Fukiko Ichida, M.D. PhD.

Current Positions

Associate Professor, Department of Pediatrics, Faculty of Medicine, University of Toyama

Clinical Professor, Director of Pediatric Cardiology, Toyama University Hospital

Office address & telephone

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Clinical and Research interests

Major areas of interest focus on cardiomyopathies, myocarditis, Kawasaki disease and congenital heart disease. Research performed includes gene discovery and characterization of genes responsible for left ventricular non-compaction, and basic study of coronary arterial lesions in Kawasaki disease. In addition, we utilize these basic science studies to develop improved clinical diagnostic approaches and new treatment paradigms. Over 200 papers on these subjects have been published.

Education&Training

1977 M.D. Niigata University School of Medicine

1987 PhD Toyama Medical & Pharmaceutical University

1983 Clinical Fellow, Department of Pediatric Cardiology, National Cardiovascular Center, Osaka, JAPAN

1984-85 Research Fellow, Department of Pediatric Cardiology, University of Leuven, Belgium

1985-86 Research Fellow, Department of Pediatric Cardiology, Cornell Medical Center, New York, USA

1999 Research fellow, Phoebe Willingham Muzzy Pediatric Molecular Cardiology Laboratory, Baylor College of Medicine, Houston, USA

Academic/Professional Appointments

1990-1999 Assistant Professor of Pediatrics, Toyama Medical&Pharmaceutical University

2000- present Associate Professor of Pediatrics, Toyama Medical&Pharmaceutical University (University of Toyama)
2007- present Clinical Professor of Pediatrics, Toyama University Hospital

Board Certifications

Japanese Board of Pediatrics
Japanese Board of Pediatric Cardiology

Professional Organizations

Executive Committee Japanese Society of Pediatric Cardiology and Cardiac Surgery
Executive Committee The Japanese Circulation Society
Executive Committee Japanese College of Cardiology
Executive Committee Japanese Pulmonary Hypertension Society
Executive Committee Japanese Society of Kawasaki Disease
Executive Committee Japanese Society of Pediatric Myocardial Disease
Scientific Advisory Board Member
The Japanese Society of Pediatrics

Publications

Associate Editor The Journal of the Japan Pediatric Society
Editorial Board Congenital Heart Disease (Wiley-Blackwell)

Selected peer-reviewed publications (25)

1. Ichida F, Hamamichi Y, Miyawaki T, et al. Clinical features of isolated noncompaction of the ventricular myocardium: Long-term clinical course, hemodynamic properties, and genetic background. ***J Am Coll Cardiol*** 1999;34:233-240.
2. Hamamichi Y, Ichida F, Yu X, et al. Neutrophils and mononuclear cells express vascular endothelial growth factor in acute Kawasaki disease. ***Pediatric Research*** 2001;49:74-80.
3. Ichida F, Tsubata S, Bowles KR, et al. Novel gene mutations in patients with left ventricular noncompaction or Barth syndrome. ***Circulation*** 2001;103:1256-1263.
4. Chen R, Tsuji T, Ichida F, et al. Mutation analysis of the G4.5 gene in patients with isolated left ventricular noncompaction. ***Mol Genet Metab*** 2002; 77, 319-325.
5. Foell D, Ichida F, Vogl T, et al. S100A12 (EN-RAGE) in monitering Kawasaki disease. ***Lancet*** 2003;361:1270-1272.
6. Yagi H, Furutani Y, Hamada H, Asakawa S, Minoshima S, Ichida F, et al.

TBX1 is a major genetic determinant of human del22q11.2 syndrome. ***Lancet*** 2003; 362: 1366-73

