TaiGen Biopharmaceuticals Holdings Ltd.

太景*-KY(4157.TWO)

Investor Meeting

November 28, 2018
Safe Harbor Statement

This presentation is prepared by TaiGen Biopharmaceuticals Holdings Ltd. (“TaiGen”) and includes forward-looking statements about TaiGen and its business, including but not limited to statements regarding drug discovery, research and clinical development, regulatory approval processes, market opportunities and commercialization. These forward looking statements are subject to risks and uncertainties and may cause actual events or results to differ materially from our current expectations. Please refer to our prospectus for full disclosure of risks before making an investment decision. This presentation is copyright protected and cannot be reproduced without written permission from TaiGen.
Agenda

Company profile
- Overview
- Corporate Updates
- Product Pipeline

Sales and forecast of Taigexyn®

Pipeline development and the anti-influenza market
Company Profile

Overview

Corporate Updates

Product Pipeline

Sales and forecast of Taigexyn®

Pipeline development and the anti-influenza market
TaiGen Biopharmaceuticals Holdings Ltd. (Cayman, Publicly Traded Entity)

TaiGen Biotechnology Co., Ltd. (Taiwan, Operational Entity)

TaiGen Biotechnology Holdings Limited (Cayman, Holding Company)

TaiGen Biopharmaceuticals Co. (Beijing) Ltd. (China, China R&D)

- TaiGen Biotechnology Co., Ltd (Taiwan) (The operating entity) was established in Taiwan in 2001 and is wholly owned by TaiGen Biopharmaceuticals Holdings Ltd. (Cayman) (The IPO entity).

- Focus on the discovery and development of NCEs (New Chemical Entities), and committed to the development of new drugs for complications such as infectious diseases and cancer, with proven R&D/overseas licensing performance.

- TaiGen Biopharmaceuticals Beijing was established in 2004. Its major role is the clinical development, regulatory submission and registration in China.

- TaiGen Biopharmaceuticals Holdings Ltd, IPO in Taiwan on Jan.7, 2014, publicly traded on Taipei Exchange Market (TPEx : 4157.TWO). The Market capitalization was NT$ 11.5 billion (as of Nov. 23, 2018) about US$370 million The cash position was about NT$875 million (as of Sep. 30, 2018).
TaiGen’s Achievements In The Past Year

- December 2017, TaiGen’s CEO, Dr. Ming-Chu Hsu, was honored by Hong Kong Biotechnology Organization (HKBIO) with the "New Drug Discovery Lifetime Achievement Award".

- June 2018, TaiGen is granted the “Taiwan Golden Quality Award” by the China Cross-Strait Culture trade Development Association.

- July 2018, TaiGen is awarded the “Outstanding Company of the Year” by the Taiwan Bio Industry Organization.
Pipeline – NCEs With Global IP Protection

<table>
<thead>
<tr>
<th>Drug Name</th>
<th>Indication</th>
<th>Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taigexyn®/Nemonoxacin</td>
<td>Community Acquired Pneumonia (Oral)</td>
<td>Taiwan IND</td>
</tr>
<tr>
<td></td>
<td>Community Acquired Pneumonia (I.V.)</td>
<td></td>
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<tr>
<td></td>
<td>Community Acquired Pneumonia (Oral)</td>
<td>China IND (Category 1.1 New Drug)</td>
</tr>
<tr>
<td></td>
<td>Community Acquired Pneumonia (I.V.)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Community Acquired Pneumonia /Diabetic Foot Infection (Oral)</td>
<td>US IND</td>
</tr>
<tr>
<td>Burixafor</td>
<td>Stem Cell Transplantation</td>
<td>US IND</td>
</tr>
<tr>
<td></td>
<td>Chemosensitization (Hematological Cancers)</td>
<td>China IND (Category 1.1 New Drug)</td>
</tr>
<tr>
<td>Furaprevir</td>
<td>Chronic Hepatitis C</td>
<td>US IND / Taiwan</td>
</tr>
<tr>
<td>TG-2349 (Furaprevir) + DAG-181 (Yimitasvir)</td>
<td>Chronic Hepatitis C DAA Regimen</td>
<td>China IND (Category 1.1 New Drug)</td>
</tr>
<tr>
<td>Anti-Influenza Drug</td>
<td></td>
<td></td>
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<tr>
<td>Anti-HBV Drug</td>
<td></td>
<td></td>
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<tr>
<td>Other New Drug in R &amp; D</td>
<td></td>
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</tr>
</tbody>
</table>

* TG-2349 + DAG-181 combo HCV DAA treatments being developed by Dongguan HEC TaiGen Biopharmaceuticals Co.Ltd., a joint venture established by TaiGen and HEC.
TaiGen’s Operational Milestones Achieved

- **Taigexyn®**
  - Oral capsules: Launched in Taiwan and China.
  - IV formulation: Under CFDA review in China.
  - Overseas out-licensing: Global out-licensing to 32 countries and regions.

