

Jian Kang: be honest with who you are and serious with what you do

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For the love for different things, different lives lead in different ways.

Painter van Gogh is known for Golden Sunflowers and Starry Night.

Musician Beethoven leaves behind mighty symphonies.

With great care and enthusiasm Professor Jian Kang (Figure 1), head of the Institute of Respiratory Diseases of China Medical University, is dedicated to improving health.

He delivered a report on behalf of government-funded international students on a conference celebrating the 10th anniversary of the Japan-China Medical Association; he was promoted to professor and chief physician of the China Medical University—an exceptional institution; he holds key posts, such as director, head of institute, vice president, and party secretary, to promote the development of respiratory medicine.

“Do you always place a high demand on yourself?”

“Not really. When I was a child, my father told me to be honest with who I am and serious with what I do, and I follow his advice.”

Principles of a career

In December 1977, Kang took the national college entrance examination, which had been suspended for 10 years. Despite the fierce competition and a rejection rate of 96%, he was admitted to China Medical University.

For more than three decades, Kang has focused on the research and clinical practice of respiratory medicine. Based in his post at the First Hospital of China Medical University, he has made significant contributions to respirology both in northeastern China and through the whole country.

The seven notes—do, re, mi, fa, so, la, ti—combined with high and low pitches, can be composed into dulcet melodies.

Kang points out that the most common clinical symptoms for patients with respiratory diseases include

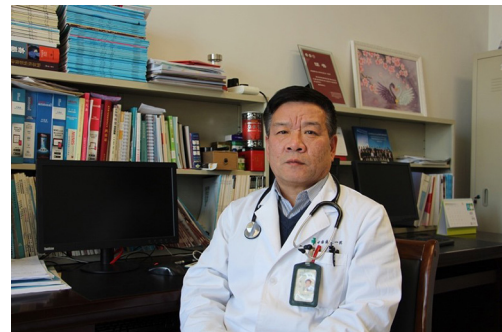


Figure 1 Prof. Jian Kang.

cough, expectoration, hemoptysis, chest pain and dyspnea, which are just like the seven notes. However, cough, for example, shows various characteristics.

Different combinations of these symptoms point to different diseases, but what matters most is to identify these “notes” accurately. *“Experienced doctors can identify the basic ‘notes’ despite their various combinations, to make an accurate diagnosis.”*

Therefore, Kang emphasizes the importance of basic skills and a right way of thinking. He believes that the core mission for doctors is to relieve patients from diseases and pain. He is a doctor first, then an internist, and lastly, a chest physician engaged in treatment, teaching, and research. These roles require him to have comprehensive medical knowledge. He adheres strictly to this principle and hopes young doctors can do so as well.

After obtaining his master’s degree, Kang enhanced his basic skills through more than 3 years of rotation, being a shift leader in the internal medicine department and working at the emergency department. In 1985, Kang received a female patient aged 17 at the gastroenterology department. She suffered from severe vomiting, but the etiology was not identified after a variety of examinations.

“Then, I asked if she had a boyfriend and her elder sister answered yes. At last, ultrasound showed that she had early intrauterine pregnancy, which caused the vomiting.” Kang said

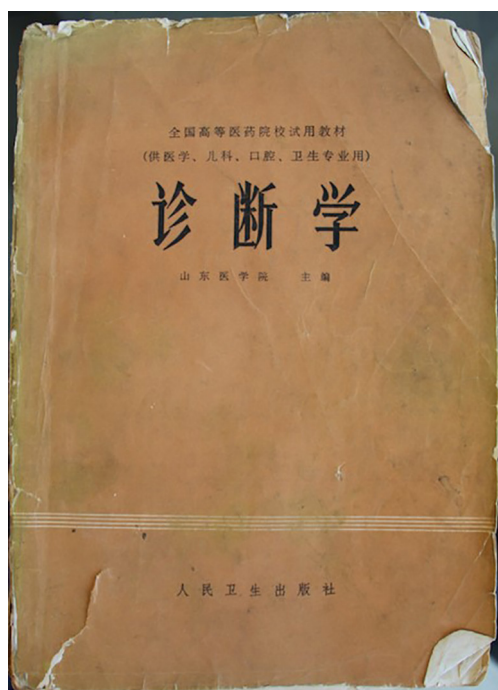


Figure 2 Jian Kang's textbook—*Diagnostics*.



Figure 3 Jian Kang reads X-ray films together with young doctors.

at the time, pregnancy was the last thing to be suspected, and relevant examinations could only be conducted on reasonable grounds.

He selected a yellowed textbook, *Diagnostics* (Figure 2), and turned to a page reading “nausea and vomiting.” Possible causes to these two symptoms were listed, and included intracranial hypertension, vestibular disorder as well as neurotic, drug-induced, gastric and reflexive causes.

