Canada-China University Linkages: The results and Achievement on cancer control network

By Professor Liu Guojin

Norman Bethune University of Medical Sciences (NBUMS, named Norman Bethune Health and Science Center of Jilin University), which was built in 1930, developed from the Norman Bethune Health School. The founder is one famous Canadian thoracic surgeon, Norman Bethune. He supported the development of the school and participated in teaching work these years. Therefore, in 1946, the school was named Norman Bethune University of Medical Sciences in memory of him.

In 1980s, China was in a rapid transition period, the transition of economy, society, politics and culture had stimulated the colleges to require of western professional knowledge. Until half of the century, the first young Thoracic Surgeon from NBUMS has been delegated to make postdoctoral research in Laval University of Canada from 1986. In 1989, a surgeon team of Laval University came to visit NBUMS and her three Teaching Hospitals, specially The First Hospital. Because of these reciprocal visits and survey, those scholars made it clear that the most significant and urgent requirement was specialized training for oncologists. They hope to set up a great platform for the treatment of solid tumor, which would become interdisciplinary cooperation in medical treatment. They have proposed the feasible report, meanwhile they applied the intention for CIDA.

The governments of China and Canada, as well as the officers of the colleges provided great and enthusiastic support for the cooperation. Since then, the cooperation has been established. Through the 20-year cooperation, it’s divided into four stages:

the first phase of the project: CCULP, 1990-1995, Sponsorship by CIDA
the second phase of the project: SULCP, 1996-2001, Sponsorship by CIDA
the third phase of the project: Public Education Project,2002-2005, Sponsorship by Quebec government
the forth phase of the project: Senior Professionals Exchange Project, 2006-2012, Sponsorship by the First Hospital.

As the Senior Coordinator, I have participated and experienced in the whole stages, and I felt that the projects have been playing an important role to push forward the early form of the First Hospital. And we hope we can make further cooperation as our new goals.

□. Canada-China University Linkage Program (CCULP) 1990-1995
In the late 19th century, China was in a rapid transition and required western professional knowledge urgently. However, medical education in China was left far behind, especially in the field of professional training for physicians; there were obvious differences between these different educational systems. For Canada, they have a typical western medical education system——pretty mature and relatively perfect. Take the Laval University for instance, it takes about 15 years to train a specialist. Medical School performs undergraduate system, including preparatory courses (bioscience & biology) for the bachelor degree after 3-year courses; four years for doctorate, five years’ resident training, at last the Fellowing training lasting four to nine years. Let’s take the surgery as an example, during these five years; every resident is required to finish 1000 operations. In the fifth year, they can lead a treatment group at this stage, meanwhile they are demanded to finish 300 operations. After experiencing a series of evaluations, assessments and a severe test, they can get the medical license. For those specialists (like Oncology Dept. Thoracic Dept. and Breast Dept.), the training, assessments and tests are more strict than residents. After passing those tests, they will get the certification of Royal College of Physicians and Surgeons of Canada. Since 1929, there have been 55 medical specialties and professionals qualification recognition systems already. However, the system in China starts in 1999, 70 years apart from Canada.

In the late 20th century, the senior high school students were admitted to Medical School directly and studied for 5 years for the bachelor’s degree. And then, they were distributed to the hospital to work as a resident physician for 3 to 5 years. At that time, there wasn’t any normal medical residency, and qualified tutors, the model actually in China is a master guided the new physicians. Under such kind of traditional model, physician could not finish the task by their own. Therefore they decided to go study further to get the Master Degree and Doctoral Degree, which cost them more than 7 years. Comparing with Resident and Fellow training, there was nothing in common. At that time, China still attached importance to education and qualifications. After two years of getting PhD, they would be promoted as a chief physician, and probably lead a team independently. However, because of the lack of resident and professional trainings, some of them still can not be up to the task. This phenomenon is tragic for both doctors and patients. CCULP recognizes the differences between these two models in training doctors. The lagged education system in China needed to be changed urgently. Although the project set up a platform for oncologists training, which provides an interdisciplinary cooperation, and finally formed a network of treatment and prevention of tumor all over the areas, the most important task is professional training to make up the deficiency of specialties. Therefore, the largest amount of fund and resources should be laid on special trainings.
Since 1990, about 50 doctors, nurses, and epidemiology teachers were sent to Québec, Prov., they were trained in 2 different universities and 5 different hospitals. The first batch of doctors had their French reinforced in the Canada-China Language Center of Beijing Normal University for half a year to one year. After they arrived in Montreal, they were distributed to live with the locals for one month, mainly to overcome the trouble of language and cultural diversity and to adjust to the social and the cultural background as quickly as possible. During the training in Laval University, Chinese doctors had a strong thirst for knowledge and experienced a novel idea of oncotherapy.

