Prepare for Your Success in China

John Gong, Ph.D., M.D.
CEO, 3D Medicines, China

2017 AACT-SIG Career Development Workshop
SOT Baltimore March 14, 2017

Precision Diagnostics, Onco Data Service, New Drug R&D
My Career Path

1. NYU (New York University)
2. NIH (National Institutes of Health)
3. ZohHong
4. JOINN
5. BeiGene
Why Toxicology?

Toxicology

- modes of toxic action
- measurement of toxicants and toxicity
- applied toxicology
- chemical use toxicology
- regulatory toxicology

Toxicology Branch

- developmental and reproductive toxicology
- systems toxicology
- general toxicology and cancer

Keywords:
- forensic
- analysis
- laboratories
- drug applications
- toxicology
- determining
- alcohol
- legal
- crime
- investigation
- medicine
Becoming a Toxicologist
Why from US to China?
China became #2 in global pharmaceutical market
Partners in China

West China Hospital
- 4,800 beds
- 470,000 sq m
- 7,800 medical staff
- 4 million patients visited
- 173,000 patients discharged
- 93,900 operations performed

JOINN Laboratories
- 500+ staff
- 80,000 sq m
- 10,000+ NHP, dogs, rodents

WuXi AppTec
Opportunities in China

- Preclinical Full services CRO
- International standards
- IPO in China soon
Opportunities in China

- Biotech focus on oncology drug R&D
- IPO in Nasdaq 2016
Opportunities in China

- Found in 2010, focus on cancer care
- 3D: Precision Diagnostics, Onco Data Service, and New Drug R&D
- 350 employee, in Shanghai, Beijing, Chengdu, Guangzhou...
- Diagnosis: 2 clinical labs, NGS panels
- Drug platforms: 1500+ PDC HCC cell line, big genomic data
- PDL1 antibody: phase 1 in US and China, only sc injection antibody
- Will IPO in China and US

Data and Biomarker driven precision anti-cancer drug development

Liquid biopsy early cancer screening technology

Next generation molecular diagnostic technology
Opportunities in China
Thanks!

谢谢！
Steps to A Successful Career
Thoughts from A Returnee

Joe Zhang, MD., Ph.D., DABT
Head of Preclinical R&D
Simcere Pharmaceutical Co. Ltd.
Established in 1995

A leading pharmaceutical company focused on drug development, manufacturing and marketing in China;

Focus on therapeutic areas including oncology, CNS, inflammation, cardiovascular diseases and anti-infectious diseases;

3 world’s first-to-market drugs and 5 China’s first-to-market drugs

4 manufacturing facilities, > 3,000 employees in total, ~200 R&D staff
Preclinical R&D

- Medicinal Chemistry (vacant)
- Discovery Biology & Pharmacology
- DMPK (vacant)
- Toxicology

- An integral part of Simcere R&D
- An engine for small molecule research
- A bridge between nonclinical and clinical development
Steps to A Successful Career

**Key Word**

Career
Is the activity one pursues as one’s *life’s work*  
---- Webster Dictionary

Job
Is any tasks performed for pay  
---- Webster Dictionary

Jobs are the building blocks for one’s career ---- Joe Zhang
Steps to A Successful Career

Where to start?

Your career objective, what would you like to be?

An experienced executive in pharmaceutical R&D, who can make significant contribution to R&D strategy and projects

A world known scientist in carcinogenesis who contributes to the cure of cancer by discovering the mechanisms of carcinogenesis

You need to consider:

✓ Area: academia, industry, government, others
✓ Type: scientific, managerial, or both?
✓ Location : USA, China, Japan, anywhere?
Steps to A Successful Career

What’s next?

Prepare a plan. How to reach there?

