

## The tale of two cities: the U.S. scientific edge and the China development engine

The United States leads China in the quality, commercial depth, and frontier intensity of its biomedical science. China leads in the speed, scale, and cost of converting science into medicines. Five Cure Innovation Index analyses – an expert survey, three bibliometric studies, and a clinical trial infrastructure analysis – map both sides of this divide and where the race will be decided.

### THE LEADER BOARD

Cure U.S.-China Biotech Competitiveness Survey

DOMAIN	U.S.	CHINA	KEY SIGNAL
Scientific discovery	3.5	3.5	Volume parity; U.S. leads influence & frontier
Clinical development	0	7	China dominates speed, cost & scale
Technology transfer	5	0	U.S. leads TTO sophistication & BD ecosystem
Capital & commercialization	5	0	U.S. leads VC, regulatory credibility
Supply chain	0	6	China leads manufacturing & CDMO
Talent	5	0	U.S. leads attraction, retention & prestige
Total Metric Scores (of 35)	19	16	
<b>Overall domain score</b>	<b>3</b>	<b>2</b>	<b>1 tie: Scientific Discovery</b>

Domain wins: respondent majority per metric. Contested metrics treated as ties.

### THE U.S. SCIENTIFIC EDGE

Cure Innovation Index Bibliometric Analysis



#### The U.S. model

- Influence leadership across all domains** RCR 2.38 vs. China's 1.82 (+31%)
- Frontier intensity** leads CAR-T (+90%), RNA (+60%), CRISPR (+45%), AI (+52%) on field-normalized impact
- Deep commercial embeddedness** 9.0% industry co-authorship rate, stable and not closing
- Market translation infrastructure** embedded in research ecosystem; every U.S. institution outperforms every Chinese peer on co-authorship

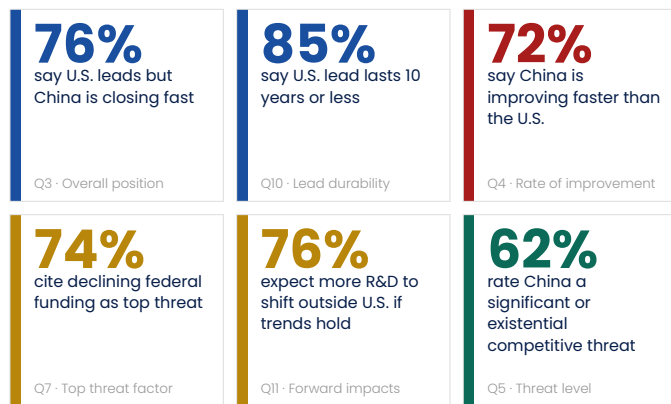


#### The China model

- Volume leadership** surpassed U.S. average publications per institution in 2022; leads in RNA and AI drug discovery output
- Development speed** discovery-to-IND 50-70% faster; Phase 1 trials 50-60% cheaper
- Clinical scale** 32% of global trial starts in 2025, up from 1% in 2009
- Manufacturing dominance** leads all 6 supply chain metrics; CDMO capacity a structural advantage
- Elite emerging ecosystem** Tsinghua University (RCR 2.37) now at U.S. elite levels; concentrated frontier nodes emerging alongside mass scale

### WHAT EXPERTS SAY IS HAPPENING

Cure U.S.-China Biotech Competitiveness Survey



### WHAT EXPERTS SAY MUST HAPPEN

% Selecting Top U.S. priorities · Cure U.S.-China Biotech Competitiveness Survey



### About the Cure U.S.-China Biotech Competitiveness Survey

Cure fielded the survey June 11 to 17, 2026, to senior U.S. leaders in private biomedical industries and U.S. academic research. The 117 respondents split nearly evenly between industry (61) and academia (56) including chief executive officers, founders, chief scientific officers, business development directors and technology transfer leaders. Cure asked respondents to assess the two countries across 35 metrics in six dimensions of end-to-end innovation.

## Session: Racing to Cures: the U.S.-China Biomedical Competitiveness Scorecard

BIO International Convention · San Diego · June 22, 2026 · Room 30DE · 4:15-5:15 PM PDT

### THE U.S. SCIENTIFIC EDGE

Cure Innovation Index Bibliometric Analysis

## Where America Still Leads — and Why It Matters More Than Ever

China has effectively closed the biomedical publication scale gap with U.S. elite institutions, signaling China's rapid research expansion across biomedical fields. Top U.S. and Chinese institutions now publish at nearly identical average annual volumes, respectively 43,562 vs 43,532 papers per institution from 2020 to 2024. However, the scientific influence of U.S. publications persists and widens in frontier biomedical domains that will define next-generation medicine, as the U.S. maintains a 52% RCR advantage for average annual publications.

#### U.S. FRONTIER DOMAIN ADVANTAGE

Leadership in frontier biomedical domains — gene editing, cell therapy, RNA therapeutics, and AI drug discovery — will shape which institutions, and which countries, define next-generation medicine. The concentration of scientific influence within these domains carries direct implications for translation, commercialization, and which country controls the therapeutics that define the next decade.

