

Curriculum Vitae

Chang Shu, M.D., Ph.D.

APPOINTMENTS: Professor and Director, Department of Vascular Surgery, National Center for Cardiovascular Diseases (NCCD), China Fuwai Hospital, CAMS & PUMC, Beijing, China Professor and Chief, Department of Vascular Surgery, The Second Xiangya Hospital, Central South University, China Director, Hunan Major Vessel Medical Center, China Director, Institute of Vascular Diseases Research, Central South University, China

ADDRESS: No. 167, North Lishi Road, Xicheng District Beijing, China, 100067.

EMAIL:

Changshu01@yahoo.com

TELEPHONE: 86-010
88322371 (Office) 86-
13910086222 (Mobile)

DATE OF BIRTH:

April 2, 1965

PLACE OF BIRTH:

Changsha, China

CITIZENSHIP:

China

EDUCATION: 1984-1989: BS, Xiangya School of Medicine, Central South University, ChangSha, China 1993-1996: MS, Xiangya School of Medicine, Central South University, ChangSha, China 1997-2000: Ph.D,M.D, Xiangya School of Medicine & Beijing Medical University, China

PROFESSIONAL REGISTRATION:

Registration as a medical doctor in
China

MEDICAL TRAINING AND APPOINTMENT: 1989.7-1991.7, Residency, Department of Surgery, Xiangya Hospital, Central South University, ChangSha, China 1991.9-1995.9, Fellowship of Surgery, Department of General Surgery, Xiangya Hospital, Central South University, ChangSha, China 1995.9-2000.8 Attending Surgeon, Department of Surgery, Xiangya Hospital, Central South University, ChangSha, China 1998.1-1999.1 Research Fellow of Vascular Surgery, Beijing Medical University, BeiJing, China 2000.9-2001.4 Associate Professor, Department of General Surgery, Xiangya Hospital, Central South University, ChangSha, China 2001.4-2001.5 Postdoctoral Fellow in Division of Pulmonary and Critical Care, Medical Center of Stanford University, USA 2001.5-2002.5 Postdoctoral Fellow in Division of Vascular Surgery, Medical Center of Stanford University, USA 2002.6-2004.5: Associate Professor & Chief, Department of Vascular Surgery, Second Xiangya Hospital, Central South University, ChangSha, China 2004.6-Present: Professor & Chief, Department of Vascular Surgery, Second Xiangya Hospital, Central South University, ChangSha, China 2014.09-2016.05: Vice-President of The Second Xiangya Hospital, Central South University, ChangSha, China 2015.10-present: Professor and Director, Department of Vascular Surgery, National Center for Cardiovascular Diseases (NCCD), China; Fuwai Hospital, CAMS & PUMC, Beijing, China

PROFESSIONAL MEMBERSHIPS: Chief of Working Group on Vascular Surgery, National Expert Committee of Cardiovascular Diseases Quality Control Center, China 2017-present President of National Society of Vascular Surgery (NSVS) 2016-present Member of National Committee of Cardiovascular Diseases (NCCD) of China Vice-President of International Angiology Union (I.U.A) 2012-2014 Author of Transatlantic Inter-Society Consensus (TASC) on PAD Writing Group Distinguished Professor of China Medical Board (CMB) International Member of Society of Vascular Surgery (SVS) Executive Chairman-elect of China Chapter of International Union of Phlebology (IUP) Vice-Chairman of Branch of Vascular Surgery of Chinese Medical Doctor Association Vice-Chairman of Branch of Endovascularology of Chinese Medical Doctor Association Vice-Chairman of Branch of Vascular Surgery of China International Exchange and Promotive Association for Medical and Health Care Vice-Chairman of Branch of Vascular Medicine of Chinese Research Hospital Association Vice-Chairman of Branch of vascular devices of China Association For Medical Devices Industry Vice President of Chinese Biotech & Vascular Surgery Society Member of Chinese Surgical Society Executive Member of Chinese Society of Vascular Surgery President of Hunan Society of Vascular Surgery Vice President of Hunan Surgical Society

