

## Curriculum Vitae of Nan-Shan ZHONG

Professor

Director of State Key Laboratory of Respiratory Disease in Guangzhou

Director of Guangzhou Institute of Respiratory Disease



Professor Nanshan Zhong is a Medical Professor of Guangzhou Medical College, and a supervisor of respiratory medicine doctoral candidates. He graduated from Beijing Medical College, majoring in medical sciences. At present, he holds the posts of the Chairman of Guangzhou Association for Science & Technology, Director of Guangzhou Institute of Respiratory Diseases, First Affiliated Hospital of Guangzhou Medical College, and Director-general of China State Key Laboratory of Respiratory Diseases.

Professor Zhong is also a leader and principal investigator to more than 10 major scientific projects, including the State-973, State-863, Tenth State Five-year Plan, National Nature Science Grants, and WHO/GOLD global network. He has published a great number of papers in worldwide reputed SCI journals, including those in *Nature Medicine*, *Lancet*, *BMJ*, *Am J Respir Crit Care Med*, and more than 200 papers in State-level journals. His publications have received 438 citations. Besides, he has published 16 monographs including *Respiratory Medicine* (National College Textbooks for Medical Postgraduates), *Medicine* (National textbooks), *Asthma: From Basic to Clinical*, etc, and has gained 9 patents.

Over the past decades, Prof Zhong has been a leader scientist in promoting China's respiratory medicine towards the forefront of international advances. He first developed and refined the definition of asymptomatic asthma, later cited by WHO, through his originally designed "simple bronchial provocation test" and epidemiological surveys. In a systemic review of etiology of chronic cough in China, he elucidated the

neuroinflammatory mechanisms to gastroesophageal reflux induced cough. His methods for diaphragmatic function assessment during exercise for the first time demonstrated protein-energy malnutrition in even 60% of patients with early to middle stage COPD, which generated a correction equation of basic energy intake in this cohort. A national epidemiological study steered by him showed the unprecedented prevalence of COPD in China. His famous research found that hydrosulfuryl-containing expectorants (carbocysteine) can be effective in preventing or reducing acute exacerbation of COPD. The results of this study were published in a Lancet paper (2008), which evoked huge international repercussions and was voted as “paper of the year 2008”. He has organized and participated in the development of a number of Chinese guidelines for diagnosis and management of bronchial asthma, COPD, chronic cough, SARS, and high-pathogenic avian flu. In 2009, he successfully established an MoE-administrated Changjiang Scholarship Team.

Due to his great achievements in medical practices and scientific education, Prof Zhong was also a recipient to Second and Third Prizes for National Natural Sciences, Outstanding Contribution Award, First Prize of Guangdong Science and Technology Awards, and Bethune Medal (2004). He became National May Day Labor Medalist (2003), National Moral Models (2007), European Respiratory Society Lifetime Honorary Fellow (2008), People Who Moved China 2009, Advanced Individual of National Medical Health Care System (2009), Fifth Higher School Teaching Masters Award (2009) and National Award for Achievements in Teaching (2009). He has been an Academician of Chinese Academy of Engineering since 1996, and was elected the President of Chinese Medical Association (2006-2011).

**Education:**

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|-----------|--|
| 1955-1960 | Bachelor of Medicine, (Beijing Medical University, Beijing, China)                                   |
| 1979-1980 | Research Fellow (Respiratory Medicine, Royal Infirmary, University of Edinburgh, Edinburgh, UK)      |
| 1980-1981 | Research Fellow (Respiratory Medicine, St. Bartholomew's Hospital, University of London, London, UK) |

**Honorary Degrees:**

March 2007, Honorary Degree of Doctor of Medicine, University of Edinburgh

Sept. 2011, Doctor of Science, honoris causa, University of Birmingham

**Professional Chronology:**

1960-1971	Assistant lecturer, Faculty of Radiology, Beijing Medical University
1971-1974	Intern, Department of Medicine, First Affiliated Hospital, Guangzhou Medical University
1974-1978	Resident, Department of Medicine, Guangzhou Medical University
1981-present	Director, Guangzhou Institute of Respiratory Disease
1978-1983	Attending Physician, Department of Medicine, Guangzhou Medical University
1983-1986	Associate Professor, Department of Medicine, Guangzhou Medical University
1986-1996	Professor, Department of Medicine, Guangzhou Medical University
1996-present	Academician, Division of Health and Medicine, Chinese Academy of Engineering
1986-1992	Dean, First Affiliated Hospital, Guangzhou Medical University
1992-2002	President, Guangzhou Medical University
2008-present	Director, State Key Laboratory of Respiratory Disease in Guangzhou

