Market Research on Healthcare System and Life Science Industry in Southwest China

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I. National Policy on Healthcare Development and Life Science Industry

i. Healthy China 2030
On August 26 2016, the Political Bureau of the Communist Party of China Central Committee reviewed and approved the Healthy China 2030 (2030) policy. First proposed in 2015, the key themes of institutional reforms and innovation have been noted and are broadly in line with the country's 13th Five-Year Plan (2016-2020). Comments made by President Xi Jinping on August 22 2016 also revealed the government's policy directions, namely to:
1. Promote healthy lifestyles.
2. Strengthen health services.
3. Improve preventative medicine.
4. Develop health-related industries.

In February 2015, the National Health and Family Planning Commission highlighted that it will work towards improving the healthcare system focusing on:
1. Improving government financing for the rural cooperative medical program, with annual government subsidies expected to be raised to CNY380 per person.
2. Increasing the reimbursement rate for outpatient services to 50% and hospitalization costs to 75%.
3. Summarizing and publicizing the best experiences of the payment system for the new rural cooperative medical program and contributing to the reform of country-level hospitals.
4. Expanding critical illness coverage for more illnesses and improving the reimbursements for patients.
5. Addressing long-distance medical treatment within provinces and doing pilot works on the trans-provincial medical expenses verification and settlements.

In April 2014, China's NDRC, the National Health and Family Planning Commission and the Ministry of Human Resources and Social Security jointly issued a circular to encourage more development in the private healthcare sector.
ii. 13th Five-Year Plan for Life Science Industries

Pharmaceutical industry\(^1\) is the basic, strategic industry in China. Since 2001, the total output value of pharmaceutical industry has maintained a high development speed. It has become the biggest emerging pharmaceutical market in the world. According to statistics, during 2011-2015, the total sales revenue of pharmaceutical industry was 2.67 trillion yuan, increased by 9%; the total profit reached 274.9 billion yuan, increased by 12.3%. For the next five years’ development, the central government has put much emphasis on pharmaceutical industry and healthcare. There are 13 related points mentioned in the 13\(^{th}\) Five-Year Plan.

1. Technology innovation: accelerate the breakthrough of communications, new energy, new materials, aerospace, biopharmaceutical, smart manufacturing etc.
2. Precision medicine: support the development of IT, biotechnology, high-end equipment and materials industries. Promote the innovation and commercialization of precision medicine, robot, advanced semi-conductor, etc.
3. Open up medical field: encourage social capital to invest in finance, medical and internet.
4. Healthcare for the poor: improve the medical service condition in poverty areas obviously.
5. Comprehensively deepen the reform of healthcare: priority will be given to the listed innovative drugs for entering social insurance catalogue.
6. Universal medical insurance: lower the cost of serious illness and chronic disease.
7. Public health service: enhance the ability construction of the weakness in women and children healthcare, public health, oncology, prevention and control of mental disease and pediatrics.
8. Prevention and control of major disease.
9. Maternal and child health care and fertility services.
10. Medical service system: establish a comprehensive diagnosis and treatment system, focusing on improving the ability of primary medical care; elevating the application of health information service and big data; developing telemedicine and smart medical.
11. Chinese traditional medicine development.
12. Implement national fitness strategy.
13. Food and drug security: deepen the examination, approval system for pharmaceutical and medical device companies; strengthen the supervision over import and export of food and drug.

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\(^1\) Pharmaceutical industry in this report means both pharmaceutical and medical device industry in China.
Under the general guidance of 13th Five-Year Plan, Ministry of Industry and Information Technology together with another five national authorities jointly issued the Guidelines for the Development of Pharmaceutical Industry on October 26, 2016.

According to the Guidelines, several key points should be noted:

**Goals**

1. By 2020, the main business income maintain a rapid growth, the average annual growth is higher than 10%.
2. The intensive input in R&D by enterprises above designated size is above 2%.
3. The number of pharmaceutical manufacturing companies with GMP certificate is over 100.
4. Compared with 2015, the added value of energy consumption of enterprises above designated size decrease by 18%, 22% reduction of carbon dioxide emissions, water consumption decreased by 23%, the VOCs emissions decrease by more than 10%.
5. The automation and information technology level of pharmaceutical production process are significantly improved; the proportion of exports of preparations and medical equipment is increases; the scale of overseas investment expands, and the international technical cooperation will be deepened.
6. The emergency R&D and production capability of national emergency response to public health emergencies is improved significantly.
7. By 2020, the proportion of main business income of the top 100 enterprises will increase by 10%.

**Key industries**

1. Biopharmaceutical: antibody drugs, recombinant protein drugs, vaccines, nucleic acid and cell therapy products and industrial technologies.
2. Chemical drugs: chemical innovative drugs, chemical generics, high-end preparation, clinically scarce drugs and industrial technologies.
4. Medical device: medical imaging equipment, IVD, therapy equipment, implants and medical materials, mobile medical products.
6. Drug production equipment: high-end equipment, equipment technology.
II. Policies in Southwest China

i. Sichuan Policy

1. Healthcare

During the 12th Five Year Plan, the total investment in the field of health and family planning from the central government and provincial government reached 126.925 billion yuan in Sichuan province. There are 80,114 medical institutions, 488,700 beds and 647,760 medical staff. According to the Sichuan “13th Five Year” Health and Family Planning Development Plan, Sichuan Health and Family Planning Commission has set several goals and measures to improve healthcare system in Sichuan.

Goals

By 2020, the basic medical and health system covering urban and rural residents should be established. The overall healthcare development is taking the lead in west China and the health level of the residents will reach or exceed the national average level. The healthcare system is more mature, the service system is sound and improved, the service mode is changed effectively, the health quality is obviously elevated and the fertility level is maintained moderately. The per capital life expectancy reach 77.3, the maternal mortality rate dropped to 19/10 million, the infant mortality rate dropped to 6.5 ‰, and the mortality rate under 5 years old dropped to 7.5 ‰. The total population of the whole province in about 85 million.

Key tasks

1) Strengthen public health services
   • Emphasize on the comprehensive prevention and control of major chronic disease and non-infectious disease.
     ➢ To integrate and gradually expand the monitoring of the existing chronic disease and risk factors, establish a monitoring system.
     ➢ Make good use of family doctor system, residents’ health records and regional health information platform so as to achieve in-depth analysis and comprehensive utilization of monitoring data, and enhance the evaluation and control effect.
     ➢ Strengthening screening and intervention for chronic diseases and high risk groups, promoting appropriate techniques for the prevention and treatment of...
chronic disease, and gradually realizing the standardized diagnosis and rehabilitation of chronic disease.

- Stress on the prevention and treatment of major infectious disease and local disease.
  - Promote the sunshine procurement of the second type vaccine.
  - Strengthen the management of the vaccine and cold chain to ensure the safety of inoculation.
  - Emphasize on the prevention and control of AIDS, improving long-term prevention and control mechanism.
  - Steadily promoting the construction of a new system for tuberculosis medical prevention.

- Emphasize on maternal and child health

- Elevate emergency medicine capability
  - Further improve the health emergency management system, strengthen the construction of health emergency monitoring, warning and risk assessment system.
  - Strengthen the standardized construction of the medical institutions of medical emergency and disease control.
  - Strengthen the medical emergency team building and emergency equipment by focus on the standardization, modularization, portability and information level of emergency medical rescue teams at all levels, improve cross regional, cross boarder and aviation rescue capabilities.

2) Elevate medical service level

- Improve hierarchical medical system
  - Rationally control the volume of patients in big hospitals, support and guide patients to receive treatment at grass root medical institutions as the first priority.
  - Actively carry out family contract doctor model.

- Elevate medical service capability
  - Improve the diagnosis and treatment of difficult and complicated disease.
  - Carry out the construction of clinical key specialties in county level medical institutions focusing on tumor, cardiovascular, pediatric, mental and infectious diseases.

