

# Hong Lu

## CURRICULUM VITAE

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### Education:

09/1988-07/1993: Bachelor's degree of Medicine, the School of Medicine, Zhejiang University, Hangzhou, China  
04/2000-03/2003: PhD degree, Molecular Genetics of Internal Medicine, Graduate School of Medical Sciences, Kanazawa University, Kanazawa, Japan

### Experiences:

07/1992-06/1993: Intern, Peking Union Medical College Hospital, Beijing, China  
07/1993-06/1996: Resident, Internal Medicine Department, Sir Run Run Shaw Hospital, Zhejiang University, Hangzhou, China  
07/1996-06/1997: Chief Resident, Internal Medicine Department, and Fellow, Cardiology Division, Sir Run Run Shaw Hospital, Zhejiang University, Hangzhou, China  
07/1997-02/1998: Fellow, Cardiology Division of Internal Medicine Department, Sir Run Run Shaw Hospital, Zhejiang University, Hangzhou, China  
02/1998-02/1999: Exchange Scholar, the First Department of Internal Medicine, Fukui Medical University, Fukui, Japan  
02/1999-05/1999: Fellow, Cardiology Division of Internal Medicine Department, Sir Run Run Shaw Hospital, Zhejiang University, Hangzhou, China  
07/1999-03/2000: Researcher, No2 Department of Internal Medicine, Kanazawa University, Kanazawa, Japan  
04/2003-09/2007: Postdoctoral Fellow, Internal Medicine Department, University of Kentucky, Lexington, KY  
10/2007-06/2008: Scientist III, Internal Medicine Department, University of Kentucky, Lexington, KY  
7/2008-present: Research assistant professor, Internal Medicine Department, University of Kentucky, Lexington, KY

## Awards:

- 2004: New Investigator Travel Award, Arteriosclerosis, Thrombosis, and Vascular Biology Council of the American Heart Association.
- 2005: Finalist, Junior Women's Award, Arteriosclerosis, Thrombosis, and Vascular Biology Council of the American Heart Association.
- 2006: New Investigator Travel Award, Arteriosclerosis, Thrombosis, and Vascular Biology Council of the American Heart Association.

## Grants:

- 04/2002-03/2003: International Rotary Club Scholarship for Outstanding Graduate Students in Medical Sciences, Japan, ¥ 1,800,000 (Japanese).
- 07/2004-06/2006: AHA Postdoctoral Fellowship Award. AHA identification No: 0425372B. \$ 84,000.

## Current Membership of Learned Societies:

American Heart Association  
American Society of Investigative Pathology

## Manuscript Reviewer:

Arteriosclerosis Thrombosis and Vascular Biology, 2006

## Publications:

1. **Hong Lu**, Duan Lu. The basic and clinic factors in heart failure patients with ventricular arrhythmia. *Foreign Medical Sciences, heart disease* 1998; 25(2):91-93. (Chinese)
2. **Hong Lu**, Toshinori Higashikata, Akihiro Inazu, Atsushi Nohara, Wenxin Yu, Masami Shimizu, Hiroshi Mabuchi. Association of estrogen receptor- $\alpha$  gene polymorphisms with coronary artery disease in patients with familial hypercholesterolemia. *Arteriosclerosis, Thrombosis and Vascular Biology*. 2002; 22 (5): 817-823.
3. Wenxin Yu, Atsushi Nohara, Toshinori Higashikata, **Hong Lu**, Akihiro Inazu, Hiroshi Mabuchi. Molecular genetic analysis of familial hypercholesterolemia: spectrum and regional difference of LDL receptor gene mutations in Japanese population. *Atherosclerosis* 2002; 165(2): 335-342.
4. **Hong Lu**, Akihiro Inazu, Yuri Moriyama, Toshinori Higashikata, Masaaki Kawashiri, Wenxin Yu, Zhiping Huang, Tomonori Okamura, Hiroshi Mabuchi. Haplotype analyses of cholesteryl ester transfer protein gene promoter: a clue to an unsolved mystery of TaqIB polymorphism. *Journal of Molecular Medicine* 2003; 81 (4): 246-255.
5. Alan Daugherty, Debra L. Rateri, **Hong Lu**, Tadashi Inagami, Lisa A. Cassis. Hypercholesterolemia stimulates angiotensin peptide synthesis and contributes to atherosclerosis through the AT1a receptor. *Circulation* 2004; 110 (25): 3849-3857.