**Professional Societies:**

1982-1985 Member, Executive Committee, Chinese Medical Association

1985-1990 Member, WHO Advisory Panel on Smoking & Health

1989-2000	Member, Executive Committee, American College of Chest Physician
1989-present	Fellow, American College of Chest Physician (FCCP)
1995-	Executive Director, Research & Education, Asian-Pacific Society of Respirology
1994-2000	Vice-chairman, Chinese Society of Respiratory Diseases
1992-	Vice-chairman, Guangdong Medical Association
1995-2010	Chairman, Guangzhou Association of Science and Technology
1993-	Member, European Respiratory Society
1997-	Executive member, Asian-Pacific Society of Respirology (APSR)
2000-2006	International Regent for PR China, American College of Chest Physicians
2006-2011	President, Chinese Medical Association
2001-2007	Chairman, Chinese Society of Respiratory Diseases
2005-present	Fellow, Royal College of Physicians of Ireland
<b>2011-present</b>	<b>Fellow of Royal College of Physician (FRCP Edinburgh )</b>
2005-present	Fellow, honoris causa, Hong Kong Academy of Medicine
2008-present	Fellow, honoris causa, European Respiratory Society

### **Editorial Activities**

1996-	Editor Board, Journal of Hospital Medicine
1992-	Editor Board, Chinese Medical Journal (English Edition)
1993-	Editor in chief, Academic Journal of Guangzhou Medical University
1996-	Editor in chief, Journal of Modern Chinese Medical Bioengineering
1995-	Reviewer, J Respirology
1999-	Reviewer, Respiratory Medicine

1992-2000	Co-editor in chief, Chinese Journal of Tuberculosis and Respiratory Diseases
2000-	Editor-in-chief, Chinese Journal of Tuberculosis and Respiratory Disease
2004-present	Editor-in-chief, CHEST (authorized Chinese Edition)

### **Awards and Prizes:**

- 1) China Ministry of Public Health Award for Advances in Science and Technology (1985)
- 2) National Award for Advances in Science and Technology, China (1997)
- 3) Outstanding Alumnus (1997) by “*Beijing Medical University*”
- 4) Outstanding Contribution Award (2003) by “*Guangdong Department of Science and Technology*”
- 5) Ho Leung Ho Lee Foundation Prize for Scientific and Technological Advancement (2003)
- 6) May Day Labor Medalist (2003)
- 7) National Award for Outstanding Health-care Worker in Anti-SARS Campaign (2003)
- 8) Bethune's Prize, China (2004)
- 9) Chinese Doctor Prize (2003)
- 10) National Role Model of Labors (2005)
- 11) WAO Awards for Distinguished Recognition (2007)

### **Main Contributions:**

- 1) Defined "Asymptomatic asthma" (Latent asthma) which was quoted by the < Global Initiative of Asthma> (WHO)1st edition ,1995 (Thorax 1990; 45: 860-5 , Chest 1992; 102: 1104-9 )

- 2) Chronic Obstructive Pulmonary Disease(COPD) : Prevalence in China (Am J Respir Crit Care Med. 2007; 176(8):753-760)  
 Biomass is one of the most risk factors of COPD in women in the rural area in China (Thorax. 2007; 62(10): 889-897)  
 Thio compound was able to prevent acute exacerbation of COPD. Efficacy was similar to inhaled corticosteroid plus long acting B2 agonist (Lancet 2008; 371: 2013–18 Elected as "Paper of 2008" by the Lancet Editorial Board)  
 Early intervention of COPD in the community may be beneficial in reducing annual FEV1 decline (BMJ. 2010 Dec 1;341:c6387.).
- 3) Diagnosis and management of Severe Acute Respiratory Syndrome(SARS)  
 Firstly described the real pathogen of SARS (Coronavirus but not Chlamydia ) in the mainland of China (Lancet 2003; 362: 1353-58)  
 Right strategy in the management of SARS(Am J Respir Crit Care Med. 2003; 168(1): 7-9)  
 Rational use of corticosteroid in the management of severe SARS (CHEST. 2006; 129: 1441-52, Brit Med J. 2006; 333: 289-91)  
 Using siRNA in prophylactic and therapeutic regimens against SARS coronavirus in Rhesus macaque. Nat Med. 2005 Sept;11(9):944-51. ; Antiviral Therapy. 2004; 9:365-374
- 4) Etiology of chronic cough in China (Chest. 2013 Mar 1;143(3):613-20.)
- 5) Clinical characteristics of N7N9 infection (NEJM. 2013 May 22.)

