

Prof. Weiliu Qiu: be a “bowing” doctor

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Upon seeing his “savior” in the ward, the old man would get so excited that he would get up from bed outright. “Slowly, slowly!” academician Weiliu Qiu hurriedly held up the old man, bent down and picked up the slippers on the ground to put on his feet. The old man was completely bewildered at the sight of a 70-year-old academician putting on shoes for him. “How can this be done? How can this be done?” This small moment happened more than a decade ago, but is still heartwarming to this day.

Weiliu Qiu (*Figure 1*) is one of the founders and pioneers of oral and maxillofacial surgery in China, and the first member of the Chinese Academy of Engineering in the field of stomatology. He was the former president of Shanghai Ninth People’s Hospital Affiliated to Shanghai Jiao Tong University and director of the university’s College of Stomatology. During his 60-year career, he has set a number of records in the field of oral and maxillofacial surgery, and cured numerous patients.

When reflecting on his life, Prof. Qiu says in an emotional tone, “*patients are teachers of doctors, and they bring us more than what we have given to them. Therefore, we should ‘be bending our bodies as doctors, not holding our heads high.’*”

Expert’s introduction

Weiliu Qiu, an expert in oral and maxillofacial surgery, an academician of the Chinese Academy of Engineering, and a professor and doctoral tutor at Shanghai Jiao Tong University. His former positions include the director of the Department of Stomatology, the dean of the School of Stomatology, and the director of the Ninth People’s Hospital of Shanghai Jiao Tong University School of Medicine (formerly the Second Medical University). He is currently an Honorary Professor at Shanghai Jiao Tong University and a tenured professor at the Ninth People’s Hospital.

Professor Weiliu Qiu has been engaged in medical teaching and research for more than 60 years and is a renowned expert in surgical treatment of maxillofacial tumors and rehabilitation surgery. He is one of the pioneers in oral and maxillofacial surgery, head and neck tumor



Figure 1 Academician Weiliu Qiu.

surgery, and oral and maxillofacial repair/reconstruction surgery in China. He has won three National Invention Awards and Science and Technology Progress Awards, and 36 ministerial and municipal science and technology awards (first, second, and third grades). He was also the winner of the Ho Leung Ho Lee Award for Progress in Science and Technology. He was the Editor-in-Chief of more than 10 books and has contributed to the publication of over 20 books and monographs. He has published over 400 scientific articles in top-rated journals. His honorary titles include the National Outstanding Teacher, National Advanced Health Care Worker, Shanghai Labor Model, Shanghai Science and Education System Bole Award, and Shanghai Education Hero. In 2009, he won the China Oral and Maxillofacial Surgery Huatuo Award and the Distinguished Fellow Award of the International Association of Oral and Maxillofacial Surgeons (IAOMS). In 2010, the International College of Dentists also awarded him the title of the Master, the highest honor of the organization.

Break into the “forbidden zone”

Oral-maxillofacial diseases, especially head & neck tumors,



Figure 2 The first combined cranio-maxillofacial resection performed by Weiliu Qiu (first on the right) and Hanzuo Shang (second from the right).



Figure 3 Weiliu Qiu (right) meets Hanzuo Shang (left) again in 2019.

are among the most damaging illnesses threatening people's health, and the skull base affected by advanced malignant maxillofacial tumors had been considered the "forbidden zone".

"Skull base is somehow like a floor of the brain; above the floor involves neurosurgery, below the floor involves oral and maxillofacial surgery, but the floor itself has remained unattended for a long time. Neurosurgeons say the floor is beyond their expertise, while oral and maxillofacial specialists believe that opening the skull base may injure brain tissues and is therefore highly dangerous," explains Prof. Qiu.

Forty years ago, a patient with a sarcoma of the infratemporal fossa sought help from Prof. Qiu. The tumor had invaded the skull base, and because of neuropathic pains and the inability to open the mouth, the 30-year-old patient had almost lost the courage to live. *"Medical science cannot solve everything. But when I saw this patient suffering terribly with no solution, it aggrieved me deeply. The pain was so strong that it pushed me to solve the problem."*

He began to contemplate on how a treatment might be created. Up until the 1970s, the surgery for congenital craniofacial anomalies, developed by Prof. Tessier, had become quite mature. This surgery was jointly performed by plastic surgeons and neurosurgeons. It inspired Prof. Qiu to explore the potential collaboration between oral and maxillofacial specialists and neurosurgeons to open the "floor" and remove the tumor *en bloc*.