All roads lead to Rome
Steps to A Successful Career

The Ideal Path

PostDoc
Assistant Professor
Associate Professor
Full Professor
“Donald Trump” Professor
Steps to A Successful Career

The Typical Path

SD at Covance

Principal Scientist/Interim Manager at BI

Head of Tox at ChemPartner

Head of NCS and MT of the site at Roche China

Head of Preclinical R&D at Simcere, MT of R&D and Simcere

Head of Medical and Translational Sciences at CP Guojian

SD: Study Director
BI: Boehringer Ingelheim
NCS: nonclinical Safety
MT: Management Team
Steps to A Successful Career

On the road

✓ Do a good job in each position you have
  • The foundation to a successful career
Steps to A Successful Career

Achievements at Covance (2000-2004)

- Increased profitability of my group > 50%
- Gained a $200K research grant (rare for a CRO)
- Published 4 peer reviewed papers
- Helped Covance become the leading lab in cell transformation
Steps to A Successful Career

On the road

✓ Do a good job in each position you have
  • The foundation to a successful career

✓ Proactively take action to gain skills for next level
  • Opportunities always come to those who are fully prepared
Steps to A Successful Career

Something to consider

- Scientific and regulatory knowledge (publications, reviews, reviewers, etc.)
- Network in scientific organizations (voluntary services)
- Interpersonal communication skills
- English
- Others
Steps to A Successful Career

On the road

- Do a good job in each position you have
  - The foundation to a successful career

- Proactively take action to gain skills for next level
  - Opportunities always come to those who are fully prepared

- Seize the opportunity when it appears
Steps to A Successful Career

A Real Case

Current Position
✓ A department head in a multinational pharmaceutical company in charge of DMPK/Tox
✓ Company car and driver
✓ Business class travel
✓ Long-term incentive plan
✓ Possibility to next level is limited (glass ceiling)

An Opportunity
✓ A development head in a biotech company in charge of entire development
✓ No car, no driver
✓ Economic class travel
✓ Stock but date of IPO unknown
✓ High possibility to impact the strategy and pipeline of the company

What’s your choice?
Steps to A Successful Career

On the road

✓ Do a good job in each position you have
  • The foundation to a successful career

✓ Proactively take action to gain skills for next level
  • Opportunities always come to those who are fully prepared

✓ Seize the opportunity when it appears

✓ Help others when every possible

✓ Stick with fine people with a positive attitude towards life and work

近朱者赤，近墨者黑
Steps to A Successful Career

Dr. Charles Wang

Dr. Luwi Pei, for encouraging me to learn more English when I was a Ph.D student

Dr. Yi Jin, for inviting me to write an article about SD’s life for AACT newsletter

Dr. John Zhang, for trying to help me to go back to the US when I was stuck in China after 9.11

Dr. Diana Auyeung and Dr. Dong, for drafting the first by-law for AACT together with me

Dr. Alex Xu, for inviting me to this workshop
Positions Currently Available

**DMPK Director/Senior Director**

✓ **Responsibilities**

- Serve as an internal expert in DMPK including but not limited to *in vitro* and *in vivo* ADME assays, PK/TK support, M&S;
- Play key roles in compound screening and optimization;
- Contribute to generating and reviewing regulatory documents;
- Manage collaborations with CRO…….

✓ **Qualifications**

- Ph.D. or equivalent in a relevant disciplines;
- At least 6 years of industrial experience;
- Hands-on experience of DMPK project support;
- Broad background knowledge in DMPK with strong expertise ……

**Toxicology Manager**

✓ **Responsibilities**

- design, plan and execute toxicology program to support drug discovery projects;
- review, edit, and offer critical feedback to the reports generated by CROs
- Generate regulatory documents;
- Provide nonclinical safety input on licensing activities…….

✓ **Qualifications**

- Ph.D. in toxicology/pharmacology or ;
- At least 3 years of relevant experience;
- Hands-on experience of DMPK project support;
- Experience of supporting early discovery and projects in cross functional drug R&D teams as toxicology representative……
Academic Toxicologist and Career Opportunities in China

Career Development Workshop
American Association of Chinese in Toxicology Special Interest Group

