Foreign and Commonwealth Office (FCO) – Written evidence (LSI0121)

Start-ups/Innovation

SIN Germany return

Background

Technology transfer and innovation from research organisations in Germany

All funding instruments listed below are at federal level (not an exhaustive list). This report does not include the many separate programmes and initiatives available at state level (e.g. Bavaria, Baden-Wuerttemberg, North Rhine-Westphalia).

The predominant method of public innovation support in Germany is through government grants. 24% of innovation in companies is financed by public grants, whereas 9% is through public loans. The KfW (Kreditanstalt fuer Wiederaufbau), Germany's government owned development bank provides subsidised loans for all companies and organisations in Germany, SMEs are a core focus. In the years 2017-18, the government has earmarked over €2 billion for the support of start-ups. Young scientists and researchers are encouraged to translate their findings into business.

The two German ministries predominately concerned with research and innovation funding, the German Ministry for Research and Education (BMBF) and the German Ministry for the Economy and Energy (BMWi), have set up a joint agency to provide advice for funding opportunities across all publicly funded programmes (Foerderberatung des Bundes). They co-ordinate also with the state level funding agencies and the EENs. The Foerderberatung focuses mainly on national funding, whereas the EENs cover European funding. The EENs are organised very differently in the different federal states (Laender). In Berlin and Brandenburg, they are co-located with the regional development agencies, which creates good synergies and works to support regional priorities. For example, in Brandenburg the EEN focuses its work on the regional strategic clusters (Health, Energy, ICT, Photonics, Mobility).

Programmes

EXIST- academic spin-off support

The single most important programme enabling an increased focus on innovation and technology transfer is the **federal EXIST programme**, of the Ministry of Economy (BMWi) and co-financed by funds of the European Social Fund. This includes a funding line to support institutions for improving their infrastructure to support spin offs, as well as a scholarship for entrepreneurs. The programme:

- Funds students, graduates, and researchers for one year to create a spin off, consisting of monthly stipends, up to €30k for material costs and €5k for coaching. In adition the university/research institution provides a mentor, free space and infrastructure (e.g. incubator).
- Supports a large number of ideas with one year grants, to fund innovative technology/knowledge based projects based on scientific findings.

- Often (apart from the health care sector), after the 1 year EXIST funding, the start-up is ready for venture capital investment. More information on EXIST here (in German).

INVEST – venture capital grants
Additional grants for start-ups that already have private funding to encourage Business Angels etc to provide further funding for companies. Minimum private funding is 10,000 Euro; annual grant support is capped at 250,000 Euro per individual investor; up to 1 Million Euro of investment can be supported annually per individual company. More information on INVEST here (in German).

BMWi innovation vouchers (go-Inno) – consulting for enterprises
BMWi innovation vouchers support consulting services for SMEs. There are two voucher modules: innovation consulting and materials efficiency. Up to 50% of expenditure on external consulting for advancements in innovation management and resource usage respectively can be reimbursed.

Availability of venture capital
Germany has a multitude of public support schemes for early stage spin-offs and start-ups, (including the EXIST programme) and public support programmes, such as Flügge in Bavaria and **GoBio, a federal programme focused on life sciences (see below)**, as well as a number of business angels. So until the first financing round, finding capital is usually not a problem (up to €2-3 million) but when it comes to higher amounts, especially above €5 million, and real growth funding, start-ups find it very hard to find investors (and if they do, these are often from the US, which sometimes then results in the business relocating).