He discussed this idea with Prof. Hanzuo Shang, a neurosurgeon. They performed simulated surgeries and searched relevant literature to explore the best procedures. *"The surgery involves two sticking points. The first is to avoid massive bleeding and any injury to major tissues, and the second is to ensure smooth cooperation from the anesthetist. The respiratory rate per minute will be decreased more than ten times when the skull base is exposed. Measures should also be taken to prevent intracranial infection and promote postoperative rehabilitation."*

Thinking that every minute and second the young man was suffering from cancer, Prof. Qiu was aware that he had no time to relax. In the race against time, he often bought a bag of steamed bread and ate it when he was hungry. He read literature and performed autopsies, working more than 10 hours every day. After a full day of busy work, he felt like falling apart. Once he took a piece of bread and fell asleep.

After six months of exploration, he finally worked out a protocol to perform the surgery: in order to prevent infection, the surgery should be carried out first inside the skull and then outside the skull; after the skull is opened, the skull base can be separated to expose its upper side; after the tissues requiring protection are identified, the osteotomy line can be designed.

On June 28th, 1978, Weiliu Qiu and Hanzuo Shang began exploring the forbidden zone (Figures 2,3). After seven hours of surgery, the tumor was completely removed.

The combined maxillofacial resection offered a new path to survival for patients with advanced, malignant maxillofacial tumors, and also opened up a new world for oral and maxillofacial surgery. This innovative approach earned Prof. Qiu with the Ministry of Health Medical Science and Technology Progress Award (second grade) in 1980.

An analysis of 113 surgical patients in 2013 showed the 5-year overall survival rate reached 72.9% after the combined maxillofacial resection, and the survival rate of patients with malignant tumors reached 59.0%.

"When doctors meet problems in clinical practice, they should make every endeavor to resolve them. There is something you can't think of, but there is nothing you can't do. Our potential

is infinite, something impossible in the past could become possible some day in the future,” explains Prof. Qiu.

“The concept of ‘cured’ should be defined by patients”

After a short-lived period of jubilation, Prof. Qiu was soon surrounded by indelible regret.

Oral and maxillofacial tumor resection is a destructive surgery. Some facial tissues have to be excised for the purpose of complete resection. For instance, the aforementioned young man lost parts of his cranial bone and one eye during the surgery.

“With the bones gone, to what can the teeth attach themselves? With the muscles gone, how can we make emotional expressions? Without emotional expressions, how can we become happy, angry, or sad?” In Prof. Qiu’s opinion, in addition to saving the patients’ life, oral and maxillofacial surgeons have another important task: return a healthy smile to the patients. However, the destructive surgery meant that patients would permanently be unable to make emotional expressions, including a smile—a condition to cruel to endure the rest of one’s life.

A campaign to preserve the patients’ cosmetic appearance and facial functions was then launched.

As early as the 1960s, Weiliu Qiu first envisioned the idea of transplanting the tunneled forehead flap in order to repair defects caused by oral tumor resection. The idea was successfully put into practice. However, there was a defect: the forehead would be scarred as a result. *“In simple terms, we resolved one problem and created another elsewhere.”*

Fortunately, microsurgery was just in ascendance at that time. Microsurgery can achieve the anastomosis of small blood vessels, even the vessels with a diameter of 1 mm. *“If we can introduce this technology to oral and maxillofacial surgery, we should be able to repair patients’ cranial and maxillofacial defects with tissues from other parts of the body.”*

Weiliu Qiu started right then. He was the first in China to adopt microsurgery in oral and maxillofacial surgery for repairing damages to patients’ appearance. He proposed the concept of functional oral and maxillofacial surgery in 1984 and 1990. *“We recommended immediate repair after tumor surgery, so as to restore the patient’s appearance and organ functions.”* Based on the microsurgery technology, he developed a multidisciplinary sequential treatment mode for oral and maxillofacial tumors, which increased the five-year survival rate of oral squamous cell carcinoma to over 65% and that of salivary gland carcinoma to more than 70%.

So far, about 10,000 patients have undergone microsurgery technology-based defect repair immediately after tumor resection in Shanghai Ninth Hospital, with a survival rate of up to 98%. The number of such cases is the highest in the world, and the rate of success is also among the highest.

As more advanced technologies have been developed, the hospital has also introduced navigation technology and 3D printing to realize precise facial repair for patients undergoing oral and maxillofacial surgeries.