Leshuai Zhang, PhD, DABT
Soochow University
3/14/2017
<table>
<thead>
<tr>
<th>国内排名</th>
<th>全球排名</th>
<th>学校名称</th>
<th>论文数</th>
<th>总被引频次</th>
<th>篇均被引频次</th>
<th>高被引论文篇数</th>
<th>热点论文篇数</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>80</td>
<td>北京大学</td>
<td>1,709</td>
<td>19,557</td>
<td>11.44</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>86</td>
<td>浙江大学</td>
<td>1,734</td>
<td>18,998</td>
<td>10.96</td>
<td>9</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>89</td>
<td>沈阳药科大学</td>
<td>1,804</td>
<td>18,740</td>
<td>10.39</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>107</td>
<td>复旦大学</td>
<td>1,511</td>
<td>16,898</td>
<td>11.18</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>114</td>
<td>中国药科大学</td>
<td>2,061</td>
<td>16,409</td>
<td>7.96</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>6</td>
<td>121</td>
<td>上海交通大学</td>
<td>1,723</td>
<td>15,918</td>
<td>9.24</td>
<td>9</td>
<td>0</td>
</tr>
<tr>
<td>7</td>
<td>131</td>
<td>中国医学科学院北京协和医学院</td>
<td>1,751</td>
<td>15,439</td>
<td>8.82</td>
<td>9</td>
<td>0</td>
</tr>
<tr>
<td>8</td>
<td>182</td>
<td>中山大学</td>
<td>1,284</td>
<td>12,124</td>
<td>9.44</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>9</td>
<td>200</td>
<td>四川大学</td>
<td>1,284</td>
<td>12,124</td>
<td>9.44</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>10</td>
<td>210</td>
<td>山东大学</td>
<td>1,241</td>
<td>10,795</td>
<td>8.7</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>11</td>
<td>239</td>
<td>第二军医大学</td>
<td>1,090</td>
<td>9,877</td>
<td>9.06</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>12</td>
<td>251</td>
<td>华中科技大学</td>
<td>930</td>
<td>9,570</td>
<td>10.29</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>13</td>
<td>323</td>
<td>南京大学</td>
<td>699</td>
<td>7,807</td>
<td>11.17</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>14</td>
<td>370</td>
<td>南京医科大学</td>
<td>920</td>
<td>6,868</td>
<td>7.47</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>15</td>
<td>381</td>
<td>中南大学</td>
<td>796</td>
<td>6,730</td>
<td>8.45</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>16</td>
<td>401</td>
<td>武汉大学</td>
<td>608</td>
<td>6,433</td>
<td>10.58</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>17</td>
<td>437</td>
<td>第四军医大学</td>
<td>660</td>
<td>5,776</td>
<td>8.75</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>18</td>
<td>509</td>
<td>苏州大学</td>
<td>598</td>
<td>4,978</td>
<td>8.32</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>19</td>
<td>512</td>
<td>吉林大学</td>
<td>682</td>
<td>4,913</td>
<td>7.2</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>20</td>
<td>515</td>
<td>西安交通大学</td>
<td>601</td>
<td>4,898</td>
<td>8.15</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>21</td>
<td>534</td>
<td>上海中医药大学</td>
<td>636</td>
<td>4,651</td>
<td>7.31</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>22</td>
<td>544</td>
<td>暨南大学</td>
<td>676</td>
<td>4,551</td>
<td>6.73</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>23</td>
<td>560</td>
<td>首都医科大学</td>
<td>646</td>
<td>4,442</td>
<td>6.88</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>24</td>
<td>582</td>
<td>兰州大学</td>
<td>472</td>
<td>4,217</td>
<td>8.93</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>25</td>
<td>601</td>
<td>清华大学</td>
<td>343</td>
<td>3,983</td>
<td>11.61</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>26</td>
<td>603</td>
<td>南开大学</td>
<td>302</td>
<td>3,956</td>