2

President of Hunan Major Vessels Medical Center

EDITORIAL BOARD: Editor of Annuals of Vascular Surgery Editor of Chinese Journal of Surgery Deputy Editor-in-chief of Chinese Journal of Vascular and Endovascular Surgery Deputy Editor-in-chief of Chinese Journal of Vascular Surgery Deputy Editor-in-chief of China Journal of General Surgery Deputy Editor-in-chief Journal of Modern Operative Surgery Editor of Chinese Journal of Biotech Engineering Editor of Journal of Central South University Editor of Journal of Chinese Journal

of Tissue Engineering Research Editor of Journal of International Journal
of Geriatrics

INTERNATIONAL ACADEMIC COMMUNICATION: 2003.7: France: Visiting Doctor
2004.9: Italy: Visiting Professor and performed an aortic dissection operation in Torino
2004.6: Australia: Visiting Doctor 2005.10: USA: Visiting Professor in St. Clare Hospital of
Seattle and Englewood Hospital of NJ. 2005.8: Belgium: Visiting Doctor 2006.9: Malaysia:
Visiting Doctor 2007.8-12: Visiting Professor in Yale University. 2011.9: USA: Visiting
Professor in Stanford University 2011.9: Philippines: Visiting Professor and performed
live operation demo of endovascular techniques in St. Luke Medical Center and Cardinal
Santos Medical Center 2012.01: Hong Kong: Visiting Professor in Hong Kong University
2012.04: Vietnam: Live operation demo of endovascular surgery in Hanoi Hospital
2012.10: Malaysia: Medical consultation and live operation demonstration 2013.01:
Indonesia: Medical consultation operation demo of endovascular surgery in Semarang
2013.06: Indonesia: Medical consultation operation demo of endovascular surgery in
Jakarta 2013.07: Thailand: Visiting Professor and medical consultation 2013.10:
Singapore: Visiting Professor in National University of Singapore 2014.01: Indonesia:
Medical consultation operation demo of endovascular surgery in National Cardiovascular
Center of Indonesia 2014.03: Philippines: Visiting Professor and live operation demo in
National Heart Centre 2014.06: USA: Visiting Professor in Harvard University, BID
Medical Center 2014.07: Sweden: Visiting Professor in Malmo 2014.09: Turkey: Visiting
Professor and live operation demo 2014.10: Greece: Visiting Professor and live operation
demo 2015.04: Brazil: Live operation demo in San Paulo and presentation in CICE
2015.07: Indonesia: Medical consultation operation demo of endovascular surgery 2015.04:
Singapore: Visiting Professor in Aortic Asia Symposium 2016.04: Indonesia: Medical
consultation operation demo of endovascular surgery 2016.04: Brazil: Live operation demo
in San Paulo and presentation in CICE

3

2016.07: USA: Live operation demo in C3 Conference 2016.08: Indonesia: live
demonstration of endovascular surgery in National Cardiovascular Center of Indonesia
2016.10: Singapore: Conference faculty and plenary lecture in Annual Congress of Asian
Society of Vascular Surgery 2017.01: India: Conference faculty and plenary lecture in 7th
International Aortic Summit 2017.02: Indonesia: Medical consultation operation demo of
endovascular surgery in National Cardiovascular Center of Indonesia 2017.04: Brazil:
Live operation demo in Cuiaba, live operation demo and presentation in CICE 2017.06:
USA: Live operation demo in C3 Conference 2017.09: Greece & Italy: Live operation demo
in Athens & Rome and presentation in Improvements & News in Vascular &
Endovascular Surgery Thessaloniki(IVEST) 2017.10: Malaysia: Conference faculty and
plenary lecture in 18th Congress of Asian Society for Vascular Surgery 2017.11: USA:
Conference faculty and plenary lecture in 2017 Veith symposium 2017.12: Ukraine: Live
operation demo in Kiev

RESEARCH GRANT: 1.Study on evaluation of new endovascular techniques for treating
aortic arch lesions, 1500000RMB. Project supported by Science and Technology Project of
Beijing, 2017

2.The pathogenesis and intervention of macrovascular disease, 7500000RMB Project supported by CAMS, Scientific and technological innovation of Medicine an Health, 2016

3. Design and research of a novel modelling vascular stent, 300000RMB Project supported by CAMS, Innovation grant, 2016

4. Design and research of a novel aortic stent-graft for vital branches.1000000RMB Project supported by Fuwai Hospital, initiation grant, 2016