What is the definition of “cured”? *“In the past, we only paid attention to survival rate and regarded ‘survival’ as ‘cured’. But actually, whether a disease is cured should be defined by patients, not by doctors.”* In his opinion, only survival with a high quality of life can be regarded as “cured”. Doctors have to resolve a lot of problems to achieve this target, which is also a driving force for the development of medicine.

“Patients are teachers of doctors, and they bring us more than we have given to them,” says Prof. Qiu.

In the past decades, Prof. Qiu has insisted that his clinic services should be priced as a general specialist, not a VIP specialist. *“The service fee for VIP specialist is ten times higher than a general specialist, and many patients come a long way to the hospital who are not rich. It’s OK for them to pay the service fee of a general specialist.”*

In 1991, Prof. Qiu received a letter of thanks from Hawaii. The patient wrote, *“I took part in two marathon races in Honolulu in 1989 and 1990, and I completed both races. My success was totally credited to your surgery.”* (Figure 4).

Now more than 80 years old, Prof. Qiu reveals that the doctor uniform remains his favorite outfit. *“I have been a doctor for a life time, and the happiest moment is when I see my patients are still alive, happy, and healthy.”*

Determined to be a surgeon at the age of 15

Shortly before the founding of the People’s Republic of China in 1949, a 50-year-old man was wounded by multiple gunshots. The man was a military officer of the Kuomintang Party and was assassinated because of dissent views. He was Zhushuang Qiu, and his 15-year-old son Weiliu Qiu witnessed the tragedy.

In his biography titled *“50-year Career as Doctor, Teacher, and Researcher”*, Prof. Qiu wrote the following:

When we began to write compositions in elementary school, we were asked to write something about what we wanted to do when we grew up. My sister, cousins and other relatives said they wanted to be an accountant or banker. I had no interest in these jobs, and

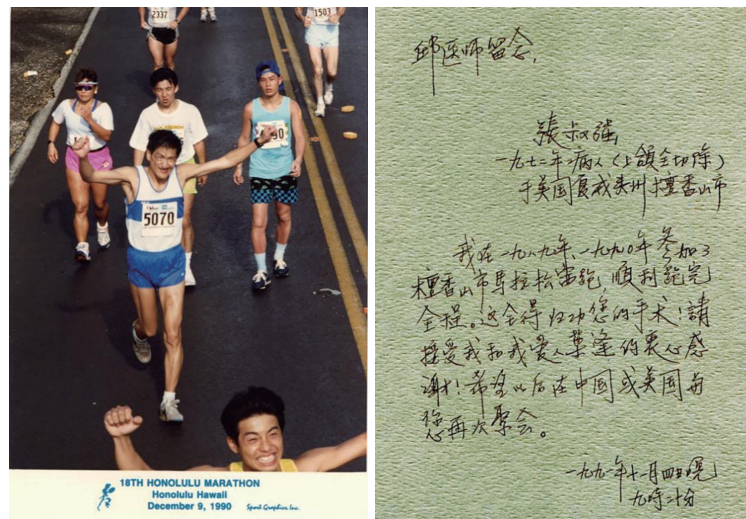


Figure 4 Photo and letter of thanks from a patient from Hawaii. The patient underwent total maxillary osteotomy in 1972 and is still alive in 2019.

wrote something about unspecific objectives, such as becoming “a useful person”, or “a knowledgeable person”. After witnessing my father’s assassination, I made up my mind to be a doctor.

After my father was wounded, I stayed in the hospital to take care of him for about six months, and learned a little about medicine, and had a tangible and deep impression of the doctor there. I admired the surgeon treating my father and was grateful to him. I was grateful because he saved my father’s life; I admired him because of his spirit of healing the wounded and rescuing the dying. I was also impressed by the doctor’s personality, and quietly set my lifetime goal of becoming a surgeon (1).

A knowledgeable person can become a doctor, and a virtuous person can practice medicine. Thanks to a sound family education, Weiliu Qiu has been a kindhearted person since childhood.

On his way to school, six-year-old Weiliu Qiu saw a little boy begging for food, but nobody offered help. He came close to the dirty boy and gave him two pieces of cake. When he returned home, he told his mother what he did, and said, “mommy, the little beggar is too sad. I want to bring some food to him every day on my way to school; otherwise, he would stay hungry for a whole day.”

“Roses given to others, fragrance left in your hand.” Weiliu Qiu wrote in a composition, “I was just trying my best to lend a hand when others were in need. Everybody should have a loving heart...”