The ***High-tech Gründerfonds*** **(HTGF**, high tech fund for entrepreneurs) a public private partnership investing seed capital in technology-based start-ups. The HTGF is funded to 80% by the Federal Ministry of Economics BMWi and 20% by industry. It invests up to €600k seed funding in return for a 15% share in the company. At the second stage, it invests up to another €1.4million and also provides subordinate company loans. This can be complemented with other customised investment. Some states also have similar constructs, for example BayernKapital, BayernLB, Landesbank Baden-Württemberg, where most of the state funds are co-funded by the European structural funds, which often co-invest with others (private investors often 20%), e.g. the 6 or 7 business angels in Germany. Public funds often serve as quality signal for private investors. The programme is delivered through partners, mainly universities and other research institutions. More information on HTGF here

KFW
The KfW is Germany's government-owned development bank. While KfW supports all companies and organisations in Germany, SMEs are a core focus. It offers the following funding programmes:

- ERP-Innovation programme
  For development of new products within companies
  The EPR programme is targeted at SMEs and freelancers with the goal to catalyse ideas and bring them to market. This is achieved through long-term equity capital provided by the local bank. There are two programmes: one to support near to market research of products, processes or services, the second

to support market entry of new products, processes and services. The funding is limited to Germany.

- BMUB environmental programme; for innovative environmental processes/protection

- KfW financing initiative for climate change; to support climate change investment

- ERP start-up funding; equity capital for technology start-ups. The EPR programme is targeted at SMEs and freelancers with the goal to catalyse ideas and bring them to market. This is achieved through long-term equity capital provided by the local bank. There are two programmes: one to support near to market research of products, processes or services, the second to support market entry of new products, processes and services. The funding is limited to Germany.

- Equity capital for growth, innovation und succession; venture capital for innovation projects and companies

Legal challenges

Universities in most states are considered subordinate authorities forming part of the state bureaucracy. This means that they have to follow general rules for state expenditures, such as EU state aid law and prohibition of subsidies, and are not able to make profit (any profit would have to be sent back to the state's finance ministry), invest and take stocks or shares, or deviate from the standard rates for remuneration of employees (which are not very attractive for the highly skilled individuals technology transfer offices would like to hire). If a university treats a start-up favourably, it operates at the border to illegality as state agencies are not allowed to intervene in the market and provide competitive advantage to some players (competition law).

Some universities and research institutes have solved this by establishing external companies to manage their technology transfer activities. However, even so, if the company remains owned by the university, it often has to follow some of these rules, and if it doesn't, that creates other problems through diverging objectives. As soon as an external company loses their non-profit status, this means that the collaborating university then would have to tender for the services EU-wide under EU rules, for example. This very strict legal structure, combined with a cautionary mind-set, makes it very hard for universities to become more flexible and support entrepreneurial activities.

From an individual entrepreneur's point of view, a key legal challenge is liability: The founder of a start-up is liable with their personal wealth for any potential loss of the business. Secondly, there are a number of legal and tax issues for venture capital investment.

The German federal states (laender) all have their own funding mechanisms for innovation. There is no overall co-ordination. However, the laender tend to structure their funding so that it is complementary to the federal level funding, e.g. they now concentrate on Cluster funding, as individual projects are well covered by federal programmes (e.g. ZIM).

Germany has in recent years strongly supported cluster development. At the Federal level, the most important framework has been the High Tech Strategy, which selected 15 clusters through an open competition. Each cluster focuses on a particular topic, for example e-mobility or Internet of Things, and includes industry partners and universities. The clusters need to create a legal entity and also engage in education and training. They are funded for five years with all together 40 Million Euros and are expected to continue on their own after that time. At the beginning of this year, the BMBF announced a specific funding call for the internationalisation of clusters.

At state level, several research and innovation ministries have also given funding to establish regional clusters, focusing on areas that they consider as competitive advantage for their state. These clusters have also been established through open competition.

Technology centres/science parks: Science parks are usually funded by the state government (as part of regional development policy, often cross-financed through EU structural funds). These often provide only small amounts per start-up (€10-30k). The federal government can give a contribution of up to €190m (there is no limit on state contributions).

Life Sciences

GO-BIO – is a special programme set up in 2005 and targeting researcher teams in life sciences wishing to start a business. The programme takes into consideration the long periods of time necessary for the development of drugs and therapies and the need for long-term, stable funding. It also assists with managerial and legal advice. The eight rounds of competition for the GO-BIO programme started in December 2016. The project manager of GO-Bio is the Research Centre Jülich. The total volume of the programme is of **150 million Euro**.