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2 Sunshine procurement refers to the behavior of enterprises and institutions to acquire products or services from their supply market as their own resources according to the principles of "openness, fairness and impartiality" and "quality first and price priority".
Explore multiple ways of one-on-one support, “Yilianti³” (medical consortium) and tele medicine.

- Improve medical service quality.

3) Promote the transformation of family planning service
- Implement the overall two child policy.
- Prioritize the population structure.
- Deepen the family planning service reform.

4) Promote the inheritance and innovation of traditional Chinese medicine

5) Promote the development of health service industry
- Encourage extension and development of high quality medical resources.
  - Support key projects like Chengdu International Biotown, Luzhou Health City, Wenjiang International Medical City, Chuanxi Health and Rehabilitation Center.
  - Actively promote telemedicine services like family telemedicine service, teleconsultation, tele monitoring and tele operation guide.
  - Support the medical and health development in Tianfu New Zone by promoting hospital projects to settle in the zone.
- Develop private hospitals and multiple health services.
- Promote the deep integration of health and elderly care services.
- Practice the action plan of “internet + health care”.

6) Improve health care service system
- Enhance the public institution construction
  - Increase 10 class A maternal and child medical institutions, 95% of city level maternal and child medical institutions reach class B and above.
  - Strengthen the construction of blood center, realize 183 blood centers at county level.
  - Build up a relatively complete first aid network by taking the first aid center of city (prefecture) as the lead, the county level first aid center and pre-hospital first aid network as the main body.
- Reinforce the construction of medical institution

7) Speed up the drive of scientific and technological innovation
- Emphasize on the construction of the innovation platform of medical science and technology

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³ Yilianti (medical consortium) is a regional medical alliance that integrates medical resources in the same area. It usually consists of a 3rd grade hospitals, a 2nd grade hospital, a community hospital and a village hospital. The purpose is to solve the problem of seeing a doctor for all the people.

⁴ Meaning male-female ratio
• Support medical scientific research by organizing medical institutions and pharmaceutical enterprises apply for national key R&D projects like “significant New Drug R&D and Production”, “Prevention and Treatment for Major Infectious Disease”, Research on Precision Medicine”, “Significant Scientific Special Project” in the field of chronic disease, malignancy, Gene and bioengineering.

• Strengthen the transformation and popularization of the achievements of medical science and technology.
  ➢ Support the construction of the Center for Biotherapy Transformation Medicine of West China Hospital, West China Medical technology Transfer Center of West China Hospital.
  ➢ Support large medical institutions to build high level GCP and GLP by adopting a variety of mechanisms.

8) Promote health care informatization
• Strengthen the informatization application of medical institutions.
  ➢ By 2020, tele medical services will cover 100% of cities, counties and districts.
• Promote the development of new format of health medical informatization.
  ➢ Build a big data base of health care and a platform for health medical information resources at provincial level.
  ➢ Actively promote the application of IOT, wearable devices, AI, VR, 3D printing technology, medical robots in the field of population health information.

9) Reinforce the opening up and cooperation of public health
• Deepen the international communication and cooperation of public health.
  ➢ Further improving the quality and strengthening the training of backbone personnel by encouraging clinical medical staff and hospital management personnel to receive training overseas.
  ➢ Strengthen cooperation with countries along the “one belt one road” in personnel training, information exchanges, technical communication and emergency rescue. Explore a long-term cooperation mechanism.
• Promote the interregional opening up and cooperation of health and family planning.
  ➢ Strengthen the strategic cooperation of Sichuan-Chongqing, Sichuan-Yunnan, Sichuan-Shaanxi, Sichuan-Zhejiang, Sichuan-Guangzhou.
  ➢ Promote the coordinated management of public health affairs, establish emergency cooperation, health supervision and joint prevention and control mechanism of major epidemic situation.
2. Life science industry

Sichuan is a major province of medicine. The annual total output value of the pharmaceutical industry in Sichuan increased by 25% in the period of 12th five year plan. In 2015, the number of pharmaceutical enterprises above designated scale reached 388, making the main business income of 108.9 billion yuan. Sichuan ranked No. 8 in China and No. 1 in mid-west China on the scale of industry.

To integrate with the national plan, Sichuan government has set several goals and taken several measures:

**Goals**

by 2020, the innovation capability of pharmaceutical industry will be into the forefront in China; a new batch of national, state and local joint innovation platform and enterprises technology innovation platform will be established; significant progress in R&D of innovative drugs, patent drugs, first generic drugs and intelligent equipment, cultivation of TCM planting.

The scale of pharmaceutical industry exceeds 500 billion yuan, annual income growth rate of main business above 15%. The growth rate of the industrial added value growth continues to be among the forefront of industry sector.

**Key tasks**

1) elevate the innovation capability:
   - strengthen the innovation capability construction of original drugs, first generics, TCM, new preparation, high-end medical device, new drug packaging material.
   - accelerate the establishment of various alliances of DNA testing technology strategic alliance, pharmaceutical clinical trial innovative R&D industrial alliance, etc.
   - build key laboratories at provincial and national level; construct pharmaceutical health industry innovation center involved by government, social capital and international innovation platforms.
   - promote the construction of National (Chengdu) Biopharmaceutical Industrial Innovation Incubation; plan to build Sichuan Clinical Medical Big Data Center, etc.
   - promote the commercialization of key pharmaceuticals: encourage using advanced preparation technology, innovative therapy tools and R&D of innovative drugs with superior therapeutic advantages.

2) Accelerate the upgrade and transformation of medical devices:
focus on the development of digital detectors, superconducting magnet, surgical precision positioning and navigation, data collection & processing, biological 3D printing, multi row spiral CT, medical robot, health monitoring, remote medical treatment equipment with high performance.

- promote the commercialization of automatic biochemical analyzer, chemiluminescence immunoassay analyzer and other IVD reagents.
- Develop advanced products such as implantable tissue regeneration biomaterials, medical dental materials, new medical packaging materials, heart valves, and high-end products in rehabilitation aids.

3) Promote the modernization of TCM:

- promote the breeding of Chinese herbal medicine and modern planting technology.
- develop the extraction and purification technology of modern Chinese medicine.
- extend TCM health service, to create the national TCM health tourism demonstration pilot zone.

**Development zones**

1) Chengdu—the core of industry innovation. Making use of Chengdu’s advantage in capital, technology, talents, medical resources, Chengdu focuses on development of high added value and low resource consumption national bio pharmaceutical preparations and high-end medical device.

2) Deyang, Ziyang, Mianyang, Meishan, Leshan—pharmaceutical competitive industrial belt. Focuses on the development of TCM, plant extracts, special API and chemical preparation etc.

3) Neijiang, Suining, Nanchong, Bazhong—modern TCM industry development cluster of eastern Sichuan. Focuses on TCM planting, extract processing and production, etc.

4) Ganzi, Aba, Liangshan—national pharmaceutical industry cluster.

**Measures**

1) Expedite the expansion to global emerging market.

2) Encourage international registration and certification of original R&D drugs abroad.

3) Expedite the pace of “going out”. Promote pharmaceutical enterprises to invest and merger overseas, set up R&D center and factories abroad; stress on “bring in” strategy by encouraging the enterprises within the special customs supervision area undertake the outsourcing of biological medicine.

4) Promote the intelligence of production process, encourage the application of AI, industrial robot in production process; accelerate the development of digital, smart,
wearable mobile medical devices, promote the implementation of new technologies like bio 3D printing technology and gene chip in implantable products.

5) Develop smart medical services. Actively promote services like telemedicine, on-line medical consulting, and on-line appointment for medical treatment. Develop remote pathological diagnosis, imaging diagnosis, expert consultation and other remote medical services.

ii. Chongqing Policy

1. Healthcare

According to Chongqing 13th Five Year Plan on the Health and Family Planning, there are 176,674 beds and 131,009 medical staff, 10 new class A hospitals and 30 national level key special medical institutions during the period of 12th five year plan.