“*These causes of nausea and vomiting are complex and even misleading. We should try to simplify the problem.*” Kang asserts that common diseases should come ahead of rare

diseases for explaining symptoms, but rare diseases should not be overlooked when common diseases fail to provide a satisfactory explanation.

Judge exonerates disputed cases; doctor examines disputed diseases

Students who attend Kang's class or conduct ward rounds led by him describe his instruction as “vivid, insightful, and intriguing.” Rich forms and thorough explanation make it easier for students to understand the complex medical knowledge Kang has.

“*Teaching is an important responsibility of the affiliated hospital of China Medical University, and we need to study how to teach. For students in different grades, teachers should take different measures to achieve the best effect.*” Teaching takes place not only in class but also during outpatient services and ward rounds. After completing a ward round, students can learn a lot in a less formal manner (Figure 3).

“*Judge exonerates disputed cases; doctor examines disputed diseases*” is a principle upheld by Kang based on years of clinical service. How can we understand this phrase? “*When a judge handles a case, he cannot convict someone of a crime based on suspicion rather than sufficient evidence. However, a doctor should not ignore any patient's complaint about discomfort. The doctor should confirm whether it is fine or not,*” explains Kang.

“*Inquiry is one way for clinicians to obtain first-hand information.*” A doctor can learn about the situation via a patient's description. Kang said experience could help a doctor hit the critical points of a problem and work out fundamental solutions.

A patient impressed upon him for having a fit of disease after a certain period. X-ray films showed problems in the right side of the patient's chest. The patient's description pointed to pneumonia, but X-ray revealed that it was not common pneumonia. What was the cause of the problems then?

Kang compared the previous attacks of pneumonia and found that they were all consistent with the symptoms of cold. He then asked about the patient's disease history and narrowed down the cause. The patient always used naphazoline hydrochloride to treat nasal obstructions caused by cold. The normal dose of naphazoline hydrochloride should be one or two drops each time, several times a day. The patient used 10–20 bottles a day due to severe nasal obstruction while lying on their right side during application. The solvent went to the lung, leading to lipid pneumonia.

Kang also does not strictly follow textbooks during ward rounds or at class. *“It is better to convey the knowledge in mind in a logical way.”*

He reveals that although his good memory helps him greatly in retrieving complex parts of medical knowledge, the methods he uses to memorize these pieces of information are more critical. He prefers collecting and categorizing disorderly information for better digestion.

Fun at the laboratory

During his study in Japan from 1993 to 1995, Kang carried out in-depth research on sleep apnea and found that sleep apnea patients had rapid eye movement sleep-dependent elevated pulmonary artery pressure. As the first author, he published the findings in the *American Journal of Respiratory and Critical Care Medicine* and the *Journal of Applied Physiology*. When he returned home, he led a team on sleep disorders in the Department of Respiratory Medicine of the First Hospital of China Medical University. Today, sleep apnea has become a dominant subject in the department, and the research here not only focuses on the detection and diagnosis of the disease but also pays particular attention to its multidisciplinary treatment.

“Our laboratory is one of the few laboratories with intermittent hypoxia equipment, which can simulate the damage caused by intermittent hypoxia. This is interesting work.” The laboratory is a place for Kang to have fun. Experiments are intriguing to him. He and his team usually stay there until 7:00 or 8:00 pm.

Kang surmises that clinical medicine and scientific research are complementary to each other: clinical checks provide statistics for analysis, which in turn enable better clinical practices. Modeling after popular exchange forms in the world, Kang regularly convenes with team members to report the progress of experiments, discuss problems, and explore solutions. Meanwhile, the meetings encourage the members to work hard and avoid errors.

There is no shortcut to success, and every step counts; efforts will pay off eventually.

Over the years, Kang has led his team to research sleep-disordered breathing, chronic obstructive pulmonary disease, and interstitial lung disease. He has undertaken research projects supported by the National Key Technologies R&D Program, “National 863 Project” (sub-project), and the National and Provincial Natural Science Foundation. He has won the National Science and Technology Progress Award (second class), and the

China Prize for Medical Science and Technology, laying the foundation for the discipline’s sustainable development during the 13th 5-Year Plan period.

Teamwork leads to prosperity; struggle for fame and gain causes swift decline

In 1996, Kang was appointed as the director of the Department of Respiratory Medicine. Before taking office, he worried about how to lead a team. He then asked his teacher Professor Runjiang Yu for advice.

Prof. Yu was the former director of the Department of Respiratory Medicine, head of the Institute of Respiratory Diseases, founder of the Department of Respiratory Medicine at the First Hospital of China Medical University, and a pioneer of respiratory medicine in China.