#### INFLUENCE GAP BY FRONTIER DOMAIN

DOMAIN	Mean Relative Citation Ratio (RCR)	ADVANTAGE				
Overall biomedical	<table border="0"> <tr><td>U.S.</td><td>2.38</td></tr> <tr><td>CHN</td><td>1.82</td></tr> </table>	U.S.	2.38	CHN	1.82	+31% U.S.
U.S.	2.38					
CHN	1.82					
CRISPR & gene editing	<table border="0"> <tr><td>U.S.</td><td>2.86</td></tr> <tr><td>CHN</td><td>1.97</td></tr> </table>	U.S.	2.86	CHN	1.97	+45% U.S.
U.S.	2.86					
CHN	1.97					
RNA therapeutics *	<table border="0"> <tr><td>U.S.</td><td>2.59</td></tr> <tr><td>CHN</td><td>1.62</td></tr> </table>	U.S.	2.59	CHN	1.62	+60% U.S.
U.S.	2.59					
CHN	1.62					
CAR-T & cell therapy	<table border="0"> <tr><td>U.S.</td><td>3.62</td></tr> <tr><td>CHN</td><td>1.91</td></tr> </table>	U.S.	3.62	CHN	1.91	+90% U.S. widest gap
U.S.	3.62					
CHN	1.91					
AI drug discovery *	<table border="0"> <tr><td>U.S.</td><td>3.45</td></tr> <tr><td>CHN</td><td>2.26</td></tr> </table>	U.S.	3.45	CHN	2.26	+52% U.S. closest gap
U.S.	3.45					
CHN	2.26					

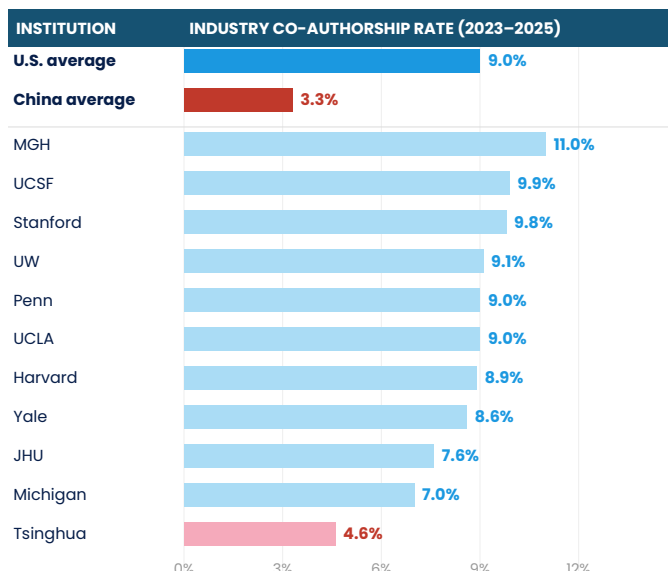
\*China leads in publication volume from 2020 to 2025; U.S. retains influence lead in all five domains.

#### U.S. INSTITUTIONAL ADVANTAGE

U.S. institutions average 9.0% industry co-authorship vs. China's 3.3% — a 2.7x gap from 2023 to 2025.

#### COMMERCIAL EMBEDDEDNESS

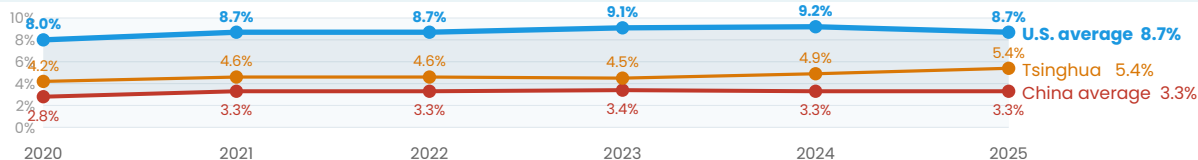
Industry Co-Authorship Rate



The gap is consistent at the institution level. All top 10 U.S. institutions outperform every Chinese peer except Tsinghua University, by co-authored biomedical publication volume from 2023 to 2025.

#### A Durable Gap: U.S. Commercial Embeddedness Stable Across Six Years

Despite China's rapid publication scale-up, the commercial embeddedness gap has remained structurally stable, 2.65 to 2.8x for six consecutive years from 2020 to 2025 — reflecting ecosystem depth, not a closing trend. Tsinghua is the sole Chinese outlier.



#### About the Cure Innovation Index Bibliometric Analysis

The Index sourced data from Dimensions, an inter-linked research information system provided by Digital Science. The analysis covers the top 10 biomedical research institutions per country (U.S. and China) by total publication volume, examining research articles in Biomedical and Clinical Sciences (ANZSRC taxonomy) published from 2020 to 2025, with longitudinal data extending to 2000 for growth analysis. Editorials, reviews, preprints, and letters are excluded. The key metric, Mean Relative Citation Ratio (RCR), is a field- and year-normalized citation measure developed by the U.S. National Institutes of Health (NIH). A RCR of 1.0 equals the average influence of NIH-funded publications. Four frontier biomedical domains (CRISPR and gene editing, CAR-T and cell therapy, RNA therapeutics, and AI drug discovery) are defined by structured keyword queries applied to publication titles and abstracts. Industry co-authorship rate is defined as the share of an institution's biomedical publications that include at least one industry-affiliated co-author. The analysis examined publications between 2020 to 2025 for trend analysis and 2023 to 2025 for institution-level comparisons.

## Session: Racing to Cures: the U.S.–China Biomedical Competitiveness Scorecard

BIO International Convention · San Diego · June 22, 2026 · Room 30DE · 4:15–5:15 PM PDT

### America's Weakest Link

Clinical Trial Infrastructure Analysis

## Where America Falls Behind – Outdated Clinical Trial Infrastructure

The emerging battleground is translation performance, the speed and efficiency with which scientific breakthroughs move from the laboratory into development, commercialization, and patient impact. If the United States wants to stay ahead, it has to modernize the clinical trial infrastructure.

### THE 64:1 TRANSLATIONAL BOTTLENECK

U.S. universities affiliated with the NIH's Clinical and Translational Science Award (CTSA) run a median of 64 Phase 1/2 trials per year. The median non-CTSA university runs 1. Same discovery base. Same R&D spending per dollar. Opposite translational output.