Weiliu Qiu was later admitted to the College of Dentistry of West China Union University (now West China Hospital of Stomatology, Sichuan University). “At

that time, I thought dentistry and surgery were different. Because my father was injured by gunshots, I hoped to be a surgeon.” Fortunately, the dean persuaded him to stay, “Do you know oral and maxillofacial surgery is also a division of stomatology?”

A new term came into his world. “What is oral and maxillofacial surgery? I had no idea at that time. I thought it’s an application of surgery into the oral and maxillofacial region, and therefore it should be a form of surgery.” After graduation, he was arranged to work at Guangci Hospital (now Ruijin Hospital, Shanghai Jiao Tong University School of Medicine) (Figures 5,6). He made no hesitation to practice at the Department of Oral and Maxillofacial Surgery, and has since devoted his life to the specialty.

“Get firsthand information, and then you have the right to say”

Prof. Qiu has a little scar near his left ear. That was left by a lymphadenectomy, and is evidence of his risky attempt to verify the effectiveness of acupuncture anesthesia.

Following Chairman Mao’s call in 1958 to explore the potential of traditional Chinese medicine, China launched a nationwide campaign to promote traditional Chinese medicine. Acupuncture anesthesia was one of the popular research topics to be used in small surgeries like removing teeth and excising tonsils.

In order to expand the scope of application of acupuncture anesthesia, Weiliu Qiu formed a research team in 1963. Their first aim was to confirm whether



Figure 5 Weiliu Qiu (third from the left, second row) and his colleagues in the Department of Oral and Maxillofacial Surgery at Guangci Hospital in 1957.



Figure 6 Weiliu Qiu and his granddaughter Chen Chen in an operating room of Shanghai Ninth Hospital. Chen Chen earned her MD degree in Harvard Medical School in 2012 and is now an ophthalmologist.

acupuncture anesthesia is effective in alleviating pain.

“How is the feeling of acupuncture anesthesia? I want to have a try in person; otherwise, I don’t have the right to say.” By coincidence, there was a small lymph node in his left ear, and he decided to remove the lymph node under acupuncture anesthesia. Nobody had yet dared to make such an experiment on a living person. After repeated explanations, Weiliu Qiu finally convinced his colleagues to take the risk.

The surgery was completed in less than 20 minutes, but he really felt the effect of acupuncture anesthesia. *“There was no obvious pain when the skin was cut open and sutured, and the pain was tolerable when the lymph node was separated; however, when the scalpel touched the auriculotemporal nerves, the pain was extremely intense.”* He made a final conclusion: *“Acupuncture anesthesia has a certain analgesic effect, but the effect is not adequate”.*



Figure 7 The medical team of Shanghai Ninth Hospital during the Tangshan earthquake (Weiliu Qiu is in the fifth from the right, second row).

Many doctors were shocked by his personal experiment. He downplayed the potential risk, by saying that *“Shennong put his life on the line when he tasted unknown herbs. I was just doing a small surgery. It’s not a big deal.”*

In order to ease patient pains, Weiliu Qiu created a new means of acupuncture anesthesia without the need for electric stimulus. He also improved the surgery under acupuncture anesthesia by replacing the curved incision into a linear one, so that the surgery can be performed instantly. When the incision was close to the nerves, a higher dose of anesthetic drugs could be administered.

This configuration of the acupuncture anesthesia approach proved to be very helpful for a large number of operations performed by the hospital’s medical team during the Tangshan earthquake in 1976, when anesthetic drugs were in acute shortage (Figure 7). In 1989, this study won the Science & Technology Progress Award from the State Administration of Traditional Chinese Medicine.

“Without firsthand information, you have no right to say”. Weiliu Qiu has undergone about ten sessions of surgical operations for his chronic otitis media, necrotizing pancreatitis, and other conditions; often he used himself as a research subject. *“For any clinical research, it must be successful before it can be put into clinical practice; if it’s unsuccessful, you can’t use it.”*

“Scientific research makes a question into a surprise”

Basic research lays the foundation for clinical practice. In 1979, Prof. Qiu, the then deputy director of the Department of Oral and Maxillofacial Surgery, met a new challenge:



Figure 8 Award and certificate granted by the International Association of Oral and Maxillofacial Surgeons (IAOMS).

establishing the human tongue carcinoma cell line.

In a typical human tongue carcinoma cell line, a person's carcinoma cells are transplanted into a nude mouse, where the cells grow and proliferate to form cell lines. After dozens of passages, a permanent carcinoma cell line is developed that can be applied in experiments to address clinical problems.