Goals

By 2020, the scientific and standardized medical model have been basically formed. Become a national regional medical center. The population and family planning policies continuously improved. The health level of residents continue to maintain the leading place in west China, higher than the national average.

Key tasks

Chongqing will promote the “healthy Chongqing” by focusing on grass root medical treatment, improving complimentary medical service system and making use of information and “internet+” technologies. Emphasize on the creation of healthy environment by promoting fairness in health care especially for women, children, elderly people, poor people, floating population and occupational hazard population.

1) Deepen healthcare reform and improve basic healthcare system

- Promote overall reform of public hospitals. Establish modern hospital management mechanism. Support military hospitals participate in public hospitals’ reform at city level.
- Steadily promote comprehensive reform of drug supply. Improving the basic drug system and gradually expanding the proportion of the allocation and usage of basic
drugs. Speed up the standardization of drug procurement platform and improve the electronic trading system of drugs.

- Promote overall hierarchical medical system.

2) Stick to prevention and improve the public health level
- Strengthen the prevention and control of major infectious diseases.
- Improve the management of chronic disease, promote mental health, reinforce capability construction of women and children health services and strengthen health management for elderly people.
- Emphasize on the comprehensive capability of medical emergency.
  - Strengthen the monitoring of public emergencies, risk assessment and early warning capacity.
  - Improve the medical emergency and first aid system. Start the construction of national water emergency rescue base and reinforce the construction of air rescue capability.
  - By 2020, the rate of standard allocation of emergency equipment at all levels should reach 100%.

3) Build up modern medical service system
- Prioritize the allocation of regional resources.
- Promote the development of public hospitals from expansion to quality oriented construction. Build a number of national and municipal key clinical specialties, and strengthen mental health, pediatrics, obstetrics and gynecology, rehabilitation, nursing, infectious diseases, tumors and stomatology.
- Promote the combination of medical and health care. Strengthen the construction of the geriatric hospital, the rehabilitation hospital, the nursing home and the hospice.

4) Speed up the development of health service industry
- Further implement the policies and measures to accelerate the development of private hospitals, develop professional hospital management groups.
- Speed up the introduction of high-end medical technology and strive for the establishment of the hematopoietic stem cell back of the umbilical cord; try to build the proton therapy center in southwest China.
- Actively strive for the pilot of encouraging foreign wholly owned medical institution recognized by the state.
- Explore social capital to build independent hemodialysis institutions and support independent medical inspection centers and image centers.
- Actively cultivate relevant supporting industries of health service industry. Actively promote high-end biopharmaceuticals. Encourage enterprises to develop special health
products for elderly people and disabled people, rehabilitation medical equipment and special equipment for stomatology, orthopedics and interventional materials. Support digital medical products and encourage R&D for personal and family health products.

2. Life science industry

Chongqing was one of the five big pharmaceutical production bases in China. At present, there are 165 pharmaceutical enterprises above designated size.

TCM industry takes up half of the total output value of Chongqing pharmaceutical industry. Although the industry base is solid with a variety of APIs and leading companies, the scale, production line and innovation capability need to be improved.

Different from other provinces and major cities in southwest China issuing relevant document after 13\textsuperscript{th} Five Year Plan, Chongqing has issued a programmatic document on accelerating pharmaceutical industry development for 2013-2020 in 2013.

Goals
1) Pharmaceutical industry is the key of strategic emerging industry in Chongqing. It will be developed into a pillar industry of billions of output value in Chongqing.
2) By 2017, the total output value of local enterprises above designated size will reach 100 billion yuan, and the accumulated investment will be 65 billion yuan. The income profit of main business will be increased to 10%. Four 10 billion scale pharmaceutical industry clusters and two 5 billion scale industry clusters will be established.
3) By 2020, the total output value of local enterprises above designated size will reach 150 billion yuan, accounting for 3\% of the total industry output in Chongqing. The R&D and production bases of modern TCM and medical devices will be built.

Key tasks
1) Six pillar industry will be formulated including 70 billion scale chemical pharmaceutical, 35 billion TCM, 15 billion health products, 15 billion medical device, 10 billion bio-pharmaceutical, 5 billion pharmaceutical excipients and accessories.
2) Create 30 leading enterprises. By 2020, three 10 billion scale enterprises, five to eight 5 billion scale enterprises and over fifteen 1 billion scale enterprises.
3) Launch 150 hit products.
Development zones

1) Liangjiang New Zone—high-end pharmaceutical and medical device industry base, focusing on the development of 50 billion scale R&D of pharmaceutical and medical device.
2) Fuling Modern TCM and Health Products Industrial Park -- 50 billion yuan scale.
3) Bannan Chemical Pharmaceutical Industrial Park—30 billion yuan scale.
4) Rongchang Biotechnology Pharmaceutical Industrial Park—20 billion yuan scale.
5) Four over 10 billion yuan scale industrial parks and Biopharmaceutical Innovation Incubation Park of Chongqing Hi-tech Zone.
6) Hechuan Industry Base of Biopharmaceutical and Medical Consumables.

Measures

1) Support to attract both national and foreign established companies and strategic projects; guide joint venture and cooperation between local enterprises and well known enterprises both nationally and globally. By 2020, bring in five-10 world top 500 companies and national top 100 companies; over 300 newly added national and foreign companies above designated scale, the output value achieve 50 billion yuan.
2) Encourage key enterprises to conduct M&A and incorporation with companies and R&D institutions globally. By 2020, 10-20 leading enterprises over 1 billion yuan scale through M&A and incorporation, the newly added output is 20 billion yuan.
3) Promote technical transformation by encouraging the use of new technology, new skills, new materials and new equipment. By 2020, the accumulated technical transformation reach 40 billion yuan.
4) Guide well established companies to increase the input in R&D. R&D headquarters and branches of both foreign and national big companies are encouraged. Expedite the construction of four state level technology innovation bases of modern TCM, medical device, innovative drug and biopharmaceutical.
5) Support qualified pharmaceutical enterprises to build medical institutions and participate in the reform of public medical.
6) Encourage companies to “going out”, striving for international orders, acquire international pharmaceutical outsourcing and set up factories overseas.
7) Talents training and introduction. Joint hospitals and pharmaceutical colleges between local enterprises and universities are encouraged.
iii. Yunnan Policy

1. Healthcare

During the 12th five year period of time, Yunnan has 24,186 medical institutions, 237,603 beds and 228,040 medical staff by the end of 2015.

Goals

By 2020, the bed number of medical and health institutions for every 1000 residents is controlled to 6 beds, the number of practicing (assistant) physicians reaches 2.5 persons, the number of registered nurses reaches 3.14 persons. Gradually reduce the gaps of health resources between prefectures and cities. Improve the fairness and accessibility of basic medical and health services in Yunnan.

Key tasks

1) Stress on innovative system mechanism
   • Establish and improve the mechanism of government investment in public health. Clarify the leading role of government in providing public health and basic medical services.
   • Deepen the comprehensive reform of basic medical institutions.

2) Strengthen the capability of resource scheduling
   • Focus on the construction of services in weak fields including traditional Chinese medicine, pediatrics, obstetrics and gynecology, maternity and children healthcare, family planning, mental health, infectious diseases, elderly care, stomatology and rehabilitation, etc.
   • Give priority to strengthening the capability of medical services in counties.

3) Emphasize on the training and use of talents.

4) Support the development of professional medical inspection institutions and imaging institutions. Gradually build up a co-sharing, co-using and co-management mechanism of large medical equipment.

5) Establish a number of demonstrative clinical specialties in order to solve complicated and difficult diseases for the people.

6) Encourage social capital to invest in medical institutions in communities through various forms and channels.
2. Life science industry

Yunnan province has the most abundant biological resources, natural medicine and national medicine resources. The total pharmaceutical industry output in Yunnan maintain a high speed increase of nearly 20% during the first three years of 12th Five Year Plan.