5. Effect of radiotherapy on neointimal hyperplasia of prosthetic vascular graft. 700000RMB Project supported by NFSC, China, 2014

6. Early endothelial injury theory on vascular complications of diabetes.500000RMB Project supported by National 973 Project (sub-project), China, 2014

7. Nitro-butyl Chrysin prevents high glucose-induced endothelial senescence.10000RMB Project supported by State Basic Research Foundation (Self -Exploration Program) ,2010

8. Effect of chemotherapy on the artificial graft after vessel bypass.5000RMB Project supported by Mittal Innovative Research Program of Central South University, 2009

9. Effect of postoperative radio/chemo therapy on the vessel grafts in animal model.100000RMB

4

Project supported by Natural Science Foundation of Hunan Province (Key project), China, 2008. (Grant No. 08JJ3041)

10. Effect of combined transplantation of VEGF and MSCs in treating critical limb ischemia in rats.5000RMB Supported by Innovative Experimental Research Project of Central South University, 2007

11. Increasing shear stress and the pathogenesis of aortic aneurysm.20000RMB Project supported by Science and Technology Department of Hunan Province, China, 2004 (Grant No. 04FJ3003)

12. The research on the pathogenesis of abdominal aortic aneurysm.5000RMB Project supported by Science and Technology Department of Hunan Province, China, 2003(Grant No. 03SSY3071)

13. Genetic diagnosis and treatment of abdominal aortic aneurysm.30000RMB Project supported by Scientific Research Foundation for Returned Scholars, Ministry of Education of China, 2003

PATENTS: 4 1. Double-core puncture needle; Utility model; 93235303.0;1995.02.08;Chen Dao jin, Shu Chang, Wen Jifang, Yan Yahui.

2. A lift elevated limb that promote venous return; Utility model; 200420006378.4;2005.02.23; Feng Lifei, Shu Chang.

3. Branched aortic stent vascular system; Utility model; CN201949182U;2011.02.16;Shu Chang, Wang Dun, Li Ming, Li Quanming, Ouyang Yurong.

4. A preparation method of endovascular stent;Patent for an Invention;CN 102489709; 2011.12.07;He Hao, Li Yimin, Shu Chang, Pan Wanghu, Wang Dun.

PUBLICATIONS: 93
Scientific papers: 78
Published books: 15

List of partial published papers: 1. Wang T, Shu C*, Li M, Li QM, Li X, Qiu J, Fang K, Dardik A, Yang CZ. Thoracic Endovascular Aortic Repair With Single/Double Chimney Technique for Aortic Arch Pathologies. *J Endovasc Ther.* 2017 Jun;24(3):383-393. 2. Wang T, Shu C*, Li M, Dardik, A, Li QM. In vitro Stent Graft Fenestration to Preserve All Supra-aortic Branches in the Treatment of a Stanford Type A Aortic Arch Dissection. *Chin Med J (Engl).* 2017 Aug 5;130(15):1878-1879.

5

3. Qiu J, Shu C*, Cai W, Li M, Li Q. Early intervention effects of open repair and endovascular aortic repair on patients suffering from 40-54 mm abdominal aortic aneurysms: single center experience. *Minerva Chir.* 2017 Oct;72(5):391-396. 4. Wang T, Shu C*, Li QM, Li M, Li X, He H, Dardik A, Qiu J. First experience with the double chimney technique in the treatment of aortic arch diseases. *J Vasc Surg.* 2017 Oct;66(4):1018-1027. 5. Shu C*, Xiong Q, Qiu J, Luo M, Fang K. Thoracic endovascular aortic repair for type B aortic dissection after renal transplantation. *Oncotarget.* 2017 Sep 30;8(53):91628-91635. 6. Zhang W, Shu C, Li Q, Li M, Li X. Adiponectin affects vascular smooth muscle cell proliferation and apoptosis through modulation of the mitofusin-2-mediated Ras-Raf-Erk1/2 signaling pathway. *Mol Med Rep.* 2015 Sep;12(3):4703-7. 7. Shu C, Wang T, Li QM, Li M, Lee JT. Stent-assisted coil embolization for a traumatic pseudoaneurysm of the visceral aortic segment. *J Vasc Interv Radiol.*2015 Mar;26(3):451-3. 8. Liu H, Shu C, Li X, Wang T, Li M, Li QM, Fang K, Wang S. Endovascular Aortic Repair Combined with Chimney Technique in the Treatment of Stanford Type B Aortic Dissection Involving Aortic Arch. *Ann Vasc Surg.* 2015 Feb 23.pii:S0890-5096(15)00081-3. 9. Chang Shu*, Kun Fang, Alan Dardik, Xin Li, Ming Li. Pregnancy-Associated Type B Aortic Dissection Treated With Thoracic Endovascular Aneurysm Repair. *The Annals of Thoracic Surgery.* 2014, Feb;97(2):582-7. 10. Ming Li, Chang Shu*, Quan-ming Li, Tun Wang, Kun