Following SULCP project, the other 30 doctors have similar feelings as before. They spared every effort to absorb modern oncology knowledge, and two of them got the Master Degree in only two years, and two of them successfully finished their post-doctoral researches, all of 80 students achieved their training plans, got the certifications. After coming back in China, they became the most active cores in the oncotherapy field. Even further, some of them have already become subject leaders. In the First Hospital, there are 50 clinical departments, and 15 of the directors and vice directors among these have had training experience in Laval University. As a Chinese saying says "It takes ten years to grow trees, but a hundred years to rear people." Although the collaboration between China and Canada has only been 20 years, and it's an essential part in China’s higher education program, history will record the remarkable moment.

NBUMS and The First Hospital gave CCULP great support. At the end of 1992, these returned doctors and nurses established Bethune-Laval Oncology Unit, BLOU. It's a new department in The First Hospital as a medical entity, meanwhile BLOU provides a platform for the cooperation between China and Canada, as well as an international communication. BLOU has in-patient, out-patient, chemotherapy room, tumor epidemiology and tumor registration system, which mainly focuses on lung cancer, mammary cancer and parts of gastroenteric tumor. During the project, two professors from University de Montreal and Beijing Cancer Hospital were entrusted by AUCC to evaluate it. It shows that BLOU is a good model with a group of well-trained specialists, especially in China-Canada Universities of academic cooperation. Although the unit is new but energetic to some extent, it's a successful model for cooperations among universities. However, the unit needs to be transformed from a traditional unit to an interdisciplinary cooperation unit, and gradually become a center.

In 1995, The First International Oncology Conference was held by NBUMS and Laval University in Changchun. It was the officials of CIDA and AUCC, ambassadors in China, governors of Ministry of International Business and
Economics and Ministry of Education, and about 100 scholars from abroad and at home who all came to attend the academic meeting. Besides the academic exchange, they held a special discussion about the CCULP project and BLOU models. After discussion, they thought the cooperation is feasible, and BLOU model is novel, especially to professional training, they surely affirm this project, because it solves a big problem in doctor training in China. The project is advancing, especially the part of personnel training.

II. SULCP 1996-2001

CCULP succeed in the designed theme which really built up the cooperation relationship between China-Canada governments and universities, meanwhile the governors and scholars well approved the project. The project was designed by both sides, and united to manage and evaluate. The very significant breakthrough is The First Hospital built up tumor specialty training and established oncology department which fills in the blank in history.

There has 31 China-Canada Universities built up cooperations with wide subject fields, that is CCULP.

Since 1996, there are 11 most effective cooperative universities getting into the second stage of another five years after a series of fierce competitions, that is SULCP. Under the sponsor of SULCP, NBUMS and Laval University started a new round of cooperation. Since SULCP started in 1996, BLOU have received abundant resources from CIDA, universities and the First Hospital. BLOU has been gradually enlarged, which mainly focuses on the treatment of breast cancer and lung cancer, clinical beds increase from 30 to 80. BLOU was equipped with projector, bechtop, kinds of endoscope and computers for Breast Dept. and Laval University devised a register and statistical system fitting for China Tumor Registry. At present, there are more than 4000 breast cancer patients registered, which provides reliable clinical basis for the following study and epidemiologic researches and becomes one of the largest database of breast cancer among China general hospitals.

As enriching and perfecting BLOU project, based on successful experience of CCULP, NBUMS and The First Hospital still attach great importance to specialty training, during the five years of SULCP, 30 related doctors received professional training in Laval University. The long-term orientation of BLOU is to transfer from a unit to a multi-disciplinary team, and finally becomes a larger cancer center, completing the transformation of unit-group-center.

Benefit from the experience of CCULP, SULCP runs very smoothly. The standardized training is still the soul of the project. The year 1996, in China, the community economy has improved a lot, but improvement was still necessary and the question remained : How to improve the nation level of medical care?
China and Canada parties have realized that Medical Schools had 8-year medical education. However, it’s aimless to extend medical education system and medical postgraduate education. As they worked in the clinical section, they faced an embarrassing situation with high education but low skills. They were helpless when to handle basic clinical works. With lack of strict training, they may become good researchers, but not good doctors. However, SULCP provides a good platform for The First Hospital, firstly supplied 1,700,000 CAD. It was not applied to postgraduate students and doctoral students education, but to the specialties training.