According to statistics, there are 6,559 kinds of Chinese herbal medicine resources in Yunnan, accounting for 51.4% of the total number of Chinese herbal medicines in China. In 2015, the total income of main business of biopharmaceutical and big health industry in Yunnan reached 180.1 billion yuan, among of which main business of biopharmaceutical industry was 72.3 billion yuan, major pharmaceutical trade companies was 48.2 billion yuan, medical service and healthcare industry was 59.6 billion yuan.

In 2016, the main business income of biomedicine and health industry in Yunnan reached around 209 billion yuan. Biopharmaceutical and big health industry have become an emerging industry with the most potential.

Since the focus of the industry in Yunnan is on TCM, which is less relevant to Israel, I will not elaborate on their policies, except for the measures part, which does have some relevancy to us.

Measures

1) Promote the construction of medical service system and elevate the medical service ability by encouraging the establishment of medical centers, the third party medical diagnostic institutions; promoting the development of high-end medical services regarding stem cell, tumor and immunology therapy; strengthening the development of TCM; optimizing women and children healthcare sources; establishing multi service models of “internet+medical”.

2) Promote the protection and development of traditional Chinese medicine by establishing seed cultivation bases and production bases; strengthening the development of national pharmaceuticals; supporting TCM hospitals and national hospitals to research on reliable high value added preparations, etc.

3) Continuously elevate the ability and level of industry development by improving the original innovation ability on key project research; encouraging stem cell clinical research and applications and establishing the DNA diagnosis pilot center, etc.
4) Build up talents teams and promote talents import project by strengthening the training and cultivation of physicians of Pediatrics, Obstetrics, rehabilitation; establishing a service platform of talents exchanging, etc.

5) Emphasize on policy guidance and coordination by encouraging tier three hospitals to cooperate with the third party inspection agency and importing well known DNA detection institutions both nationally and internationally to build a high level DNA technology detection technology platform.

iv. Guizhou Policy

1. Healthcare

Goals

By 2020, the basic medical and health system will cover both rural and urban residents, everyone has access to basic medical and health services. The average life expectancy in Guizhou will reach 75 years, the infant mortality rate, mortality rate of children under 5 years old will be in control of 7.5 ‰ and 9.5 ‰. Personal health spending accounted for the proportion of total health expenditure will decrease to around 26%.

Key tasks

1) Establish scientific and reasonable hierarchical diagnosis system. Take common disease, chronic disease as a breakthrough in building up hierarchical diagnosis system through various forms like family doctor services, city medical group, cross regional alliance, remote medical specialist collaboration, etc.
   • Improve the medical and health service system, prioritize medical resources.
     ➢ Control the number scale of public hospitals.
     ➢ Emphasize on the development of telemedicine.
     ➢ Encourage social capital invest in medical inspection institution, pathological diagnosis institutions, medical imaging institutions, disinfection supply agencies and blood purification institutions.
   • Improve the medical service capability in grass root medical institutions
   • Promote the construction of “Yilianti”
     ➢ All the class A hospitals should play a leading role in building a reasonable and effective framework of “Yilianti”.
➢ Full implementation of setting up medical community in county by county hospitals and township hospitals.
➢ Promoting family doctor services focusing on high blood pressure, diabetic, tuberculosis patients and elderly people, children, maternal, the disabled floating people etc.

2) Establish a scientific modern hospital management system
3) Establish a highly efficient universal medical insurance system
4) Build up a standardized and orderly supply system for drug supply
   • Support and encourage Guizhou enterprises to carry out consistent evaluation of efficacy of the quality of generic drugs
   • Deepen the reform of drug circulation system. Promote “two vote system”. All the public medical institutions should practice “two vote system” for drug procurement.
5) Accelerate the formation of multiple medical pattern. Encourage social capital to invest in non-profit medical institutions.
   • Support the construction of elderly people caring community, rehabilitation and health check institution, rehabilitation management, medical care institution, recreation and rehabilitation facilities.
   • Actively develop internet based health services, promote the deep integration of health services and IT like cloud computing, big data, mobile internet and IOT.
6) Practice the construction of health and medical informatization
   • Speed up the construction of regional national health information platform, set up the national health information standardization system covering data, application, management and safety, etc.
   • Accelerate the construction of the provincial health big data center and system.
   • Promote the application of health big data.
      ➢ Expedite the integration of the resident health card and social security card.
      ➢ Encourage medical institutions to extend services based on internet+diagnosis, rehabilitation and prevention.
      ➢ Relying on the “health care cloud” and “cloud Guizhou” platforms, Guizhou will build the provincial healthcare block chain.

2. Life science industry
There are 7 major categories of pharmaceutical industry in Guizhou: TCM products, TCM pieces, chemical API and preparations, biopharmaceutical products, medical equipment, pharmaceutical packaging materials & medical materials, Chinese herbal medicine breeding industry. In 2016, Guizhou has 254 pharmaceutical enterprises, of which 155
pharmaceutical manufacturing enterprises, 36 hi-tech medicine enterprises and 38 medical R&D platforms.

Pros: Guizhou is one of the four major Chinese herbal breeding bases in China. There are 4802 kinds of Chinese herbs grew in Guizhou, which accounts for 40% of the total kinds of Chinese herbs in China, ranked the 2nd place in China. Besides, Guizhou is famous for national medicine. Miao medicine, which is one kinds of national medicine, reached the highest sales of national medicines in China. The development speed of pharmaceutical industry is very fast in recent years.

Cons: there is a big gap between Guizhou and national level regarding the development of pharmaceutical industry. The total scale ranked No. 24 in China. The development of chemical drugs, biologicals and medical equipment lag far behind while TCM and national medicine take up 90% of the total industry. Lack of innovation capability.

Since the focus of the industry in Guizhou is on TCM, which is less relevant to Israel, I will not elaborate on their policies, except for the measures part, which does have some relevancy to us.

**Measures**

1) Further develop TCM and national medicine. Give priority to the support of exclusive and large varieties, and focus on the development of major diseases medicines for tumor, cardiovascular and cerebrovascular diseases.

2) Cultivate and develop biopharmaceuticals, importing biological products like placental polypeptide injection, Human prothrombin complex, human hepatitis B immunological and human nerve growth factor injection. Vigorously develop new vaccines and diagnostic reagents to prevent and diagnose major infectious diseases and accelerate the formation of a number of biological innovative medicines in genetic engineering, enzyme engineering, fermentation engineering and so on.

3) Strengthen the development of chemical drugs.

4) Elevating the development of medical device and medical materials. Give full play to the advantages of Guizhou’s military enterprises, promote civil military integration, focus on developing and producing digital and intelligent medical devices such as medical oxygen pressurized cabin and electric wheelchair smart control system, etc.

5) Cultivate dominant variety focusing on major diseases like tumor and cardiovascular.
6) Enhance the innovation capability by promoting the cooperation among university, R&D center and production, supporting the construction of sources banks of human stem cells, TCM, national medicine, medicine herbs, animal etc.

7) Improve the market system by extending the sales network of pharmaceuticals, medical devices and health services to rural market.

