

Nobuko Hagiwara, M.S., Ph.D.

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| Clinical Interests | Nobuko Hagiwara has expertise in the field of molecular genetics. She completed postdoctoral training at the University of Iowa in biological sciences and the University of California, Irvine, in anatomy and neurobiology. She also was a postdoctoral fellow at the Fox Chase Cancer Center Institute for Cancer Research in Philadelphia, PA, and the University of Arizona College of Medicine in Tucson. The Hagiwara lab studies development of the heart and skeletal muscle at the molecular and cellular levels. We are researching the Sox6 mutant heart to understand the progression of early stages of heart failure. A deficiency of the Sox6 transcription factor shows cardiac and skeletal muscle degeneration and arrhythmia. Another interesting phenotype is fiber type distortion in skeletal muscle. Since specialization of slow- and fast-twitch fiber type is crucial for physiological function of skeletal muscle, Sox6 should play an important role in normal fetal muscle development as well as in muscle degenerative diseases. To understand the role of Sox6 in skeletal muscle development, we are investigating downstream targets and cofactors of the Sox6 protein. To conduct our research, we utilize genetic, molecular and cellular biology techniques. |
| Title | Assistant Professor |
| Specialty | Cardiovascular Medicine , Internal Medicine |
| Department | Internal Medicine |
| Division | Cardiovascular Medicine |
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| Education | Ph.D., University of Tokyo, Tokyo, 1995 B.S., Ochanomizu Women's University, Tokyo, 1984 M.S., Ochanomizu Women's University, Tokyo, 1987 |
| Professional Memberships | American Heart Association Society for Developmental Biology Society for Neuroscience |
| Honors and Awards | Japanese Ministry of Education Scholarship for graduate studies abroad., 1986 |
| Select Recent Publications | Odeh H, Hunker KL, Belyantseva IA, Azaiez H, Avenarius MR, Zheng L, Peters LM, Gagnon LH, |

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Cohen-Barak, O., Yi, Z., Hagiwara, N., Monzen, K., Komuro, I., and Brilliant, M. H. (2003) *Sox6* regulation of cardiac myocytes development. *Nuc. Acids Res.* 31: 5941-5948.

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Cohen-Barak, O., Hagiwara, N., Arlt, M.F., Horton, J.P., and Brilliant, M.H. Cloning, characterization and chromosome mapping of the human *SOX6* gene. *Gene* 265: 157-164, 2001.

Newton, J.M., Cohen-Barak, O., Hagiwara, N., Gardner J.M., Davisson, M.T., King, R.A., Brilliant M.H. Mutations in the human orthologue of the mouse underwhite (*uw*) gene underlie a new form of oculocutaneous albinism, *OCA4*. *Am. J. Hum. Genet.* 69:981-988, 2001.

Hagiwara, N., Klewer, S.E., Samson, R.A., Erickson, D.T., Lyon, M.F., and Brilliant, M.H. *Sox6* is a candidate gene for p100H myopathy, heart block and sudden neonatal death. *Proc. Natl. Acad. Sci. USA* 97: 4180-4185, 2000.

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