“It is not difficult. You only need to bear two words in mind: integrity and fairness.” Prof. Yu’s words enlightened Kang, which to him meant that you need to become who you are first, and then mobilize your team members. Prof. Yu had followed the advice himself.

Over the past 20 years, whenever leading a team and developing his discipline, Kang has remained true to Yu’s words. His discipline can be characterized by the principles outlined below.

First, enhance each aspect of the discipline, such as promoting the development of intensive care medicine. The Department of Respiratory Medicine has been recognized as a crucial national discipline and national key clinical organization many times and remains in the top 10 of the national discipline rankings list. Kang himself won China’s top honor in respiratory medicine, Outstanding Chinese Chest Physician, in 2017.

Second, staff members of the department should have an influence on the sub-disciplines of respiratory across China. Kang was vice chairman of the Chinese Thoracic Society for four terms. Other team members also play essential roles in fields like asthma, chronic obstructive pulmonary disease, interstitial disease, intensive care, and sleep. Their honors are greatly gratifying to Kang.

Third, establish talent training platforms and set up a talent pool to mobilize young people. People born in the 1980s are maturing along with the core technologies innovated during the same era, although talents can be found across all age groups. Like the locomotive, Kang has led his “talent train” to speed ahead rapidly.

When speaking about Prof. Yu, Kang describes him as very respectable and admirable. As an upright individual,

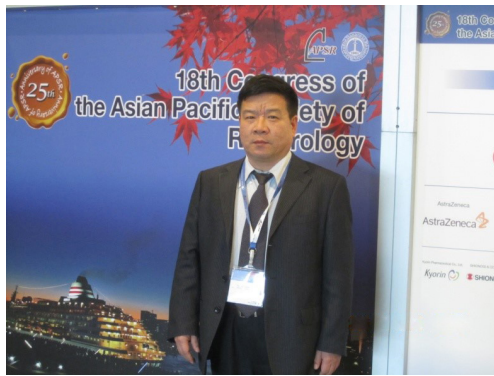


Figure 4 Jian Kang at the 18th Congress of the Asian Pacific Society of Respiriography in November 2013.



Figure 5 Jian Kang joined the combat against SARS in 2003.

Prof. Yu helped the Institute of Respiratory Diseases to form a culture of “exploration, progress, cooperation, and commitment.”

The power of cultural inheritance cannot be underestimated: “If a department relies on only one person, it is unstable; if a department depends on a team, it is relatively stable; and, if a department has its own culture, it is invincible,” says Kang.

He particularly enjoys a sentence from *The Commentary of Zuo*, which says the following: “Wise kings like Yu and Tang blame themselves in the face of problems, so their rise is inevitable; Jie and Zhou tend to blame others, so their downfall comes suddenly.”

Kang believes the same rule applies to the development of a discipline. The rise of discipline needs the efforts of several generations, while only one person may trigger its decline. Therefore, he revised the sentence from *The Commentary of Zuo* into his own motto: “Teamwork leads to rapid prosperity; struggle for fame and gain causes swift decline.” (Figure 4).

The mission amid epidemic outbreaks

Whenever there is a respiratory disease outbreak, chest physicians are always in the frontline. Kang joined the combat against SARS, H1N1 swine flu, H5N1 bird flu, and H7N9 bird flu. He was appointed to lead the clinical expert team of Liaoning Province to control epidemic diseases.

“It is my duty as a doctor,” Kang states in a firm tone. In the face of severe epidemic outbreaks, an expert should have a sense of the mission and care for the greater good of all.

In 2003, SARS broke out in Guangdong and spread throughout the country. Due to a business visit to the province, Kang was able to get first-hand information about the outbreak. He was director of the Liaoning respiratory disease society and reported the situation to the Liaoning Health Department (now Health Commission) and urged the authority to take precautions.

Additionally, Kang also reported the situation to the hospital and gained support from the president to invite Prof. Rongchang Chen at the Guangzhou Institute of Respiratory Disease to give lectures targeting medical staff at the First Hospital of China Medical University. At the time, only a few media members had covered the SARS epidemic. Before its spread, the hospital had taken early precautions.

During the outbreak of H1N1 flu in 2009, several hospitals in Shenyang found “strange” cases. Kang gathered experts in the city to discuss the situation and keep the epidemic under control (Figure 5).

“It was not a task designated by others; I just realized the necessity to do so,” said Kang.

Unshirkable responsibility to promote regional development

The Department of Respiratory and Intensive Care Medicine of the First Hospital of China Medical University also functions as the Liaoning Medical Center for Asthma and Allergic Diseases and the Liaoning Medical Center for Respiratory Diseases. It is also responsible for the diagnosis and treatment of respiratory diseases in northeastern China.

Kang understood that there should be an academic leader in the region, and the First Hospital of China Medical University has played this role in the past. For the institute, being the flagship in regional research is not a burden, but rather a stimulus for further development.