<table>
<thead>
<tr>
<th>Contact the Drug Purchase Center in the Commission</th>
<th>Prepare the application materials upon the Center’s requirements</th>
<th>The Center allows the application materials to be published on the bidding website</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>If bid successfully, the medical device can be included in the centralized procurement list</td>
</tr>
</tbody>
</table>
III. Major players in SWC

i. Sichuan

1. Government

<table>
<thead>
<tr>
<th>No.</th>
<th>Name of organization</th>
<th>Responsibilities</th>
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<tbody>
<tr>
<td>1</td>
<td>Sichuan Health and Family Planning Commission</td>
<td>Draft the mid-term and long term development plan of health and family planning; Guide the administrative examination and approval; work on the regulations, policies and measures for emergency medicine, major diseases and heavy infectious diseases; implement the relevant norms and standards of medical institutions, medical technology applications, medical quality, medical safety, medical services, etc.</td>
</tr>
<tr>
<td>2</td>
<td>Sichuan Provincial Economic and Information Commission</td>
<td>Responsible for the development strategy and major policies of new type industry; responsible for the promotion of technological transformation of all the enterprises in Sichuan; initiating the development industrial parks; managing the overall development of all the industries in Sichuan.</td>
</tr>
<tr>
<td>3</td>
<td>Sichuan Food and Drug Administration</td>
<td>Supervise the management norms of the R&amp;D, production, sales and quality of drugs and medical equipment; organize and implement the inspection system for the supervision and management of food, medicine, medical equipment and cosmetics.</td>
</tr>
</tbody>
</table>
2. **Associations**

<table>
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<tr>
<th>No.</th>
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<tbody>
<tr>
<td>1</td>
<td>Sichuan Province Medicine Development and Promotion Association</td>
<td>Sichuan Province medicine Development and Promotion Association was initiated by Sichuan Kelun Pharmaceutical, Sichuan Kechuang Pharmaceutical, Sichuan Good Doctor Pharmaceutical, Sichuan Tongdao Pharmaceutical, Sichuan Hebang Pharmaceutical and Chengdu Rongyao Pharmaceutical Co., Ltd. It was founded in June 2013.</td>
</tr>
<tr>
<td>2</td>
<td>Sichuan Medical Device Industry Association</td>
<td>The Association was founded in October 1999, mainly providing management and consultancy services to its members.</td>
</tr>
<tr>
<td>3</td>
<td>Sichuan Association of Pharmaceutical Commerce</td>
<td>Founded in 1988, Sichuan Association of Pharmaceutical Commerce has more than 100 member companies.</td>
</tr>
<tr>
<td>4</td>
<td>Chengdu Association of Medical Equipment Industry</td>
<td>Chengdu Association of Medical Equipment Industry is a non-profit social association, a consultant of government decision, and a helper of administration, connecting government and medical equipment enterprises.</td>
</tr>
<tr>
<td>5</td>
<td>Chengdu Health Service Industry Chamber of Commerce</td>
<td>Founded in 2015, Chengdu Health Service Industry Chamber of Commerce has over 240 member companies covering biopharmaceutical, medical equipment, medical investment, medical services and medical cosmetology.</td>
</tr>
</tbody>
</table>
### 3. Major hospitals

<table>
<thead>
<tr>
<th>No.</th>
<th>Name of organization</th>
<th>Responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>West China Hospital, Sichuan University</td>
<td>3(^{rd}) grade class A hospital. WCH is one of the largest single-site hospitals in the world and a leading medical center of West China, treating complicated and severe cases, especially in the fields of living donor liver transplantation, severe acute pancreatitis, and clinical anesthesia.</td>
</tr>
<tr>
<td>2</td>
<td>West China Second University Hospital/West China Women’s and Children’s Hospital</td>
<td>3(^{rd}) grade class A hospital. The West China Second University Hospital of Sichuan University (WCSUH- SCU), also known as West China Women’s and Children’s Hospital, Sichuan University, is directly supervised by the National Health and Family Planning Commission of China.</td>
</tr>
<tr>
<td>3</td>
<td>Sichuan Academy of Medical Sciences &amp; Sichuan Provincial People’s Hospital</td>
<td>The hospital is the center of clinical service and research, one of National Top Hundred Excellent Hospitals, the National Class A of the Third Grade Hospital, the International SOS Network Hospital of MOH, the Pilot Digital Hospital of MOH, the Provincial Post-Doctoral Research Workstation, etc. It is also the largest Geriatric Health Care Base in Western China.</td>
</tr>
<tr>
<td>4</td>
<td>Angel Women’s and Children’s Hospital</td>
<td>The hospital focuses on obstetrics and gynecology and neonatology services to both Chinese and foreign families. In 2012, the hospital got JCT certificate, became the 15(^{th}) JCI hospitals in China.</td>
</tr>
</tbody>
</table>
The hospital is a 2nd grade class B comprehensive hospital consisting of medical, nursing, scientific research and teaching.

Chengdu Aier Eye Hospital is founded in 2002. It has developed into an international hospital by exporting its technology to European market for the prevention of blindness.

### 4. Companies

<table>
<thead>
<tr>
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<th>Name of organization</th>
<th>Highlights</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Sichuan Kanghong Pharmaceutical Co., Ltd.</td>
<td>Kanghong Pharmaceutical is a group focusing on Chinese patent drugs, chemical drugs and R&amp;D, production, sales and after-sales services of biologics. There are altogether 3 production bases for Chinese patent drug, chemical drugs and biologics in Sichuan. Kanghong Pharma will invest $7 million in IOPtima for 19% of that company's shares at a $30 million company value. The Chinese company will receive an exclusive license to market IOPtima's product in China.</td>
</tr>
<tr>
<td>2</td>
<td>Sichuan Haisco Pharmaceutical Group Co., Ltd.</td>
<td>Haisco Pharmaceuticals, founded in 2000, is a public listed company focusing on R&amp;D of therapeutic new drugs. Meanwhile Haisco Pharmaceuticals has outstanding capability of marketing and sales. Haisco Pharmaceuticals ranks No.3 in chemical pharmaceutical industry of China. It has already invested 5 Israeli companies, covering Cardiovascular, Robotic surgery, Orthopedics fields.</td>
</tr>
<tr>
<td></td>
<td>Company Name</td>
<td>Description</td>
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</tr>
<tr>
<td>3</td>
<td>Sichuan Kelun Group</td>
<td>Founded in 1996, Kelun Group has developed into a modern pharmaceutical group, with more than 90 subsidiaries (branches) both at home and abroad; all this rapid development took place within 19 years.</td>
</tr>
<tr>
<td>4</td>
<td>Good Doctor Pharmaceutical Group Co., Ltd.</td>
<td>Established in 1988, the group has developed into a modernized pharmaceutical group with 28 wholly owned subsidiaries, 8 GMP manufacturing companies, 2 GAP planting and breeding bases.</td>
</tr>
<tr>
<td>5</td>
<td>Sichuan Yuanda Shuyang Pharmaceutical Co., Ltd.</td>
<td>Sichuan Yuanda Shuyang Pharmaceutical Co., Ltd. (SHUYANG) founded in 1985, was an army-owned enterprise. SHUYANG has total assets of RMB 1.1 billion and its manufacturing base is located in high-tech zone of Chengdu city. SHUYANG has 13 plasmapheresis stations in Sichuan and Guangxi province. Its average annual sales value is above RMB 600 million and profit tax over 80 million per year. Its sales network covers all over the country and successfully enters into international market.</td>
</tr>
<tr>
<td>6</td>
<td>Chengdu Brilliant Pharmaceutical Group Inc.</td>
<td>Founded in 2007, Chengdu Brilliant Pharmaceutical Group, Inc. is one of the top 100 pharmaceuticals in China, a modern pharmaceutical enterprise that combine research and development, production, and sales.</td>
</tr>
<tr>
<td>7</td>
<td>Alltech Medical Systems Co., Ltd.</td>
<td>AllTech’s multinational leadership and development team members average more than 20 years of experience in the field of diagnostic medical imaging.</td>
</tr>
<tr>
<td>8</td>
<td>Macurra Biotechnology</td>
<td>Maccura Biotechnology Co., Ltd. was incorporated in 1994. It focuses on In-Vitro Diagnostic reagents’ development, manufacture, marketing and service.</td>
</tr>
</tbody>
</table>
### ii. Chongqing

1. **Government**

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<th>No.</th>
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<tbody>
<tr>
<td>1</td>
<td>Chongqing Health and Family Planning Commission</td>
<td>Draft the mid-term and long term development plan of health and family planning; Guide the administrative examination and approval; work on the regulations, policies and measures for emergency medicine, major diseases and heavy infectious diseases; implement the relevant norms and standards of medical institutions, medical technology applications, medical quality, medical safety, medical services, etc.</td>
</tr>
<tr>
<td>2</td>
<td>Chongqing Economic and Information Commission</td>
<td>Responsible for the development strategy and major policies of new type industry; responsible for the promotion of technological transformation of all the enterprises in Chongqing; initiating the development industrial parks; managing the overall development of all the industries in Chongqing.</td>
</tr>
</tbody>
</table>

#### 9 Shifeng Medical Apparatus and Instrument

Chengdu Xinjin Shifeng Medical Apparatus & Instrument Co., Ltd is the largest specialized manufacturer of sterile medical apparatus and instrument in western China.

