

CURRICULUM VITAE

Name: Issei Komuro, M.D., Ph.D.

Education:

1976-1982 M.D., Faculty of Medicine, University of Tokyo
1985-1989 Ph.D., Faculty of Medicine, University of Tokyo

Professional Experience:

1982-1984 Resident in Internal Medicine, Tokyo University Hospital
1984-1989 Clinical and Research Fellow in Cardiology, Department of Medicine III, The University of Tokyo School of Medicine
1989-1993 Research Fellow, Molecular Medicine Unit and Cardiovascular Division, Beth Israel Hospital and Harvard Medical School
1993-1998 Instructor in Medicine, Chief of Molecular Cardiology Division, Department of Medicine III, The University of Tokyo School of Medicine
1998-2000 Assistant Professor in Medicine, Department of Cardiovascular Medicine, The University of Tokyo Graduate School of Medicine
2001-2010 Professor in Medicine, Chairman, Department of Cardiovascular Science and Medicine, Chiba University Graduate School of Medicine
2009-2012 Professor and chairman, Department of Cardiovascular Medicine, Osaka University Graduate School of Medicine
2012-2023 Professor and chairman, Department of Cardiovascular Medicine, The University of Tokyo Graduate School of Medicine
2023- Professor and chairman, Department of Frontier Cardiovascular Science, The University of Tokyo Graduate School of Medicine
Vice president, International University of Health and Welfare
Professor Emeritus, The University of Tokyo

Awards and Honors:

1985 Gold Medal for Erwin von Balz Preiz (first prize)
1990 American College of Cardiology/Merck Award
1993 Louis N. Katz Basic Science Research Prizes for Young Investigators (Finalist), American Heart Association
2003 Outstanding Investigator Prize of the International Society of Heart Research
2010 Gold Medal for Erwin von Balz Preiz (first prize)
President's Distinguished Lectures of the ISHR Award
2019 Research Achievement Award of the International Society of Heart Research
2022 Gold Medal, European Society of Cardiology

Editorial Board: Journal of Clinical Investigation, Circulation, Arteriosclerosis, Thrombosis, and Vascular Biology, Circulation Journal, Int Heart Journal (editor-in-chief), Heart & Vessel, Annals of Vascular Diseases, Cardiology Plus

