



THE JAPAN PRIZE FOUNDATION

2011 Japan Prize Awarded to UNIX Pioneers and Interleukin-6 Discoverers

Dr. Dennis Ritchie and Dr. Ken Thompson Receive Prize for Information and Communications; Dr. Tadimitsu Kishimoto and Dr. Toshio Hirano Receive Prize for Bioscience and Medical Science

Tokyo (January 25, 2011) – The Japan Prize Foundation (formerly known as the Science and Technology Foundation of Japan) today announced the laureates of its 2011 Japan Prize, one of the world's most prestigious international awards in science and technology. Two American innovators of technology, Dennis Ritchie and Ken Thompson, and two Japanese scientists, Tadimitsu Kishimoto and Toshio Hirano, received this esteemed honor for the categories of information and communications, and bioscience and medical science, respectively. Together Dr. Ritchie and Dr. Thompson developed the UNIX operating system which has significantly advanced computer software, hardware and networks over the past four decades, and facilitated the realization of the Internet. The work and discoveries by Dr. Kishimoto and Dr. Hirano have led to the development of a treatment for rheumatoid arthritis and Castleman's disease among others.

Now in its 27th year, the Japan Prize Foundation aims to promote the advancement of science and technology for the peace and prosperity of mankind. The Foundation awards the Japan Prize annually to scientists and researchers in two categories who, regardless of nationality, made substantial contributions to their field and to the world. The 2011 Japan Prize laureates will each receive a certificate of recognition and a commemorative gold medal at an award ceremony during Japan Prize Week in Tokyo on April 20, 2011. A cash award of 50 million Japanese yen (approximately US\$600,000) will also be given to each field - this year the two laureates in each field will split the prize equally.

2011 Japan Prize: Field of Information and Communications

Dennis Ritchie, Ph.D., Distinguished Member of Technical Staff Emeritus, Bell Labs, Alcatel-Lucent Inc., and Ken Thompson, Ph.D., Distinguished Engineer, Google Inc., were honored with the 2011 Japan Prize in information and communications for developing the operating system (OS), UNIX, in 1969 while researchers at Bell Labs. Compared to other operating systems prevailing around that time, their new and advanced OS was simpler, faster and featured a user-friendly hierarchical file system. UNIX was developed in conjunction with the programming language, C, which is still widely used for writing OS, and dramatically improved the readability and portability of UNIX source code. As a result, UNIX has come to be used by various systems such as embedded systems, personal computers, and super computers.

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UNIX was also a major driving force behind the development of the Internet. University of California, Berkeley developed Berkeley Software Distribution (BSD), an extended version of UNIX that was implemented with the Internet protocol suite TCP/IP. The development was based on the sixth edition of UNIX that Bell Labs distributed along with its source code to universities and research institutions in 1975, which led to the beginning of an “open source” culture. BSD UNIX helped the realization of the Internet.

2011 Japan Prize: Field of Bioscience and Medical Science

The 2011 Japan Prize in bioscience and medical science was awarded to two scientists from Osaka University, Tadamitsu Kishimoto, M.D., Ph.D., Professor Emeritus, and Toshio Hirano, M.D., Ph.D., Dean of Graduate School of Medicine, for their discovery of interleukin 6 (IL-6), a cell-signaling molecule in the immune system and its application in treating diseases. The scientists focused on the correlation between IL-6, inflammation and diseases, and were able to unravel the significant role of IL-6 in rheumatoid arthritis and other disease conditions. These discoveries led to the development of tocilizumab, an antibody drug used to treat autoimmune diseases such as rheumatoid arthritis and Castleman’s disease by inhibiting the effect of IL-6. Tocilizumab was approved in Japan for treating rheumatoid arthritis in 1985, and has since been approved in more than 70 countries around the world, including the U.S.

2012-2015 Japan Prize Designated Fields of Eligibility

Last November, the Japan Prize Foundation announced the elected fields of eligibility for the 2012-2015 Japan Prize, which are listed below. In 2014, the Japan Prize will celebrate its 30th year of honoring world leaders of science and technology.

	Designated Fields of Eligibility For: Physics, Chemistry, Engineering	Designated Fields of Eligibility For: Life Science, Agriculture, Medicine
2012	Environment, Energy, Infrastructure	Healthcare, Medical Technology
2013	Materials, Production	Biological Production, Biological Environment
2014	Electronics, Information, Communications	Life Science
2015	Resources, Energy, Social Infrastructure	Medical Science, Medicinal Science

About Japan Prize Foundation

Since its inception in 1985, the Japan Prize Foundation has awarded the Japan Prize to 70 people from 13 countries. In addition to awarding the Japan Prize, which is endorsed by the Japanese government, the Foundation has been hosting "Easy-to-Understand Science and Technology" seminars and awarding research grants to help nurture young scientists and further promote the advancement of science and technology. For additional details about the Japan Prize Foundation and its activities, please visit <http://www.japanprize.jp>

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