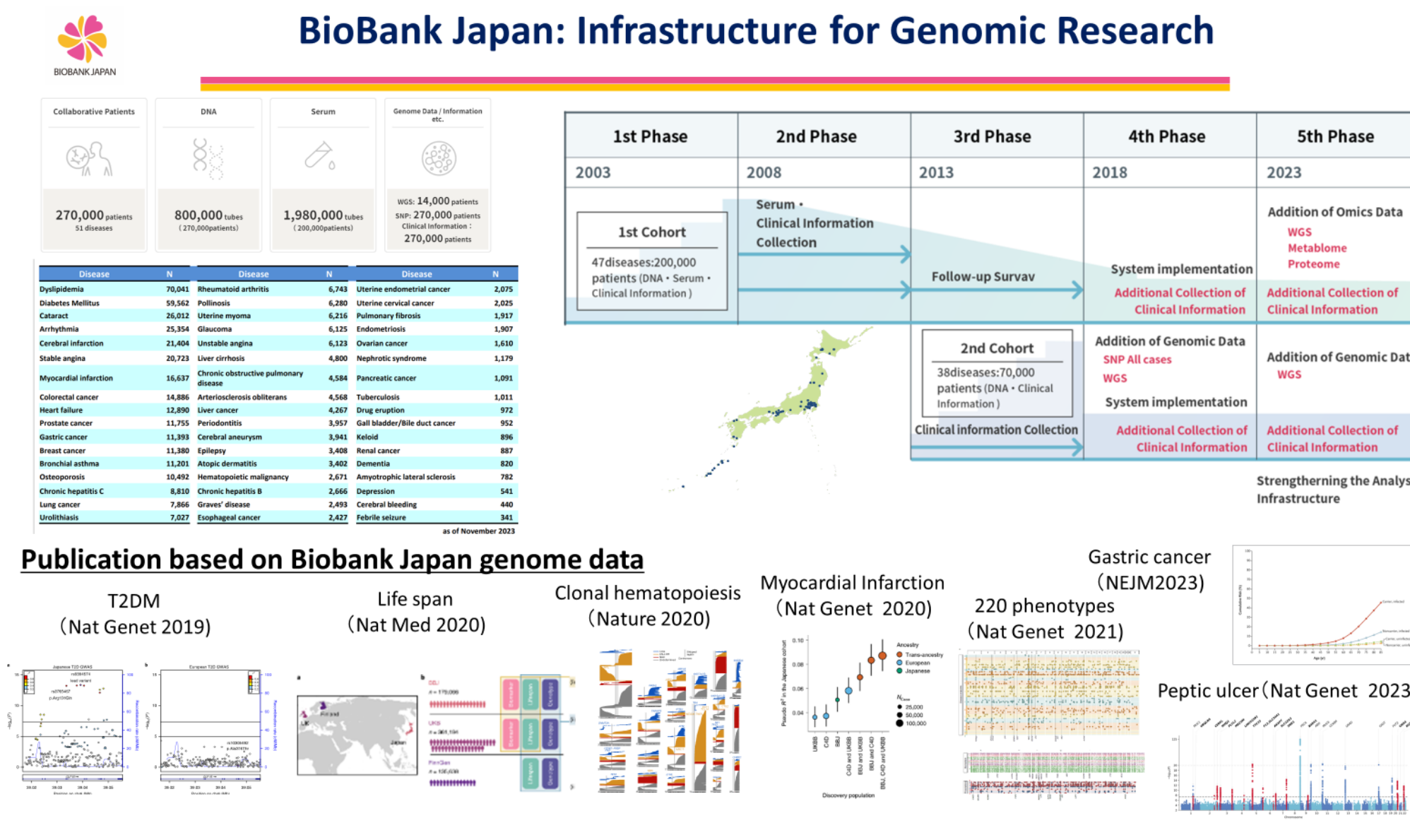
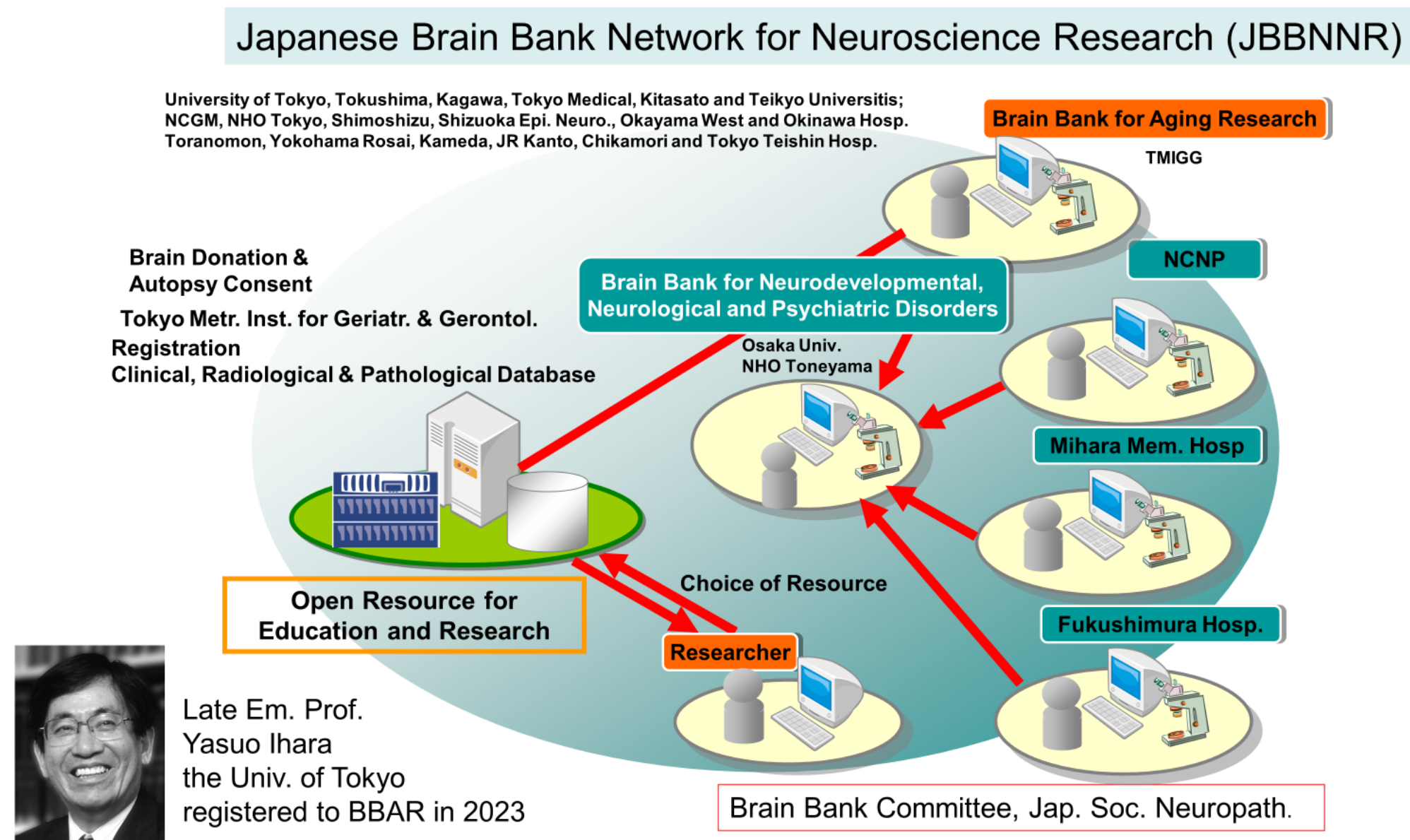
Neuropathological examination follows the Japanese Prion Surveillance System, which includes routine histology, immunohistochemistry, Western blotting, and genomic analysis. In 2012, BBAR recruited the members of the Japanese Society of Neuropathology (JSNP), with the consensus of longitudinal clinical studies, brain donation system, open resource, and quality control of neuropathological findings, and established the Japanese Brain Bank Network for Neuroscience Research (JBBNNR). BBAR, BB for Neurodevelopmental, Neurological and Psychiatric Disorders (BBNNDP, Osaka University), BB of National Center of Neurology and Psychiatry, BB of Mihara Memorial Hospital and BB of Fukushima Hospital formed the ally, with the BB Committee of JSNP. JBBNNR is based on full autopsy providing neuropathological diagnosis by neuropathologists.