### **Selected Publications:**

#### **Books**

NS Zhong, Diagnosis and Classification (asthma) in Global strategy for Asthma Management and Prevention WHLBI/WHO workshop (GINA)(1995)(Chap5, pp48-61)

- NS Zhong, Management of Asthma in Developing Countries. In: Asthma. PJ Barnes. Lippincott Raven Publishes Phildephia (1997), pp1869-1881.(Chap127, pp1869-1882)
- NS Zhong et al. An English-Chinese-Japanese Illustrative Medical Dictionary. Man Lee Bookstore Co Ltd. Hong Kong. 1985
- NS Zhong et al. Updates in Modern Respiratory Disease. People's Health Publishing House. Beijing. 1994
- NS Zhong et al. Designs in Medical Studies. Zhongshan University Publishing House. Guangzhou. 2000
- NS Zhong et al. A Precise Handbook for Diagnosis and Treatment of Respiratory Diseases. Medimedia Co Ltd. 2001
- NS Zhong et al. Prevention and Treatment Strategies to Atypical Infectious Pneumonia. Guangdong Higher Education Publishing House. Guangzhou. 2003
- NS Zhong et al. Diagnosis and Treatment of Atypical Infectious Pneumonia. Guangdong Education Publishing House. 2003
- NS Zhong (Chief Editor) Asthma: Basis & Clinical Practice  
People's Health Publishing House 2004
- NS Zhong (Co-Chief Editor) Internal Medicine (5th edition)People's Health Publishing House 2006
- NS Zhong (Chief Editor) Respiratory Medicine (For Postgraduate Student) 2006
- NS Zhong (Chief Editor) Respiratory Medicine (2nd edition)  
2011

**Papers during the last ten years:**

- 1) NS Zhong et al. Bronchial hyperresponsiveness in young students in China, relation to respiratory symptoms, diagnosed asthma and risk factors. Thorax 1990; 45: 860-5
- 2) JP Zheng, NS Zhong. Energy metabolism in COPD. Chin Med J. 1991;71: 100-3.

- 3) NS Zhong, et al. Pressure support ventilation with facial (nasal) mask in the management of patient with acute exacerbation of COPD. *Chin J Tuber Respir Dis.* 1992; 15:285-8.
- 4) NS Zhong et al. Is asymptomatic bronchial hyperresponsiveness an indication of potential asthma? *Chest* 1992; 102: 1104-9
- 5) NS Zhong. Atopic diseases in the Chinese Community. *Clin Exp Allergy* 1994; 24; 297-298.
- 6) YM Luo, NS Zhong. Diaphragmatic fatigue in COPD. *Chin J Tuber Respir Dis* 1994; 17:suppl: s93-6.
- 7) YC Zhang, NS Zhong. Rehabilitation -with facial (nasal) pressure support ventilation in patient with stable stage of COPD. *Chin J Tuber Respir Dis,* 1994;17:suppl: s69-73.
- 8) YX Tan, NS Zhong. Energy and protein support in ventilated patients with acute exacerbation of chronic Cor pulmonale . 1994; 33:527-530.
- 9) NS Zhong. Monitoring in mechanical ventilation. *Chin J Tuber Respir Dis* 1994; 17. suppl: s26-31
- 10) Xu J, Zhong NS, et al. Impacts of EDRF and endothelin on the development of pulmonary hypertension. *J Beijing Med Univ.* 1994; 26(suppl): 233-4
- 11) Xu J, Zhong NS, et al. Effects of hypoxia-induced endothelin release on the proliferation of pulmonary artery smooth muscle cells. *Chin J Tuber Respir Dis.* 1994; 17(3): 185-9
- 12) Ran PX, Ouyang NT, Chen SC, Zhong NS. Expression of oncogene Jun in the lung of rat with hypoxia. *Chin J Histochem & Cytochem.* 1995; 4(1): 14-8
- 13) YC Zhang, NS Zhong. COPD and noninvasive ventilation. *RT International* . 1995; 4:99-106.
- 14) PX Ran, J Xu, NS Zhong. Effect of on endothelium- 1 and No synthase mRNA expression in pulmonary artery and right heart of rat. *Chi Med J* 1995; 75:479-481.