The German Accelerator Life Sciences GALS (funded by the Federal Ministry of Economics BMWi) is located in Cambridge, Massachusetts and helps help emerging German life science companies succeed in the global market by developing sound business strategies, assisting in obtaining capital and navigating the regulatory landscape.

CASE Study

Munich /Bavaria has a strong innovation ecosystem. Excellent education and research institutions (LMU Munich and TU Munich, universities of applied sciences, Max Planck Society, and the Fraunhofer Society of Applied Research) are combined with long-standing industry collaborations and some very strong start-ups in the business-to-business sector which develop specific technologies. For those, market access is a much bigger challenge than for customer-focused start-ups, as they need to be able to demonstrate a track funding record as well as capacity to produce en masse, to be contracted by large corporations or the state (part of this is caused by legal requirements for public procurement, for example).

Since 1997, **Bio^{M}** is the network organization of the biotechnology sector in Munich and in Bavaria, commissioned by the Bavarian Ministry of Economic Affairs. It is a non-profit networking and economic promotion agency for the approximately 270 biotechnological and pharmaceutical companies in the

metropolitan area of Munich. The core competence of the region is the development of innovative therapeutics and diagnostics, in particular for personalized healthcare. Bio^{M} supports the Bavarian biotechnological and pharmaceutical sector with an extensive network for developing new business contacts. The cluster management offers central access and a broad range of information about the sector for prospective customers from home and abroad.

Bio^{M} GmbH offers extensive and individual support to start-ups and young entrepreneurs in medical biotechnology in developing a viable business model and in setting up a plausible business plan. They help identify financing and funding opportunities and offer support from a research idea to a start-up. (Bio^{M} for BioEntrepreneurs (pdf)

Bio^{M} Munich Biotech Development AG (i.L.) is a consulting and investment company based in Martinsried, in the center of the Munich biotechnological cluster. From 1997-2014, the company has supported many promising start-ups with its seed financing program targeting medical biotechnology. Since 2014, Bio^{M} AG (i.L) has not accepted any new investments.

Bio M Annual Report 2016
Companies in the biotechnology sector throughout Germany could raise EUR 508 million in 2016, accounting for about 8% less than the preceding year. The biotech sector has become more attractive on the stock markets: the listed companies have raised EUR 258 million in total, which amounts to a 5% increase on the preceding year (EUR 246 million).

BRAIN AG has been the first biotechnology company to go public on the Frankfurt Stock Exchange since 2007. Venture capitalists have invested a total of EUR 216 million in German enterprises, a 17% decrease compared to 2015 records (EUR 260 million). These are results of a survey carried out by 'BIO Deutschland' (association representing the biotech sector), in collaboration with the magazine Transkript in 2017.

In 2016, 10 new life sciences companies were established in Bavaria, and a relocated one. (Munich/Martisried and Regensburg). They were using services such as business consulting and the financing network of public and private support offered by local cluster manager Bio M and partners in their investor network.

Health-Care Start-ups in Germany (and case specific to Berlin)
Finance in the Health-Care start-up scene is a lot more costly than, for example, E-Commerce start-ups.
1.) **Time-consuming:** Usually, long project timeframe from the first prototype to finished product due to high quality product and rigorous testing required. Therefore, lot more money needs to be accumulated to see projects through.
2.) **Not just the product:** Next to developing the new technologies, health-care start-ups also need to do surveys and organise the legal framework as well as their marketing strategies.
3.) **Legal Barriers:** Young start-ups face barriers when it comes to the laws in life sciences – it is also vital to not use any "grey legal areas" as laws can change and then the whole business model may be obsolete and collapse.