The registry of brains from forensic autopsy started in BBNNDP in 2020, which included suicide victims and accidental death cases of developmental disorders. But in Japan, legal and cultural barriers must be overcome.

Biobank Japan (BJJ) is one of the major biobanks which started in 2003, including 199,998 patients with 340,298 DNA and serum. TMIGG was one of the funding members of BBJ and 86 patients were registered to BBAR. In 2023, we started comprehensive genomic studies of these patients.

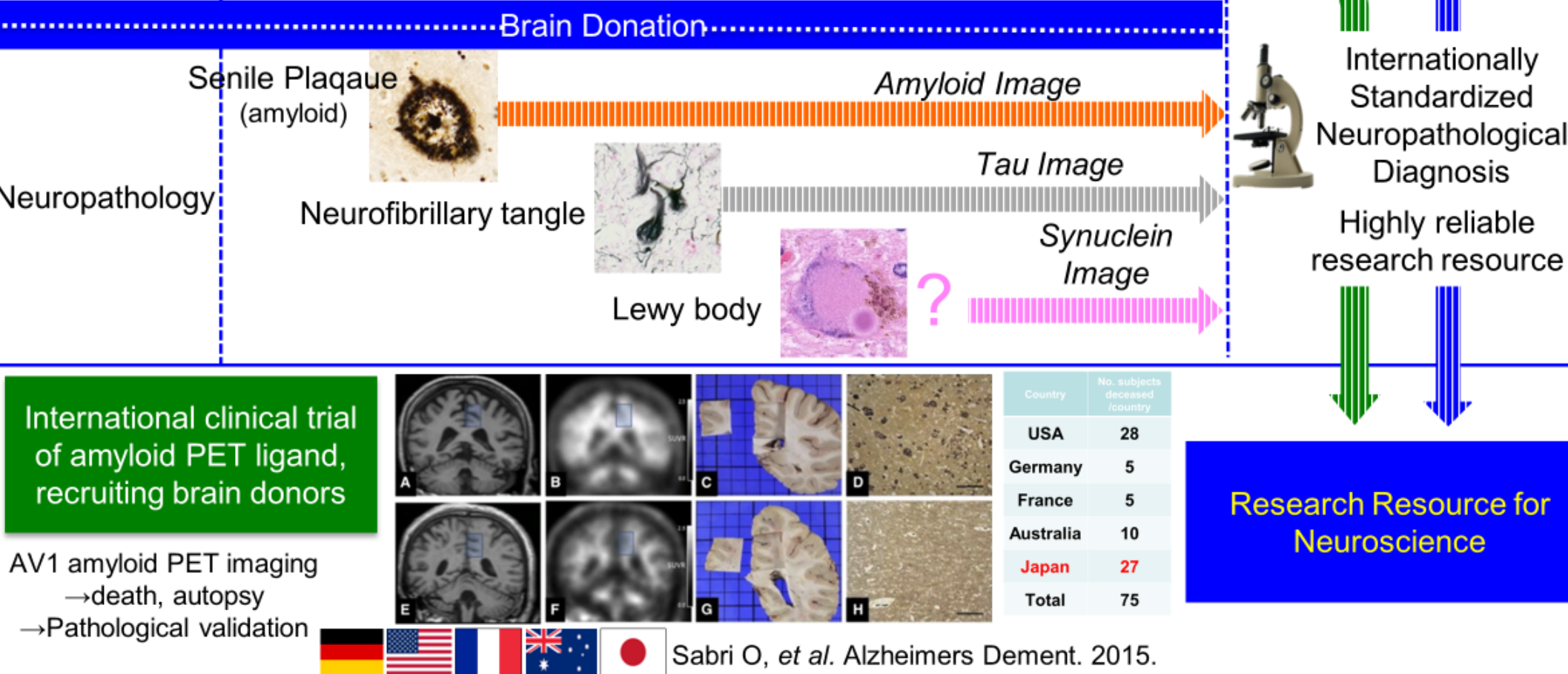
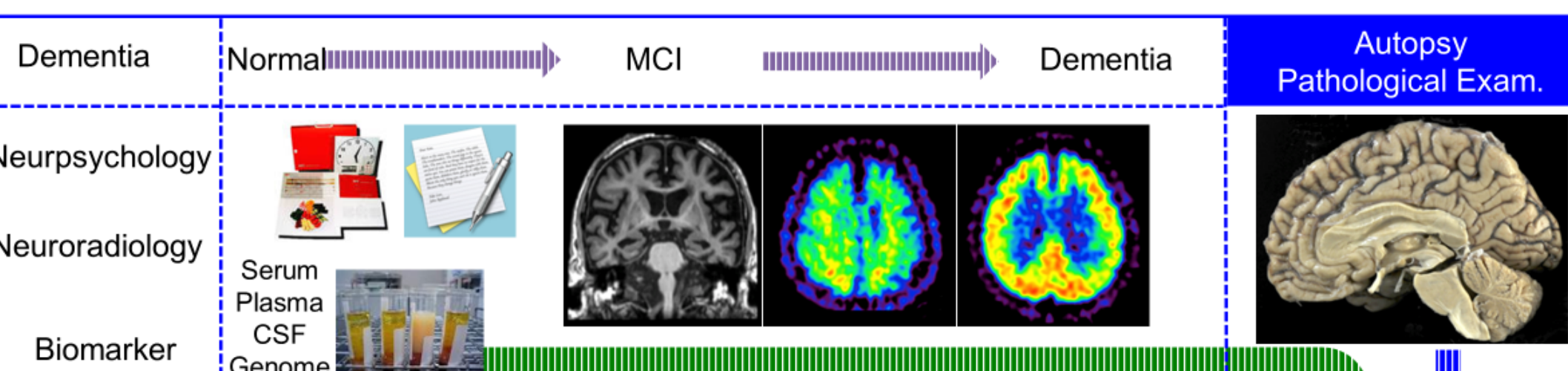
JSNP now welcomed 13 board certified young neuropathologists, whose main aim is to inherit the Japanese brain bank network system to the next generation.