**1 62 universities do the work of 243.** CTSA institutions — just 62 of 243 U.S. research universities — account for **67% of all U.S. Phase 1/2 clinical trials**. The remaining 181 universities share the other 33%.

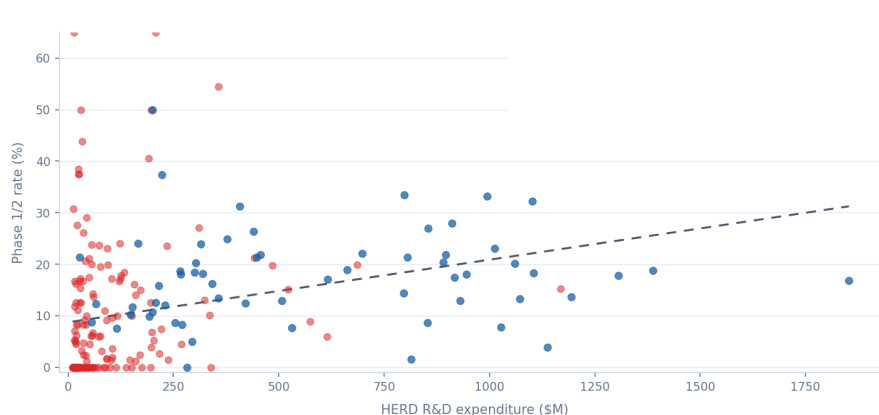
**2 44% of universities with active trial programs have near-zero Phase 1/2 conversion.** Dozens of institutions run general clinical trials but produce almost no early-phase translational work — the exact gap a shared Phase 1 infrastructure network is designed to close.

**3 Money alone doesn't explain it.** A non-CTSA university with \$500M in R&D expenditure is no more likely to run Phase 1/2 trials than one with \$50M. The CTSA infrastructure designation — not funding level — is the decisive variable. Only **56% of non-CTSA universities** run any Phase 1/2 trials at all, vs. **97% of CTSA universities**.

**4 Frontier science and trial infrastructure are concentrated in different institutions.** The highest frontier publication intensity in the U.S. is in specialist research institutes, Broad Institute (12% frontier share), Jackson Laboratory (13%), City of Hope (11% CAR-T), Salk, Scripps, Dana-Farber, while clinical trial capacity is concentrated in CTSA-designated universities. **The institutions generating the next wave of science are often not the ones equipped to translate it.**

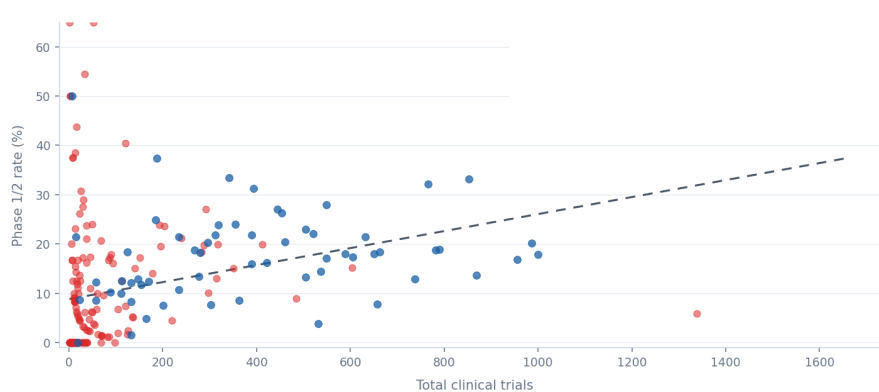
**5 CTSA institutions run 6x more Phase 1/2 trials than non-CTSA universities, despite similar R&D spending.** Expanding the CTSA network or building equivalent Phase 1 capacity is the single highest-leverage domestic intervention. **The efficiency gap is in infrastructure designation, not funding level.**

### Biomedical R&D Funding and Phase 1/2 Concentration



● CTSA university (N=62) ● Non-CTSA university (N=181)  
Each dot = one university · All 243 universities with active trial programs

### Total Trial Volume and Phase 1/2 Concentration



● CTSA university (N=62) ● Non-CTSA university (N=181)  
Each dot = one university · All 243 universities with active trial programs

#### About the Cure Innovation Index Clinical Trial Infrastructure Analysis

The Cure Innovation Index Clinical Trial Infrastructure Analysis examined 2020 to 2024 data regarding 243 universities ranked in the Cure Innovation Index sourced from ClinicalTrials.gov; the Higher Education Research and Development (HERD) Survey; and Dimensions, an inter-linked research information system provided by Digital Science. Of the universities, 62 were CTSA members and 181 were not. Analysis included Phase 1/2 interventional trials tagged drug, device, biologic, diagnostic, or genetic.

## THE CHINA ADVANTAGE

Cure Innovation Index Development Gap Analysis

### Where China Pulls Ahead – Speed, Scale and Costs

China decisively leads in clinical development, outmaneuvering the United States in time from discovery to proof-of-concept and development time efficiency. It has invested in and built its translation engine to speed trial recruitment and enrollment and bring efficiencies to supply chain infrastructure, while scaling clinical infrastructure and controlling clinical trial costs.

#### THE VERDICT

The Reagan-Udall Foundation for the FDA's new report *Enhancing Early-Stage Drug Development in the United States* (June 2026), from a March 2026 BIO-funded roundtable, corroborates Cure Innovation Index analyses: "Without deliberate investment and direction, the U.S. will continue to lose Phase 1 programs to countries that have made precisely that investment." The roundtable developed 17 recommendations, including designating U.S. clinical trial infrastructure as a critical national asset, on par with semiconductors and domestic energy, and building a dedicated network of Phase 1-capable trial sites with streamlined IRB processes.