<td>13.1</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>27</td>
<td>633</td>
<td>第三军医大学</td>
<td>470</td>
<td>3,665</td>
<td>7.8</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>28</td>
<td>641</td>
<td>中国医科大学</td>
<td>503</td>
<td>3,606</td>
<td>7.17</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>29</td>
<td>662</td>
<td>哈尔滨医科大学</td>
<td>504</td>
<td>3,514</td>
<td>6.97</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>30</td>
<td>663</td>
<td>安徽医科大学</td>
<td>434</td>
<td>3,512</td>
<td>8.09</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>31</td>
<td>682</td>
<td>中国科学院大学</td>
<td>459</td>
<td>3,396</td>
<td>7.4</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>32</td>
<td>701</td>
<td>中国海洋大学</td>
<td>311</td>
<td>3,309</td>
<td>10.64</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>33</td>
<td>733</td>
<td>南方医科大学</td>
<td>461</td>
<td>3,131</td>
<td>6.79</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>名次</td>
<td>学校名称</td>
<td>所在地区</td>
<td>论文数</td>
<td>占该校总前3%高被引论文数比/%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>-----------------</td>
<td>----------</td>
<td>--------</td>
<td>-----------------------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>浙江大学</td>
<td>浙江</td>
<td>1</td>
<td>27</td>
<td>2.48</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>北京大学</td>
<td>北京</td>
<td>2</td>
<td>26</td>
<td>1.94</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>中国药科大学</td>
<td>江苏</td>
<td>3</td>
<td>23</td>
<td>35.38</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>复旦大学</td>
<td>上海</td>
<td>3</td>
<td>23</td>
<td>2.47</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>上海交通大学</td>
<td>上海</td>
<td>3</td>
<td>23</td>
<td>2.29</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>中山大学</td>
<td>广东</td>
<td>6</td>
<td>18</td>
<td>2.54</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>第三军医大学</td>
<td>重庆</td>
<td>7</td>
<td>17</td>
<td>14.41</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>南京医科大学</td>
<td>江苏</td>
<td>8</td>
<td>14</td>
<td>6.42</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>苏州大学</td>
<td>江苏</td>
<td>8</td>
<td>14</td>
<td>2.96</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>温州医科大学</td>
<td>浙江</td>
<td>8</td>
<td>14</td>
<td>22.22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>四川大学</td>
<td>四川</td>
<td>11</td>
<td>12</td>
<td>2.94</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>中南大学</td>
<td>湖南</td>
<td>12</td>
<td>11</td>
<td>2.76</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>山东大学</td>
<td>山东</td>
<td>12</td>
<td>11</td>
<td>2.09</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>中国科学院大学</td>
<td>北京</td>
<td>12</td>
<td>11</td>
<td>1.19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>吉林大学</td>
<td>吉林</td>
<td>12</td>
<td>11</td>
<td>2.24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>中国海洋大学</td>
<td>山东</td>
<td>16</td>
<td>9</td>
<td>5.88</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>清华大学</td>
<td>北京</td>
<td>16</td>
<td>9</td>
<td>0.67</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>大连医科大学</td>
<td>辽宁</td>
<td>16</td>
<td>9</td>
<td>26.47</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>沈阳药科大学</td>
<td>辽宁</td>
<td>16</td>
<td>9</td>
<td>36</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>中国医科大学</td>
<td>辽宁</td>
<td>20</td>
<td>8</td>
<td>9.64</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
1. **Radiation toxicology & Military toxicology were the basis of toxicology in China**