We will make every effort to keep brain bank system for the future of neuroscience.



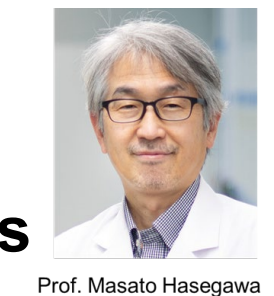
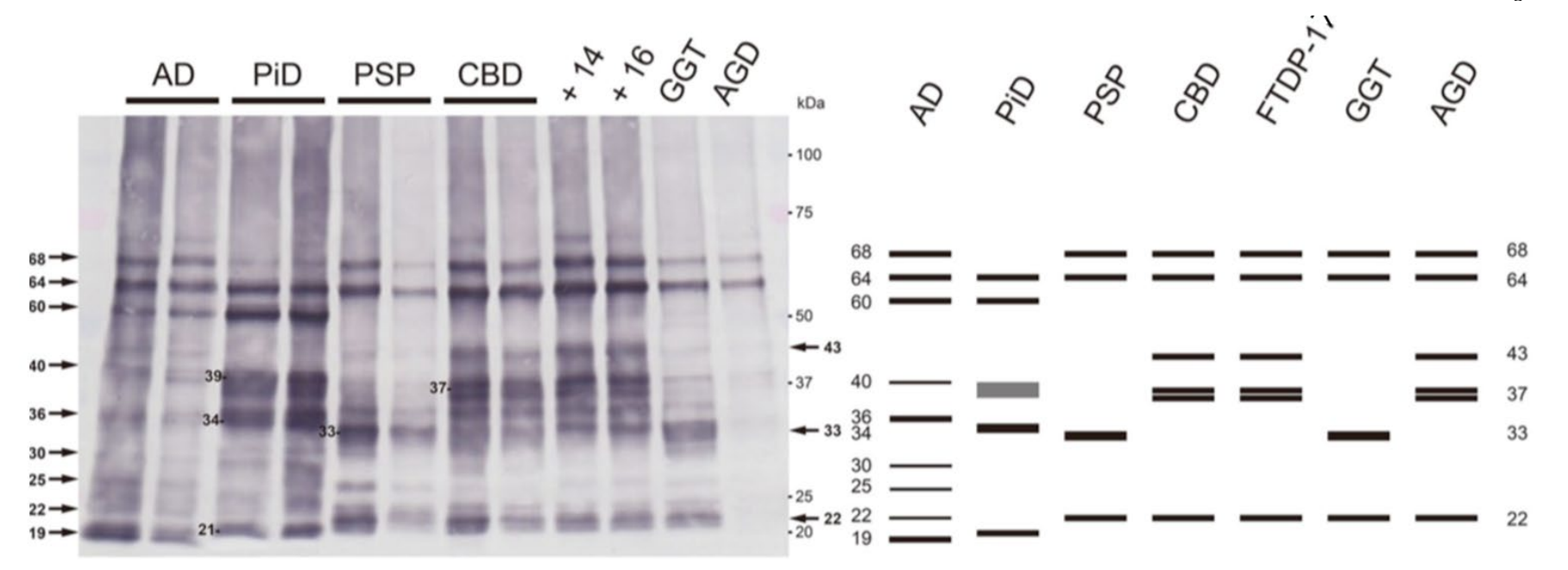
Brain Bank for Aging Research

Brain Donation → Longitudinal Study → Autopsy → Neuropath. Dx. → Bioresource built