- **Burixafor (TG-0054)**
  - Completed Phase II in hematopoietic stem cell transplantation in the U.S.
  - Completed Phase I in chemo sensitization in China.
  - Seeking strategic partners for continue development.

- **Furaprevir (TG-2349)**

- **Anti-Influenza**
## Partnered In 32 Countries Worldwide

As of Nov. 28, 2018

<table>
<thead>
<tr>
<th>Licensee</th>
<th>Territory</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zhejiang Medicine</td>
<td>Mainland China</td>
<td>1</td>
</tr>
<tr>
<td>R-Pharm</td>
<td>Russian Federation, Turkey and Commonwealth Independent States (Include Azerbaijan, Armenia, Belarus, Kazakhstan, Kyrgyzstan, Moldova, Turkmenistan, Tajikistan, Uzbekistan, Ukraine, Georgia)</td>
<td>13</td>
</tr>
<tr>
<td>Holding Distribution</td>
<td>Taiwan</td>
<td>1</td>
</tr>
<tr>
<td>Productos Científicos</td>
<td>Mexico, Brazil and Latin American Market (include Colombia, Peru, Uruguay, Paraguay, Bolivia, Venezuela, Argentina, Chile, Costa Rica, Honduras, Nicaragua, Panama, Guatemala, El Salvador, Ecuador)</td>
<td>17</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>32</strong></td>
</tr>
</tbody>
</table>
Out-licensing

Taiwan
- Upfront Payment
- Milestone Payment
- Supply Revenue

Mainland-China
- Upfront Payment
- Milestone Payment
- Royalty Payment

Russia+Turkey+CIS
- Upfront Payment
- Milestone Payment
- Supply Revenue
- Royalty Payment

Mexico+Latin American
- Upfront Payment
- Milestone Payment
- Supply Revenue

Continue to expand partnerships in other territories

Taigexyn®
The First Joint Venture in Class 1 New Drug Development Between Taiwan and China

TaiGen

Patent Rights & IP Investment, 40%

Dongguan HEC TaiGen Biopharmaceuticals Co., Ltd.

Cash and IP Investment, 60%

Greater China HCV Market
Credible Platform In China For Expansion

- Established platform with track record and experience for development of sustainable product pipeline.
- Utilizing partnerships, new business models to maximize company value.
- Expanding global business through creditable platform.

TaiGen Beijing
Clinical, Regulatory, Registrations

TaiGen Taiwan
R&D

Funding

Global Business

Regulatory

Partnership
TaiGen’s Achievements And Visions

Established a foothold in China

• TaiGen Beijing, established in 2004, has a proven track record in clinical development, regulatory filing and registration in China.

Expanding Licensing and Partnership Territories

• Out-licensed Taigexyn® to R-Pharm and Productos Cientificos covering 30 countries worldwide.
• Continue to expand partnerships in other territories.

New Business Model

• Explore different business models and opportunities for maximizing company value.

Anti-infective Platform

• Established a platform with track record for development of sustainable product pipeline.
Sales and forecast of Taigexyn®

Pipeline development and the anti-influenza market
The Trend And Growth Of China’s Pharmaceutical Market

Sales | 894  | 1,073| 1,205| 1,515| 1,920| 2,439| 3,127| 3,661| 4,424| 5,033| 6,142| 6,453| 6,975| 7,457

Source: IMS
<table>
<thead>
<tr>
<th>No.</th>
<th>Therapeutic Area</th>
<th>Market Share%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><strong>Systemic infection</strong></td>
<td>15.35</td>
</tr>
<tr>
<td>2</td>
<td>Digestive tract &amp; metabolism</td>
<td>13.11</td>
</tr>
<tr>
<td>3</td>
<td>Cardiovascular circulation</td>
<td>11.19</td>
</tr>
<tr>
<td>4</td>
<td>Anti-tumor and immunomodulator</td>
<td>9.87</td>
</tr>
<tr>
<td>5</td>
<td>Central Nervous System</td>
<td>9.52</td>
</tr>
<tr>
<td>6</td>
<td>Blood and hematopoietic organs</td>
<td>5.34</td>
</tr>
<tr>
<td>7</td>
<td>Respiratory system</td>
<td>3.61</td>
</tr>
<tr>
<td>8</td>
<td>Musculoskeletal system</td>
<td>2.53</td>
</tr>
<tr>
<td>9</td>
<td>Genitourinary and reproductive system</td>
<td>1.51</td>
</tr>
<tr>
<td>10</td>
<td>Diagnostics</td>
<td>1.16</td>
</tr>
<tr>
<td>11</td>
<td>Others</td>
<td>26.81</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>100.00</strong></td>
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</tbody>
</table>