4.) **Perspectives:** Start-ups must ensure business model reflects public expectations (e.g. health innovations to be free of charge)
5.) **Get insights from Experts:** Start-ups need to enter into dialogue with the experts through for example an accelerator programme:

Examples:
Merck Accelerator (two locations: Darmstadt (Germany), where they get offices in the Merck Innovation Center as well regular mentoring, and in Nairobi (Kenya); start-ups receive regular mentoring and as well as offices in the Start-up Center Metta.
TK-Accelerator – TK 2017 (Techniker Krankenkasse – German insurance company): 3 start-ups are receiving mentoring and coaching as well as access to the facilities and experts; in order to bridge the gap between the start-up and industry. The TK-Accelerator Programme 2017 will finish on 7 November 2017 with their Innovation Day showcasing the 3 start-ups.

Successful cooperation between Pharmaindustry & Berlin Start-Up Scene:
1.) Bayer CoLaborator: infrastructure and expertise for new start-ups.

Established in May 2014; Bayer is offering Lab and Office Space to Start-ups in the area of Life Sciences. Bayer wants to promote Berlin as a Health-care and Innovation Location. Start-ups also have access to worldwide Bayer-Science-Network.
http://www.colaborator.berlin.bayer.com/en/home.php

2.) Bayer Open Innovation: "Grants4 Indication": Crowd-Sourcing initiative (submission ended on 30th September 2017)
https://grants4indications.bayer.com/home/
Bayer is supporting the exploration of new indications by offering grants and further financial support.

3.) "Opening Hour" at Healthcare Lab from Pfizer:
Start-ups are invited to enter into dialogue with the industry and other experts. Berlin Healthcare Lab also offers workshops and pitch days regularly and offers mentoring.
A-Z List of Digital Health Care Startups in Germany:
https://gesundheitswirt.wordpress.com/ubersicht-der-digital-health-startups/

A-Z List of Health Care Startups in Germany:
http://healthcare-startups.de/location/

Other Sources:

- Federal Ministry of Economics BMWi http://www.exist.de/EN/Home/home_node.html;jsessionid=6CB06CBF91CABBF9F1D47276BACB0891

- Federal Ministry of Education and Research BMBF: The New High-Tech Strategy, https://www.hightech-strategie.de/de/The-new-High-Tech-Strategy-390.php

- BioM "Bavarian Biotech Report 2016/17" and "BioM for Bioentrepreneurs"

- "Role of research organisations in the German innovation ecosystem" - Report by Prisca Merz, Senior International Relations Officer at Imperial College London, 2016

Start-ups/Innovation

SIN USA return

Federal support

The 21st Century Cures Act, signed December 13, 2016 by President Obama, promotes and funds the acceleration of research into preventing and curing serious illnesses; and accelerates drug and medical device development. The bill provided $4.8 billion in new funding for the National Institutes of Health; of that, $1.8 billion is reserved for the "cancer moonshot" launched by Vice President Biden to accelerate research in that field. Another $1.6 billion is earmarked for brain diseases including Alzheimer's.

The National Institute for Health (NIH) funds $32.3Bn annually in medical research, each year they award more than $700M through the Small Business Innovation and Research/Small Business Technology Transfer programme. These programs congressionally require eligible governmental agencies to set aside a percentage of their extramural budget so that domestic small businesses can engage in R&D that has a strong potential for technology commercialization.

In 2013, the NIH set up three innovation centres to accelerate the commercialisation of health research, the centres are a consortium of government, academic, private sector and non-profit organisations.

The NIH alongside other federal agencies participates in the i-corps programme, designed to give researchers the skills to commercialise their research.

In addition to providing support to translate research, funding basic research provides an impact on the innovation ecosystem. A 2012 report by the Milken Institute found that every dollar of NIH funding boosted the size of the bioscience industry by $1.70 and that the long-term impact may be as high as $3.20 for every dollar spent. A 2013 report by Battelle found that, looking solely at federal support for the Human Genome Project between 1988 and 2012, every dollar of federal funding helped generate an additional $65 dollars in genetics-related private activity.

