The Latest Developments of Drug Registration Administration in China(Translated)

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- I. To see the current situation of drug development in China from the drug registration data
- II. The latest developments and future of drug registration administration in China

The research & development of innovative drug is the only way for China to change from the pharmaceutical country to the leading pharmaceutical country.

The role of government in promoting the pharmaceutical innovation and the research & development of new drug

Government plays a vital role in promoting the pharmaceutical innovation and the research & development of new drug. We need new treatments to meet the unmet clinical demands.

Measures to support and promote the research & development of new drug from the global governments:

- Critical Path Plan (U.S. FDA, 2002)
- European Innovative Drug Plan (EU, 2007)
- Five-year Strategic Plan for Innovative Medicines and Medical Equipment (Japan, 2007)
- Specialized Plan of Major Drug Creation (China, 2008, 2011)

State 12th Five-year Scientific and Technological Development Plan

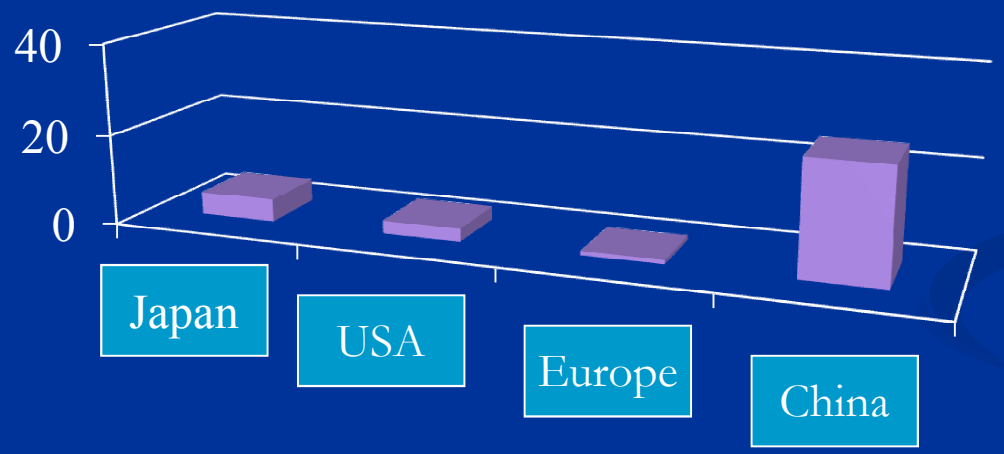
Specialized Plan for Major New Drug Creation:

- Develop 30 kinds of innovative drugs, transform about 200 categories of drug, develop 150 kinds of diagnostic reagents, put more than 10 new vaccines into clinical trials, and obtain 40 biological drugs with independent intellectual property right.

Opportunities for the innovation brought by growth expectation of pharmaceutical industry

IMS Health predicts:

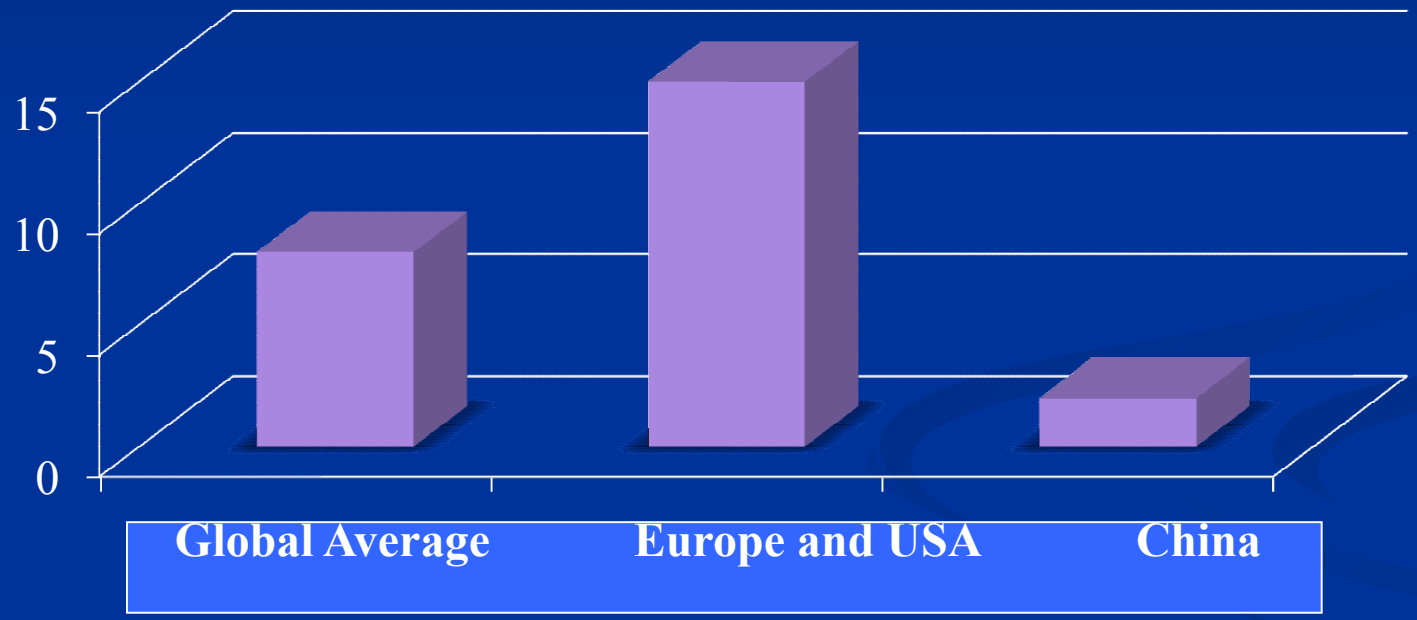
- the pharmaceutical industry growth in 2011



- in the next 4-5 years, the domestic pharmaceutical industry will maintain the same growth rate (25-27%), exceeding 50 billion U.S. dollars
- the investment of specialized funds during 12th five years- the key role of promoting

