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SPECIAL ISSUES

Venture Capital Fund for Start-ups

Chinese Ministry of Finance and Ministry of Science and Technology issued on July 6, 2007 an interim method to manage the fund for investing in small and medium-sized enterprises. The state treasury will make RMB100 million available to establish China ‘s first national fund for the purpose in 2007.

The fund is designed to support capital needs of start-ups in following manners: 1) conditional shareholding. The fund makes an equity investment in a start-up. The investment will be withdrawn in a time and under a condition agreed upon. The mode is desirable for supporting newly established venture capital firms, in an attempt to increase the total investment destined to small and medium-sized enterprises; 2) joint investment. The fund and venture capital firm will make a joint investment in small and medium-sized start-ups. The investment will be manly made to support the existing venture capital firms, in an effort to reduce their risks; 3) risk subsidies. Subsidies will be made to a venture capital firm that has made an investment in small and medium-sized start-ups, in an effort to build up its risk dealing capacity; 4) investment guarantee. A venture capital firm screens out small and medium-sized start-ups that are of potential value for investment, though with possible risks. The fund will offer subsidies for the selected small and medium-sized start-ups. Meanwhile, venture capital firms will provide free consultations to the start-ups, before investing in them. At this point, the Fund will make a second subsidy available to the start-up. This mode is mainly designed to address venture capital firms ‘ concerns for risks, before making an investment. It is desirable for service oriented firms, such as incubators for small and medium-sized start-ups.

Non-profit in nature, the Fund is established to absorb social ideal money to invest in small and medium-sized start-ups, allowing investors to have some returns, or be supported with subsidies. The Fund will extend benefits to more businesses, letting more sectors enjoy the support of state treasury, in a move to improve the fund raising environment for small and medium-sized start-ups.

To regulate the operation, the interim method stipulates that the start-up that needs the financing of venture capital firms shall be publicized on the websites of Ministry of Finance and Ministry of Science and Technology, or on other authorized media, before being approved for the money from the Fund. The two government agencies will also assign a third party to evaluate the Fund ‘s operation and achievements.

S&T Insurance Cities Selected

MOST and China Insurance Regulatory Committee (CIRC) jointly inked on July 20, 2007 an MOU with the municipal authorities of Beijing,Tianjin, Chongqing, Shenzhen, and Wuhan, and Suzhou High Tech Park Management Committee, for providing S&T insurance for them. At the same occasion, Huatai Insurance and China Insurance Broker undersigned China's first S&T insurance accord with Suzhou Gude Electronics, and
UFIDA. The event heralds a successful collaboration between S&T communities, insurance industry, and local government, and a new phase for insurance industry supporting the nation's proprietary innovation strategy.

To implement the Outline for the National Medium and Long Term S&T Development Planning (2006-2020), MOST and CIRC have jointly issued a circular on further strengthening and improving insurance services for high tech businesses, and organized experts to work on S&T insurance policies, in an attempt to provide insurance service for the implementation of the nation ‘s proprietary innovation strategy. With the strong support of government agencies and local authorities, and active participation of insurance firms and S&T businesses, S&T insurance has achieved substantive results.

To promote the further development of S&T insurance, local authorities have formulated supporting policies and measures, and submitted insurance candidates to both MOST and CIRC. The two government agencies finally came up with a list of five cities, including Beijing as the first recipients of S&T insurance. The second group of cities will be produced on the basis of proven experience of the first one, so as to steadily increase the number of cities and service items.

Distant Training for Poverty Alleviation

MOST Rural Technology Development Center opened up July 20, 2007 its third distant training course for poverty alleviation. Lecturers spoke about a range of interesting issues concerning highly pathogenic strain of blue ear diseases, including clinical symptoms, epidemic fingerprints, diagnosis, immune procedures, and associated control. Audiences also heard lectures on other issues, including diagnosis and treatment of cardiovascular diseases. Experts answered questions raised by listeners.
To extend the coverage and influence of distant training course for poverty alleviation, and promote exchanges between different government agencies, the training event also invited the participation of poverty alleviation experts from China Association for Science and Technology, Ministry of Commerce, Ministry of Public Security, and other non- Communist parties.

Since its opening, the training course has invited 7 experts to lecture on rural policies, agricultural techniques, and health for more than 1500 farmers and grassroots technicians, with some 100 questions answered. According to the arrangements of MOST Department of Rural Affairs and Rural Center, the training course can be heard on the third Friday every month, with main topics on rural construction, modern farming, and rural health.

INTERNATIONAL COOPERATION

China-Germany Ecological Project

Under the framework of intergovernmental cooperation between China and Germany, a joint research team, made up of researchers from Chongqing University, Tongji University, and Researcher Center FZ-Juelich, was established to work on key technologies for building a sustainable ecosystem in the Yangtze River Three-Gorge Dam area. Researchers will have a systematic study of the evolution of water environment after the construction of the Three-Gorge Dam, and its impacts on the adjacent land ecosystem, collecting basic scientific data and information for improving the ecological environment of the Dam area. They will also develop key technologies to address pollution control, providing scientific evidences and technical support for building a healthy environment and ecosystem for the area. The project has been listed as a project for intergovernmental cooperation.

With the support of MOST Department of International Cooperation, Chinese and German implementers gathered together in July to define research topics in five areas relating to water environment. German side offered technologies and funds for the implementation of the project.

China and Mongolia Tech Transfer

Inner Mongolia Department of Science and Technology and Mongolian Science Foundation jointly unveiled on July 18, 2007 an inauguration ceremony for the China-Mongolia Technology Transfer Center in Ulan Bator, the first of its kind established by China in Mongolia. The ceremony also witnessed the signing of an S&T cooperation program between China and Mongolia for

2008-2010, and an outline for joint China-Mongolia Committee for Science and Technology, and opening of a China-Mongolia S&T website.