Several other federal agencies provide support for life sciences, including DARPA - Biological Technologies Office, the Biomedical Advanced Research and Development Authority, Department of Energy, Centre for Disease Control, National Science Foundation, which provide infrastructure and funding to the life sciences ecosystem. There are also federal level R&D tax incentives.

The US small business administration also provides matched funding with investors through the small business investing company (SBIC) programme.

The FDA has recently announced a new precertification programme for digital health software with the aim to provide a more agile approach to digital health technology.

State funding and initiatives

In addition to national funding, initiatives exist at a state level, for example the Massachusetts Life Sciences Center which is implementing a $1Bn state funded initiative, New York City and New York State have recently announced multimillion dollar investments that include infrastructure, tax incentives and training. For example JLabs received $17M in funding from New York State to open a new incubator in New York. Whilst not a life sciences company, the current discussion around Amazon's second headquarters also gives an insight into the types of incentives a state can offer.

In addition to federal tax incentives there are also state level tax incentives, for example a summary of the support available to life sciences companies in Massachusetts.

Individual states also have initiatives in specific areas, for example California has a $3M precision medicine initiative to mirror the national initiative launched under the Obama administration. California has also raised over $3Bn in funding from tax payers from a vote to support regenerative medicine, resulting in the California Institute for Regenerative Medicine.

QB3 was founded in 2000 as one of four Governor Gray Davis Institutes for Science and Innovation (originally, California Institutes for Science and Innovation, or "Cal ISIs"). The Institutes were launched in 2000 as an ambitious statewide initiative to support research in fields that were recognized as critical to the economic growth of the state. QB3 now has five incubators, and has raised a venture fund. Several corporate partners have also co-located at the incubators to enable them to work with the startups.

Private, Philanthropic and local initiatives

Several universities have their own funding to support innovation and bridge the gap between research and VC funding, in some cases this comes from philanthropic support but other sources are also used, for example the University of California uses part of their pension fund.

University culture and the approach to technology transfer are often cited by academics as important in encouraging them to create spin out companies, for example the share a university takes in the equity of the spin out.

There are a range of accelerators that support the life sciences for example launchpad digital health and Indie Bio in addition to providing seed funding, they also provide mentors and a support network. Several hospitals and large companies also have incubators for example J labs and the Texas Medical Center.

Philanthropic support can provide a source of undiluted funding, and life sciences is an area well represented in funding. In addition to US philanthropy, several US organisations have highlighted the Wellcome Trust awards as a source they have used.

The US has a strong venture capital ecosystem, estimates for this year suggest that healthcare venture fund raising will exceed $6Bn. Many life sciences investors have scientific expertise, for example on the Forbes list of top life sciences investors several have a scientific PhD or a medical degree. Often start-ups cite the benefit of close proximity to VCs as important to raising funding, for example Stanford and Sandhill Road, or MIT and Kendall Square.

There are also alternative sources of funding such as crowdsourcing, for example Medstartr (described as kickstarter for medtech) and Experiment.

In addition to funding, networks are important to support the innovation ecosystem. Many incubators and accelerators have this as part of their system but there are also specific organisations such as Venture Cafe designed to create and build networks.

Skills are also important, and universities have created entrepreneurship training and fellowships to support their students and faculty translate their research. There are also examples of UK universities building on US developed methods such as the lean launchpad approach.

Supporting business skills development and creating networks to give scientists access to serial entrepreneurs are two examples that are helping to bridge the science and business gap.

Successful start-ups

There are a range of reasons that companies have become successful, for example Amgen cite access to funding and a strategic manufacturing partnership. Kite Pharma was recently acquired by Gilead for $11.9Bn, Kite's immunotherapy treatment was initially developed by the National Cancer Institute (part of NIH). Juno Therapeutics has raised $300M in two funding rounds in twelve months is a spin out company from the Fred Hutchinson Cancer Research Center which receives 85% of its funding from the NIH.