Data about the gaps to the international new drug research

Proportion of the investment of new drug R&D to the sales revenue



Significant increase in the total output value of pharmaceutical industry

Slow growth in the R & D input indicator

Low proportion of R & D personnel to total employees in China

Drug Registration Approval Situation 2010-2011

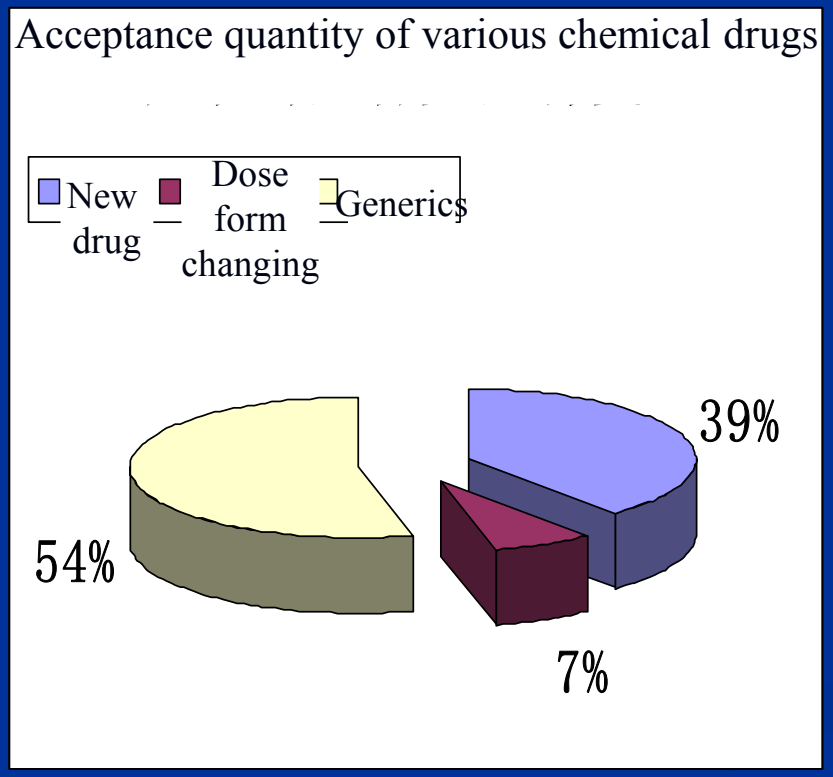
Drug Registration Data Analysis 2010

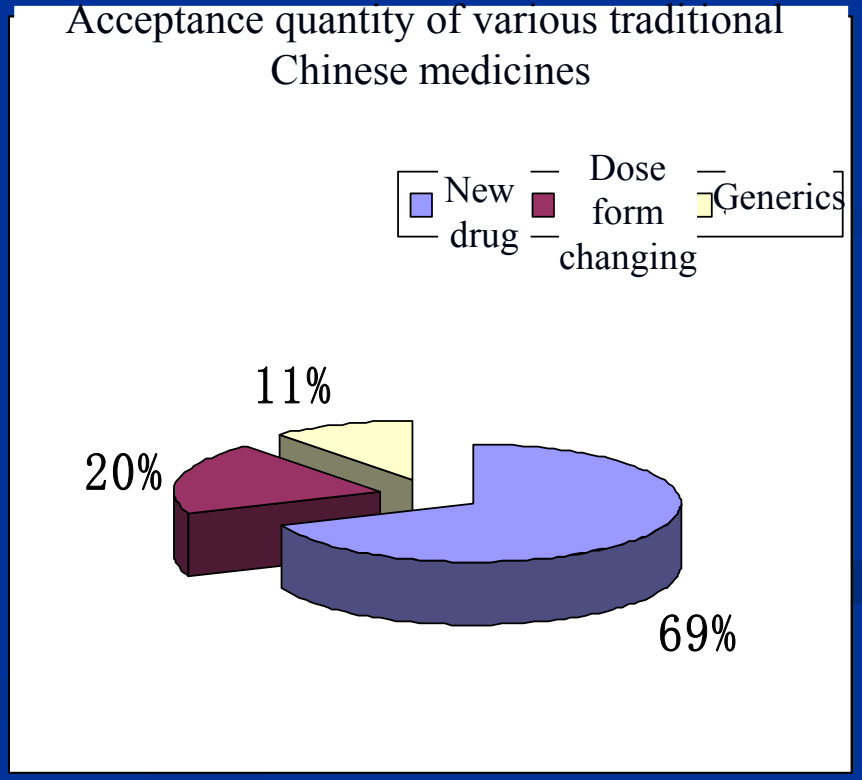
Drug Registration Acceptance Situation

	Internal Application Acceptance				Oversea Application Acceptance
	Chemical drugs	Traditional Chinese Medicines	Biological Products	Supplementary Application	
Quantity	1528	105	69	2433	599
Total	4135			2433	599
Total	4734				