   - **苏州大学医学部放射医学与防护学院 (School for Radiological and Interdisciplinary Sciences, Soochow University)**
     前身是创建于1964年隶属于原核工业部的苏州医学院放射医学系。着重在放射生物学、分子影像与核医学、辐射纳米毒理、辐射防护与核安全、辐射应用技术、核能环境放射化学、定量生物学等方面开展前沿研究。以柴之芳院士为学科带头人，固定长驻研究人员80余人，博士后研究人员20余人。

   - **军事医学科学院 (Academy of Military Medical Sciences)**
     1951年6月11日，为解决我志愿军入朝作战面临的系列军事医学难题，中央军委作出“迅速成立军事医学科学院”的重大决定。同年8月1日，我院在上海正式成立，1958年5月迁址北京，是继中国科学院之后新中国第二个科学院，是我军最高军事医学研究机构。

2. **Academic level of toxicology in China and focused area**

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Affiliation</th>
<th>BS/MS</th>
<th>PhD</th>
<th>Postdoc &amp; Job in US</th>
<th>Research Interest</th>
</tr>
</thead>
<tbody>
<tr>
<td>陈立功&lt;br&gt;Ligong Chen</td>
<td>2013青千</td>
<td>清华大学医学院</td>
<td>南开大学化学系</td>
<td>UC Berkeley</td>
<td>UCSF UCSF PI Pfizer visiting scientist</td>
<td>Drug Tox &amp;Protein transporter</td>
</tr>
<tr>
<td>张慧东&lt;br&gt;Huidong Zhang</td>
<td>2014青千</td>
<td>第三军医大学预防医学院</td>
<td>兰州大学化学系</td>
<td>中科院大化所</td>
<td>Vanderbilt U Harvard Med</td>
<td>Developmental Tox</td>
</tr>
<tr>
<td>李瑞宾&lt;br&gt;Ruibin Li</td>
<td>2016青千</td>
<td>苏州大学放射医学</td>
<td>北科大应用化学</td>
<td>中科院大化所</td>
<td>UCLA</td>
<td>Nanotoxicology</td>
</tr>
<tr>
<td>陈瑞&lt;br&gt;Rui Chen</td>
<td>2014青千</td>
<td>东南大学公共卫生</td>
<td></td>
<td></td>
<td>Postdoc/NYU School of Medicine Postdoc/Univ of Texas SW Med Center</td>
<td>Environmental Tox &amp;Tumor</td>
</tr>
<tr>
<td>康裕建&lt;br&gt;Yujian Kang</td>
<td>2009千人 ATS</td>
<td>四川大学</td>
<td></td>
<td>Iowa State Univ</td>
<td>Prof/Univ of Louisville School of Medicine</td>
<td>CardioToxicology</td>
</tr>
<tr>
<td>黄传书&lt;br&gt;Chuanshu Huang</td>
<td>2011千人</td>
<td>温州医科大学生命科学院</td>
<td></td>
<td></td>
<td>Prof/New York U School of Medicine</td>
<td>Environmental Tox &amp;Tumor</td>
</tr>
<tr>
<td>甘剑英&lt;br&gt;Jianying Gan</td>
<td>2011千人</td>
<td>浙江大学农业生物技术学院</td>
<td>浙江农业大学</td>
<td></td>
<td>Postdoc/Minnesota Univ Prof/UC Riverside Environmental Science</td>
<td>Environmental Tox &amp;Chemical/Pesticide</td>
</tr>
</tbody>
</table>
3. Salary, Start up funding, Settlement funds

• **Thousand Youth Talents Plan Project**

  **Annual salary:** 35±5万 RMB/year ($50±15K)
  
  **Start up funding:** 1百万-3百万 RMB/year ($150K-450K) by China government
  
  Funding match 1:1 by most of universities

  **Settlement funds:** 50万 ($75K) by China government, 80±20万($110K±30K) by universities

  Other Lab and office spaces, moving expense compensation, job for spouse and settlement for children

http://mt.sohu.com/20160604/n452904160.shtml

• **Regular professor in the universities**

  **Annual salary:** 25±5万 RMB/year ($35±7K)
  
  **Start up funding:** 60±20万 RMB/year ($85K±30K) by universities

  **Settlement funds:** 50±15万($70K±20K) by universities

• **Regular associate professor in the universities**

  **Annual salary:** 20±5万 RMB/year ($30±7K)
  
  **Start up funding:** 30±10万 RMB/year ($45K±15K) by universities

  **Settlement funds:** 30±5万($45K±8K) by universities
4. There are more bonus and other “soft” packages

Your salary include:

• Basic stipend (monthly)
• House Funds (monthly), 1:2.25 match
• Bonus from the department/unit level (innovation center etc.)
• Bonus from the medical school (monthly)
• Bonus from the university level (year-end)

Bonus depends upon your performance, which highly rely upon the following:

• Paper quantity and quality you have published during the last year
• Projects you have obtained during the last year
• Courses you taught (the number of courses and students, the language used)
• Research and teaching awards from county/province/nation level
• Student supports to get plans/projects/awards
• 班主任

Other flexible incomes
5. Boot on the Ground

- Use funding flexibly (quickly v.s. gradually)
- Actively contact with local resources (affiliated hospitals, institutes, previous mentors, college classmates)
- Based on your previous work, make progress and publish something within three years.
- Track and understand the scientific policy trends in the national level
- Talk to the salesmen with marks on QQ/Weixin to assure the quality of kits and antibodies etc.
- Be used to the financial system of the university.

6. Positive Attitude with respects

- Teamwork and being involved as the part of the group
- Respect and be polite to old leader, college dean, and other specialty authorities
- Actively propose to help professional organizations
- Read the policies from the university level, make friends with administrative staffs.
- Understand correctly something that you thought was unfair
THE END