In order to improve the treatment of malignant oral and maxillofacial tumors, Prof. Qiu selected several senior doctors including Ronggen He and Changyu Lu to establish a biological laboratory from scratch. However, there was no venue, no equipment, and no technical team. *"It was at least 20 years behind the world's more advanced head & neck tumor laboratories"*, and Prof. Qiu was under a lot of pressure to narrow the gap.

His mentor Prof. Xize Zhang encouraged him, *"It's not terrible to be behind. As long as we are moving in the right direction, we can narrow the gap with the advanced countries and join the forefront."*

Starting a new business is no easy task. Holding the belief of learning from work and working during the learning process, Prof. Qiu led the research team on a study tour to several institutions, including the Peking University Hospital of Stomatology, the Pathology Laboratory of Shanghai Medical College of Fudan University, and the Shanghai Institute of Materia Medica under the Chinese Academy of Sciences. The team brought home advanced technologies and concepts.

After nearly two years of effort, the Tca-8113 study was entering a critical stage at the end of 1980. *"During those days, we were working on 24-hour shifts to observe cell growth. Sometimes the tumor cells grew ten days in a passage, or five or six days in a passage, and that required non-stop observations around the clock. When we were taking dynamic photos, the team was split into three groups, and everybody was working at least ten hours a day."*

At 7 a.m., on January 13th, 1981, China's first tongue carcinoma cell line Tca-8113 was successfully cultivated. The success led to the subsequent development of a series of cell lines (e.g., the salivary gland carcinoma cell line and lung metastatic carcinoma cell line) and prompted Chinese oral and maxillofacial specialists to conduct collaborative studies with medical schools from abroad.

Prof. Qiu said in an emotional tone, *"to put it in simple terms, scientific research makes a question into a surprise."*

From clinical practice to scientific research, from adjuvant therapy with traditional Chinese medicine to multidisciplinary therapy of malignant tumors, a Chinese-style oral and maxillofacial surgery was quickly rising on the international stage.

Prof. Rudolf Fries, the ex-chairman of the International Association of Oral and Maxillofacial Surgeons (IAOMS), spoke highly of the Department of Oral and Maxillofacial Surgery of Shanghai Ninth Hospital: *"I have visited 301 peer departments in 58 countries between 1968 and 2001, and I have never seen one as highly skilled, modern, and dynamic as your team."*

When Prof. Qiu represented China as the first-term council member of IAOMS in 1999, he was very excited in his speech: *"I'm very pleased to have brought Chinese oral and maxillofacial surgeons to the world stage, because it's an important part of my career."*

In 2009, IAOMS conferred its top accolade, "Outstanding Membership Award", to 77-year-old Prof. Qiu. Before him, there were only five winners of the award worldwide. He was the first winner from Asia (Figures 8,9).

"His biggest hope is that his students can be more successful than him"

As a student of Prof. Qiu, Zhiyuan Zhang says one scene has deeply rooted in his mind. *"Prof. Qiu has six tubes on*



Figure 9 The list of Distinguished Fellow Award winners in the IAOMS 50th anniversary book. Weiliu Qiu was the only winner from Asia.



Figure 10 Weiliu Qiu and his students at the Lantern Festival in 2019.

his body, and he is sweating due to fever, but he is concentrated on examining the students' graduation papers, line by line. The papers are entirely filled by his revisions, with wet marks on them."

Prof. Qiu was suffering from acute pancreatitis in 1994. Before he made a full recovery, he resisted a high fever of

39 °C to read students' research papers. *"I was shaken and deeply moved by what he did. He was personally practicing how to be a good teacher,"* says Zhiyuan Zhang.

Prof. Qiu's secretary Qiyun Wang says, *"He has a pair of unusually meticulous eyes. He would provide targeted suggestions on career development for his students based on their personalities and characteristics. For instance, some people are very meticulous and pursue perfection on everything, so he would advise them to specialize in plastic surgery; if a student is bold, careful and has a clever mind, Prof. Qiu would encourage him to perform studies in areas that are rarely explored."*

In the 1980s, China's research on temporo-mandibular joint surgery was still very insufficient. Prof. Qiu asked his student Chi Yang to explore this topic for his doctoral research. Chi Yang met many challenges during the research, and some people even questioned the effect of temporomandibular arthroscopy. Prof. Qiu stood firmly behind him, however, and set up a coordination team to support his research.