Drug Registration Data Analysis 2010

Drug Registration Acceptance Situation





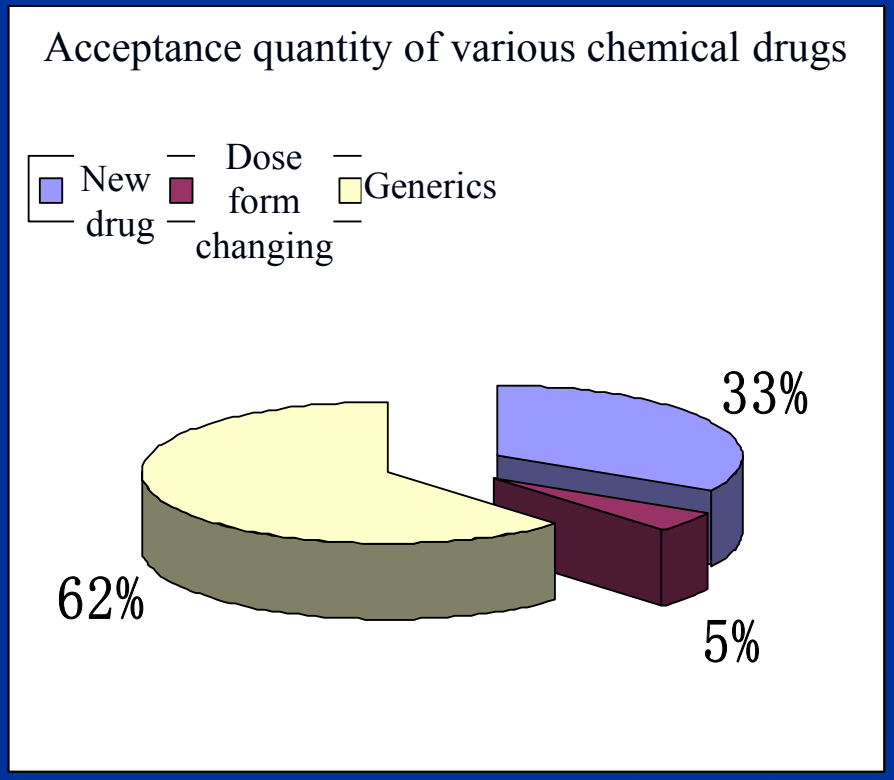
Drug Registration Data Analysis 2011

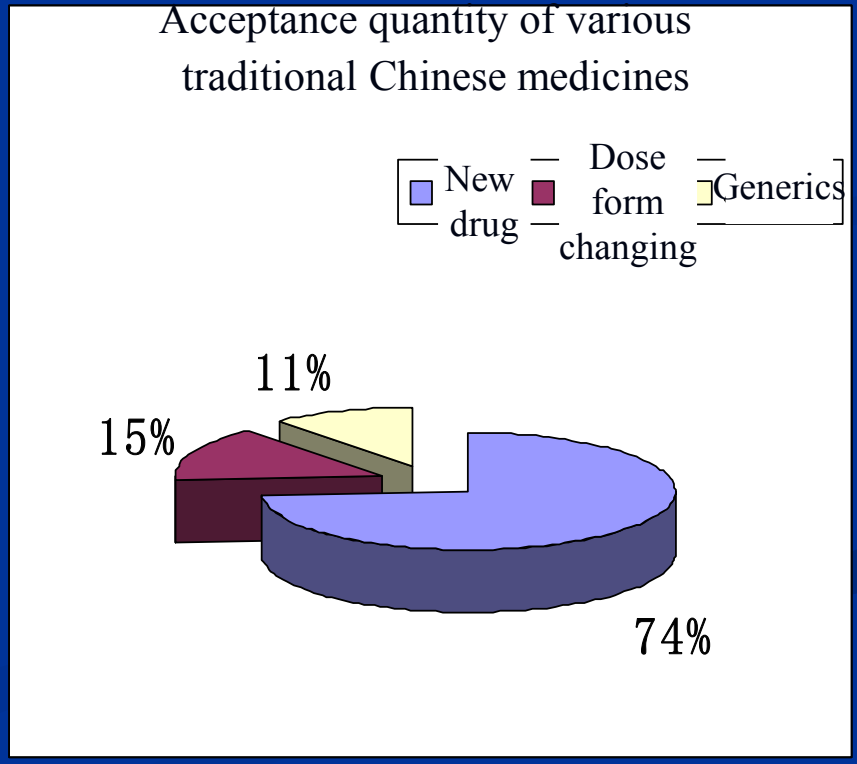
Drug Registration Acceptance Situation

	Internal Application Acceptance				Oversea Application Acceptance
	Chemical drugs	Traditional Chinese Medicines	Biological Products	Supplementary Application	
Quantity	2678	144	91	3311	766
Total	2913			3311	766
Total	6990				