Fang, and Zhong-gao Wang. Midterm Results of Intentional Celiac Artery Coverage During TEVAR for Type B Aortic Dissection. *Journal of Endovascular Therapy* 2013 20:3, 276-282 11. Chang Shu*, Kun Fang, Mingyao Luo, Quanming Li, Zhonggao Wang. Emergency Endovascular Stent-grafting for Acute Type B Aortic Dissection with Symptomatic Malperfusion. *Int Angiol.* 2013 Oct;32(5):483-91. 12. Yang C, Shu C*, Li M, Li Q, Kopp R. Aberrant Subclavian Artery Pathologies and Kommerell's Diverticulum: A Review and Analysis of Published Endovascular/Hybrid Treatment Options. *Journal of Endovascular Therapy* 2012;19(3):373-82 13. Chang Shu*, Tun Wang, Quan-ming Li, Ming Li, Xiao-hua Jiang, Ming-yao Luo, Xin Li. Thoracic Endovascular Aortic Repair for Retrograde Type A Aortic Dissection with an Entry Tear in the Descending Aorta. *Journal of Vascular and Interventional Radiology*, 2012;23(4):453- 460.e1 14. Guo Y, Shu C*, Zhou X, X Jiang, Q Li. High-dose Preoperative Fractionated Radiotherapy Does not Affect the Patency and Healing of ePTFE Vascular Prosthesis after Replacement of Canine Abdominal Aorta and Inferior Vena Cava. *Eur J Vasc Endovasc Surg.* 2012;43(4):460-465. 15. Shu C, Guo Y, Zhou X, Wan H, Yan J, Yuan L. Effect of postoperative fractionated radiotherapy on canine ePTFE graft neointima and anastomotic stoma healing: A preliminary experimental study. *Asian Journal of Surgery* 2011;34(3):121-7. 16. C. Shu, H. He, Q-M Li, et al. Endovascular Repair of Complicated Acute Type-B Aortic Dissection with Stent-graft: early and mid-term results. *Eur J Vasc Endovasc Surg.* 2011;42(4):448-53 17. C. Shu, F Wan, Q-M Li, et al. Autologous Carotid Artery Reconstruction for the Extracranial Internal Carotid Artery Aneurysm in a Patient Combined with Pulmonary Bulla . *Eur J Vasc Endovasc Surg.* 2011,42(1):22-5.