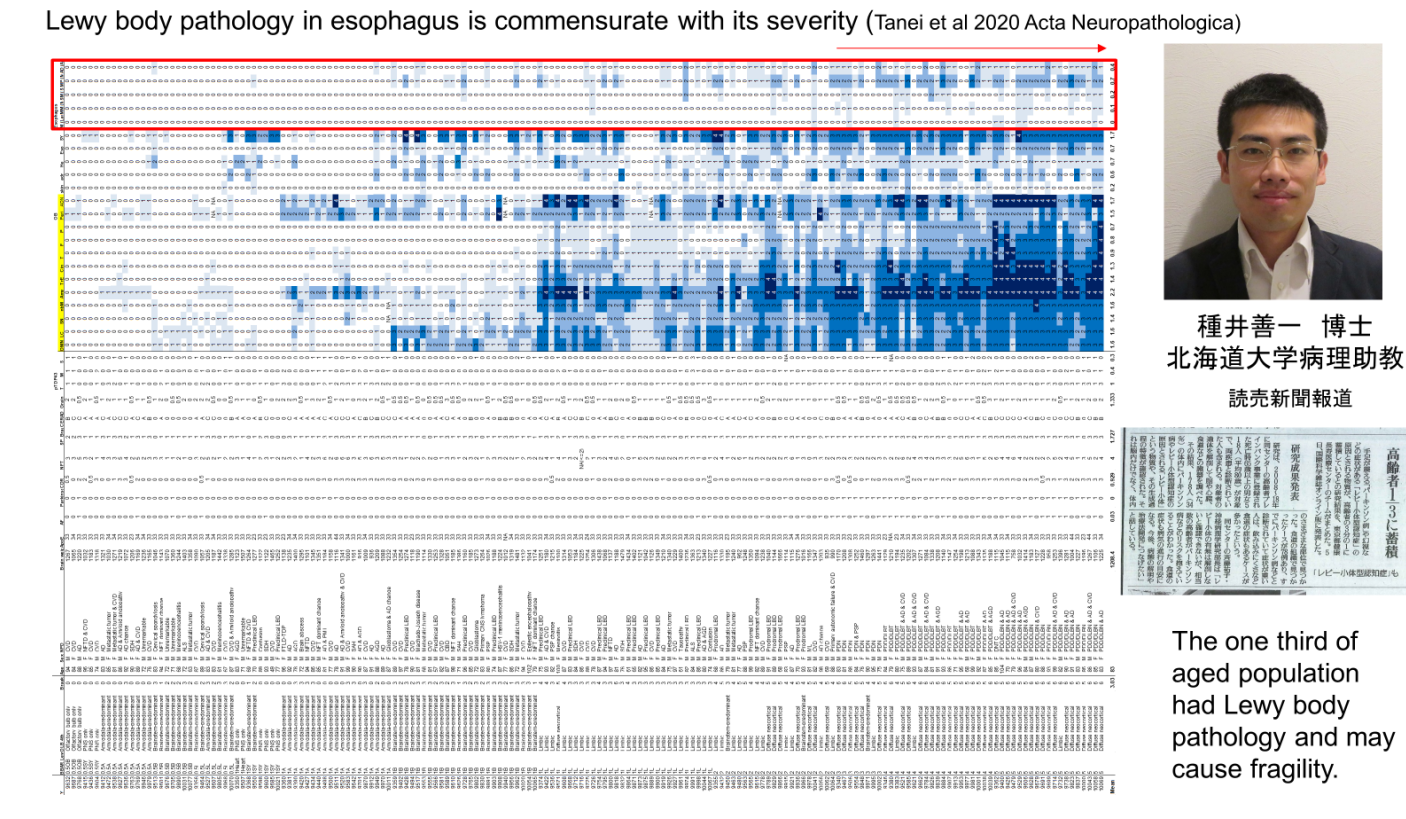
Prof. Yuko Saito

Western blot and Immuno EM: the base of neuropathological diagnosis