Start-ups/Innovation

SIN China return

Q1 ● What financial and other support is available to these start-ups? How is the innovation eco-system set up in China, what works well and what works less well?

China's life science industry is rapidly developing. China is dedicating an unprecedented amount of funding to research and development.

The Ministry of Science and Technology (MOST) - the central government's key ministry for setting policy on science and technology (S&T) innovation—administers China's largest S&T programs:

- The National High-Tech Research and Development Programme, also known as "863 Programme", is a major Chinese national research programme launched in 1986. It focuses on the application of cutting-edge technologies in key areas such as biotechnology.

- The National Basic Research Programme, also called "973 Programme", was launched in 1997, with a strong focus on key basic research projects. Other key programmes include key technologies R&D programme, National Science and Technology Infrastructure Program and mega projects of science research. Each of these general plans comprises specific programs for the life sciences sector.

China has also invested heavily in nurturing human capital development in S&T fields. According to a MOST report, China is home to the world's largest stock of S&T personnel, with over 3.5 million full-time employees engaged in R&D activities

Applying for patents is not the only motivation for Chinese researchers. There are many reasons for this. First, the current evaluation system for researchers at both universities and public research institutes favours academic publications over patents. Second, until recently, on-duty invention and the resulting IP were considered state assets or university property, which minimised financial incentives for researchers to commercialise discoveries. Third, universities and public research institutes lack the administrative and legal infrastructures to effectively manage and transfer research from the lab bench to farther downstream. Lastly, upstream researchers claim that downstream industry is unable to absorb new technologies and that the absence of effective intermediaries (such as a dedicated technology patent and transfer office, which is common in most Western universities) exacerbates this gap.

To strengthen the capacity of China's technology industry farther downstream, the government has established a variety of tax and subsidy incentives for firms in all seven of its strategic emerging industry priority sectors, including biotech. These schemes include conventional preferential tax breaks for high-tech firms; tax deductions for R&D-related activities; public subsidies for key inputs such as land, raw materials, and capital investments; and loan interest subsidies. Life science firms also benefit from preferential government drug-procurement policies.

The establishment of the Torch Program during the 1980s ensured the government had an important role in facilitating the development of start-up commercial technology firms. For instance, the program sparked the creation of thousands of R&D industry parks throughout China. In the life science field specifically, there are currently estimated to be at least four hundred provincial and national biotechnology parks and clusters in China, many of which are located around the Shanghai-Suzhou area, Beijing, and Guangzhou.

In addition, to mitigate risk in venture capital financing for technology start-ups, in 1999 the Chinese government created the Innovation Fund for Small Technology-based Firms, also known as Innofund, which provides early-stage grants, loan-

interest subsidies, and in some cases equity investments. Around 10% of Innofund's financing was allocated to the life science sector. That said, many venture capitalists in China remain reluctant to invest in early-stage technologies and firms in the life science sector which is deemed to be a risky bet. Thus, in 2006 the State Council established venture capital guiding funds (VCGF), which work with private venture capital firms to co-invest in promising technology start-ups. Between 2009 and August 2014, approximately RMB 9.1 billion was allocated from the central fiscal budget for the creation of VCGFs. By Zero2IPO's estimate, a total of 192 government-sponsored VCGFs were established over 2006–14. The year 2014 alone saw an addition of 39 such funds totalling roughly RMB 196 billion. In 2016, the State Council announced plans to create a RMB 40 billion VCGF to support China's emerging strategic industries, including funds targeting the biopharmaceutical sector exclusively. Currently, the healthcare industry is the most heavily invested sector by VCGFs.

Life science start-ups get government support in science/industry parks. Parks set up by the government, with some preferential policies (free rent, sometimes free buildings/equipment/etc), in return for the company/research group committing to establish a temporary or permanent team. There is also the option to help companies to find funding, and sometimes there are rewards to over a certain number of employees, etc. The park/government may expect a portion of the tax, or ask companies to be exclusive (so, companies may not be allowed to set up another site in the province/country).