6

18. Chang Shu, Xiaolei Hu, Mingyao Luo, et al. A review of SA aneurysms with a small subsection on aneurysms arising from a splenomesenteric trunk. *Int Angiol.* 2011;30(5):395-407. 19. Chang Shu, Mingyao Luo, Quanming Li, et al. Early results of left carotid chimney technique in endovascular repair of acute nonA-nonB aortic dissections. *J Endovasc Ther.* 2011;18:477-484 20. C. Shu, M.Y. Luo, Q.-M. Li, et al. Large Ruptured Carotid Artery Pseudoaneurysm in Behcet's Disease: Report of a Case. *Eur J Vasc Endovasc Surg*,2010;40(6):826. 21. C. Shu, H. He, Q.-M. Li, et al. Endovascular Percutaneous Treatment of Tuberculous Pseudo-aneurysm Involving the Coeliac Artery: A Case Report. *Eur J Vasc Endovasc Surg.* 2010,40(2):230-233. 22. Li S, Cai W, Li X, Qiu J, Li Q, Shu C*. Thoracic endovascular aortic repair for traumatic type B aortic dissection: a 5-year experience from a single center. *Int Angiol.* 2017 Aug;36(4):316-321. 23. Qi YF, Xiao ZX, Shu C, Yue J, Liu SH, Chen H, Zeng ZF, Zhang WB. Infected Abdominal Aortic Aneurysms Treated with Extra-anatomic Prosthesis Bypass in the Retroperitoneum. *Ann Vasc Surg.* 2017 Nov;45:231-238. 24. Fowkes FG, Forster RB, Levin CE, Naidoo NG, Roy A, Shu C, Spertus J, Fang K, Bechara- Zamudio L, Catalano M, Visonà A, Nikol S, Fletcher JP, Jaff MR, Hiatt WR, Norgren L. Prioritization of treatments for lower extremity peripheral artery disease in low- and middle- income countries. *Int Angiol.* 2017 Jun;36(3):203-215. 25. Wang M, Collins MJ, Foster TR, Bai H, Hashimoto T, Santana JM, Shu C, Dardik A. Eph-B4 mediates vein graft adaptation by regulation of endothelial nitric oxide synthase. *J Vasc Surg.* 2017 Jan;65(1):179-189. 26. Yang H, Luo M, Fu Y, Cao Y, Yin K, Li W, Meng C, Ma Y, Zhang J, Fan Y, Shu C*, Chang Q, Zhou Z. Genetic testing of 248 Chinese aortopathy patients using a panel assay. *Sci Rep.* 2016 Sep 9;6:33002. 27. Cai W,

Li X, Shu C, Qiu J, Fang K, Li M, Chen Y, Liu D. Comparison of Clinical Outcomes of Endovascular Versus Open Revascularization for Chronic Mesenteric Ischemia: A Meta-analysis. *Ann Vasc Surg.* 2015 Mar 7. pii: S0890-5096(15)00156-9. [Epub ahead of print] 28. He H, Yao K, Nie WP, Wang Z, Liang Q, Shu C. Endovascular Treatment for Acute Type B Aortic Dissection Involving a Right-sided Aortic Arch and Kommerell's Diverticulum: A Case Report and Review of the Literature. *Ann Vasc Surg.* 2015 Feb 28. pii: S0890-5096(15)00134-X. 29. Guozuo Xiong, Ling Li, Shaowei Sun, Tianping Li, Duanfang Liao, Chang Shu and Qinhui Tuo. Subcellular localization of daxx influence ox-ldl induced apoptosis in macrophages. *Mol Biol Rep* 2014;41(11):7183-7190. 30. Chenzi Yang, Yuanyuan Guo, Caroline C. Jadlowiec, Xin Li, Wei Lv, Lynn S. Model, Michael J. Collins, Yuka Kondo, Akihito Muto, Chang Shu, Alan Dardik, Vascular endothelial growth factor-A inhibits EphB4 and stimulates delta-like ligand 4 expression in adult endothelial cells, *Journal of Surgical Research*, 2013,183(1):478-486 31. Yamamoto K, Li X, Shu C, Miyata T, Dardik A. Technical aspects of the mouse aortocaval fistula. *J Vis Exp.* 2013 Jul 11;(77):e50449. doi: 10.3791/50449. 32. Collins J., X. Li, W. Lv, C. Yang, C. D. Protack, A. Muto, C. C. Jadlowiec, C. Shu, A. Dardik. Therapeutic strategies to combat neointimal hyperplasia in vascular grafts. *Expert Rev Cardiovasc Ther*, 2012;10(5):635-47.