#### 10 Kechuang Holding Group

Kechuang Holding Group is a large scale comprehensive private enterprise with 288 wholly owned companies and holding subsidiaries. Its total asset is above 51 billion yuan. It owns over 20,000 employees.
Chongqing Food and Drug Administration
Supervise the management norms of the R&D, production, sales and quality of drugs and medical equipment; organize and implement the inspection system for the supervision and management of food, medicine, medical equipment and cosmetics.

2. Association

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<tr>
<td>1</td>
<td>Chongqing Association for Medical Instrument Industry</td>
<td>Founded in 2005, the Association has over 500 member companies including medical device manufacturing companies, institutes, R&amp;D institutes, inspection units, medical institutions etc.</td>
</tr>
<tr>
<td>2</td>
<td>Chongqing Pharmaceutical Industry Association</td>
<td>Founded in 2002, the Association has over 152 members, supervised by Chongqing FDA.</td>
</tr>
<tr>
<td>3</td>
<td>Chongqing Hi-tech Enterprise Association</td>
<td>Chongqing Hi-tech Enterprise Association, registered at Chongqing Civil Affairs Bureau, directed by Chongqing Science &amp; Technology Commission, is a non-profit, regional and federal association voluntarily organized by companies, institutions and individuals committing to hi-tech industry developing.</td>
</tr>
</tbody>
</table>
3. Major hospitals

<table>
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<tr>
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<th>Responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Chongqing Hospital Group of the 1st Affiliated Hospital of Chongqing Medical University</td>
<td>The hospital was established by a Shanghai 1st Medical College (now Fudan University) in 1957. It has developed into the first batch of 3rd grade class A hospital consisting of medical, teaching, scientific research, finance, prevention, health care, etc. There are 3200 beds in the headquarter hospital.</td>
</tr>
<tr>
<td>2</td>
<td>Chongqing Xinqiao Hospital Army Medical University</td>
<td>Founded in 1944, Xinqiao Hospital is the 2nd Affiliated Hospital of Army Medical University. It’s the 1st batch of “designated hospital for foreigners” in Chongqing and a 3rd grade class A hospital with 2860 beds.</td>
</tr>
<tr>
<td>3</td>
<td>The 1st Hospital Affiliated to Army Medical University (Southwest Hospital)</td>
<td>It was founded in 1941 in Chongqing. It’s a comprehensive 3rd grade class A hospital with 2900 beds.</td>
</tr>
<tr>
<td>4</td>
<td>Chongqing Ren’ai Hospital</td>
<td>Chongqing Ren’ai Hospital is focusing on women diseases.</td>
</tr>
<tr>
<td>5</td>
<td>Chongqing Tongji Hospital</td>
<td>The hospital is a comprehensive private hospital of clinical, prevention, health care and rehabilitation. 200 beds.</td>
</tr>
<tr>
<td>6</td>
<td>Chongqing Huaxi Maternity Hospital</td>
<td>The hospital is an integrated obstetrics and gynecology hospital of medical, clinical, prevention and health care.</td>
</tr>
</tbody>
</table>
4. Companies

<table>
<thead>
<tr>
<th>No.</th>
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</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Taiji Group</td>
<td>Taiji Group Co., Ltd. is one of China’s top fortune 500 enterprises. It is ranked amongst the top 10 in China’s pharmaceutical industry, with assets of RMB 20 billion.</td>
</tr>
<tr>
<td>2</td>
<td>Chongqing Zhifei Bio-pharmaceutical Co., Ltd.</td>
<td>Chongqing Zhifei was founded in 2002 with a registered capital of 800 million yuan, 1,000 employees and total assets of 2.5 billion yuan. The company listed on Shenzhen stock exchange in September 2010. It is the first private vaccine enterprise listed on GEM.</td>
</tr>
<tr>
<td>3</td>
<td>Yao Pharma Co., Ltd.</td>
<td>YaoPharma is a pharmaceutical manufacturer integrating R&amp;D, manufacturing and marketing &amp; sales functions, with multiple subsidiaries, and fully complying with Chinese GMP. Its oral solid line passed GMP inspection from Health Canada and US FDA; its API site passed GMP inspection from US FDA, EU EDQM, Australia TGA and Japan PMDA, etc.</td>
</tr>
<tr>
<td>4</td>
<td>Chongqing Bio-Pharmaceutical Co., Ltd.</td>
<td>Founded in 1995, the company is a pharmaceutical company focusing on the R&amp;D, production and sales of plant medicine and biological medicine. It has developed 13 biological drugs and innovative medical equipment.</td>
</tr>
<tr>
<td>5</td>
<td>Huapont Life Sciences Co., Ltd.</td>
<td>Huapont Life Sciences Co., Ltd. is an enterprise listed on the small and medium sized board of Shenzhen stock exchange market, focusing on pharmaceutical production, health care, agrochemical and tourism, etc.</td>
</tr>
<tr>
<td></td>
<td>Company Name</td>
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</tr>
<tr>
<td>6</td>
<td>Chongqing Pharscin Pharmaceutical (Group) Co., Ltd.</td>
<td>Founded in 1996, the group has created an asset of 680 million Yuan. It’s a national key Hi-tech enterprise of medical R&amp;D, medical production and sales.</td>
</tr>
<tr>
<td>7</td>
<td>Chongqing Lummy Pharmaceutical Co., Ltd.</td>
<td>Chongqing Lummy Pharmaceutical Co., Ltd. is a high-tech pharmaceutical enterprise involving pharmaceutical R&amp;D, manufacture and sales, which was established in 1999, Chongqing. Lummy went public on Shenzhen GEM Stock market (Code: 300006) in October, 2009. The company total assets are 2.194 billion Yuan.</td>
</tr>
<tr>
<td>8</td>
<td>Chongqing Chemical and Pharmaceutical Group</td>
<td>Founded in August of 2000, the Group is a large fully state-owned holding group invested and sponsored by Chongqing Municipal Government. It has 33 subsidiaries. There are over 35,000 employees working in wholly-owned and controlled subsidiaries. In 2015, the total sales revenue of the Group has reached 54 billion RMB, the total assets has exceeded 70 billion RMB.</td>
</tr>
<tr>
<td>9</td>
<td>Jinshan Science &amp; Technology (Group) Co., Ltd</td>
<td>The company is one of the largest manufacture and developer of GI medical devices in the world. Founded in 1998, we’re the second in the world to have developed Capsule Endoscopy.</td>
</tr>
<tr>
<td>10</td>
<td>Chongqing Hualun Medical Equipment Co., Ltd.</td>
<td>It mainly engaged in the R&amp;D, production, sales and services of medical equipment, electrical instrument, bio-technology products. It’s recognized by the Chongqing Municipal Government of Chongqing as the core enterprise of innovation strategic alliance of medical device industry.</td>
</tr>
</tbody>
</table>
11 Tiansheng Pharmaceutical Co., Ltd. Founded in 2001, Tiansheng Pharmaceutical Co., Ltd. has developed into a comprehensive pharmaceutical enterprise covering drug production, circulation, Chinese herbs planting and processing and R&D.