"Prof. Qiu does not impose too many restrictions on students and instead gives us more space and trust; even mistakes are tolerable." Thanks to the support of the coordination team, Chi Yang contributed some improvements and innovations to temporomandibular arthroscopy. He is now the director of the Department of Oral Surgery of Shanghai Ninth Hospital and is well-known at home and abroad. Every year, many foreign scholars come to visit the hospital and watch him perform the temporo-mandibular joint surgery.

Prof. Zhengyi Wu, vice president of Shanghai Jiao Tong University School of Medicine, speaks of Prof. Qiu: *"Prof. Qiu's biggest wish is that his students can stand on his shoulders and achieve greater success than him. For coauthored articles, he has always put his students' names first. He also has relinquished party and academic positions earlier than required and let his students and younger talents take over."*

"The more experienced a doctor is, the more incompetent he feels himself." Prof. Qiu explains, *"there are too many black spots in medical science, and nobody can uncover all the mysteries by himself. Medical progress requires unwavering efforts by one generation after another, and the next generation must do a better job."*

After four decades of work, Prof. Qiu has cultivated roughly 70 masters, doctors and post-doctoral researchers. Among his well-known students are Zhiyuan Zhang, Guofang Shen, Qingang Hu, Chenping Zhang, Chi Yang, Zuolin Wang, Jiawei Zheng, Jian Sun, and Ping Zhang. They achieved fame in the field of oral and maxillofacial surgery and are holding important positions at hospitals or medical schools (Figure 10).

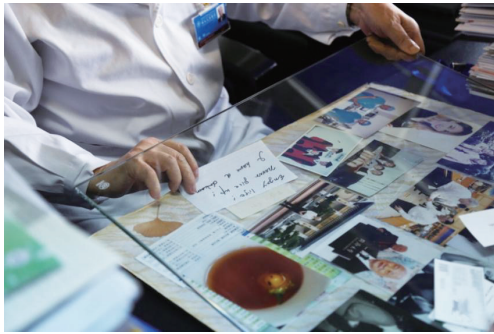


Figure 11 Weiliu Qiu's desk in his office.

“Holding a piece of chalk, standing in the classroom and being surrounded by students from around the world” has always been Prof. Qiu's simple dream during his 40-year teaching career.

Afterword

There is a picture on the office table of Prof. Qiu. It features a cup of tea. *“You see, there is a piece of a tea leaf; does it look like a human's head?”* (Figure 11).

He has always been trying to strike a balance between work and life. *“When I see something beautiful, I take a photo and print it. It's fun.”*

More than a decade ago, Prof. Qiu stopped performing surgeries, but he has continued to see patients, instruct students and conduct research. He sits in his outpatient office half a day every week, offering some treatment advice to patients. He also compiles manuscripts to provide learning materials for students.

He is nearly 90 now, but he has maintained a strong curiosity for new things. He reads several pieces of newspapers every day to learn about the latest technological development, and he can use PhotoShop.

Prof. Qiu once said, *“I have been dreaming for a long time to publish an English journal of oral and maxillofacial surgery.”* This year, the dream has finally come true.

The first issue of *Frontiers of Oral and Maxillofacial Medicine (FOMM)* was recently published. The English journal was jointly published by Shanghai Ninth People's Hospital, which is affiliated to Shanghai Jiao Tong University School of Medicine, and AME Publishing Company. *“A journal is the mouthpiece of a medical discipline and reflects the status of the discipline. A discipline is deficient without a journal. I hope FOMM will be helpful in further expanding the influence of China's oral and maxillofacial*

medicine on the world stage,” Prof. Qiu beams with high expectations.

“Enjoy your life! Never give up! I have a dream” These three sentences come from Bora Milutinovic, the coach that led China's only national football team to qualify for the World Cup. The words can be found on two papers on his office table—one fading and the other still new.

“I think it's very enlightening. It's more than enough to enjoy our own life; we don't have to think about anything else; everybody, especially researchers, must not give up their dream; my dream is to bring our surgical skills to the rest of the world. In the 1950s, we hoped to catch up to Dr. Martin (U.S. pioneer of head & neck surgery), and that dream has already been realized. Now our goal is to catch up to the MD Anderson Cancer Center; I believe we can also fulfill this dream, but when it happens, I might be in heaven.” Prof. Qiu laughs, both with strong ambition and easygoing spirit.

“How do you think of your career as a doctor?”

“I have made every effort, and I think I'm a qualified surgeon.”

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References

1. Weiming Yan. The biography of Academician of Chinese Academy of Engineering---Weiliu Qiu. Beijing: People's Medical Publishing House, 2018.

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