- 15) J Xu, Ho s, Zhong NS et al. Endothelin-1 in the pathogenesis of chronic hypoxia induced pulmonary hypertension. *Chin J Tuberc Respir Dis.* 1995; 18:373-6.
- 16) YX Zeng, NS Zhong. Prediction of the level of continuous positive airway pressure in the management of obstructive sleep apnea via nasal mask. *Chin J Tuberc Respir Dis* 1996; 19:269-72.
- 17) NS Zhong. New insights into risk factors of asthma. *Respiratory* 1996:1159-166
- 18) NS Zhong. Asthma management in Guangzhou. *Respir* 1996; 3:1-2
- 19) J Xu, NS Zhong. Interaction of TNF- $\alpha$  and ET-1 on the pathogenesis of animal asthmatic model. *Clin Exp Allergy* 1997; 27:568-573.
- 20) J Xu. , Ren PX, NS Zhong. The effect of GM-CSF on endothelin-1 and endothelin converting enzyme gene expression in human airway smooth muscle cells with or without theophylline incubation. *Chin J Tuberc Respir Dis*, 1997 20(5): 276-9.
- 21) Ouyang NT, PX Ran, ZQ Du, T Zhu, NS Zhong. Expression of FGF-B and C-myc in mouse lung tissue affected by hypoxia. *Chin J Tuberc Respir Dis*, 1997; 20(1):22-24.
- 22) JP Zheng, NS Zhong et al. Prophylactic effects of beclomethasone inhalation on bronchial hyperresponsiveness and asthma; a randomized, double blind parallel controlled trial. *Chin J Tuberc Respir Dis.* 1998; 21:9-12.
- 23) NT Ouyang, NS Zhong. Effects of dexamethasone on apoptosis of airway inflammatory cells in asthmatic guinea pigs. *Chin J Tuberc Respir Dis*, 1998 21(11): 672-674.
- 24) WG He, J Xu, NS Zhong. Effect of inhaled-corticosteroid on the mRNA expressions of endothelin-1 and endothelin converting enzyme in bronchial asthma. *Chin J Tuberc Respir Dis*, 1998; 21(6): 336-339.
- 25) HL Huang, BQ Sun, J Li, Mo HY, PX Ran, NS Zhong. Effects of low dose inhaled corticosteroid plus low dose theophylline on levels of serum osteocalcin and ECP in patients with asthma. *Chin J Tuberc Respir Dis*, 1998; 21(3):

- 26) H-iiang H, J Xu, NS Zhong. The changes of EGI and EG2 positive eosinophils and their clinical significance in asthmatics. *Chin J Tuber Respir Dis*, 1998 21(10): 612-614.
- 27) YD Xu, SC Chen, NS Zhong. L-arginine prolonged the efficacy of inhaled NO on the inhibition of hypoxia induced pulmonary hypertension. *Chin J Tuber Respir Dis*, 1998 21(4): 200-203.
- 28) JP Zheng, NS Zhong. Risk Factors of Environment and Occupation on lung diseases in China. *J. Enviro Med*. 1999; 1(2): 359-382.
- 29) SC Wen, J Xu. , NS Zhong. Effect of antisense oligonucleotides on endothelin converting enzyme expression and endothelin-1 release from airway smooth muscle cells. *Chin J Tuber Respir Dis*, 1999; 22(5): 279-282.
- 30) J Xu, NS Zhong. Mechanisms of bronchial hyperresponsiveness:the interaction of endothelin-1 and other cytokines. *Respirology* 1999; 4(4): 413-7.
- 31) JP Zheng, NS Zhong. Risk Factors of Environment and Occupation on lung diseases in China. *J. Enviro Med*. 1999; 1(2): 359-382.
- 32) JH Liang, NS Zhong. A new type of liposomes delivery system. *Chin J Tuber Respir Dis*, 1999; 22(8): 474.
- 33) SC Wen, YC Zhang, J Xu, NS Zhong. Endothelin-1 induces IL-8 expression in human airway epithelia] cells by activating Nuclear factor-KB. *Eur Respir J*, 2000; 16(Supplement 31) 568s.
- 34) SC Wen, J Xu, NS Zhong. Effects of antisense endothelin converting enzyme (ECE-1) RNA on TNFA induced ECE mRNA expression in bronchial epithelial carcinoma cells. *Eur Respir J*. 2000; 16(Supplement 31) 178s.
- 35) He MZ, J Xu, H Zhang, AC Xue, NS Zhong. Quantitative assay of IL-8 mRNA expression and IL-10 mRNA expression in peripheral blood mononuclear cells (PBMCs). *Eur Respir J*. 2000; 16(Supplement 31) 283s.
- 36) YH Zhang, J Xu, NS Zhong. Activation of NF-KB. In respiratory syncytial virus infected Balb/c mice. *Eur Respir J*. 2000; 16(Supplement 3 1) 283s.