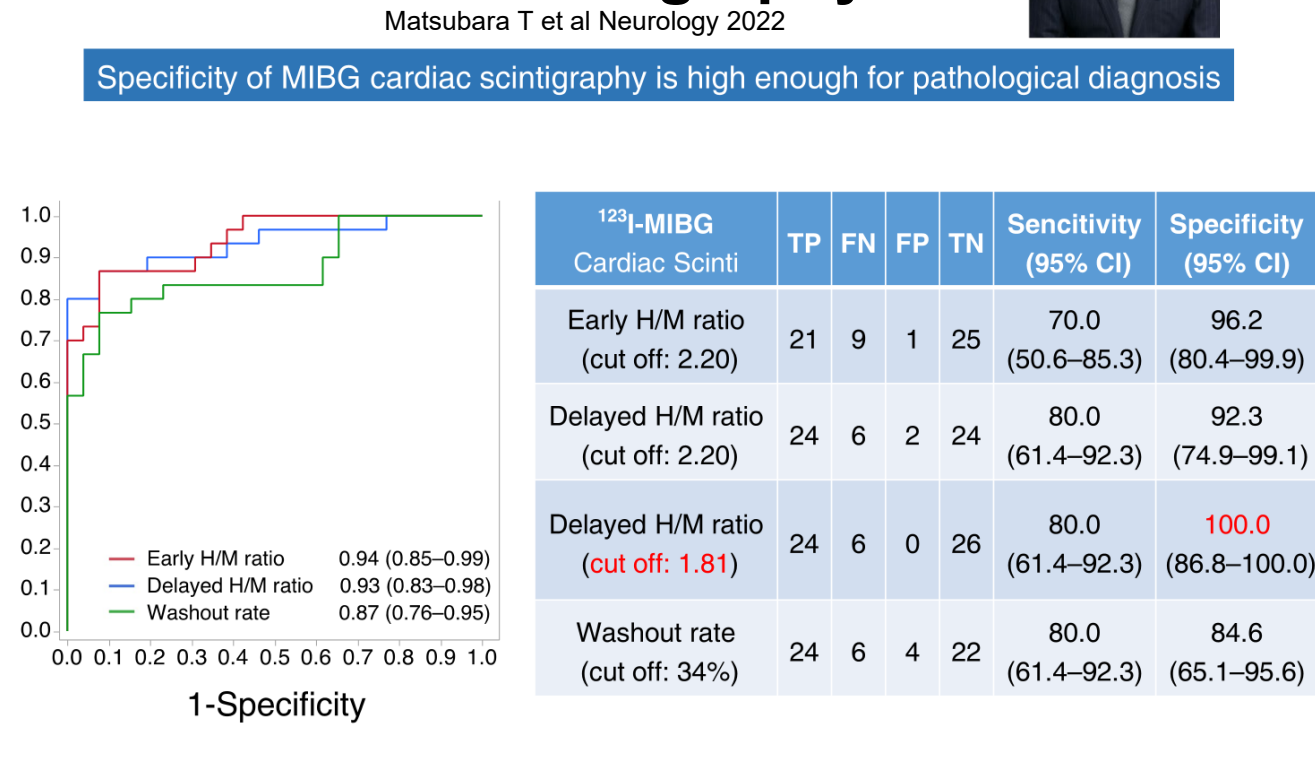
Prof. Masato Hasegawa

Systemic Lewy body Pathology Data Set

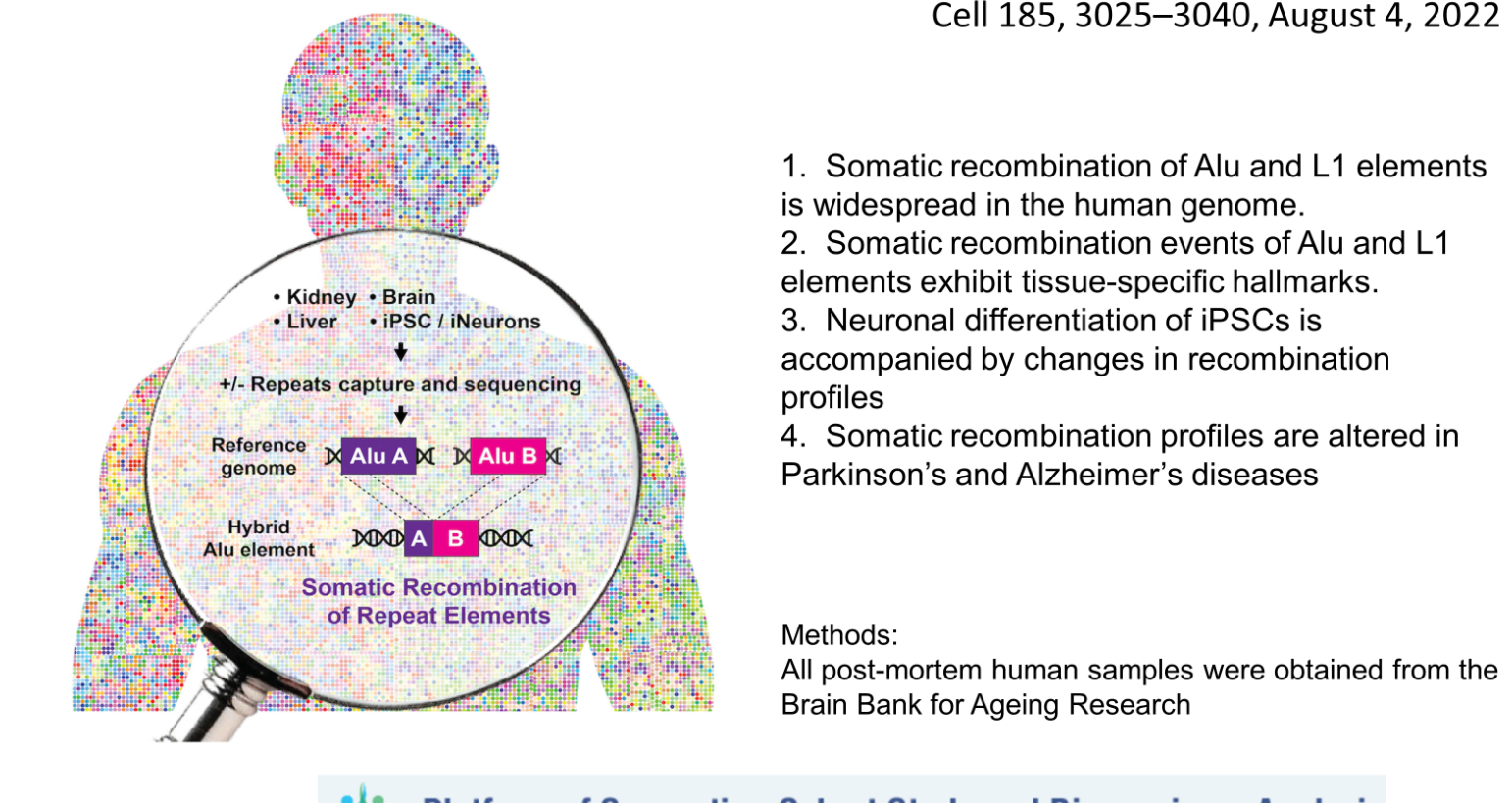


Prof. Borghammer