12 Kerui Pharmaceutical Co., Ltd. Kerui Pharmaceutical Co., Ltd. is a hundred years’ history of modern pharmaceutical enterprise, affiliated to the Chongqing Chemical Group.

iii. Yunnan
1. Government

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<tr>
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<tr>
<td>1</td>
<td>Yunnan Health and Family Planning Commission</td>
<td>Draft the mid-term and long term development plan of health and family planning; Guide the administrative examination and approval; work on the regulations, policies and measures for emergency medicine, major diseases and heavy infectious diseases; implement the relevant norms and standards of medical institutions, medical technology applications, medical quality, medical safety, medical services, etc.</td>
</tr>
<tr>
<td>2</td>
<td>Yunnan Industry and Information Commission</td>
<td>Responsible for the development strategy and major policies of new type industry; responsible for the promotion of technological transformation of all the enterprises in Yunnan; managing the overall development of all the industries in Yunnan.</td>
</tr>
<tr>
<td>3</td>
<td>Yunnan Food and Drug Administration</td>
<td>Supervise the management norms of the R&amp;D, production, sales and quality of drugs and medical equipment; organize and implement the inspection system for the supervision and management of food, medicine, medical equipment and cosmetics.</td>
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2. **Associations**

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<tbody>
<tr>
<td>1</td>
<td>Yunnan Medicine Chamber of Commerce</td>
<td>Yunnan Medicine Chamber of Commerce, established on Sept 10, 2012, is one of the largest chamber of commerce in Yunnan. By the end of 2014, it has 104 members.</td>
</tr>
<tr>
<td>2</td>
<td>Yunnan Medical Device Industry Association</td>
<td>Medical Device Industry Association, founded on March 4, 2016 in Kunming, was initiated by Yunnan Baiyao, Yunnan Sanxin Medtec, etc.</td>
</tr>
<tr>
<td>3</td>
<td>Yunnan Association of Medicine Circulation Industry</td>
<td>Yunnan Association of Medicine Circulation Industry, founded on April 29, 2014, is a non-profit, legal-independent and inter-departmental association voluntarily organized by enterprises engaged in medicine retail and wholesale. Currently, it has 75 members.</td>
</tr>
</tbody>
</table>

3. **Major hospitals**

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</thead>
<tbody>
<tr>
<td>1</td>
<td>1(^{st}) Affiliated Hospital of Kunming Medical University</td>
<td>Founded in 1941, the hospital is a large comprehensive hospital of medical, teaching, R&amp;D, and health care. It has 300 beds, 5 national key specialties, 24 provincial clinical specialties and 30 R&amp;D institutions.</td>
</tr>
<tr>
<td>2</td>
<td>The 1(^{st}) People’s Hospital of Yunnan Province</td>
<td>Founded in 1939, the hospital has developed into a comprehensive hospital focusing on difficult and critical disease and designated hospital for international rescue. It has 2400 beds.</td>
</tr>
<tr>
<td>No.</td>
<td>Name of organization</td>
<td>Highlights</td>
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</tr>
<tr>
<td>3</td>
<td>2nd Affiliated Hospital of Kunming Medical University</td>
<td>Founded in 1952, the hospital is the “national top 100 hospital” and international SOS net hospital.</td>
</tr>
<tr>
<td>4</td>
<td>Kunming Tongren Hospital</td>
<td>It is invested by Beijing Tongren Medical Industrial Group. The hospital is built at a standard of 3rd grade class A hospital. It is a comprehensive medical care center of medical, teaching, R&amp;D, nursing, prevention, rehabilitation and international communication.</td>
</tr>
<tr>
<td>5</td>
<td>Yunnan Boya Hospital</td>
<td>The hospital is built according to the standard of 3rd grade hospital and international JCI standard. With an investment of 600 million yuan, the hospital has 600 beds and a construction area of 60000 sqm. Its focus is kidney and heart.</td>
</tr>
<tr>
<td>6</td>
<td>Xuanwei Yunfeng Hospital</td>
<td>The hospital is the 2nd grade class A hospital. It was founded in 1970. It’s a comprehensive hospital of medical, prevention, health care and teaching. It has 400 beds.</td>
</tr>
</tbody>
</table>

### 4. Companies

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</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Yunnan Baiyao Group</td>
<td>Yunnan Baiyao Group is the largest traditional Communications manufacturer and is leading the world in researching the powers of herbs for treatment of blood circulation disorders and wound healing.</td>
</tr>
<tr>
<td>No.</td>
<td>Company Name</td>
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</tr>
<tr>
<td>2</td>
<td>Kunming Pharmaceutical Inc.</td>
<td>The company was established in 1951. It is listed as one of the new key national high-tech companies and one of the Top 100 companies in the Chinese medical industry, focusing on innovative natural botanical drugs and integrates R&amp;D, production, marketing, commercial wholesales and international marketing.</td>
</tr>
<tr>
<td>3</td>
<td>Yunnan Dianhong Pharmaceutical Co., Ltd.</td>
<td>Yunnan Dianhong Pharmaceutical Co., Ltd., formerly known as Dianhong Natural Drug, was set up in 1993. It was formally registered as Sino-American Kunming Dianhong Pharmaceutical Co., Ltd. in 1997. On February 27, 2014, it was purchased by Bayer Group. It owns over 3,000 employees.</td>
</tr>
<tr>
<td>4</td>
<td>Kunming Longjin Pharmaceutical Co., Ltd.</td>
<td>Kunming Longjin Pharmaceutical Co., Ltd. was set up in 1996 with a registered capital of 50 million yuan. The company is a hi-tech pharmaceutical company focusing on the development, production and sales of natural plant medicine and chemical lyophilized powder for injection.</td>
</tr>
<tr>
<td>5</td>
<td>Yunnan Hong Xiang Pharmaceutical Co., Ltd.</td>
<td>Set up in 1981, Yunnan Hong Xiang Pharmaceutical has developed into a big shareholding group integrating TCM plantation, medicine R&amp;D, retail chain operation and medical industry. It owns over 10 subsidiaries and 3,600 Yi Xin Tang chain drug stores in Yunnan, Guizhou, Guangxi, Sichuan, Shanxi, Chongqing, Tianjin, Shanghai and Hainan. It listed on the Shenzhen Stock Exchange small and medium board (Stock Code: 002727).</td>
</tr>
</tbody>
</table>
Walvax Biotechnology Co., Ltd. was founded in 2001, which is a modern biological pharmaceutical enterprise engaged in R&D, production and sales of bio-medicine products. Walvax is a National Validated High-tech Enterprise and Enterprise Technical Center.

As the first Sino-foreign joint venture in the pharmaceutical industry of Yunnan Province, (Sino-US Joint Venture) Kunming Baker Norton Pharmaceutical Co., Ltd. (KBN) is a national high-tech enterprise and foreign-funded enterprises. It was jointly founded in 1992 by KPC (Kunming Pharmaceutical Corporation) and Teva Pharmaceutical Industries Ltd. (TEVA).

Founded in 2011, Yunnan Medical Investment Management Co., Ltd. is the wholly owned subsidiary of Yunnan Investment Group. It has a total assets of 20.4 billion yuan with a registered capital of 2.17 billion yuan.

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<tr>
<td>6</td>
<td>Yunnan Walvax Biotechnology Co., Ltd.</td>
<td>Walvax Biotechnology Co., Ltd. was founded in 2001, which is a modern biological pharmaceutical enterprise engaged in R&amp;D, production and sales of bio-medicine products. Walvax is a National Validated High-tech Enterprise and Enterprise Technical Center.</td>
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<td>7</td>
<td>KBN</td>
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<td>Yunnan Medical Investment Management Co., Ltd.</td>
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iv. Guizhou

1. Government

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<tr>
<td>1</td>
<td>Guizhou Health and Family Planning Commission</td>
<td>Draft the mid-term and long term development plan of health and family planning; Guide the administrative examination and approval; work on the regulations, policies and measures for emergency medicine, major diseases and heavy infectious diseases; implement the relevant norms and standards of medical institutions,</td>
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medical technology applications, medical quality, medical safety, medical services, etc.

2. Guizhou Economy and Information Commission

- Responsible for the development strategy and major policies of new type industry;
- responsible for the promotion of technological transformation of all the enterprises in Guizhou; managing the overall development of all the industries in Guizhou.