- 1 China's share of global clinical trial starts grew from 1% in 2009 to 32% in 2025.**  
 Nearly matching the U.S. at 35%. In oncology, China now accounts for **39% of global trial starts.**
- 2 Early discovery-to-IND cycles in China are 50-70% faster than the rest of the world.**  
 Driven by streamlined workflows, a dense CRO ecosystem, and regulatory reviews that grew from **200 in 2017 to 1,300 in 2024.**
- 3 Phase 1 trials in China cost an estimated 50-60% less.**  
 China's median time-to-launch for novel active substances compressed from 9.6 years (2005-09) to **3.7 years** in the past five years.
- 4 Chinese biopharmaceuticals now account for approximately one-third of new compounds entering the U.S. pipeline.**  
 Projected to account for **35% of FDA approvals by 2040.** International deals for China-based companies reached 94 in 2025, nearly half with U.S. partners.
- 5 Speed and efficiency top the list of what U.S. leaders say China cannot be matched on.**  
 38% of survey respondents cite speed and efficiency as China's primary replication advantage, followed by government coordination (16%) and value chain integration (14%). Conversely, what China finds hardest to replicate: **commercial depth (43%), scientific talent (26%).**

**80%**

of Chinese biotech company leaders have significant U.S. or global Big Pharma experience, or still live part-time in the U.S.

*Industry roundtable participant · 2026*

**94**

International M&A or licensing deals by China-based companies in 2025, up from 71 in 2024; nearly half with U.S. partners

*IQVIA, Global R&D Trends 2026.*

**3.6 years**

Median time-to-launch for Chinese novel active substances, down from 9.5 years in 2006 to 2025, a 62% compression

*IQVIA, Global R&D Trends 2026.*

#### PANELIST, CURE BIO 2026 SESSION

#### Jue Wang, PhD

Vice President and Global Head of Business Development, Insilico Medicine

*"AI doesn't favor incumbents. It favors whoever deploys it fastest. China is moving with speed and intentionality. The U.S. has stronger foundational science – but whether that translates into a sustained lead depends on how quickly its institutions modernize around it. The real question isn't whether AI will reshape global biotech leadership. It's whether science and industry can move fast enough together to realize that potential and unlock its full potential for patients."*

#### About the Cure Innovation Index Development Gap Analysis

Clinical trial start data sourced from IQVIA Institute for Human Data Science, *Global R&D Trends 2026* (IQVIA, 2026). Discovery-to-IND speed, cost estimates, and time-to-launch data sourced from IQVIA, 2026 and from the Reagan-Udall Foundation for the FDA, *Enhancing Early-Stage Drug Development in the United States* (June 2026). Chinese biopharma pipeline penetration and FDA approval projections sourced from Ge, Q., Zhang, X., Kaitin, K., & Shao, L., Development of Chinese innovative drugs in USA, *Nature Reviews Drug Discovery*, 23, 412-413 (2024). Survey data from the Cure Innovation Index U.S.-China Biotech Competitiveness Scorecard, fielded June 11-17, 2026.

## SENIOR INDUSTRY PERSPECTIVES

### What senior leaders are seeing, and what they say must change

Senior leaders from industry, academia, and innovation share their perspectives about U.S. biomedical innovation competitiveness, providing corroborating insights and evidence to the Cure Innovation Index's findings of U.S.-China biomedical innovation competitiveness.

#### U.S. STRATEGIC ASSETS

##### PANELIST, CURE BIO 2026 SESSION

#### Vanessa Almendro Navarro, PhD, MBA

Senior Vice President and Chief Commercialization Officer, City of Hope

*"America's scientific leadership and discovery capabilities are our greatest strategic assets. To protect and expand that leadership, we need a coordinated national strategy that strengthens the full innovation continuum, from NIH-funded discovery to translational development, national clinical trial infrastructure, domestic manufacturing, resilient supply chains, and global talent. Discovery alone will not secure our leadership – translation will."*

#### THE DEALMAKING SHIFT

##### LICENSING & BD

*"The evolution of Chinese biotech is mind-blowing. Their ability to execute and expand – now with the quality you need and at significantly lower cost – is remarkable. There are something like 6,000 biotech startups in China. We need to engage with this innovation rather than ignore it, because if the U.S. ignores innovation coming out of China, U.S. patients are going to be the ones who suffer."*

HEAD OF BUSINESS DEVELOPMENT, THERAPEUTIC AREAS · GLOBAL SPECIALTY BIOPHARMACEUTICAL COMPANY · INDUSTRY ROUNDTABLE, 2026

##### LICENSING & BD

*"Two years ago, Chinese biotechs were seeking validation or cash through a Western partnership. Now, the most attractive assets have alternatives. They can pursue an IPO in Hong Kong, raise additional capital, or wait to generate more data. When a Chinese biotech has a credible IPO path, they negotiate very differently."*

HEAD OF PHARMACEUTICAL PARTNERING · MAJOR GLOBAL PHARMACEUTICAL COMPANY · INDUSTRY ROUNDTABLE, 2026

#### CHINA INNOVATION

##### CLINICAL DEVELOPMENT SPEED

*"I think about the macro factors driving innovation in China – R&D investment as a percentage of GDP, increasing affluence driving greater demand for healthcare, the sheer number of STEM graduates. These dynamics are driving innovation in a very real way. And many of the companies emerging in China are acutely aware that the real value lies in ex-China markets. So their approach to IP is not meaningfully different from how a U.S. or European biotech would approach IP strategy."*