Up to date, Inner Mongolia has staged more than 30 cooperative projects with Mongolia, covering an array of interesting areas, including new energy, pastureland stock raising, ecological environment, traditional Mongolian medicine, plantation, deep processing of agrifoods and animal products, computer, and information processing. The newly established technology transfer center will facilitate two nation 's technology transfer, cooperation and exchanges on a long term basis, allowing China 's fund, technology, and personnel to work with resource in Mongolia, for a fruitful cooperation.

RESEARCH AND DEVELOPMENT

Inflammation Reaction be Reduced

Based on their 4-year studies, a research team headed by Geng Jianguo, Laboratory of Molecular Cell Biology, Institute of Biochemistry and Cell Biology, Shanghai Institutes for Biological Sciences, has found that working together of both PSGL-1 and Naf1 plays an important role in activating leukocyteduring inflammation. At the same time, blocking the collaboration between the two impairs the activation, allowing inflammation reaction being inhibited. The finding was published in the July 16 online issue of *Nature Immunology*.

Researchers unveiled the following process: when an inflammation occurs, PSGL-1 sends activation signals through Naf1, allowing leukocyte being activated. Animal modeling further reveals that blocking the working relationship between PSGL-1 and Naf1 noticeably inhibits the activated leukocyte adhering to endothelium cells, reducing the infiltration of leukocyte to the inflammation, and inhibiting associated reaction.
Researchers said the reaction of leukocyte to inflammation works like sending telecommunication signals. Blocking the communication of PSGL-1 and Naf1, means moving a mobile phone to a place with weaker signals, and can effectively inhibit the overreactions of leukocyte, weakening inflammation reactions. This is important discovery for preventing and treating inflammations.

New Catalyst Preparation Approach

In collaboration with Prof. WANG Zhonglin at the Georgia Institute of Technology, a study team, led by Prof. SUN Shigang of Xiamen University School of Chemistry, has developed a new electrochemical approach that produces a 24-facet platinum crystal at the nanoscale, through controlling the surface structure and growing mode of nanocrystals.
24-facet platinum crystallization is a rare approach for preparing crystals. Thanks to the high number of crystal facets, the structure comes up with an enhanced activity (2 to 4 times that of the platinum catalysts in current use) and stability. It also raises the efficiency and prolongs the work life of catalysts. The new approach creates a new technical line for preparing nano platinum catalysts, promising an important application for fuel battery, petrochemicals, and tail gas purification.

Breakthroughs in Dry Air Energy

An indirect dry air water cooler, jointly developed by Tsinghua University and Xinjiang GreenAir, recently passed an approval check. The event marks an important breakthrough achieved by China in utilizing dry-air energy.
Experts who are not part of the project told reporters that an air cooling system using dry-air can save energy by 70%, compared with traditional air coolers. It does not induce indoor pollution, as a traditional cooler does, as it keep operating on fresh air. The trial operation in Wulumuqi, Shihezi, and Akesu shows that the new cooler is able to maintain an indoor temperature between 22℃～28℃. The new cooler has been installed in an area of 1 million square meters in Xingjian and other places.

Scientific Utility of Compounds Matching

A research team led by Prof. WANG Xijun, with Heilongjiang University of Chinese Medicine, has separated and identified 11 elements in a famous traditional Chinese medicine recipe named Liuweidihuang Pellets. Researchers for the first time worked out the absorption, distribution, and clearing mechanisms of these elements in human body.
Using chemical approaches, researchers successfully unveiled the links between basic changes of therapeutic effects and elements matching and pharmacodynamics of the medicine. They analyzed and identified 11 medicinal elements and associated origins. Four of them are metabolites. Researchers found that element 1 (5-HMFA) is a new metabolite jointly produced by three elements, capable of remedying kidney and improving blood flows. Both element 1 and element 9 have an function of improving eleven indicators in an animal model for kidney weakness, including body weight, heart rate, chest gland, spleen weight, serum, and blood viscosity. The finding has confirmed the scientific utility of compound matching.

NEWS BRIEFS

World Largest Co-Generator

An energy efficient, environment friendly, and multifunctional co-generator was put into operation on July 19, 2007 in Anshan Iron and Steel Group Corporation. With coal and coal gas as its fuel, the co-generator claims the largest capacity and most advanced CCPP technologies in the world. It is designed to recover the furnace coal gas through CCPP, reducing both energy losses and air pollution, and increasing thermal-power efficiency. It can produce up to 300,000 kilowatt hours of electricity per hour, with an annual

output of 2 billion kilowatt hours of electricity. It enjoys an annual energy saving of 700,000 tons of coal equivalent, compared with a thermal power plant at the same level. It enjoys numerous merits, including enhanced recycle efficiency, reduced environmental pollution, lower unit investment, fine peak regulating performance, quick on-and-off, smaller space requirement, reduced water consumption, shorter construction cycle, higher automation level, and few operating personnel. It is truly an environment friendly secondary energy project.

More Fuel Battery Cars

With the support of MOST, China' s fuel battery vehicles applaud for an impressive progress, with more proprietary buses, sedan cars, and electric bicycles hitting the road. According to a briefing, a Chinese made fuel battery bus costs RMB 3 million, or 1/5 the cost of its overseas counterparts. Chinese made Chaoyue III fuel battery sedan car scored 4 "A" and 1 "B" in a 120-km clean energy car contest held in Paris last year. People will see fuel battery buses and cars providing services for the Beijing Olympic Game in 2008.

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