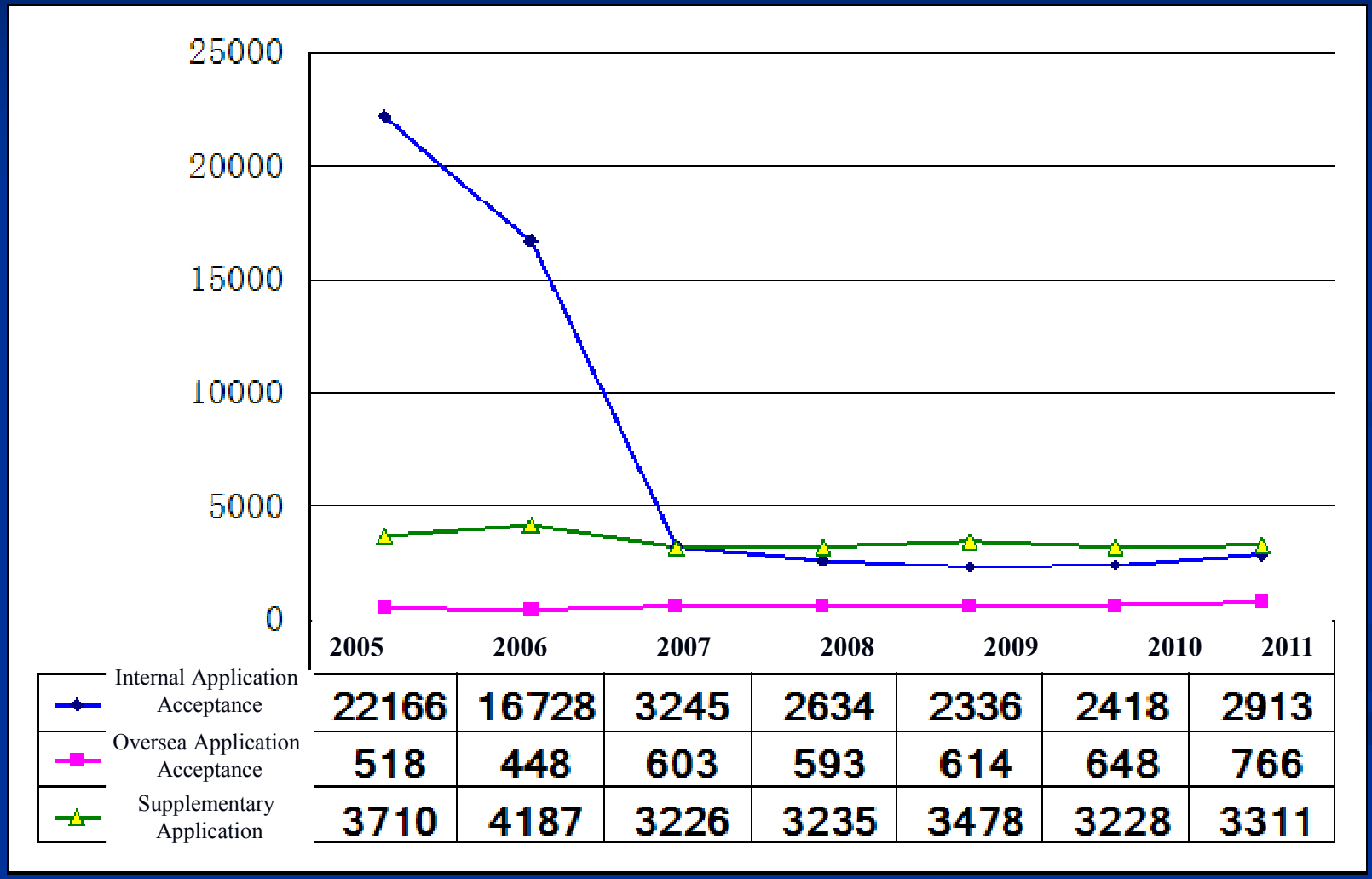
Drug Registration Data Analysis 2011

Drug Registration Acceptance Situation



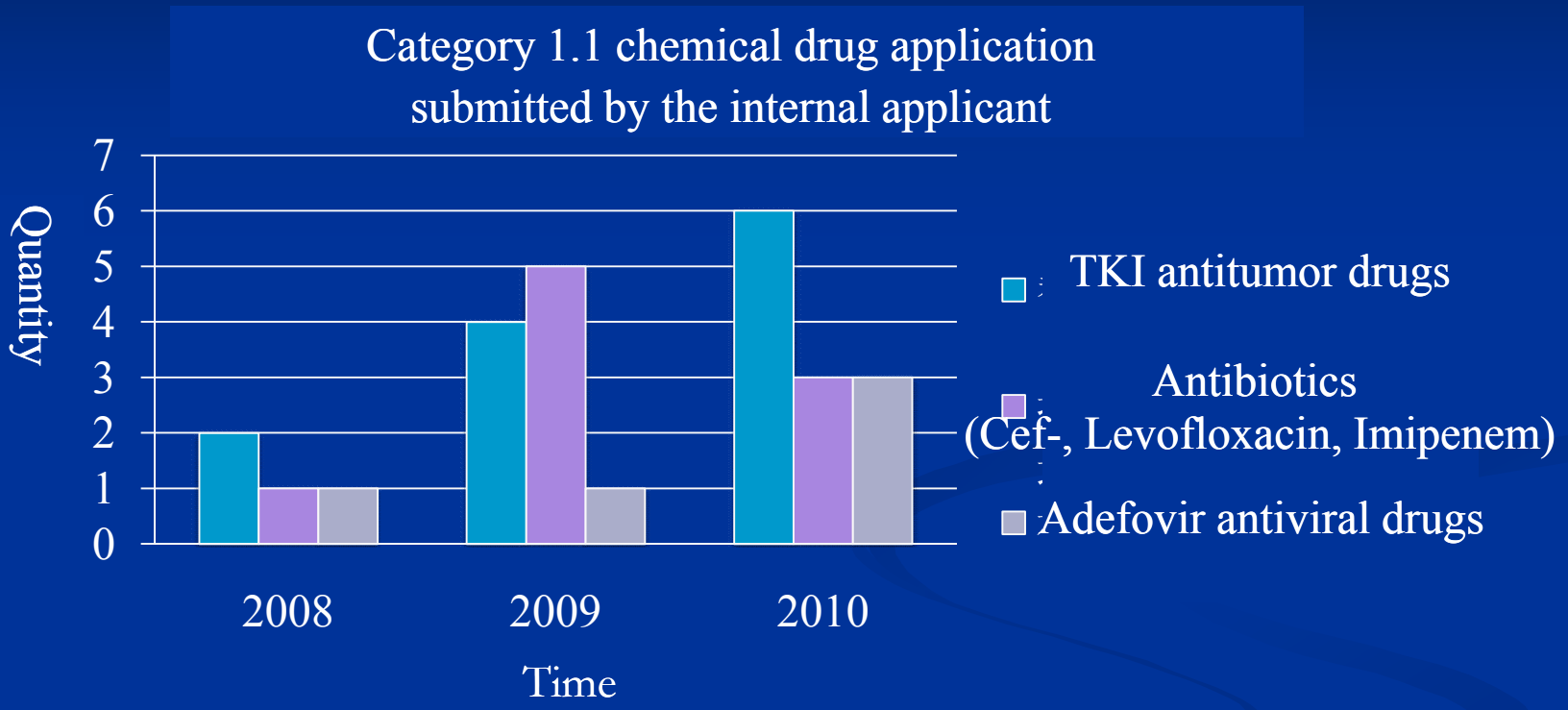


In the past seven years, drug registration application and acceptance trends



	2005	2006	2007	2008	2009	2010	2011
Internal Application Acceptance	22166	16728	3245	2634	2336	2418	2913
Oversea Application Acceptance	518	448	603	593	614	648	766
Supplementary Application	3710	4187	3226	3235	3478	3228	3311

Category 1.1 new chemical drug application and acceptance of domestic enterprise (2008-2010)



The declaration of antibiotics without new target or new mechanism is still accounted for a large proportion.
The TKI antitumor drugs are the focus of R & D investment.
The adefovir antiviral drugs are the concerns of R & D investment.
The above information about the declaration of category 1.1 chemical drug of domestic enterprise reflect the expectations and judgments of the enterprise to the future market, mainly focused on tracking innovation, and supported by the combination of imitation and creation.

Drug Registration Data Analysis 2010

Data of Approved Drugs in 2010, (Chemical Drugs 1.96:1)

Type	Quantity (by acceptance No.)	Involved number of varieties
Chemical drugs	794	369
Traditional Chinese Medicines	80	72
Biological Products	12	10
Total	886	451

Drug Registration Data Analysis 2011

Data of Approved Drugs in 2011, (Chemical Drugs 1. 69:1)

Type	Quantity (by acceptance No.)	Involved number of varieties
Chemical drugs	569	314
Traditional Chinese Medicines	47	47
Biological Products	25	19
Total	641	380