1. 30 doctors from Gastrointestinal Surgery Dept., Radiotherapy Dept., pathology Dept., Gynecological oncology Dept., were selected to Laval University to accept Specialist Training in Oncology Department. After being trained and came back to the hospital, they promoted advanced and novel clinical works, for instance, it was the foregoer to use colposcope to check cervical cancer at that time.

2. Doctors of BLOU extend the patterns, and arrange Specialist Training in Oncology for doctors. After the project mature and with cooperative intention, both sides will establish oncology department under BLOU pattern in hospital, which named mini-BLOU. There is a cooperative network among Tongliao City, Inner Mongolia Province; Shenyang Railway Hospital; the fifth hospital of Zhuuhai; Jilin Chemical Industry Hospital; The Second Hospital of Jilin University; Breast Dept. of Qingdao Medical College and Shenzhen Hospital attached to Peking University.

3. Palliative Care (Hospice) Unit, at that time, was the first palliative care in The First Hospital. In 2000, with the sponsor of CIDA, International Tumor Palliative Care meeting was held in Tianjing with the cooperation of NBUMS, Tianjing Medical University, Laval University and Ottawa University. 150 scholars attended the meeting. Although it’s a new project, it is still necessary in the practice of tumor terminal phase care.

4. China-Canada cooperative project is a national program. Although NBUMS locates in Changchun city, Jilin Province. Laval University is situated in Quebec City, they both have cooperative will. The project has great effect on friendly exchanges. During the period of SULCP, the mayor Chuhua Song, the president of Ministry of Health of Jilin Province and the president of Jilin University visited Quebec City; the mayor of Quebec City, the responsible officers of Quebec Anti-Cancer Association visited NBUMS and the First Hospital as well. Due to the exchange visits, both sides deepened the understanding of the project and these two cities became twin cities. With the project putting into effect, people between these cities established a good relationship. At the end of 2001, Quebec government subsidizes public education system, which is the third cooperative project of China-Canada University.
5. CCULP and SULCP have succeeded in educating 80 doctors for The First Hospital, and they are excellent teachers at the same time. The projects have successfully established Tumor Treatment Entity and platform of human resource. Take doctors from Breast Dept. and Thoracic surgery as an example, they have the great strength and influence in oncology and teaching in NBUMS. Even in the world, they are more confident in their specialties.

In 2001, after finishing every task in project, Jilin University and Laval University held the Second International Tumor Meeting with 300 members’ attendance, including governors from each countries, Canadian ambassador and scholars from Japan, America, Canada and China. They had further academic exchange about medical education and tumor treatment. The success of 11-year cooperative projects between China and Canada and the International Tumor Meeting have been reported positively by Jilin Television, CCTV, China Daily, Le Soleil, Selection, The Gazette. A movie, “Dans l’esprit de Norman Bethune”, captured the history of the 11-year collaboration in an authentic way. And it showed the forward looking of the project.

The projects solved the urgent requirement of professional needs, it’s a successful model.

III.Public Education Program in Cancer 2002-2006

With the practice of two-term cooperative projects, the key of success is that both governments and universities give great support. In the second half of 1989, due to the influence of politics, most western countries suspended academic exchanges with China. However, we were impressed by Canadian’s courage and braveness and Chinese's intelligence. The official who was in charge of this program felt that it is commendable for their respect and equality under such kind of political environment. In 1995, at the end of CCULP, Canadian ambassador entertained directors on both sides, including officials of Ministry of Health, Cao vice minister, Director of Foreign Affairs, Yinyin Mu,officials of Ministry of education, Xiuqin Zhang. They had dinner together and meanwhile provided constructive ideas about applying for SULCP.

The third stage of the cooperation was sponsored by Quebec government, with a total cost of 250,000 Canadian Dollar. Jilin Department of Health, Health Bureau of Hebei Province, Health Bureau of Gansu Province, and Health Bureau of Shanxi Province participated in the cooperation of the Public Education Program in Cancer. In China, lung cancer has been the fatal disease in light of the fact of 300 million smokers and 600 million second-hand smokers. The theme of the cooperation was decided as smoking control. These four provincial governments were the dominant to join in Public Education Program
in Cancer and advertised smoking control. BLOU translated and published in more than 20 popular science readings, and Canadian cultural ambassador Mark Rowswill was invited as the image ambassador for the project, the team has crossed more than five provinces of North China, and had a great effect in China. HEBTV made a TV feature film for this activity. And gradually, smoking control with laws and regulations had been forming and spreading all over China. Professor Jean Couture, as Canadian director, visited north and south to take part in the campaign all the time. However, at that time, the professor was 80 years old.