- 37) W Zhang, NS Zhong, J Xu. Expression of GM-CSF mRNA in asthmatic patients. *Chin J Tuber Respir Dis*, 2000; 23(9): 534-537
- 38) He MZ, Zhang H, NS Zhong. Quantification of IL-8 mRNA expression by competitive RT-PCR in peripheral blood mononuclear cells in asthmatics. *Journal of Zhongshan University*. 2000; 39(2): 92-96.
- 39) HL Huang, RX Chang, PX Ran, NS Zhong. Ifite-induced interleukin-5 and interleukin-4 expressions in peripheral blood mononuclear cells from asthmatic children with respiratory syncytial virus infection. *Chin J Tuber Respir Dis*, 2000; 22(4): 217-220.
- 40) AH Chen, NS Zhong. A cysteinyl leukotriene receptor antagonist (Zafirlukast) inhibits leukotriene C4 induced endothelin-1 expression and release from human airway epithelial cells and smooth muscle cells. *Chin J Tuber Respir Dis*, 2000; 23(10): 617-620.
- 41) J Li, HY Mo, NS Zhong. Effect of low dose of inhaled corticosteroid combined with small dose of oral theophylline on the management of bronchial asthma. *Chin J Tuber Respir Dis*, 2000 23(6): 336-339.
- 42) Asher I Boner A NS Zhong. Prevention of allergy and asthma: interim report. *Allergy* 2000 Nov; 55(11): 1069-88
- 43) S Huang, NS Zhong. Chronic airway inflammation and atopic features in cough variant asthma. *Chemosphere*, 2000 Jul; 41(1-2): 139-42.
- 44) GW Wong, Hui DS Chan HH Fok TF, Leung R, NS Zhong. Prevalence of respiratory and atopic disorders in Chinese schoolchildren. *Clin Exp Allergy*, 2001; 31(8):1225-31.
- 45) NS Zhong. Pharmacokinetics and safety of oral theophylline. *ATS 2001 –San Francisco, California, USA 97th International Conference*, 2001.
- 46) JP Zheng, NS Zhong. Normative values of pulmonary function testing in Chinese adults. *Chin Med J (Engl)*, 2002; 115(1): 50-4.

- 47) GW Wong, Li ST Hui DS Fok TF, NS Zhong. Individual allergens as risk factors for asthma and bronchial hyperresponsiveness in Chinese children. *Eur Respir J*, 2002 Feb; 19(2): 288-93.
- 48) NS Zhong. Fighting SARS in grand collaboration: Our strategies. *Chinese Medical Journal*. 2003;6(6):803~804
- 49) NS Zhong, et al. Fighting SARS in grand collaboration: our strategy. *Chin J Tuber Respir Dis*. 2003;26(6):321~322;
- 50) NS Zhong. Diagnosis and treatment of SARS. *Chin General Clin J*. 2003; 19(10): 865-867
- 51) NS Zhong, GQ Zeng. Our strategies for fighting severe acute respiratory syndrome (SARS). *Am J Respir Crit Care Med*. 2003; 168(1): 7-9
- 52) NS Zhong, et al. Epidemiology and cause of severe acute respiratory syndrome (SARS) in Guangdong, People's Republic of China, in February, 2003. *Lancet* 2003; 362: 1353-58
- 53) WK Lam, NS Zhong, WC TAN. Overview on SARS in Asia and the World. *Respirology*. 2003; 8: S2-S5
- 54) K Tsang, NS Zhong. SARS: pharmacotherapy. *Respirology* 2003; 8:S25-S30
- 55) LYC Yam, RC Chen, NS Zhong. SARS: ventilatory and intensive care. *Respirology* 2003; 8: S31-S35
- 56) PM Calverley, W Boonsawat, Z Csek, NS Zhong, S Peterson, H. Olsson. Maintenance therapy with budesonide and formoterol in chronic obstructive pulmonary disease. *Eur Respir J* 2003; 22:912-919
- 57) BJ Zheng, Y Guan, J Li , NS Zhong. Prophylactic and therapeutic effects of small interfering RNA targeting SARS-Coronavirus. *Antiviral Therapy*. 2004; 9:365-374
- 58) NS Zhong, JP Zheng, Michael JH, Du X. Comparison of Salmeterol/Fluticasone Propionate via a Single Inhaler with Budesonide Alone in Control of Mild-to-Moderate Asthma. *Clinical Drug Investigation*; 2004; 24(10):583-92