80 representative papers out of ~1400 papers

1. Komuro I, Kurabayashi M, Shibazaki Y, Takaku F and Yazaki Y. Molecular Cloning and Characterization of a Ca^{2+} , Mg^{2+} - Dependent Adenosine Triphosphatase from Rat Cardiac Sarcoplasmic Reticulum. Regulation of its Expression by Pressure Overload and Developmental Stage. **J Clin Invest** 83:1102-1108, 1989.
2. Komuro I, Wenninger K.E, Philipson K.D and Izumo S. Molecular Cloning and Characterization of the Human Cardiac $\text{Na}^+/\text{Ca}^{2+}$ Exchanger cDNA. **Proc Natl Acad Sci USA** 89:4769-4773, 1992.
3. Komuro I and Yazaki Y. Control of Cardiac Gene Expression by Mechanical Stress. **Annu Rev Physiol** 55:55-75, 1993.
4. Komuro I, Schalling M, Jahn L, Bodmer R, Jenkins N.A, Copeland N.G. and Izumo S. Gtx: a novel murine homeobox-containing gene, expressed specifically in glial cells of the brain and germ cells of testis, has a transcriptional repressor activity *in vitro* for a serum-Inducible Promoter. **EMBO J** 12: 1387-1401, 1993.
5. Komuro I. and Izumo S. Csx: a murine homeobox-containing gene specifically expressed in the developing heart. **Proc Natl Acad Sci USA** 90:8145-8149, 1993.
6. Yamazaki T, Komuro I, Kudoh S, Zou Y, Shiojima I, Mizuno T, Takano H, Hiroi Y, Ueki K, Tobe K, Kadowaki T, Nagai R and Yazaki Y. Mechanical Stress Activates Protein Kinase Cascade of Phosphorylation in Neonatal Rat Cardiac Myocytes. **J Clin Invest** 96:438-446, 1995.
7. Aikawa R, Komuro I, Yamazaki T, Zou Y, Kudoh S, Tanaka M, Shiojima I, Hiroi Y and Yazaki Y. Oxidative Stress Activates Extracellular Signal-Regulated Kinases Through Src and Ras in Cultured Cardiac Myocytes of Neonatal Rats. **J Clin Invest** 100:1813-1821, 1997.
8. Yamauchi T, Ueki K, Tobe K, Tamemoto H, Sekine N, Wada M, Honjo M, Takahashi M, Takahashi T, Hirai H, Tushima T, Akanuma Y, Fujita T, Komuro I, Yazaki Y and Kadowaki T. Tyrosine Phosphorylation of the EGF Receptor by the Kinase Jak2 Is Induced by Growth Hormone. **Nature** 390:91-96, 1997.
9. Harada K, Komuro I, Hayashi D, Sugaya T, Murakami K and Yazaki Y. Angiotensin II Type 1a Receptor Is Involved in the Occurrence of Reperfusion Arrhythmias. **Circulation** 97:315-317, 1998.
10. Harada K, Komuro I, Shiojima I, Hayashi D, Kudoh S, Mizuno T, Kijima K, Matsubara H, Sugaya T, Murakami K. and Yazaki Y. Pressure Overload Induces Cardiac Hypertrophy in Angiotensin II Type 1A Receptor Knockout Mice. **Circulation** 97:1952-1959, 1998.
11. Terauchi Y, Tsuji Y, Satoh S, Minoura H, Murakami K, Okuno A, Inukai K, Asano T, Kaburagi Y, Ueki K, Nakajima H, Hanafusa T, Matsuzawa Y, Sekihara H, Yin Y, Barrett J.C, Backer J.M, Oda H, Ishikawa T, Akanuma Y, Komuro I, Suzuki M, Yamamura K, Kodama T, Suzuki H, Koyasu S, Aizawa S, Tobe K, Fukui Y, Yazaki Y and Kadowaki T. Increased Insulin Sensitivity and Hypoglycemia in Mice Lacking p85 α Regulatory Subunit of Phosphoinositide 3-Kinase. **Nat Genet** 21:230-235, 1999.
12. Zhu W, Zou Y, Aikawa R, Harada K, Kudoh S, Uozumi H, Hayashi D, Gu Y, Nagai R, Yazaki Y, Komuro I. MAPK superfamily plays an important role in daunomycin-induced apoptosis of cardiac myocytes. **Circulation** 100:2100-2107, 1999.

13. Shimoyama M, Hayashi D, Takimoto E, Zou Y, Oka T, Uozumi H, Kudoh S, Shibasaki F, Yazaki Y, Nagai R, Komuro I. Calcineurin plays a critical role in pressure overload-induced cardiac hypertrophy. **Circulation** 100:2449-2454, 1999.
14. Aikawa R, Nawano M, GU Y, Katagiri H, Asano T, Zhu W, Nagai R, Komuro I. Insulin prevents cardiomyocytes from oxidative stress-induced apoptosis through activation of P13 Kinase /Akt. **Circulation** 102:2873-2879, 2000.
15. Shimoyama M, Hayashi D, Zou Y, Takimoto E, Mizukami M, Monzen K, Kudoh S, Hiroi Y, Yazaki Y, Nagai R, Komuro I. Calcineurin inhibitor attenuates the development and induces the regression of cardiac hypertrophy rats with salt-sensitive hypertension. **Circulation** 102:1996-2004, 2000.
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18. Zou Y, Hiroi Y, Uozumi H, Takimoto E, Toko H, Zhu W, Kudoh S, Mizukami M, Shimoyama M, Shibasaki F, Nagai R, Yazaki Y, Komuro I. Calcineurin plays a critical role in the development of pressure overload-induced cardiac hypertrophy. **Circulation** 104:97-101, 2001.
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23. Minamino T, Yoshida T, Tateno K, Miyauchi H, Zou Y, Toko H, Komuro I. Ras induces vascular smooth muscle cell senescence and inflammation in Human atherosclerosis. **Circulation** 108: 2264-2269, 2003.
24. Zou Y, Zhu W, Sakamoto M, Qin Y, Akazawa H, Toko H, Mizukami M, Takeda N, Minamino T, Takano H, Nagai T, Nakai A, Komuro I. Heat shock transcription factor 1 protects cardiomyocytes from ischemia/reperfusion injury. **Circulation** 108: 3024-3030, 2003.
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