6. Hiroshi Mabuchi, Toshinori Higashikata, Atsushi Nohara, **Hong Lu**, Wenxin Yu, Tsuyoshi Nozue, Yoshihiro Noji, Shoji Katsuda, Masa-aki Kawashiri, Akihiro Inazu, Junji Kobayashi, Junji Koizumi. Cutoff point separating affected and unaffected familial hypercholesterolemic patients validated by LDL-receptor gene mutants. *Journal of Atherosclerosis and Thrombosis* 2005; 12(1): 35-40.
7. Lisa A. Cassis, Debra L. Rateri, **Hong Lu**, Alan Daugherty. Bone marrow transplantation reveals that recipient AT1a receptors are required to initiate AngII-induced atherosclerosis and aneurysms. *Arteriosclerosis, Thrombosis, and Vascular Biology*; 2007; 27(2): 380-386.
8. **Hong Lu**, Carine M. Boustany-Kari, Alan Daugherty, Lisa A. Cassis. AngII increases adipose angiotensinogen expression. *American Journal of Physiology-Endocrinology and Metabolism* 2007; 292(5): E1280-1287.
9. **Hong Lu**, Debra L. Rateri, David L. Feldman, Richard J. Charnigo, Akiyoshi Fukamizu, Junji Ishida, Elizabeth G. Oesterling, Lisa A. Cassis, Alan Daugherty. Renin inhibition reduces hypercholesterolemia-induced atherosclerosis. *Journal of Clinical Investigation*; 2008; 118(3): 984-993.

### Reviews:

1. **Hong Lu**, Lisa A. Cassis, Alan Daugherty. Renin-angiotensin system in vascular aneurysm formation. *Current Hypertension Reports*; 2008; 10: 99 - 106.

### Book chapters:

1. **Hong Lu**, Lisa A. Cassis, Alan Daugherty. Atherosclerosis and arterial blood pressure in mice. *Current Drug Targets*; Bentham Press. Editor: G.S. Getz; 2007; 8: 1181-1189.
2. **Hong Lu**, Debra L. Rateri, Alan Daugherty. Immunostaining of mouse atherosclerotic lesions. *Methods in Molecular Medicine*; Humana Press. Editor: N. Sreejayan, and J. Ren; 2007; 139: 77-94.

### Editorials:

1. Alan Daugherty, Debra L. Rateri, **Hong Lu**. As macrophages indulge, atherosclerotic lesions bulge. *Circ Res*; 2008, 102: 1445 - 1447.

### Manuscripts in Preparation:

1. **Hong Lu**, Lisa A. Cassis, David L. Feldman, Alan Daugherty. The association and dissociation between atherosclerosis and aneurysms in mice: mechanisms driven by endogenous and exogenous angiotensin II.
2. **Hong Lu**, Lisa A. Cassis, Alan Daugherty. Dietary sodium regulates blood pressure and the systemic renin angiotensin system independent of atherogenesis.