- 59) NS Zhong, G Wong. Epidemiology of Severe Acute Respiratory Syndrome (SARS): Adults and Children. *Paediatric Respiratory Review*. 2004; 5(4):270-4
- 60) Li BJ, Tang Q, Cheng D, Qin C, Xie FY, Wei Q, Xu J, Liu Y, Zheng BJ, Woodle MC, Zhong N, Lu PY. Using siRNA in prophylactic and therapeutic regimens against SARS coronavirus in Rhesus macaque. *Nat Med*. 2005 Sept;11(9):944-51.
- 61) Mo H; Zeng G; Ren X; Li H; Ke C; Tan Y; Cai C; Lai K; Chen R; Chan Yeung M; Zhong N. Longitudinal profile of antibodies against SARS-coronavirus in SARS patients and their clinical significance. *Respirology*. 2006; 11(1):49-53
- 62) Chen RC, Tang XP, Tan SY, Liang BL, Wan ZY, Fang JQ, Zhong NS. Treatment of SARS with glucosteroids: The Guangzhou experience. *CHEST*. 2006; 129: 1441-52
- 63) Zhong NS, Zeng GQ. What have we learned from SARS epidemics in China? *Brit Med J*. 2006; 333: 289-91
- 64) Zheng JP, Yang L, Wu YM, Chen P, Wen ZG, Huang WJ, Shi Y, Wang CZ, Huang SG, Sun TY, Wang GF, Xiong SD, Zhong NS. The efficacy and safety of combination salmeterol (50 microg)/fluticasone propionate (500 microg) inhalation twice daily via accuhaler in Chinese patients with COPD. *Chest*. 2007;132(6):1756-63.
- 65) Liu S; Zhou Y; Wang X; Wang D; Lu J; Zheng J; Zhong N; Ran P. Biomass fuels are the probable risk factor for chronic obstructive pulmonary disease in rural South China. *Thorax*. 2007; 62(10): 889-897
- 66) Zhou BP, Zhong NS, Guan Yi. Treatment with convalescent plasma for influenza A (H5N1) infection. *NEJM*. 2007; 357:14-15
- 67) Zhong N; Wang C; Yao W; Chen P; Kang J; Huang S; Chen B; Wang C; Ni D; Zhou Y; Liu S; Wang X; Wang D; Lu J; Zheng J; Ran P. Prevalence of chronic obstructive pulmonary disease in China: a large, population-based survey. *Am J Respir Crit Care Med*. 2007; 176(8):753-760

- 68) Zhong NS, Zeng GQ. Pandemic planning in China: Applying lessons from severe acute respiratory syndrome. *Respirology*. *Respirology* (2008) 13 (Suppl. 1), S33–S35
- 69) Zheng JP, Kang J, Huang SG, Chen P, Yao WZ, Yang L, Bai CX, Wang CZ, Wang C, Chen BY, Shi Y, Liu CT, Chen P\*, Li Q, Wang ZS, Huang YJ, Luo ZY, Chen FP, Yuan JZ, Yuan BT, Qian HP, Zhi RC, Zhong NS. Effect of carbocisteine on acute exacerbation of chronic obstructive pulmonary disease (PEACE Study): a randomised placebo-controlled study. *Lancet* 2008; 371: 2013–18
- 70) Zhong N. Preparing for the next flu pandemic: from SARS to avian flu. *Singapore Med J* 2008; 49(8) : 595-598
- 71) He Z, Li B, Yu L, Liu Q, Zhong N, Ran P. Suppression of oxidant-induced glutathione synthesis by erythromycin in human bronchial epithelial cells. *Respiration*. 2008;75(2):202-9.
- 72) Li J, Zhou Z, An J, Zhang C, Sun B, Zhong N. Absence of relationships between tuberculin responses and development of adult asthma with rhinitis and atopy. *Chest*. 2008 Jan;133(1):100-6.
- 73) Zhang D, Yin P, Freemantle N, Jordan R, Zhong N, Cheng KK. An assessment of the quality of randomised controlled trials conducted in China. *Trials*. 2008 Apr 24;9:22.
- 74) Chen X, Sun R, Hu J, Mo Z, Yang Z, Liao D, Zhong N. Attenuation of bleomycin-induced lung fibrosis by oxymatrine is associated with regulation of fibroblast proliferation and collagen production in primary culture. *Basic Clin Pharmacol Toxicol*. 2008 Sep;103(3):278-86.
- 75) Cai C, Zeng Y, Chen H, Gu Y, Zeng Q, Zhong N. Fibrobronchoscopic evidence of endobronchial hairs in intrapulmonary teratoma with hemoptysis but without trichoptysis. *Am J Med Sci*. 2008 Nov;336(5):441-4.
- 76) He C, Liu M, Zhou C, Zhang J, Ouyang M, Zhong N, Xu J. Detection of epidermal growth factor receptor mutations in plasma by mutant-enriched PCR assay for

