



<Curriculum Vitae - 2011 Japan Prize Laureate>

Dr. Toshio Hirano

Dean of Graduate School of Medicine, Osaka University

Nationality: Japan

Date of Birth: April 17, 1947 (63 years old)

Academic Degrees:

1972 Graduate School of Medicine, Osaka University

Professional Career:

- 1973 Studied abroad at National Institutes of Health, United States
- 1978 Osaka Prefectural Habikino Hospital
- 1980 Assistant Professor of School of Medicine, Kumamoto University
- 1984 Assistant Professor at Osaka University,
Institute for Molecular and Cellular Biology
- 1989 Professor of Medicine, Osaka University
- 2001 Group Director of Riken Research Center for Allergy and Immunology
- 2002 Professor of Graduate School of Frontier Biosciences, Osaka University
- 2004 Dean of Graduate School of Frontier Biosciences, Osaka University
- 2007 Professor of WPI Immunology Frontier Research Center, Osaka University
- 2008 Dean of Graduate School of Medicine, Osaka University

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Graduate School of Medicine, Osaka University
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Major Publications:

1. Hirano T, Teranishi T, Toba H, Sakaguchi N, Fukukawa T, Tsuyuguchi I. Human helper T cell factor(s) (ThF). I. Partial purification and characterization. *J Immunol.* 1981; 126: 517-522.
2. Teranishi T, Hirano T, Arima, N and Onoue K. Human helper T cell factor(s) (ThF). II. Induction of IgG production in B lymphoblastoid cell lines and identification of T cell replacing factor-(TRF) like factor(s). *J. Immunol.* 1982; 128:1903-1908.
3. Hirano T, Yasukawa K, Harada T, Taga T, Watanabe Y, Matsuda T, Kashiwamura S, Nakajima K, Koyama K, Iwamatsu A, Tsunasawa S, Sakiyama F, Matsui H, Takahara Y, Taniguchi T, Kishimoto T. Complementary DNA for a novel human interleukin (BSF-2) that induces B lymphocytes to produce immunoglobulin. *Nature* 1986; 324: 73-76.
4. Kawano M, Hirano T, Matsuda T, Taga T, Horii Y, Iwato K, Asaoku H, Tang B, Tanabe O, Tanaka H, Kuramoto A, Kishimoto T. Autocrine generation and requirement of BSF-2/IL-6 for human multiple myelomas. *Nature* 1988; 332: 83-85.
5. Yamasaki K, Taga T, Hirata Y, Yawata H, Kawanishi Y, Seed B, Taniguchi T, Hirano T, Kishimoto T. Cloning and expression of human interleukin 6 (BSF-2/IFN β 2) receptor. *Science* 1988; 241: 825-828.
6. Hirano T, Matsuda T, Turner M, Miyasaka N, Buchan G, Tang B, Sato K, Shimizu M, Maini R, Feldmann M, Kishimoto T. Excessive production of interleukin 6/B cell stimulatory factor-2 in rheumatoid arthritis. *Eur J Immunol.* 1988; 18: 1797-1801.
7. Taga T, Hibi M, Hirata Y, Yamasaki K, Yasukawa K, Matsuda T, Hirano T, Kishimoto T. Interleukin-6 triggers the association of its receptor with a possible signal transducer, gp130. *Cell* 1989; 58: 573-581.
8. Hibi M, Murakami M, Saito M, Hirano T, Taga T, Kishimoto T. Molecular cloning and expression of an IL-6 signal transducer, gp130. *Cell* 1990; 63: 1149-1157.

9. Nakajima K, Yamanaka Y, Nakae K, Kojima H, Kiuchi N, Ichiba M, Kitaoka T, Fukada T, Hibi M and Hirano T. A central role for Stat3 in IL-6-induced regulation of growth and differentiation in M1 leukemia cells. *EMBO J*. 1996; 15:3651-3658.
10. Fukada T, Hibi M, Yamanaka Y, Takahashi-Tezuka M, Fujitani Y, Yamaguchi T, Nakajima K, Hirano T. Two signals are necessary for cell proliferation induced by a cytokine receptor gp130: involvement of STAT3 in anti-apoptosis. *Immunity*. 1996; 5: 449-460.
11. Ohtani T, Ishihara K, Atsumi T, Nishida K, Kaneko Y, Miyata T, Itoh S, Narimatsu M, Maeda H, Fukada T, Itoh M, Okano H, Hibi M, Hirano T. Dissection of signaling cascades through gp130 in vivo: reciprocal roles for STAT3- and SHP2-mediated signals in immune responses. *Immunity*. 2000; 12: 95-105.
12. Atsumi T, Ishihara K, Kamimura D, Ikushima H, Ohtani T, Hirota S, Kobayashi H, Park S-J, Saeki Y, Kitamura Y, and Hirano T. A point mutation of Tyr-759 in interleukin 6 family cytokine receptor subunit gp130 causes autoimmune arthritis. 2002; *J. Exp. Med.* 196:979-990.
13. Sawa S, Kamimura D, Jin G-H, Morikawa H, Kamon H, Nishihara M, Ishihara K, Murakami M, and Hirano T. Autoimmune arthritis associated with mutated IL-6 receptor gp130 is driven by STAT3/IL-7-dependent homeostatic proliferation of CD4+ T cells. *J. Exp. Med.* 2006; 203:1459-1470.
14. Ogura H, Murakami M, Okuyama Y, Tsuruoka M, Kitabayashi C, Kanamoto M, Nishihara M, Iwakura Y and Hirano T. Interleukin-17 promotes autoimmunity by triggering a positive feedback loop via interleukin-6 induction. *Immunity* 2008; 29:628-636.
15. Hirano T. Interleukin 6 in autoimmune and inflammatory diseases: a personal memoir. 2010; *Proc. Jpn. Acad., Ser. B*. 86: 717-730.

Major Honors:

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| 1986 | Erwin von Bälz Prize |
| 1990 | CIBA-GEIGY Rheumatism Prize |
| 1992 | Sandoz Prize for Immunology |
| 1997 | Osaka Science Prize |
| 1998 | Mochida Memorial Prize |
| 2000 | ISI Citation Laureate Award, 1981-1988 |
| 2004 | The Fujihara Prize |
| 2005 | Medical Award of the Japan Medical Association |
| 2006 | The Emperor's Purple Ribbon Medal |
| 2009 | The Crafoord Prize from the Royal Swedish Academy of Sciences
(along with Dr. Tadimitsu Kishimoto) |
| 2009 | Suita City Award |
| 2010 | Osaka City Mayoral Special Award |

Membership:

- President of Japanese Society for Immunology (2005-2006)
- Board Member of Japanese Society for Immunology
- Board Member of International Society for Zinc Biology
- Member of the American Association of Immunologists
- Member of Japanese Cancer Association
- Member of the Japanese Biochemical Society

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