In particular, the cooperation with great success is under the guide of the directors and coordinators of the project. They play a significant role in the project. Professor Jean Couture as the director of the project is courageous as a leader and strict as a scholar. During the first two stages of 11 years, he worked back and forth between the two countries more than 20 times, both sides exchanged documents, assessment reports, project progress and messages more than 1,500 copies. These efforts were the strength to put the project going forward. Through the project, we felt his charisma, and gradually we became good friends. At present, BLOU inherits the public education program in cancer and academic exchange work. One of trainer with great passion to introduce the Canadian anticancer patterns through radio broadcast and TV stations; he went every primary hospital within Jilin province to expand tumor treatment public education and specialty training, until he retired. After his retirement, he made ten series telefilms to review and reflect the history of cooperation. Breast Dept, as a great support section has been developed as an influential department. These academic chiefs go to Beijing and Shanghai to give oncotherapy lectures and academic exchange to introduce novel technics and methods every weekend.

In the former third stage of China-Canada cooperation, CIDA and CCULP has invested 500,000 CAD. In SULCP, that is 1,700,000 CAD. Quebec government donated 250,000 CAD. For these two International Tumor Meeting, CIDA input another 180,000 CAD. As the equal principle, China government and Universities invested 7,200,000 RMB (equals to 1,200,000CAD). The total 3,800,000 CAD, 75% was put into training Chinese doctors and equipments for BLOU. It’s also the goal of our program, on behalf of Chinese people.

IV. China-Canada Universities High-Level Specialists Exchange Program 2005-2012

Following in the 21st century, China became stronger in economy and politics. We are in an important position in the world. With the nation strengthened,
universities emerge as a place to assemble knowledge and have greater progress, both elements being key for a nation to conquer the world in global knowledge economy competition.

With the rapid economic development, our country gave great support to the universities, to achieve the world level of top universities in research and innovation, providing like “National Nature Science Foundation of China,” “613 programme” “211 programme” as material support. Meanwhile, CCULP and SULCP ended; the advantages of both universities changed. Leaders of the First Hospital were considering and pursuing the feasibility of the new possible cooperative pattern.

In 2007, president mission of the First Hospital of Jilin University visited Laval University and affiliated hospitals. Before this visit, they had already a blueprint about this new cooperation, which will put into 7,000,000 RMB (equal to 1,200,000 CAD) for those high-level specialists to exchange visit. This time, both sides reached an agreement and implemented the new cooperative project. According to the agreement, five students of Laval University can come to study clinical teaching in the First Hospital of Jilin University every year, a famous doctor from Canada would be employed to work in the First Hospital, meanwhile experienced directors are arranged to study, visit and exchange in Laval University. At this stage of cooperation, more than 20 scholars came to 3 hospitals of Laval University for further study. 3 students came to Laval University to finish PhD. Still in 2013, the project is going very well.

At the beginning of 21st century, the international exchange of the First Hospital achieved a new height, cooperative effectiveness appeared, absorbed western experiences, which brought the bold reform about the basic framework and department structure. And it becomes more strict and formal about medical education and specialty training. After getting MHA and PhD, Doctors still need to be accepted in a 2-year Residency Application. With obtaining the license of certificate, then they can do clinical work in their departments. For the doctors who fail, they have to obey Elimination System. For these specialists training, we assign them to famous hospitals at home and abroad, in Laval University for example. The former four stages of China-Canada cooperation have positive and long-term effect, especially the fourth stage, compared with the former three ones, there are great differences in administration and operation patterns. The former two projects were sponsored by CIDA, coordinated by Canada University and AUCC. As the corresponding department, Ministry of Business and Economics was in charge of administration in China, and the International Cooperation Department of the Ministry of Education was responsible for the coordination. And the executive tasks of the project was in the charge of chiefs
and coordinators of the both sides directly. During the process, frequent negotiations and adjustments between universities and hospitals were needed. However, due to the direct cooperation between executive leaders of the First Hospital and chiefs of the Laval University, the fourth stage of the cooperation was more direct and flexible.