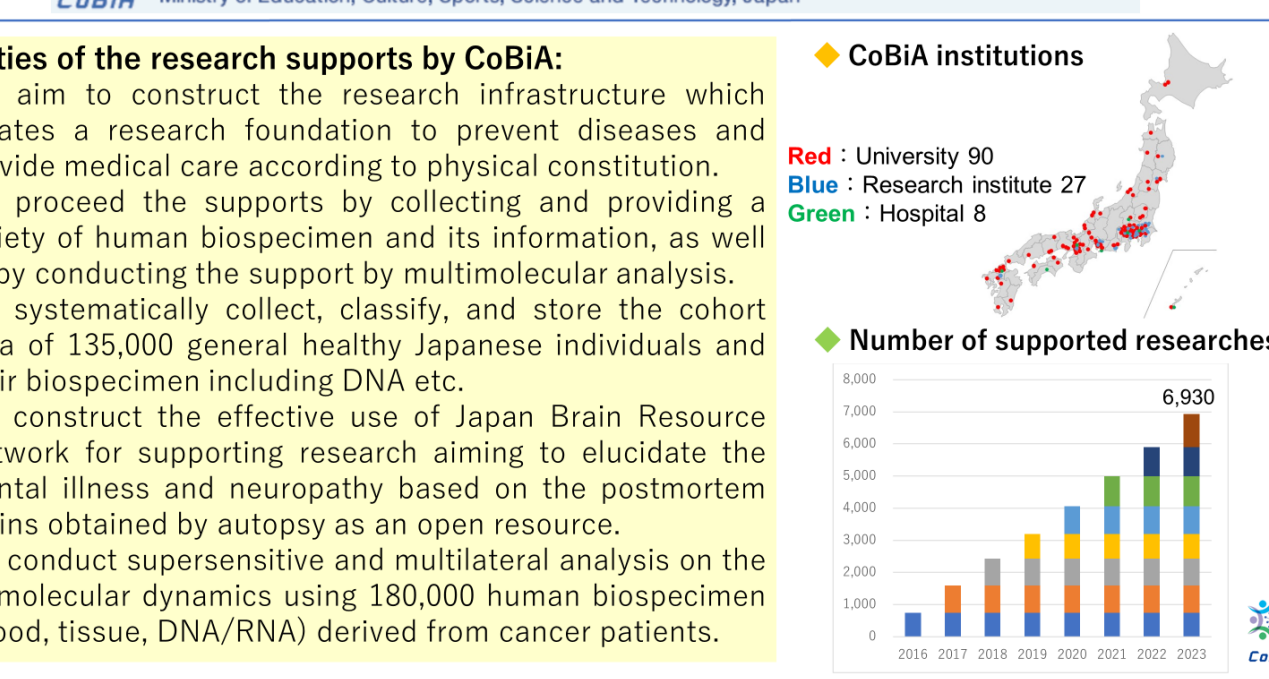
Autopsy Validation of MIBG cardiac scintigraphy



Recombination of repeat elements generates somatic complexity in human genomes



Platform of Supporting Cohort Study and Biospecimen Analysis



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