“Ten years ago, the academic, Nanshan Zhong, said to me that the hospital should help other hospitals in the northeast region. I

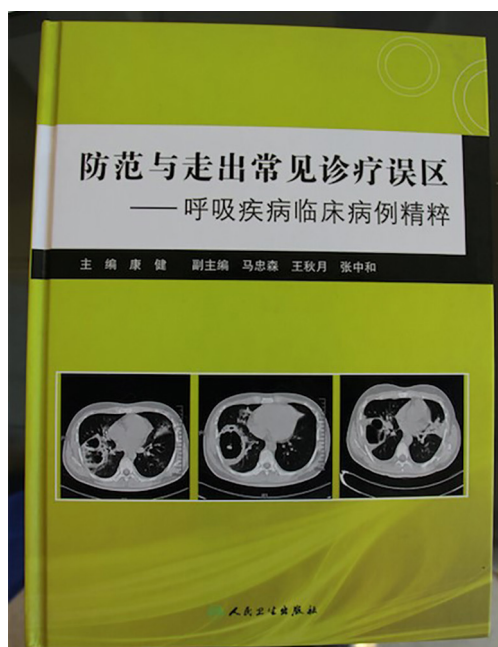


Figure 6 *Prevention and Correction of Common Diagnostic Errors—Selected Clinical Cases of Respiratory Diseases* edited by Jian Kang.

have kept his words in mind,” said Kang.

He initiated the “Northeastern China Respiratory Disease Conference” 10 years ago. The conference is alternately held by Shenyang, Dalian, Changchun, and Harbin and has received an overwhelming response from industry insiders. The first conference took place in Shenyang, and Nanshan Zhong attended and addressed the meeting. The year 2018 marks the 10th anniversary of the conference. Mr. Zhong revisited it and was gratified to see the conference develop into a grand event. Kang has fulfilled his promise.

Every edition of the conference is highly anticipated as it provides a platform for chest physicians in the northeast region to exchange experience and seek universal progress. At the fifth edition, the conference established the “Runjiang Yu Young Chest Physician Award” to encourage the growth of young doctors in the field.

Furthermore, the organizing committee of the conference selects practical clinical topics half a year ahead of its opening. Examples include discussions on complicated cases and reports in typical situations.

In 2016, the *Prevention and Correction of Common Diagnostic Errors—Selected Clinical Cases of Respiratory Diseases* (Figure 6) was published. The book collects discussions on complicated cases and reports on typical cases, which

analyze the process of diagnosis and treatment, discuss key points of diagnosis and treatment, and identify “turning points.” Experience and lessons are drawn from these analyses to help readers avoid similar “detours.” People’s Medical Publishing House applauded the practice and reached out to the conference to begin cooperation. This book is the brainchild of chest physicians in the northeast region (Figure 6).

Afterword

Throughout the interview with Jian Kang, we could feel his enthusiasm for his career and life.

When talking about professional knowledge, he likes using analogies and even body language to make in-depth knowledge easy to understand. For example, to display symptoms of patients with sleep-disordered breathing, he vividly role-played as a patient, breathing heavily, holding his breath suddenly, and then snoring.

We also had the opportunity to see him re-draw illustrations in the textbook. “*You see here. I added these.*” He displayed his works while laughing heartily. He drew a doctor who is palpating a patient lying on back, which formerly existed in an illustration. In another example, he added a baby on the shoulder of a patient with ovarian cysts.

He seeks to have fun at work and leads a fulfilling life.

Expert’s introduction

Jian Kang, MD, professor, is the Director of the Institute of Respiratory Diseases, China Medical University. He graduated from the Department of Medicine of China Medical University in 1982 and received his doctoral degree in 1991. He was promoted to professor/chief physician in 1994 and employed as a supervisor of doctoral candidates in 1995. He has studied at Chiba University in Japan and received short-term training at Oxford University, UK. He is a member of the board of directors for the Chinese Medical Association and also serves as the vice-chairman of the Chinese Association of Chest Physicians (CACP). He is the chief editor of *Chinese Journal of Practical Internal Medicine* and deputy editor-in-chief of *International Journal of Respiration*. He has won one National Science and Technology Progress Award (second class), two China Prizes for Medical Science and Technology, one Ministry of Education Science and Technology Progress Prize, and six Liaoning People’s Government Science and Technology Progress Awards. He has published over 500 articles in

peer-reviewed journals, among which over 60 articles have been published in SCI-indexed journals, with a cumulative impact factor score of over 200 and has over 1,000 without-self citations. He is the editor of seven monographs, and he has trained about 30 doctoral candidates.

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Footnote

Conflicts of Interest: The author has no conflicts of interest to declare.

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