7

33. Li X, C. Jadlowiec, Y. Guo, C. D. Protack, K. R. Ziegler, W. Lv, C. Yang, C. Shu, A. Dardik. Pericardial Patch Angioplasty Heals via an Ephrin-B2 and CD34 Positive Cell Mediated Mechanism. *PLoS One*, 2012;7(6):e38844. 34. Xin Li, Yuanyuan Guo, Kenneth Ziegler, Lynn Model, Sammy D.D. Eghbali, Robert Brenes, Susun Kim, Chang Shu, Alan Dardik. Current Usage and Future Directions for the Bovine Pericardial Patch. *Ann Vasc Surg.* 2011;25(4):561-8 35. Chengpei Xu, Sheila Lee, Chang Shu, Hirotake Masuda, Christopher K Zarins. Expression of TGF- β 1 and β 3 but not apoptosis factors relates to flow-induced aortic enlargement. *BMC Cardiovasc Disord*, 2002;2:11. 36. He XB, Li JJ, Chen YH, Shu C, Tang QL, Yang XM. Treatment of recurrent head and neck carcinoma involving the carotid artery: carotid reconstruction with ePTFE graft. *Eur Arch Otorhinolaryngol.* 2011 Dec;268(12):1817-22. 37. Guang-sen Zhang, Yang-ming Tang, Meiqing Tang, Zi-Ju Qing, Chang Shu, Xiang-qi Tang, Ming-yang Deng, Li-ming Tan. Antithrombin Cambridge II(A384S) mutation frequency and antithrombin activity levels in 120 of deep venous thrombosis and 150 of cerebral infarction patients in a single center in Southern China. *Blood coagulation & fibrinolysis.* 2010;21(6): 588-91. 38. Guang-sen Zhang, Hong-ling Peng, Ming-yang Deng, Chang Shu, Rui-juan Li, Yang-ming Tang, Min-fei Pei. Mah-Jong-related deep vein thrombosis. *The Lancet*, 2010;375:2214.

BOOKS AND MONOGRAPHS (EDITOR-IN-CHIEF) Clinical anatomy of vascular surgery. WANG Zhong-gao, SHU Chang. Shandong science and technology press (2010). In Chinese language. Aortic Surgery and Its Branches. Vice-chief Translator (2012). People's Health Press.

PRESENTATIONS IN INTERNATIONAL CONFERENCES 1. Endoluminal Management of Aortic Dissections with Severe Complications. Oral presentation in

American College of Surgeons 96th annual Clinical Congress. Oct, 2010, Washington. 2. Endoluminal Management of Aortic Dissections with Severe Complications. Oral presentation in the XXIV European Society for Vascular Surgery Annual Meeting. Sep, 2010, Amsterdam. 3. Endoluminal Management of Aortic Dissections: Report of 290 cases. Oral presentation in American College of Surgeons 95th annual Clinical Congress. Oct, 2009, Chicago. 4. Chang Shu, Ming Li. Endoluminal Management of Aortic Dissections with life-threatening complications. Oral presentation in American College of Surgeons 97th annual Clinical Congress. Oct, 2011, San Fransisco. 5. Chinese Experience of TEVAR on Stanford B Aortic Dissection. 33th Charing Cross International Symposium. Apr, 2011, London 6. Chinese Experience in the Management of Aortic Dissection. Oral presentation in 2011 Vascular Annual Meeting presented by Society for Vascular Surgery. June, 2011, Chicago. 7. Chinese Experience in the Management of Aortic Dissection. Western Vascular Society 26th Annual Meeting, 2011, Hawaii 8. Endoluminal management of complicated aortic dissection. Oral presentation in 2011

