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Prof. Takanori Shibata was born in 1967 and received B.S., M.S. and Ph.D. in Electronic and Mechanical Engineering from Nagoya University in 89, 91 and 92, respectively. He was a research scientist at AIST from 93 to 98. Concurrently, he was a visiting research scientist at the Artificial Intelligence Lab., Massachusetts Institute of Technology from 95 to 98, and a visiting research scientist at the Artificial Intelligence Lab., Univ. of Zurich in 96. At the AIST, Dr. Shibata was a senior research scientist from 98 to 13. Concurrently, he was the Deputy Director for Information and Communication Technology Policy, Bureau of Science, Technology, and Innovation Policy, Cabinet Office, Government of Japan from 09 to 10. Since 2013, he has been the current positions. His research interests include human-robot interaction, robot therapy, mental health for astronauts in long-term mission (e.g. to Mars), and humanitarian de-mining. He was certified as the inventor of a seal robot named PARO, the World's Most Therapeutic Robot, by Guinness World Records in 2002. He has received many awards including the Robot of the Year by Ministry of Economy, Trade and Industry, Japan in 2006, The Outstanding Young Person (TOYP) of the world by Junior Chamber International (JCI) in 2004, and the Japanese Prime Minister's Award in 2003. In 2015, PARO was awarded the "Patient Trophy" as innovation of non-pharmacological therapy for dementia by the AP-HP (Assistance Publique - Hôpitaux de Paris), France, that is one of the largest medical group in the World.

PARO Neurological Therapeutic Medical Robot, for Non-pharmacological Therapy



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Robot therapy, which uses robots as a substitution for animals in “animal therapy,” is a new robot application in the fields of welfare and patient care. The baby seal robot “PARO” began development for robot therapy in 1993. PARO was commercialized in Japan in 2005, and in Europe and the U.S. in 2009, and about 4,000 PAROs have been used in hospitals and care facilities in more than 30 countries. Recent clinical trials including randomized controlled trials have revealed that robot therapy has a similar effect on patients as animal therapy. In 2009, the U.S. Food and Drug Administration (FDA) certified PARO as a “neurological therapeutic medical device.” PARO can be used in various kinds of therapy similar to real animals, such as palliative care for cancer patients and training of social skill of children with developmental problems. There are a lot of evidences of therapeutic effect of PARO on elderly dementia patients because explicit differences can be easily observed before and after interacting with PARO. The therapeutic effects of the elderly with dementia interacting with PARO include improvement of depression, anxiety, loneliness, pain, agitation, sleep and quality of life, and recovery from speech disorders. PARO can reduce usage of psychotropic medications as a non-pharmacological approach. PARO can also reduce burden of care and nursing, and social cost of medical and welfare service.