

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.

respiratory medicine towards the forefront of international advances. He first developed and refined the definition of asymptomatic asthma, later cited by WHO, through his

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 v

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 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
2011-present	Fellow of Royal College of Physician (FRCP Edinburgh)
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) *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. 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 endothelin- 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 1996; 19:373-6.
- 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-A and ET-1 in the pathogenesis of animal asthmatic model. Cli Exp Allergy 1997; 27:568-573.
- 20) J Xu. , Ren PX, NS Zhong. The effect of GM

- 26) H-iang 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
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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
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- 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.
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- 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 Ca²⁺ entry and transient receptor potential canonical and vanilloid

- 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 Ca²⁺ entry, and basal [Ca²⁺]_i in rat distal pulmonary arterial smooth muscle cells. *Am J Physiol Cell Physiol*. 2010 Dec;299(6):C1370-8.
- 86) Zhou Y, Hu G, Wang D, Wang S, Wang Y, Liu Z, Hu J, Shi Z, Peng G, Liu S, Lu J, Zheng J, Wang J, Zhong N, Ran P. Community based integrated intervention for prevention and management of chronic obstructive pulmonary disease (COPD) in Guangdong, China: cluster randomised controlled trial. *BMJ*. 2010 Dec 1;341:c6387.
- 87) Guan Y, Zeng Q, Yang H, Zheng J, Li S, Gao Y, Deng Y, Mei J, He J, Zhong N. Pulmonary alveolar proteinosis: quantitative CT and pulmonary functional correlations. *Eur J Radiol*. 2012 Sep;81(9):2430-5.
- 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.
- 89) Chung KF, Zhang J, Zhong N. Outdoor air pollution and respiratory health in Asia. *Respirology*. 2011 Oct;16(7):1023-6.
- 90) Chen L, He Z, Qin L, Li Q, Shi X, Zhao S, Chen L, Zhong N, Chen X. Antitumor effect of malaria parasite infection in a murine Lewis lung cancer model through induction of innate and adaptive immunity. *PLoS One*. 2011;6(9):e24407.
- 91) Zhong N, Zheng J, Wen F, Yang L, Chen P, Xiu Q, Yao W, Sun T, Zhao Z, Shen H, Shi Y, Lin J, Li Q. Efficacy and safety of budesonide/formoterol via a dry powder inhaler in Chinese patients with chronic obstructive pulmonary disease. *Curr Med Res Opin*. 2012 Feb;28(2):257-65.
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- indigotica root resulting in the prevention of viral attachment. *Mol Med Rep*. 2012 Mar;5(3):793-9.
- 93) Zeng G, Zhong N. Translational medicine: what is in a name from the perspective of Chinese clinicians? *Sci China Life Sci*. 2011 Dec;54(12):1077-80.
- 94) Li H, Qiu Y, Zhang X, Xu X, Liao D, Wang W, Wen D, Dong Q, Xian H, Wang D, Zhong N, He J. Establishment of a lung cancer biobank of a southern Chinese population. *J Thorac Dis*. 2009 Dec;1(1):17-22.
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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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