8

Annual Meeting presented by Asian Society of Vascular Surgery. Oct, 2011, Taiwan. 9. Marfan Syndrome: Open surgery or endovascular treatment; Results of endovascular management of complicated aortic dissection. 2012 Hong Kong Surgical Forum. Jan, 2012, Hong Kong 10. Thoracic Endovascular Aortic Repair on Patients with Marfan Syndrome. 2012 ISVS. Mar, 2012, Miami 11. Thoracic Endovascular Aortic Repair with Assistant Techniques on Aortic Dissection involving Aortic Arch. 25th Congress of IUA. Jan, 2012, Crezh 12. Technical challenges associated with endovascular management of acute type B aortic dissection: What are they and how can they be addressed? Cardiovascular Symposium of Royal Society of Medicine, Nov, 2012, London, UK 13. TEVAR for type B aortic dissection in Marfan's syndrome can work. Veith Symposium 2012, NY, USA 14. Endovascular treatment on aortic dissection evolving aortic arch. Aortic Surgery and Anesthesia Conference, Dec, 2012, Italy 15. TEVAR for aortic arch diseases: a case-based review. 2013 China Interventional Therapeutics. Mar, 2013, Beijing. 16. TEVAR for aortic arch diseases: a case-based review. 2013 China Interventional Therapeutics. Mar, 2013, Beijing. 17. Endovascular management of complicated aortic dissection. Annual Congress of Cardiovascular Diseases in Indonesia. May, 2013, Indonesia. 18. Endovascular management of complicated aortic dissection. Annual Congress of Royal College of Surgeons of Thailand. Jul, 2013, Thailand. 19. Incidence and management of acute type B aortic dissection in China. 2013 London Cardiovascular Symposium of Royal Society of Medicine. Oct, 2013, London. (Session Chairman and co-organizer) 20. Hybrid treatment on aortic arch pathologies. 23rd Annual Congress of the Association of Thoracic and Cardiovascular Surgeons of Asia. Oct, 2013, Singapore. 21. Endovascular treatment on aortic arch dissections with assisted techniques. Annual Congress of Asian Society of Vascular Surgery. Oct, 2013, Turkey. 22. Adjunctive Techniques To Facilitate Endovascular Repair Of Aortic Dissection With A Tear And Involvement Of The Arch And Its Branches: Hybrid Repairs And Chimneys; Endovascular Repair For Acute TBAD With Visceral Ischemia Is Successful And Durable. 2013 Veith Symposium. Nov, 2013, New York. 23. Clinical results of TEVAR on complicated aortic dissection. 18th International Experts Symposium on Critical Issues of Aortic Endografting. July, 2014, Sweden. 24. Status and development of endovascular treatment on aortic dissections in China. Harvard and Asian conjoint symposium. Sep,

2014, Boston 25. Utilization of Chimney techniques in treatment of aortic dissection involving vital branches. Annual Congress of Asian Society of Vascular Surgery. Oct, 2014, Hong Kong. 26. CHIMPS techniques on aortic dissection involving branches of all levels. Veith Symposium 2014. Nov, 2014, New York. 27. Therapeutic strategies of endovascular and open treatment on aortic pathologies. 2015 Aortic Asia. (Faculty and Speaker) April, 2015, Singapore.

9

28. Multiple Chimney techniques in aortic dissection. Annual Congress of Heart Association in Indonesia. April, 2015, Jakarta.(Faculty and Live demos) 29. Current status of EVAR in China and selection tips in endografts. CICE 2015, Brazil. (Live case demonstration and invited speaker) 30. TASC III Global Project Symposium. 2015, Berlin, Germany. 31. The novelty and potentials of TEVAR and EVAR in aortic diseases. The 57th Annual Congress of International College of Angiology. 2015, Jakarta, Indonesia. 32. Long-term results of endovascular treatment for aortic dissection. Asia Aorta 2016, Thailand(Invited Speaker) 33. Complex TEVAR demonstration. C3 conference 2016, America 34. Challenging anatomy of EVAR: techniques and innovations; Chinese experiences of TEVAR and EVAR for aortic diseases. CICE 2016, Brazil.(Live cases demonstration and faculty speaker) 35. All-distance endovascular repair for aortic diseases. ASVS 2016, Singapore (Faculty and invited speaker) 36. Tips And Tricks to Make Chimney TEVAR in the Aortic Arch. 2016 Veith Symposium. New York, US. 37. Challenging anatomy of EVAR: techniques and innovations; Chinese experiences of TEVAR and EVAR for aortic diseases. 7th International Aortic Summit. 2017, India. 38. Complex TEVAR demonstration. Congresso Internacional de Cirurgia Endovascular 2017. 2017, Brazil. 39. Live broadcast surgery. Complex Cardiovascular Catheter Therapeutics 2017. 2017, USA. 40. Optimal Choices for Aortic Arch Pathology: Open, Hybrid and Total-Endo Approach. 18th Congress of Asian Society for Vascular Surgery. 2017, Kuala Lumpur, Malaysia. 41. Choice of optimal treatment for aortic arch lesions: open, hybrid, chimney: which is best and when; In all patients with TBADs treated by TEVAR an attempt should be made to cover all secondary tears: how to do this. 2017 Veith Symposium. 2017, New York, USA.