7. Yu X, Hirono K, Ichida F, et al. Enhanced iNOS Expression in Leukocytes and Circulating Endothelial Cells Is associated with the Progression of Coronary Artery Lesions in Acute Kawasaki Disease. ***Pediatr Research*** 2004; 55: 688-694.
8. Ye F, Foell D, Hirono K, Vogl T, Rui C, Yu X, Watanabe S, Watanabe K, Uese K, Hashimoto I, Ichida F, et al. Profound S100A12 expression in early stage of Acute Kawasaki Disease. ***Am J Cardiol*** 2004; 94:840-844
9. Viemann D, Strey A, Janning A, Jurk K, Klimmek K, Vogl T, Hirono K, Ichida F, et al. Myeloid-related protein 8 and 14 induce a specific inflammatory response in human microvascular endothelial cells. ***Blood.*** 2005;105:2955-62.
10. Xing Y, Chen R, Tsuji T, Haneda N, Matsuoka T, Isobe T, Kuwabara A, Higaki T, Ikemoto Y, Tsubata S, Futatani T, Watanabe S, Hirono K, Ichida F, et al. . Genetic Analysis in Patients with Left Ventricular Noncompaction and Evidence for Genetic Heterogeneity. ***Mol Genet Metab***.2006; 88: 71-77.
11. Hirono K, Foell D, Ye F, Vogl T, Chen R, Yu X, Watanabe S, Watanabe K, Uese K, Hashimoto I, Roth J, Ichida F, et al. Profound Expression of Myeloid Related Protein (MRP) 8 and MRP14 in Acute Kawasaki Disease. ***J Am Coll Cardiol*** 2006;48:1257-64.
12. Shan L, Makita N, Xing Y, Watanabe S, Futatani T,Ye F, Saito K, Ibuki K,Watanabe K, Hirono K, Uese K, Ichida F, et al. SCN5A Variants in Japanese Patients with Left Ventricular Noncompaction and Arrhythmia. ***Mol Genet Metab***. 2008, 93**:** 468-474
13. Ichida F. Left Ventricular Noncompaction. ***Circ J***. 2009,73:19-26
14. Watanabe K, Matsui M, Matsuzawa J, Tanaka C, Noguchi K, Yoshimura N, Hongo K, Ishiguro M, Watanabe S, Hirono K, Uese K, Ichida F, et al. Impaired neuroanatomic development in infants with congenital heart disease. ***J Thorac Cardiov Surg*** 2009;137:146-53.
15. Watanabe S, Hashimoto I, Saito K, Watanabe K, Hirono K, Uese K, Ichida F, et al. Characterization of Ventricular Myocardial Performance in Fetus by Tissue Doppler Imaging. ***Circ J*** 2009;73:943-7.
16. Bowles NE, Hirono K, Yu X, and Ichida F. Parvoviral Genomes are Not Present in Endothelial Cells of Kawasaki Disease Patients Who Develop Coronary Artery Lesions. ***Pediatr Infect Dis J*** 2009;28:345.
17. Saito K, Ibuki K, Yoshimura N, Hirono K, Watanabe S, Watanabe K, Uese K, Yasukouchi S, Ichida F, Miyawaki T. Successful cardiac resynchronization therapy in a 3-year-old girl with isolated left ventricular noncompaction and narrow QRS

complex. ***Circ J*** 2009; 73: 2173-77.