Source: IMS
Total Sales Of Antibiotics In China

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<tr>
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<tbody>
<tr>
<td>Sales (RMB 100M)</td>
<td>378</td>
<td>465</td>
<td>563</td>
<td>694</td>
<td>680</td>
<td>665</td>
<td>653</td>
<td>787</td>
<td>797</td>
<td>837</td>
<td>886</td>
</tr>
</tbody>
</table>
Market Share Of Different Antibiotic Classes In China (2017)

Sales Ranking
- 1 Cephalosporins
- 2 Broad-spectrum penicillin
- 3 Penem
- 4 Quinolones
- 5 Macrolides
- 6 Aminoglycoside
- 7 Others

<table>
<thead>
<tr>
<th>No.</th>
<th>Antibiotic Class</th>
<th>Sales(RMB 100 million)</th>
<th>Market Share%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cephalosporins</td>
<td>479</td>
<td>54.1</td>
</tr>
<tr>
<td>2</td>
<td>Broad-spectrum penicillin</td>
<td>133</td>
<td>15</td>
</tr>
<tr>
<td>3</td>
<td>Penem</td>
<td>85</td>
<td>9.6</td>
</tr>
<tr>
<td>4</td>
<td>Quinolones</td>
<td>77</td>
<td>8.7</td>
</tr>
<tr>
<td>5</td>
<td>Macrolides</td>
<td>45</td>
<td>5.1</td>
</tr>
<tr>
<td>6</td>
<td>Aminoglycoside</td>
<td>13</td>
<td>1.5</td>
</tr>
<tr>
<td>7</td>
<td>Others</td>
<td>53</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>885</td>
<td>100</td>
</tr>
</tbody>
</table>
Quinolones Sales And Forecasts In China

2017 IV/Total = 85.5%
Sales of the Leading Quinolone – Avelox (Bayer’s Moxifloxacin) In China

2017 IV / Total = 76.4%

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</tr>
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<tbody>
<tr>
<td>Oral</td>
<td>0.008</td>
<td>0.26</td>
<td>0.54</td>
<td>0.85</td>
<td>1.23</td>
<td>1.78</td>
<td>2.38</td>
<td>2.76</td>
<td>2.99</td>
<td>3.36</td>
<td>3.66</td>
<td>3.26</td>
<td>3.6</td>
<td>3.57</td>
<td>3.9</td>
<td>4.45</td>
</tr>
<tr>
<td>IV</td>
<td>0.02</td>
<td>0.43</td>
<td>1.45</td>
<td>2.82</td>
<td>4.4</td>
<td>5.62</td>
<td>6.73</td>
<td>7.57</td>
<td>9.44</td>
<td>10.14</td>
<td>12.3</td>
<td>12.46</td>
<td>13.48</td>
<td>14.42</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>0.008</td>
<td>0.26</td>
<td>0.56</td>
<td>1.28</td>
<td>2.68</td>
<td>4.6</td>
<td>6.78</td>
<td>8.38</td>
<td>9.72</td>
<td>10.93</td>
<td>13.1</td>
<td>13.4</td>
<td>15.9</td>
<td>16.03</td>
<td>17.38</td>
<td>18.87</td>
</tr>
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</table>
## Avelox Injection And Other Generic Moxifloxacin

Unit : RMB 100 Million

<table>
<thead>
<tr>
<th></th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bayer (德國拜耳)</td>
<td>12.3</td>
<td>12.46</td>
<td>13.48</td>
<td>14.42</td>
</tr>
<tr>
<td>Yoko-bio (南京優科)</td>
<td>1.04</td>
<td>4.23</td>
<td>8.82</td>
<td>12.71</td>
</tr>
<tr>
<td>ChengduTiantaishan Pharm (成都天臺山)</td>
<td>0</td>
<td>0.06</td>
<td>1.63</td>
<td>3</td>
</tr>
</tbody>
</table>
Sales Of Zhejiang Medicine’s Levofloxacin In China