- prediction of the response to gefitinib in patients with non-small-cell lung cancer. *Int J Cancer*. 2009 Nov 15;125(10):2393-9.
- 77) Wu J, Xu J, Cai C, Gao X, Li L, Zhong N. Ag85B DNA vaccine suppresses airway inflammation in a murine model of asthma. *Respir Res*. 2009 Jun 16;10:51.
- 78) Zhang Q, Lai K, Xie J, Chen G, Zhong N. Does unrestrained single-chamber plethysmography provide a valid assessment of airway responsiveness in allergic BALB/c mice? *Respir Res*. 2009 Jul 3;10:61.
- 79) He J, Ying W, Yang H, Xu X, Shao W, Guan Y, Jiang M, Wu Y, Zhong B, Wang D, Tucker S, Zhong N. Gemcitabine plus cisplatin chemotherapy with concurrent para-toluenesulfonamide local injection therapy for peripherally advanced nonsmall cell lung cancer larger than 3 cm in the greatest dimension. *Anticancer Drugs*. 2009 Oct;20(9):838-44.
- 80) Xie J, Zhang Q, Zhong N, Lai K. BAL fluid 8-isoprostane concentrations in eosinophilic bronchitis and asthma. *J Asthma*. 2009 Sep;46(7):712-5.
- 81) Xie J, Zhang Q, Lai K, Zhong N. Measurement of nasal airway resistance and response in mice. *Int Arch Allergy Immunol*. 2010;151(3):262-4.
- 82) Lu W, Ran P, Zhang D, Peng G, Li B, Zhong N, Wang J. Sildenafil inhibits chronically hypoxic upregulation of canonical transient receptor potential expression in rat pulmonary arterial smooth muscle. *Am J Physiol Cell Physiol*. 2010 Jan;298(1):C114-23.
- 83) Chen L, Lai K, Xie J, Zhong N. Establishment of airway eosinophilic bronchitis mouse model without hyperresponsiveness by ovalbumin. *Clin Exp Med*. 2011 Mar;11(1):19-24.
- 84) Peng G, Lu W, Li X, Chen Y, Zhong N, Ran P, Wang J. Expression of store-operated Ca<sup>2+</sup> entry and transient receptor potential canonical and vanilloid-related proteins in rat distal pulmonary venous smooth muscle. *Am J Physiol Lung Cell Mol Physiol*. 2010 Nov;299(5):L621-30.

- 85) Lu W, Ran P, Zhang D, Lai N, Zhong N, Wang J. Bone morphogenetic protein 4 enhances canonical transient receptor potential expression, store-operated Ca<sup>2+</sup> entry, and basal [Ca<sup>2+</sup>]<sub>i</sub> in rat distal pulmonary arterial smooth muscle cells. *Am J Physiol Cell Physiol*. 2010 Dec;299(6):C1370-8.
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- 88) Li J, Huang Y, Lin X, Zhao D, Tan G, Wu J, Zhao C, Zhao J, Spangfort MD, Zhong N; China Alliance of Research on Respiratory Allergic Disease (CARRAD). Influence of degree of specific allergic sensitivity on severity of rhinitis and asthma in Chinese allergic patients. *Respir Res*. 2011 Jul 15;12:95.
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## 钟南山教授

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**简介：**钟南山，广州医学院呼吸内科教授，博士生导师。1960年毕业于北京医学院医疗系。现任广州市科协主席、广州医学院第一附属医院广州呼吸疾病研究所所长、呼吸疾病国家重点实验室主任。

钟南山院士先后主持国家 973、863、“十五”科技攻关、国家自然科学基金重点项目、WHO GOLD 委员会全球协作课题等重大课题十余项。在国际学术期刊上发表 SCI 论文 50 余篇，其中包括《Nature Medicine》、《Lancet》、《BMJ》、《Am J Respir Crit Care Med》等国际权威刊物，被引用次数达 438 次；在中华医学会等机构主办的国家级杂志上发表论文 200 多篇；出版专著《呼吸内科学》（全国高等学校医学研究生规划教材）、《内科学》（全国统编教材）、《哮喘：从基础到临床》等 16 部，获得专利 9 项。

钟南山教授是近十几年来推进我国呼吸病专业发展迈向国际前沿的学科带头人之一。通过创制的“简易气道反应性测定法”及流行病学调查，首次证实并完善“隐匿型哮喘”的概念，为 WHO 所采纳。对我国慢性咳嗽病因谱进行了系统的分析，阐明了胃食道反流性咳嗽的气道神经炎症机制。创制“运动膈肌功能测定法”，首次证实即使早中期 COPD 病人也有 60%存在蛋白-能量营养不良，制定了补充其基础耗能的校正公式。组织了全国 COPD 的流调，首次明确了国人的 COPD 患病率。研究发现含巯氢基的祛痰药物（羧甲司坦）能有效地预防慢性肺阻塞性疾病患者急性发作（减小发作频率），研究结果 2008 年在《Lancet》上发表，引起国际医学界中巨大的反响，被选为 2008 年度优秀文章。并组织制订了国内支气管哮喘、