18. Hirono K, Saito K, Watanbe S, Higuchi O, Ibuki K,Watanabe K, Uese K, Kanegane H, Kennmochi Y, Wittkowski H, Foell D, Roth J, Ichida F, et al. The efficacy of infliximab treatment and dynamic changes of inflammatory cytokines in patients with refractory Kawasaki disease. ***Peditaric Res*** 2009;65:696-701.
19. Matsuzaki T, Matsui Mie, Nakazawa J, Ichida F, et al. Neurodevelopment in 1-year-old Japanese infant after congenital heart surgery. ***Pediatr Int*** 2010: 52; 420-427
20. Hirono K, Yoshimura N, Taguchi M, Watanabe K, Nakamura T, Ichida F, et al. Bosentan induces clinical and hemodynamic improvement in candidates for right-sided heart bypass surgery. ***J Thorac Cardiovasc Surg.*** 2010;140:346-51.
21. Chang B, Momoi N, Shan L, Mitomo M, Aoyagi Y, Endo K, Takeda I, Chen R, Xing Y, Yu X, Watanabe S, Yoshida T, Kanegane H, Tsubata S, Bowles NE, Ichida F, Miyawaki T; Noncompaction study collaborators. Gonadal mosaicism of a TAZ (G4.5) mutation in a Japanese family with Barth syndrome and left ventricular noncompaction. ***Mol Genet Metab.*** 2010;100:198-203.
22. Chang B , Nishizawa T, Furutani M, Fujiki A, Tani M, Kawaguchi M, Ibuki K, Hirono K, Taneichi H, Uese K, Onuma Y, Bowles NE, Ichida F, et al. Identification of a novel *TPM1* mutation in a family with left ventricular noncompaction and sudden death**.** ***Mol Genet Metab.*** 2011;102:200-6
23. Ibuki K, Watanabe K, Yoshimura N, Kakimoto T, Matsui M, Yoshida T, Origasa H, Ichida F. The improvement of hypoxia correlates with neuroanatomical and developmental outcomes; Comparison of mid-term outcomes in infants with TGA or Single Ventricle physiology. ***J Thorac Cardiovasc Surg.*** 143:1077-1085, 2012
24. Kobayashi T, Saji T, Otani T, Takeuchi K, Nakamura T, Arakawa H, Kato T, Hara T, Hamaoka K, Ogawa S, Miura M, Nomura Y, Fuse S, Ichida F, et al. : Efficacy of immunoglobulin plus prednisolone for prevention of coronary artery abnormalities in severe Kawasaki disease (RAISE): a randomised, open-label, blinded-endpoints trial. ***Lancet*** 379:1613-1620, 2012.
25. Chang B, Gorbea C, Lezin G, Shan L, Sakai N, Kogaki S, Otomo T, Okinaga T, Hamaoka A, Yu X, Hata Y, Nishida N, Yost HJ, Bowles NE, Brunelli L, Ichida F. 14-3-3ε Gene Variants in a Japanese Patient with Left Ventricular Noncompaction and Hypoplasia of the Corpus Callosum ***Gene***. 15:515:173-80, 2013

Research Support

- The Ministry of Education,Culture,Sports,Science and Technology in Japan

Grant-in-Aid for Scientific Research No.24591571 (2012-2014) **PI**
Functional Analysis of Sarcomere Gene Mutations in Japanese Patients with Left Ventricular Noncompaction and Arrhythmia.

- The Ministry of Education,Culture,Sports,Science and Technology in Japan
  Grant-in-Aid for Scientific Research No.20591274 (2008-2010) **PI**
  Genetic analysis of SCN5A Variants in Japanese Patients with Left Ventricular Noncompaction and Arrhythmia.
- The Ministry of Education,Culture,Sports,Science and Technology in Japan
  Grant-in-Aid for Scientific Research No.17591072 (2006-2007) **PI**
  Genetic analysis of Patients with Left Ventricular Noncompaction, Impact of cytoskeletal protein gene mutation.
- The Ministry of Education,Culture,Sports,Science and Technology in Japan
  Grant-in-Aid for Scientific Research No.15591094 (2003-2004) **PI**
  Mutation Analysis of the G4.5 gene in Infantile Cardiomyopathy
- The Ministry of Education,Culture,Sports,Science and Technology in Japan
  Grant-in-Aid for Scientific Research No.12670734 (2000-2001) **PI**
  Genetic analysis of Japanese Patients with Left Ventricular Noncompaction.
- The Ministry of Education,Culture,Sports,Science and Technology in Japan
  Grant-in-Aid for Scientific Research No.10670708(1998-1999) **PI**
  Genetic analysis of in Japanese Patients with Left Ventricular Noncompaction
- Grants form Ministry of Health, Labour and Welfare) (2009-2011) **Co-investigator**
  Nationwide systems and fellowship training of adults congenital heart disease
- Grants form Ministry of Health, Labour and Welfare (2008-2010) **Co-investigator**
  Randomized controlled trial to assess immunoglobulin plus steroid efficacy for Kawasaki disease
- Grants from Core Research for Evolutional Science and Technology (Japan Science and Technology Agency) (2007-2010) **Co-investigator** The study of the neuroanatomical and developmental changes in infants with congenital heart disease
- Japanese Study of Cognitive Function after Open Heart Surgery in Pediatric Patients (Ministry of Health, Labour and Welfare) (2007-2009) **Co-investigator** The study of the neuroanatomical and developmental changes in infants with congenital heart disease
- JSPS Asian Core Program (Japanese Society for the Promotion of Science) (2010-2011) **Co-investigator** A prospective longitudinal study of the neuroanatomical and developmental changes in infants with congenital heart disease; Comparison of mid-term outcomes in infants with TGA or Single Ventricle physiology