HEAD OF PHARMACEUTICAL PARTNERING · GLOBAL PHARMACEUTICAL COMPANY · INDUSTRY ROUNDTABLE, 2026

#### U.S. THREATS AND PRIORITIES

##### Top U.S. threats

- Declining federal funding
- China's supply chain capacity
- China's clinical development speed and cost
- China's manufacturing scale
- China's rising discovery skills and talent

Cure U.S.-China Biotech Competitiveness Survey

##### Top US priorities

- Restore NIH funding
- Expand translational funding
- Modernize clinical trial infrastructure
- Strengthen domestic manufacturing and supply chains
- Attract and retain global scientific talent

#### About Attributions

Named quotes are confirmed attributed statements. Anonymized quotes are drawn from a closed-door industry roundtable conducted under Chatham House Rules, 2026; speakers are identified by role and organization type only. Cure Innovation Index survey open-text responses are from the Cure U.S.-China Biotech Competitiveness Survey, n=117, June 11-17, 2026. Additional data sourced from IQVIA Institute for Human Data Science, *Global R&D Trends 2026* and the Reagan-Udall Foundation for the FDA, *Enhancing Early-Stage Drug Development in the United States* (June 2026).

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### U.S. COMPLACENCY RISK

#### U.S. LEADERSHIP

*"China actually changes the game in a way that is, in part, healthy. Europe has been complacent for a long time — when you're the most successful player in the room, you tend to relax. Now we have genuine competition that is faster and is deploying technologies like AI more effectively in some respects. One of the best things we can do is learn from that. What we have that China still lacks is a deep commitment to foundational, curiosity-driven basic research. We can compete on that basis. But on the development side, we are slower and more expensive — and those are structural things we need to address."*

PRESIDENT & CHIEF SCIENTIFIC OFFICER · MAJOR U.S. BIOPHARMACEUTICAL COMPANY · INDUSTRY ROUNDTABLE, 2026

#### SURVEY RESPONDENT

*"The U.S. does not have a discovery problem — we have a translation bottleneck. Increase proof-of-concept funding."*

ACADEMIC LEADER · Cure U.S.–China Biotech Competitiveness Survey · Q13B OPEN TEXT

#### SURVEY RESPONDENT

*"Get federal funding of basic research back on track. Moving all the dollars to selected industries will significantly hurt discovery."*

INDUSTRY LEADER · Cure U.S.–China Biotech Competitiveness Survey · Q12B OPEN TEXT

#### U.S. LEADERSHIP

*"The one thing I've learned as a venture capitalist is to bet on people, not just on ideas. And on the structural question: we need to change our regulatory and development systems. China can get molecules into the clinic much faster and at much lower cost. Our system is moving in the opposite direction — it takes longer, costs more, and faces more pricing pressure. That system is not sustainable in its current form."*

EXECUTIVE CHAIRMAN · MAJOR U.S. BIOPHARMACEUTICAL COMPANY · INDUSTRY ROUNDTABLE, 2026

### WHAT THE VOICES CONFIRM

Senior industry leaders across pharma, biotech, and academia are seeing the same dynamic the Cure Innovation Index data maps: **China has built a development engine** that is faster, cheaper, and increasingly self-sustaining. The licensing and BD market has already repriced to reflect it.

### WHERE THE U.S. ADVANTAGE HOLDS

**Foundational science, commercial depth, and talent** remain structurally hard for China to replicate. The U.S. ecosystem depth — industry co-authorship, TTO sophistication, capital formation — is a durable moat. But it requires investment to remain so.

### THE WINDOW TO ACT

The consensus from both the data and the voices: **the problem is not discovery — it is translation.** Restoring NIH funding, expanding translational infrastructure, and modernizing clinical trial systems are the three levers that determine whether the U.S. lead holds into the next decade.

## THE LEAPFROG CHALLENGE

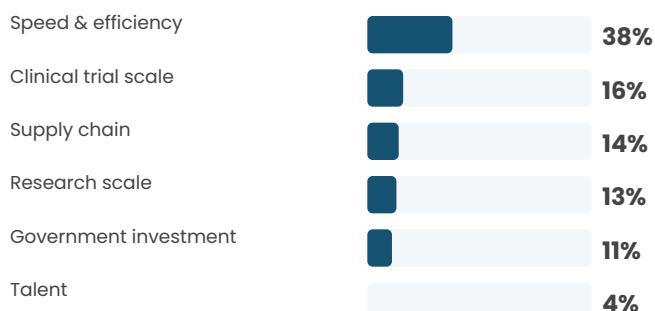
Cure U.S.-China Biotech Competitiveness Survey

# What's Hardest to Replicate: Two Distinct Dimensions

China's structural advantages — speed, scale, and state coordination — are difficult for the U.S. system to replicate. The U.S. commercial ecosystem and talent base present an equivalent challenge for China.

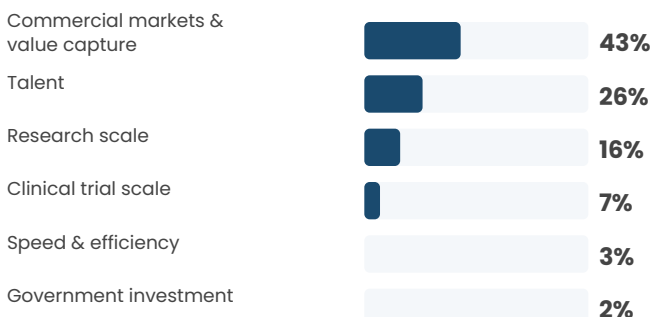
### China's Hardest to Replicate

U.S. perspective: aspects of China's ecosystem hardest for the U.S. to match



### U.S. Hardest to Replicate

China perspective: aspects of the U.S. ecosystem China cannot easily replicate



Q15: Hardest to replicate aspect of each country's biotech ecosystem · Cure U.S.-China Biotech Competitiveness Survey