An example is **Chengdu Hi-Tech Zone**, the zone offers four main types of services: 1. Upgraded supply chains, 2. Financial services and systems, 3. An international industrial community, 4. Specialised government incentives and policies to accelerate industry. In Sichuan Province 14 policies have been granted by the provincial FDA, and the Reform Pilot of Review and Approve has been accelerated in the Province. As for the park, there are "Golden 40" policies to support the development of the industry, and 17 new industrial policies that provide support for enterprises from R&D to industrialisation.

Under item 2. Financial services and systems, various funding schemes are provided in the zone, Government industry funds (RMB 10billion China Biomedical Industry Fund, RMB 10billion Biological Industry Special Fund of CDHT), Bond financing, Equity financing, Listing financing.

Another example is Beijing e-Town park. The government fund established a series of technical centres/platforms to serve the start-up companies. Companies can share the formulation platform, animal models platform, and new drug assessment centre, etc… along their R&D journey. This lowers the cost and removes the burden from each individual start-up.

Government, foundation (charity) and private capital partnerships also play important role in the system.

Earlier this year, **Beijing's Global Health Drug Discovery Institute** officially opened its doors. The GHDDI is a non-profit, independent drug R&D institute founded by three entities: the Gates Foundation, the Beijing municipal government and Tsinghua University. It is backed by $100 million, which will support the institute for its first five years. To support the Gates Foundation's interest in

developing effective, inexpensive drugs for diseases prevalent in low-resource areas of the world, the GHDDI focuses in those areas and also assembles a screening library of molecules that have the potential for repurposing to other diseases.

Q2 ● What is the relationship like between potential funders (VCs etc) and scientists and start-up businesses in the life sciences. Do potential funders have scientific expertise? How is the gap between science and business successfully bridged? Can you give any examples of successful start-up companies that have been grown into larger successful companies and why this has been successful?

In China, there used to be very few VCs dedicated to life sciences, but many domestic VCs are emerging along with international VCs. Most of the professionals of those VCs have a science education background or work experience in life science companies. It is worth noting, some of those deals are cross-border transactions. That said, Chinese VCs also look globally for strong opportunities. According to Sofie Qiao, managing director of Wuxi Venture Fund, the Wuxi fund invests in companies both in China and the United States, "and the U.S.-China hybrid model is favoured," Qiao said, describing life science innovation developed in the U.S. for deployment in China.

A few cases with details are below.

Jul 9, 2014, Grandhope Announces $48 Million VC Fund for Stem Cell Projects
Grandhope Biotech and its corporate parent, Guangzhou Zhiguang Biotech, plan to form a $48 million VC fund to underwrite stem cell and regenerative medicine projects. The projects will be carried out in conjunction with Peking University's Science and Technology Development Department. The two entities agreed to set up a stem cell/regenerative medicine research institute that will be housed at PKU. Grandhope will invest $9.5 million for ua 40% stake in the entity; PKU will contribute intangibles for an equal 40% share, and the remaining 20% will be reserved for management.

Sep 21, 2017, Infervision Raises $18 Million to Develop Automated Scan Readers
Infervision, a Beijing AI/deep learning company, closed an $18 million B round to advance its automated medical diagnosis products. Founded in 2016, Infervision is developing products that read tomography and X-ray scans to diagnose cancer. They received the angel/VC round of RMB 12.5million (appx. $1.9million) from Innoangel Fund and Powercloud Venture Capital. They have grown successfully ever since, and receives Series A of RMB 50million ($7.9million) from Sequoia Capital in 2016 and now Series B.

The company says its products do not replace radiologists, but help them become more productive. Using Infervision technology, a doctor's time-per-scan could be reduced from ten minutes to five seconds, the company said. Qiming Venture Partners led the B round, joined by Sequoia Capital China (lead A round) and Genesis Capital.

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