In the fourth stage, the Cancer Center of the First Hospital has established within 10 years, and made great progress. There are now more than 600 beds, including the departments, radiotherapy room, cell biology treatment and palliative treatment rooms, hematology, breast neoplasms, thoracic neoplasms and gastrointestinal neoplasms. The First Hospital became the biggest Oncology Center in China. The First Hospital and Laval University became real cooperative partners and set up a close relationship. Although Norman Bethune University of Medical Science and Norman Bethune established good relationship 70 years ago, the effective and active period began at the end of 20th century. At that time, the cultural revolution almost ruined university education, and Canada was there to help China, established a large-scale cooperation with China, and tumor prevention and treatment project was one of the most success examples. The spirit lasts long between both countries, even the chief of tumor controlling program Professor Jean Couture was named as “Quebec Bethune in conquering cancer”.

In 2009, NBUMS at the age of 70 years old and the First Hospital at the age of 60 years old, held a series of commemorative activities and academic meetings, which to more than 100 scholars were invited from all over the world, including the third Canadian ambassador and his representatives, the director of Beijing foreign affair office, the representatives of Laval University and Mr. and Mrs. Couture came to celebrate as well. The guests visited the new buildings and Oncology Center. They offered sincere congratulations on the impressive development. Compared with the tough environment in Norman Bethune health school in the past when Bethune had to operate on the wounded in the corridor, we have developed to a modern hospital with more than 4000 beds, and we believe the First Hospital, including the cooperative project, Oncology Center, will grow up as an important part serving for the whole world.

Remarks:
1. Shuzheng Liu, the founder of the cooperation program of Canada-China
University, headmaster, who died in 2011 of 86 years old.

2. Directors of CCULP and SULCP:

Professor Jean Couture, Director of Canada representative, lives in Quebec of 88 years old.

Professor Guojin Liu, Director of China representative, retired in 2010, lives in Toronto.

3. Guanjun Wang, Director of China-Canada Universities High-Level Specialists Exchange Program, President of The First Hospital of Jilin University. He made a brave revolution to the First Hospital and gained a new sightseeing with the collaboration between China and Canada.

4. Administrators and specialists to participate in management and visit Laval University:

Shuzheng Liu, Yuquan Tan, Qing Su, Jie Xu, Yuanye Chen, Guangsheng Li, Xun Zhu, Dianfu Li, Shilun Qiu, Qi Yuan, Deshun Yu, Yulin Li, Jiaxiang Wu, Guanjun Wang, Laijin Lu, Donghang Zhang, Guishan Gu, Chunhua Song, Chuntian Chen

5. Directors and vice directors accepted to train and exchange in Laval University

Guojin Liu, Wei Liu, Ti Tong, Zhimin Fan, Dong Song, Lihua Feng, Lihua Dong, Lirong Bi, Wei Xu, Zheng Liu, Mingzhi Cao, Qingbin Meng, Quan Wang, Lei Wang, Sujun Gao, Wenguang Zhao, Xia Yuan, Hongyan Li, Liqun Ren, Zhendong Ji

6. Leaders after trained by BLOU

Bin Zhang, Affiliated Hospital of Inner Mongolia University for the Nationalities, Director of thoracic surgery

Dawei Hu, Vice president of Chengde Medical College, Director of Oncological Surgery

Xia Yuan, Vice president of Huizhou People’s Hospital, Director of Oncology

7. Head nurse of the First Hospital after trained in Laval University:

Qun Li, Yong Zhao, Yue Cong

8. Immigrated aboard after training:

Li Tong(Canada), Qiang Fu(Canada), Yingchun Wang(Canada), Weiguo Liu(America), Jing Sui(America), Xiujie Li(Canada), Fengfei Huang(Canada)

9. Besides the training program, CHUL supplies additional fundings for:

Dong Song(postdoctor), Liqun Ren(postdoctor), Fengfei Huang(Master,
and Doctor), Min Hong and Zhuo Li(Master and Doctor), Xia Yuan(Master),
Hongbo Wang(Doctor), Bing Han, Sijie Li, Lu Lu, Gang Zhao

10. During the forth stage of the program, professors in the First Hospital
coordinated together with President Guanjun Wang, which including Professor
Wei Li(Director of Cancer Center), Professor Wei Liu(Vice president of thoracic
surgery), Professor Dong Song(Vice director of Breast Surgery).