### CHINA'S RAPID EXPANSION

*"China's ascent reflects regulatory reform, AI-enabled discovery, and the out-licensing of high-value clinical assets that increasingly shape multinational R&D pipelines. Although geopolitical tensions around data integrity and market access are real, they should not eclipse opportunities for regulatory cooperation, shared standards, and improved patient access. Meanwhile, US vulnerabilities arise less from China's progress than from domestic policy decisions that weaken scientific capacity and global health partnerships."*

Babul A, Mahdavi P, Hussain M, Babul N. China's Pharmaceutical Ascent: Opportunity for Global Health, Test for US Leadership. *Cureus*. 2026;18(3):e105407. Published 2026 Mar 17. doi:10.7759/cureus.105407.

### INVITED VOICE

#### Alex Zhavoronkov, PhD

CEO, Insilico Medicine

*"When it comes to saving lives and curing diseases, there should be no competition, only cooperation. But if you want to compete with China - it is important to set up local presence and compete with China in China. Without having a very efficient local discovery engine that takes full advantage of the local infrastructure and highly-qualified talent which likes to work only for top companies in the field, it is impossible to compete with the locally-brewed companies. China is the world's UFC of drug discovery - the ultimate gym where every dollar, every month, every quality metric counts and is used for competitive advantage. If you can win in China - you can win everywhere in the world and you can really win against diseases."*

## STRATEGIC AGENDA — WHAT MUST HAPPEN NOW

# The window is open. It will not stay open.

The U.S. does not have a science problem. It has a translation problem — and a complacency risk. The data, the expert voices, and the industry roundtable all converge on three imperatives. The question is whether the U.S. acts on them before the structural advantages it holds today erode into the structural disadvantages of the next decade.

### THREE IMPERATIVES FROM CURE U.S.-CHINA BIOTECH COMPETITIVENESS SURVEY

I

#### IMPERATIVE ONE

### Protect the discovery engine

The U.S. scientific advantage — RCR 31% higher, frontier leads of 45-90% in CRISPR, RNA, and CAR-T — is real but not self-sustaining. It was built on NIH-funded basic research. Cutting that foundation to save money is cutting the seed corn.

**81%**

cite NIH restoration as top policy priority

II

#### IMPERATIVE TWO

### Fix the translation bottleneck

62 CTSA universities run 67% of all U.S. Phase 1/2 trials. The median non-CTSA university runs one. China's discovery-to-IND cycles are 50-70% faster. This is not a science gap. It is an infrastructure gap, and infrastructure can be built.

**61%**

call for expanding translational funding programs

III

#### IMPERATIVE THREE

### Compete, don't disengage

China's biotech innovation is not a threat to be contained. It is a development engine to be understood, engaged, and in some cases partnered with. Disengagement cedes not just deals but intelligence about a rapidly evolving innovation landscape that currently funds U.S. discovery reinvestment.

**72%**

say China is improving faster than the U.S.

### 3 STRATEGIC THEMES FROM THE SENIOR INDUSTRY ROUNDTABLE

#### China is no longer a low-cost follower

It now competes on quality, speed, and execution, not just cost. The Insilico parallel Phase II story (China completed enrollment while the U.S. lagged) is the clinical development version of this shift.

#### The ecosystem is self-sustaining

Chinese biotechs now have credible IPO paths in Hong Kong, domestic capital, and growing global licensing leverage. Western partnerships are a choice, not a necessity, which changes every negotiation.

#### The real threat is U.S. complacency

"When you're the most successful player in the room, you tend to relax." Competition is healthy. The danger is assuming U.S. leadership is permanent rather than earned and maintained.

#### PANELIST, CURE BIO 2026 SESSION

### Yan Ling, PhD

Executive Director, Head of Research Innovation China, Takeda

*"The next era of biopharma innovation will not be defined by geography, but by the ability to combine the best capabilities across ecosystems. The U.S. brings science, capital, regulatory credibility, commercialization, with global access; China brings speed, scale, clinical execution, manufacturing depth, and a growing innovation pipeline. Linking these strengths across discovery, translation, development, and manufacturing can build more resilient pathways and accelerate innovative medicines to patients."*

## STRATEGIC PROJECTIONS — WHAT THE DATA SHOW

# The 2031 Scenario: **Two Paths from Here**

The expert data and the senior industry roundtable converge on the same conclusion: structural inaction carries compounding costs. The two scenarios below project what the evidence shows by 2031 — one driven by deliberate policy and investment, the other by drift.



### If the U.S. acts now

*Projected outcomes by 2031 if imperatives are acted on*

- NIH funding restored and expanded — discovery pipeline protected, frontier science advantage maintained in CRISPR, CAR-T, RNA, and next-generation platforms
- Phase I infrastructure network built — CTSA model extended, trial starts retained domestically, discovery-to-IND gap closed from 50-70% slower to competitive
- Industry co-authorship deepens — the 9.0% commercial embeddedness advantage widens as academic-industry partnerships formalize earlier in the discovery cycle
- China engagement produces wins — licensing, co-development, and market access deals bring Chinese innovation into U.S. patient pipelines faster
- U.S. share of global trial starts holds at 35%+ — development does not migrate further to China and Australia



### If current trends continue

*Projected outcomes by 2031 if no structural changes are made*

- 76% of experts say more R&D shifts outside the U.S. — trial migration accelerates, Phase I sites atrophy, site-investigator relationships move offshore permanently
- China reaches 35-40% of global trial starts — matching or exceeding the U.S.; Chinese companies projected at 35% of FDA approvals by 2040
- Frontier science advantage erodes — AI drug discovery gap already at 52% and narrowing; Tsinghua emerging as a concentrated excellence node comparable to U.S. elite institutions
- 85% say U.S. lead lasts 10 years or less — and without structural intervention, the experts surveyed do not believe that lead is self-renewing
- Supply chain vulnerability deepens — China leads all 6 supply chain metrics; API and CDMO dependence grows without deliberate domestic manufacturing investment

## WHAT THE EVIDENCE RECOMMENDS

# Change the Trajectory. **Five Things to Do Now.**

The Cure U.S.-China Biotech Competitiveness Survey results align with findings from the Cure Innovation Index analysis of U.S. biomedical research ecosystem: Institutions that lead in translational performance combine scientific excellence with strong commercialization infrastructure, deep industry engagement, and an embedded entrepreneurial culture.