3. Guizhou Food and Drug Administration

- Supervise the management norms of the R&D, production, sales and quality of drugs and medical equipment; organize and implement the inspection system for the supervision and management of food, medicine, medical equipment and cosmetics.

2. Associations

<table>
<thead>
<tr>
<th>No.</th>
<th>Name of organization</th>
<th>Highlights</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Guizhou Medical Equipment Industry Association</td>
<td>Guizhou Medical Equipment Industry Association, directed by Guizhou Food and Drug Administration, is a non-profit regional association voluntarily organized by enterprises, institutions and individuals engaged in medical equipment producing, managing and application.</td>
</tr>
<tr>
<td>2</td>
<td>Guizhou Federation of Industry and Commerce</td>
<td>Guizhou Federation of Industry and Commerce was founded in May 5, 1955. By 2008, it has has 98 organizations above the county level, 103,580 members (of which 10,225 companies, 774 group members and 85448 individual members</td>
</tr>
</tbody>
</table>
3. Guizhou Big Health Pharmaceutical Industry Alliance
   Founded in 2015, the Alliance includes 11 industry associations related to big health industry, over 30 key drug companies, more than 20 food health products, new resource food enterprises, 10 large healthcare leisure and health tourism complexes, etc.

4. Guizhou Pharmaceutical Industry Association
   Founded in 2004, the Association is guided by Guizhou Economy and Information Commission. It has over 100 member companies in the fields of pharmaceutical industry, commerce, pharma machinery, TCM and processing, biotechnology, etc.

3. Major hospitals

<table>
<thead>
<tr>
<th>No.</th>
<th>Name of organization</th>
<th>Responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The Affiliated Hospital of Guizhou Medical University</td>
<td>Founded in 1941, it is the strongest comprehensive hospital in Guizhou. It has 3000 beds and 4358 employees. It has the largest clinical inspection center, sterilized center and health check center in Guizhou.</td>
</tr>
<tr>
<td>2</td>
<td>The 1st Affiliated Hospital of Guiyang Chinese Medicine College</td>
<td>It’s a 3rd grade class A hospital specialize in orthopedics, eye diseases and thyroid disease. It has 600 beds.</td>
</tr>
<tr>
<td>3</td>
<td>Guizhou Provincial People’s Hospital</td>
<td>It’s a comprehensive 3rd grade class A hospital integrating medical, teaching, R&amp;D, health care, prevention, rehabilitation and emergency. There are 3000 beds and 4200 employees.</td>
</tr>
<tr>
<td>No.</td>
<td>Name of organization</td>
<td>Highlights</td>
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</tr>
<tr>
<td>4</td>
<td>Guizhou Cancer Hospital/ Cancer Hospital of Guizhou Medical University</td>
<td>Founded in 2007, the hospital is a 3rd grade class A hospital specialized in cancer. It’s the Deputy Director General of the China Western Radiotherapy Association. It has 500 beds.</td>
</tr>
<tr>
<td>5</td>
<td>Guizhou Limacon Hospital</td>
<td>Guizhou Limacon Hospital Co., Ltd. is a listed company integrating medical, education, training, material production process and finance.</td>
</tr>
<tr>
<td>6</td>
<td>Guiyang Baiyun Cardiovascular Hospital</td>
<td>Its predecessor is Guiyang Baiyun District 1st People’s Hospital (a 2nd grade class A hospital). It’s reformed in 2016 and specialized in cardiovascular and information management.</td>
</tr>
</tbody>
</table>

### 4. Companies

<table>
<thead>
<tr>
<th>No.</th>
<th>Name of organization</th>
<th>Highlights</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Guizhou Yibai Pharmaceutical Co., Ltd.</td>
<td>Guizhou Yibai Pharmaceutical Co., Ltd. is a high-tech enterprise integrating the research, development, production and sale of new drugs. Founded on June 12, 1995, it became a joint-stock company in November 2000.</td>
</tr>
<tr>
<td>2</td>
<td>Guizhou Bailing Pharmaceutical Co., Ltd.</td>
<td>The group is composed of 7 pharmaceutical companies with total assets of 3.57 billion Yuan and a net sales avenue of 1.57 billion Yuan in 2014. There are altogether 12 kinds of production preparations.</td>
</tr>
<tr>
<td></td>
<td>Company Name</td>
<td>Details</td>
</tr>
<tr>
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</tr>
<tr>
<td>3</td>
<td>Guizhou Xinbang Pharmaceutical Co., Ltd.</td>
<td>Guizhou Xinbang Pharmaceutical Co., Ltd. was founded in 1995. It successfully listed on Shenzhen Stock Exchange on April 16, 2014 (stock code: 002390). The company has a registered capital of 1.7 billion yuan and total assets of 10.17 billion yuan. The company has developed into an industrial group of medical industry, health care and pharmaceutical distribution.</td>
</tr>
<tr>
<td>4</td>
<td>Guizhou Hanfang Pharmaceutical Co., Ltd.</td>
<td>The company is founded in 1992. It focuses on the breeding and planting of Chinese herbs, R&amp;D and production of preparations. It has a total assets of 80.69 million yuan.</td>
</tr>
<tr>
<td>5</td>
<td>Guizhou Guoyao Group Tongjitang (Guizhou) Pharmaceutical Co., Ltd.</td>
<td>The company directly subordinates to Sino Pharmaceutical Group, with a total asset of 500 million Yuan. There are 4 wholly owned subsidiaries in addition to 2 medical plants in Guiyang, and an orthopedics’ Chinese medicine production base is under the construction, which is the 3rd largest solid preparation production base in southwestern China.</td>
</tr>
<tr>
<td>6</td>
<td>Guizhou Shenqi Pharmaceutical Co., Ltd.</td>
<td>Shenqin Pharmaceutical has been developed for over 20 years, concentrating on the R&amp;D, production and sales of anti-cancer, cardio cerebral vessel, cold&amp; coughs children medicine and antimitotic medicine. The company will expand its businesses through investment, cooperation, merger and recombination.</td>
</tr>
</tbody>
</table>
Guizhou Jingfeng Injection Co., Ltd. was founded in 2010. It is a professional medicine manufacturing enterprises, which takes innovative drugs as the core and the first generic drugs as the mainstream. The product category is cardio vascular and others.

### IV. Exhibitions and Conventions

<table>
<thead>
<tr>
<th>No.</th>
<th>Date</th>
<th>Place</th>
<th>Exhibition/Convention</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>March 9-11, 2018</td>
<td>Chengdu, Sichuan</td>
<td>Healthcare Expo China West</td>
</tr>
<tr>
<td>2</td>
<td>March 16-18, 2018</td>
<td>Chongqing</td>
<td>The 26th Middle West (Chongqing) Medical Expo</td>
</tr>
<tr>
<td>3</td>
<td>March 22-24</td>
<td>Guiyang, Guizhou</td>
<td>The 19th China (Guiyang) International Medical Equipment and Technology Expo</td>
</tr>
<tr>
<td>4</td>
<td>April 25-28, 2018</td>
<td>Chengdu, Sichuan</td>
<td>2018 Dental Show West China</td>
</tr>
<tr>
<td>5</td>
<td>June 22-24</td>
<td>Chengdu, Sichuan</td>
<td>The 8th Chengdu Jinsha Geriatrics Forum (held by West China Hospital)</td>
</tr>
<tr>
<td>6</td>
<td>October, 2018</td>
<td>Chengdu, Sichuan</td>
<td>The 2nd Session of China (Sichuan) Aging Elderly Service Industry Expo</td>
</tr>
<tr>
<td>7</td>
<td>November, 2018</td>
<td>Chengdu, Sichuan</td>
<td>2018 China (Chengdu) International Emergency Equipment Technology Exhibition</td>
</tr>
<tr>
<td>8</td>
<td>November 8-12, 2018</td>
<td>Kunming, Yunnan</td>
<td>2018 China Kunming International Regimen and Healthcare for the Elderly Expo</td>
</tr>
</tbody>
</table>
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