慢性阻塞性肺疾病、咳嗽、SARS、人高致病性禽流感等方面的诊治指南。2009 年成功申报了教育部长江学者团队。

因工作卓越，先后获得国家科技进步二等奖、三等奖，广东省科学技术突出贡献奖、一等奖等二十余项科技成果奖；获全国五一劳动奖章（2003）、白求恩奖章（2004）、全国道德模范（2007）、欧洲呼吸学会（ERS）终生荣誉会员（2008）、全国“双百”评选之感动新中国人物（2009）、全国医药卫生系统先进个人（2009），第五届高等学校教学名师奖（2009），国家级教学成果奖二等奖（2009）等荣誉称号。1996 年当选为中国工程院院士，并当选为中华医学会会长（2006-2011）。

## 教育

- 1955-1960 北京医学院 医学学士
- 1979-1980 英国爱丁堡大学皇家医院呼吸内科 研究员
- 1980-1981 英国伦敦大学圣巴塞洛莫医院呼吸内科 研究员

## 工作经历

- 1960-1971 北京医学院放射医学教研组 助教
- 1971-1974 广州医学院第一附属医院内科 住院医师
- 1974-1978 广州医学院第一附属医院内科 主治医师
- 1978-1982 广州医学院第一附属医院内科 副主任医师
- 1981-今 广州呼吸疾病研究所 所长
- 1983-1986 广州医学院 副教授
- 1986-1996 广州医学院 教授
- 1996-今 中国工程院 院士
- 1986-1992 广州医学院第一附属医院 院长
- 1992-2002 广州医学院 院长、党委书记
- 2008-今 广州呼吸疾病国家重点实验室 主任

## 社会任职

- 1982-1985 中华医学会 执行委员会成员
- 1985-1990 联合国世界卫生组织吸烟与健康医学顾问
- 1989-2000 美国胸科医师学会 执行委员会成员
- 1989- 美国胸科医师学会 会员
- 1995- 亚太呼吸学会研究与教育分会 执行主任
- 1994-2000 中华医学会呼吸病学分会 副主席
- 1992- 广东省医学会 副主席
- 1995-2010 广州市科学技术协会 主席
- 1993- 欧洲呼吸学会会员
- 1997- 亚太呼吸学会 (APSR) 学术委员会 执行委员
- 2000-2006 美国胸科医师学会 中国区负责人
- 2006-2011 中华医学会 会长
- 2001-2007 中华医学会呼吸学会主任委员
- 2005- 爱尔兰皇家内科医师学会会员
- 2011- 爱丁堡皇家内科医师学会会员**
- 2005- 香港医学专科学院 终生荣誉会员
- 2008- 欧洲呼吸学会 (ERS) 终生荣誉会员

## 编辑学

- 1996- Journal of Hospital Medicine 编委
- 1992- 中华医学杂志英文版 编委
- 1993- 广州医科大学学报 主编
- 1996- 中华生物医学工程杂志 主编
- 1995- Respiriology 审稿专家
- 1999- Respiratory Medicine 审稿专家
- 1992-2000 中华结核和呼吸杂志 副总编
- 2000- 中华结核和呼吸杂志 总编

### 获奖及奖励

- 1) 1985 年 国家卫生部 China Ministry of Public Health Award for Advances in Science and Technology (1985)
- 2) 1997 年 全国科技进步奖
- 3) 1997 年 北京医科大学 杰出校友奖
- 4) 2003 年 广东省科技个人特等奖励
- 5) 2003 年 何梁何利基金会科技进步奖
- 6) 2003 年 全国五一劳动奖章
- 7) 2003 年 全国抗非特等功臣
- 8) 2004 年 白求恩奖章
- 9) 2003 年 中国医师奖
- 10) 2005 年 国家劳动模范
- 11) 2007 年 世界变态反应组织杰出贡献奖

### 主要贡献

- 1) 证实并发展了“隐匿型哮喘”的概念，并被 < Global Initiative of Asthma > (WHO)1st edition ,1995 (Thorax 1990; 45: 860-5 , Chest 1992; 102: 1104-9 )引用
- 2) Chronic Obstructive Pulmonary Disease(COPD) : Prevalence in China (Am J Respir Crit Care Med. 2007; 176(8):753-760)  
Biomass is one of the most risk factors of COPD in women in the rural area in China (Thorax. 2007; 62(10): 889-897  
Thio compound was able to prevent acute exacerbation of COPD. Efficacy was similar to inhaled corticosteroid plus long acting B2 agonist (Lancet 2008; 371: 2013–18 Elected as "Paper of 2008" by the Lancet Editorial Board  
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3) 非典型性肺炎(SARS)的诊治

Firstly described the real pathogen of SARS (Coronavirus but not Chlamydia ) in the mainland of China (Lancet 2003; 362: 1353-58)

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- 2) JP Zheng, **NS Zhong**. Energy metabolism in COPD. Chin Med J. 1991;71: 100-3.
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- 55) LYC Yam, RC Chen, **NS Zhong**. SARS: ventilatory and intensive care. *Respirology* 2003; 8: S31-S35
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