### 1 Restore and protect NIH basic research funding

The U.S. scientific influence advantage was built over decades of NIH investment. It cannot be rebuilt quickly once lost. Restoring funding is not discretionary. It is the foundation of everything else on this page.

81% top policy priority · Cure Survey · "Get federal funding of basic research back on track." — Survey Respondent

### 2 Modernize clinical trial infrastructure and build U.S. Phase 1 network

The Reagan-Udall Foundation's 17 recommendations provide a ready-made legislative agenda. The problem, as the report notes, is not knowledge but execution. Designating clinical trial infrastructure as a national asset, on par with semiconductors, is the first step.

Reagan-Udall Recs. #14-16 · Clinical Trial Infrastructure Analysis: 97% of CTSA universities vs. 56% of non-CTSA institutions run any Phase 1/2 trials

### 3 Expand translational and Proof-of-Concept funding

Dedicated Proof-of-Concept funds, precompetitive, industry-co-invested, and university-anchored, are the single highest-leverage intervention available. The Valley of Death is not a metaphor. It is a measurable funding gap between NIH grants and venture-stage investment.

61% expand translational funding · 62% cite Proof-of-Concept funding as greatest opportunity · "We have a translation bottleneck." — Survey Respondent

### 4 Modernize FDA regulatory pathways for AI-enabled drug discovery

The speed advantage China now holds is not only about trial infrastructure. It also reflects regulatory processes that have adapted to AI-enabled discovery timelines. The FDA has made progress, but a formal framework for AI-assisted IND submissions is still absent.

38% cite speed and efficiency as China's primary replication advantage · Clinical Trial Infrastructure Analysis

### 5 Invest in U.S. scientific talent and immigration policy

The U.S. leads all five talent dimensions — management availability (73%), ability to attract scientific talent (68%), entrepreneurial talent (66%), ability to retain (64%), and scientific expertise prestige (50%). China cites U.S. talent as the second hardest attribute to replicate (26%). A more open talent and immigration environment is essential to sustaining this lead.

52% call for improved talent and immigration policies · Cure U.S.-China Biotech Competitiveness Survey

## The U.S. is not losing because China has better science.

### It is losing because it has underinvested in the infrastructure that moves science into medicine.

The Cure Innovation Index data are unambiguous: the United States retains a 31% scientific influence advantage, a 2.7× commercial embeddedness lead, and decisive strengths in capital, technology transfer, and talent. These are not the assets of a country that is losing. They are the assets of a country that is not yet translating what it has. China's rise is not a reason for fear. It is a reason for urgency. The window to act is open. The question is whether the institutions, investors, and policymakers in this room will treat translation as the national strategic priority the data say it must be.

— Cure Innovation Index, June 2026

## U.S. vs. China Biotech Competitiveness Scorecard

U.S. ADVANTAGE

% of respondents indicating advantage

CHINA ADVANTAGE

### MATCH #1 · SCIENTIFIC DISCOVERY

U.S. 3

TIE 2

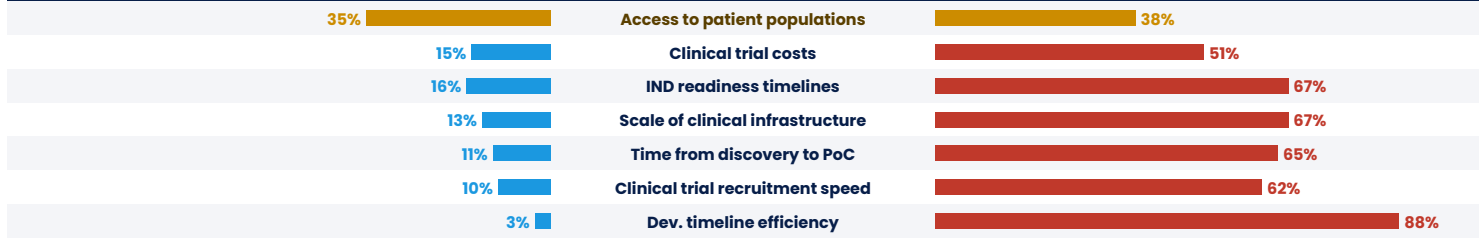
CHINA 2



### MATCH #2 · CLINICAL DEVELOPMENT

TIE 1

CHINA 6



### MATCH #3 · TECHNOLOGY TRANSFER

U.S. 5



### MATCH #4 · CAPITAL & COMMERCIALIZATION

U.S. 5



### MATCH #5 · SUPPLY CHAIN & STRATEGIC RESILIENCE

CHINA 6



### MATCH #6 · TALENT

U.S. 5



– Bars scaled to maximum observed response (88%). – Tied, responses within 3 percentage points.