## Abstracts:

1. **Hong Lu**, Toshinori Higashikata, Akihiro Inazu, Hiroshi Mabuchi. Association of estrogen receptor- $\alpha$  gene polymorphisms, PvuII and XbaI, with coronary artery disease in patients with familial hypercholesterolemia. *33<sup>th</sup> Annual Meeting of Japan Atherosclerosis Society*; July, 2001, Tokyo, Japan.
2. **Hong Lu**, Toshinori Higashikata, Akihiro Inazu, Hiroshi Mabuchi. Association of estrogen receptor- $\alpha$  gene polymorphisms with coronary artery disease in patients with familial hypercholesterolemia. *XIV International Symposium on Drugs Affecting Lipid Metabolism*; September, 2001, New York.
3. **Hong Lu**, Akihiro Inazu, Hiroshi Mabuchi. Genetic analyses of cholesteryl ester transfer protein gene promoter and HDL cholesterol. *34<sup>th</sup> Annual Meeting of Japan Atherosclerosis Society*; July, 2002, Kobe, Japan.
4. **Hong Lu**, Katsuya Tashiro, Debra L. Rateri, Lisa A. Cassis, Alan Daugherty. Definition of a macrophage renin-angiotensin system that is stimulated in a hyperlipidemic environment. *5<sup>th</sup> Annual conference on Arteriosclerosis, Thrombosis and Vascular Biology*; May, 2004, San Francisco.
5. **Hong Lu**, Debra L. Rateri, Lisa A. Cassis, Alan Daugherty. The blockade of AT1 receptors increases angiotensinogen expression in mouse adipose tissue. *13<sup>th</sup> South East Lipid Research Conference*; September, 2004, Callaway Gardens, Pine Mountain, Georgia.
6. **Hong Lu**, Katsuya Tashiro, Debra L. Rateri, Lisa A. Cassis, Alan Daugherty. Acetylated LDL-induced lipid-loading of macrophages upregulates angiotensinogen via the AT1a receptor. *6<sup>th</sup> Annual conference on Arteriosclerosis, Thrombosis and Vascular Biology*; April, 2005, Washington, DC.
7. **Hong Lu**, Debra L. Rateri, Lisa A. Cassis, Alan Daugherty. Renin deficiency in bone marrow-derived cells reduces hypercholesterolemia-induced atherosclerosis. *7<sup>th</sup> Annual conference on Arteriosclerosis, Thrombosis and Vascular Biology*; April, 2006, Denver.
8. **Hong Lu**, Lisa A. Cassis, David L Feldman, Alan Daugherty. Renin inhibition markedly reduces hypercholesterolemia-induced atherosclerosis. *American Heart Association Scientific Sessions 2006*, Nov, 2006, Chicago.
9. **Hong Lu**, Debra L. Rateri, Lisa A. Cassis, Alan Daugherty. Medial macrophages that accumulate in abdominal aortic regions prone to angiotensin II-induced aneurysms are not primarily derived from blood borne cells. *8<sup>th</sup> Annual conference on Arteriosclerosis, Thrombosis and Vascular Biology*; April, 2007, Chicago.
10. **Hong Lu**, Lisa A. Cassis, Alan Daugherty. Exogenous angiotensin II directly promotes abdominal aortic aneurysms in hypercholesterolemic mice. *Angiotensin Gordon Research Conference*; February, 2008, Ventura, CA.
11. **Hong Lu**, Lisa A. Cassis, Alan Daugherty. Dietary sodium regulates blood pressure and the systemic renin angiotensin system independent of atherogenesis. *9<sup>th</sup> Annual conference on Arteriosclerosis, Thrombosis and Vascular Biology*; April, 2008, Atlanta.
12. **Hong Lu**, Lisa A. Cassis, Alan Daugherty. Exogenous angiotensin II directly

promotes abdominal aortic aneurysms in hypercholesterolemic mice. *9<sup>th</sup> Annual conference on Arteriosclerosis, Thrombosis and Vascular Biology*; April, 2008, Atlanta.

13. **Hong Lu**, Lisa A. Cassis, Alan Daugherty. Infusion of the AngII precursor, AngI, induces atherosclerosis and aneurysms via an ACE dependent mechanism. *9<sup>th</sup> Annual conference on Arteriosclerosis, Thrombosis and Vascular Biology*; April, 2008, Atlanta.

### **Seminars:**

- 5/2007: Zhejiang University, School of Medicine, Zhejiang, China.  
Title: Renin inhibition reduces hypercholesterolemia-induced atherosclerosis: the contribution of renin from bone marrow-derived cells.

### **Research Interests:**

Area of research focuses on how the overactivation of the renin-angiotensin system plays an important role in the development of atherosclerosis and aneurysmal formation. Specific interest is to define the mechanisms by which the renin-angiotensin system contributes to these two vascular pathologies using specific pharmacological tools or genetic disruption approaches. Studies are performed using mouse models and cell culture system.