2017 IV / Total = 95.7%
The Sales Of Oral Quinolone By Brands

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</tr>
</thead>
<tbody>
<tr>
<td>Gemifloxacin</td>
<td>0.67</td>
<td>2.32</td>
<td>7.00</td>
<td>11.90</td>
<td>14.60</td>
<td>3.90</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Antofloxacin</td>
<td>0.00</td>
<td>0.00</td>
<td>1.60</td>
<td>11.70</td>
<td>22.00</td>
<td>21.00</td>
<td>29.00</td>
<td>34.60</td>
<td>34.90</td>
<td>33.80</td>
<td>37.10</td>
</tr>
</tbody>
</table>
Sales Of Nemonoxacin (oral) In China

In the first three quarters of 2018, cumulative sales increased by 562.7%. The 2018Q3 grew by 651.1% in the same period last year.
1. Moxifloxacin reached RMB1 billion annual sales in the 10th year after product launched. Nemonoxacin is estimated to reach the same mark earlier.
2. The current sales forecast of Nemonoxacin is better than those in 2012. TaiGen can recognize 7%~11% royalty income.
The Progress Of Nemonoxacin (IV) In China

Listed in the NDA Priority Review, Feb. 2018

CDE Expert Consultation Meeting, Apr. 2018

CFDI Clinical Trial Data Review Meeting, Jul. 2018

NDA
Company Profile

Basic Information

Corporate Updates

Product Pipeline

Taigexyn®’s sales in China and its forward looking

Pipeline development and the anti-influenza market
TaiGen Research Pipeline

- **Target validation and drug screening**
- **Lead optimization**
- **Preclinical study**
- **Clinical trials**

**Anti-influenza Drug**
Goal: US & China IND in 2019

**Anti-HBV Drug**
Goal: Select candidate for preclinical study by 2019

**Others**
Unmet Needs of Influenza

Influenza vaccination rates varies from region to region

- Vaccination rates in the major market e.g.:
  - 27% in Germany and 47% in US.
- US CDC: Vaccine effectiveness estimates for influenza seasons from 2004-2018 are ~50%.

Unmet needs

- Influenza results in about 3 to 5 million cases of illness and about 250000 to 50000 respiratory deaths annually
- Influenza antiviral medications such as Tamiflu must be taken within 48 hours of onset of symptoms
- Seasonal flu vaccine cannot provide sufficient protection against influenza

Novel influenza antiviral drug is urgently needed.
Global market of influenza is variable:

- United States, Europe and Japan were the major market for anti-influenza drugs, accounting for about 90%.
- The global market of anti-influenza drugs is about $1.7 billion in 2016.
- Global anti-influenza drugs are estimated to reach $2 billion in 2022.
- In 2009 pandemic, the antiviral drug market reached a peak of about 4 billion US dollars.

China is one of the fastest growing influenza market:

- The main drug in treatment is neuraminidase inhibitors such as Tamiflu.
- Sales of HEC Pharm’s Kewei (generic Tamiflu) was RMB190 million in 2014 and RMB1.4 billion in 2017 with a CAGR greater than 90%. The 2018 sales is estimated to reach RMB 3 billion (about 430 million US dollars).
A novel flu drug, Xofluza, from Shionogi was recently approved in US and Japan. Xofluza was reported to be superior to Tamiflu.
TaiGen’s Influenza Program

- Novel mechanism of action
- Inhibit virus replication and spread
- Effective against influenza type A and B as well as avian influenza (H7N9)
- Effective even given more than 48 hours after onset of symptoms
- Effective against mutant virus that are resistant to neuraminidase inhibitor such as Tamiflu

Target IND filing in US and China in 2019
About 325 million people worldwide are chronic hepatitis B virus carriers.

Mortality related to chronic hepatitis B is about 800,000 people per year.

The hepatitis B vaccine is the mainstay of hepatitis B prevention, but it is ineffectiveness for reducing chronic hepatitis.

Oral nucleotide/nucleoside and interferon injection are the primary treatment. These are not cure and patients often have to take these medications for the rest of their life.

China will be the largest hepatitis B market. In 2017, sales of nucleoside analogs reached a market size of RMB 8.3 billion (IMS).

Novel hepatitis B antiviral drug is urgently needed.
TaiGen’s Anti-HBV Program

Aim of Anti-HBV program

1. Become the anchor drug for hepatitis B treatment
2. Effective against known drug-resistant virus
3. Eliminate HBV DNA in infected liver cells

Novel mechanism of action, orally administered HBV drug

- Better in vitro activity
- Daily dosing
- Preclinical candidate selection by 2019
Q&A

Thank You