#### About the Cure U.S.–China Biotech Competitiveness Survey

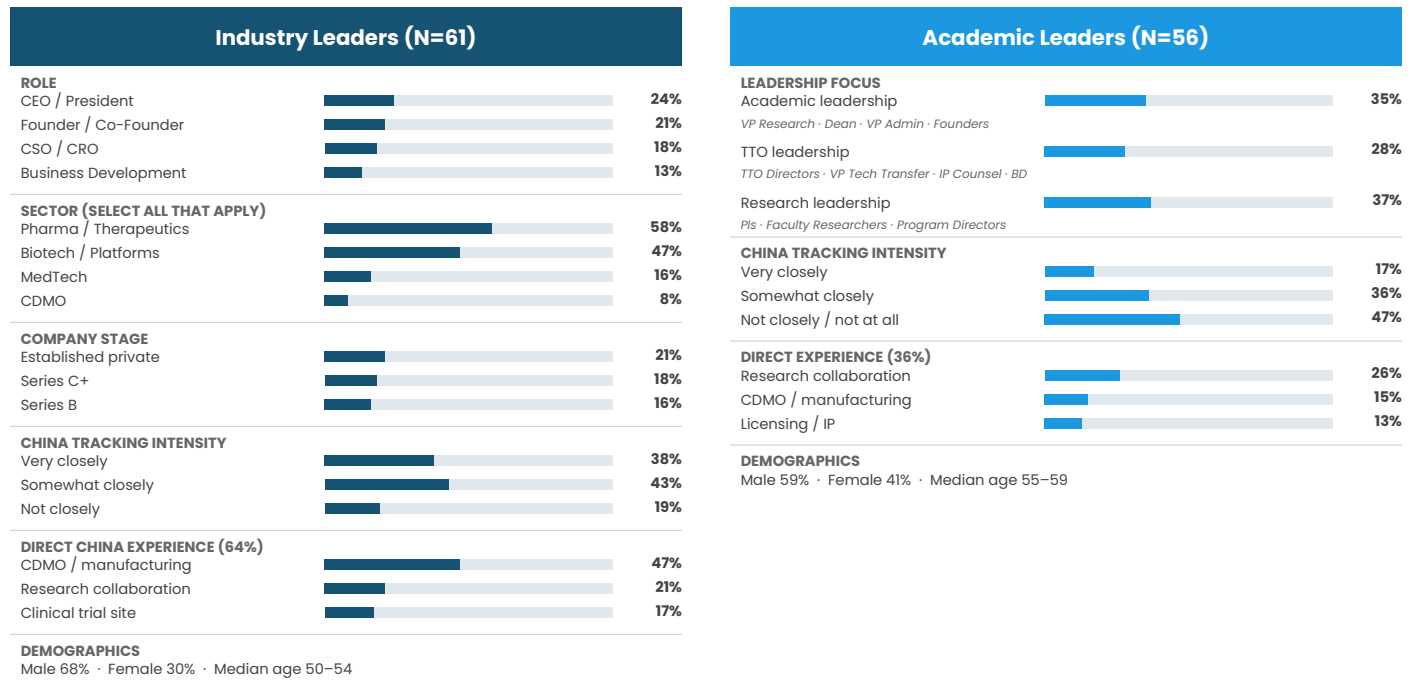
Cure fielded the survey June 11 to 17, 2026, to senior U.S. leaders in private biomedical industries and U.S. academic research. The 117 respondents split nearly evenly between industry (61) and academia (56) including chief executive officers, founders, chief scientific officers, business development directors and technology transfer leaders. Cure asked respondents to assess the two countries across 35 metrics in six dimensions of end-to-end innovation.

## Session: Racing to Cures: the U.S.-China Biomedical Competitiveness Scorecard

BIO International Convention · San Diego · June 22, 2026 · Room 30DE · 4:15–5:15 PM PDT

## CURE INNOVATION INDEX U.S.-CHINA BIOTECH COMPETITIVENESS SURVEY

### About the Respondents



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## About the Cure Innovation Index

The Cure Innovation Index, launched in April 2026, is the first data-driven framework to measure how effectively U.S. biomedical institutions translate scientific discovery into real-world healthcare solutions and treatments. The Index reports an evidence-based ranking of 303 U.S. biomedical research institutions, from more than 6,000 nationwide, across 25 indicators of translational performance. The Index data platform also provides institution-specific diagnostics, peer benchmarking, identification of translational strengths and gaps across key capabilities, insights, strategic recommendations, and intuitive interactive data visualizations to help institutional leadership with strategic decision-making and investment insights. [wewillcure.com/innovation-index](https://wewillcure.com/innovation-index).

## About Cure

Cure is the premier healthcare innovation ecosystem that provides knowledge, infrastructure and tools to accelerate progress toward cures. Headquartered in New York City, Cure convenes all key stakeholders for innovation across its physical and digital community. The campus houses flagship event venues and is home to healthcare organizations from idea stage to public companies. Cure members gain access to premium opportunities and curated connections. In 2026, The Cure Innovation Index was published, providing unmatched visibility into how research institutions translate breakthrough science into real-world health impact. Innovate with Cure at [wewillcure.com](https://wewillcure.com).

# Racing to Cures

## The US - China Biomedical Competitiveness Scorecard

June 22, 2026 · 4:15 to 5:15 PDT  
Room 30DE, San Diego Convention Center



**MODERATOR**  
**Seema Kumar**  
Chief Executive Officer, Cure

### PANELISTS



**Vanessa Almendro Navarro**  
Chief Commercial Officer, City of Hope



**Yan Ling**  
Executive Director, Head of Research Innovation China, Takeda Pharmaceuticals



**Jue Wang**  
Vice President and Global Head of Business Development, Insilico Medicine

Visit Cure at the New York State Pavilion, #3151 in the BIO Exhibit Hall.