Drug Registration Data Analysis 2010

Data of Approved Drugs in 2010

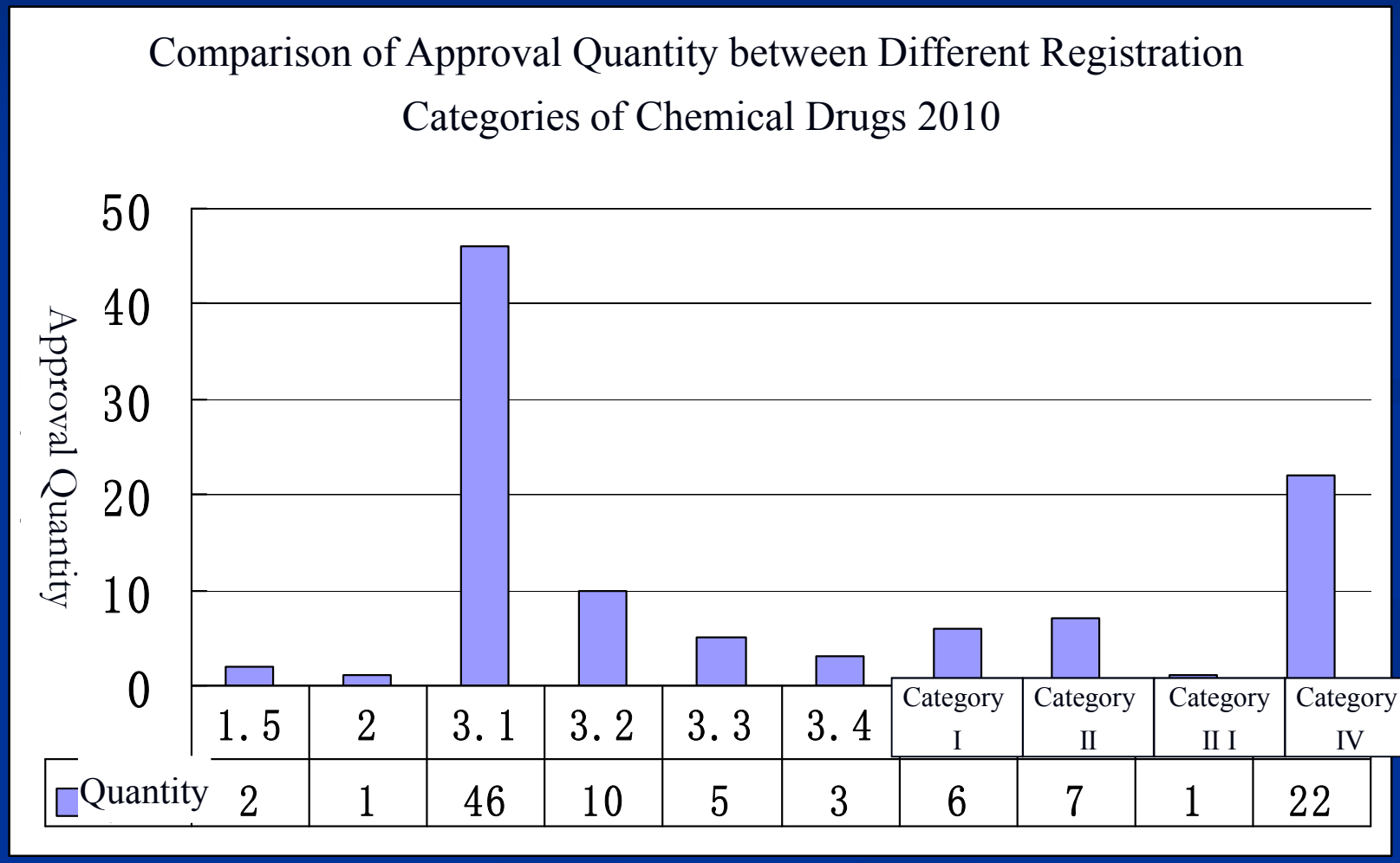
Chemical drugs			Traditional Chinese Medicines			Biological Products		
New drug	Dose form changing	Generics	New drug	Dose form changing	Generics	New drug	Dose form changing	Generics
103	51	640	12	59	9	9	1	2
794(19% of new drugs)			80(88%)			12		
886								

Drug Registration Data Analysis 2011

Data of Approved Drugs in 2011

Chemical drugs			Traditional Chinese Medicines			
New drug	Dose form changing	Generics	New drug	Dose form changing	Generics	Biological Products
103	35	431	18	24	5	25
569(24% of new drugs)			47(89%)			25
641						

Drug Registration Data Analysis 2010



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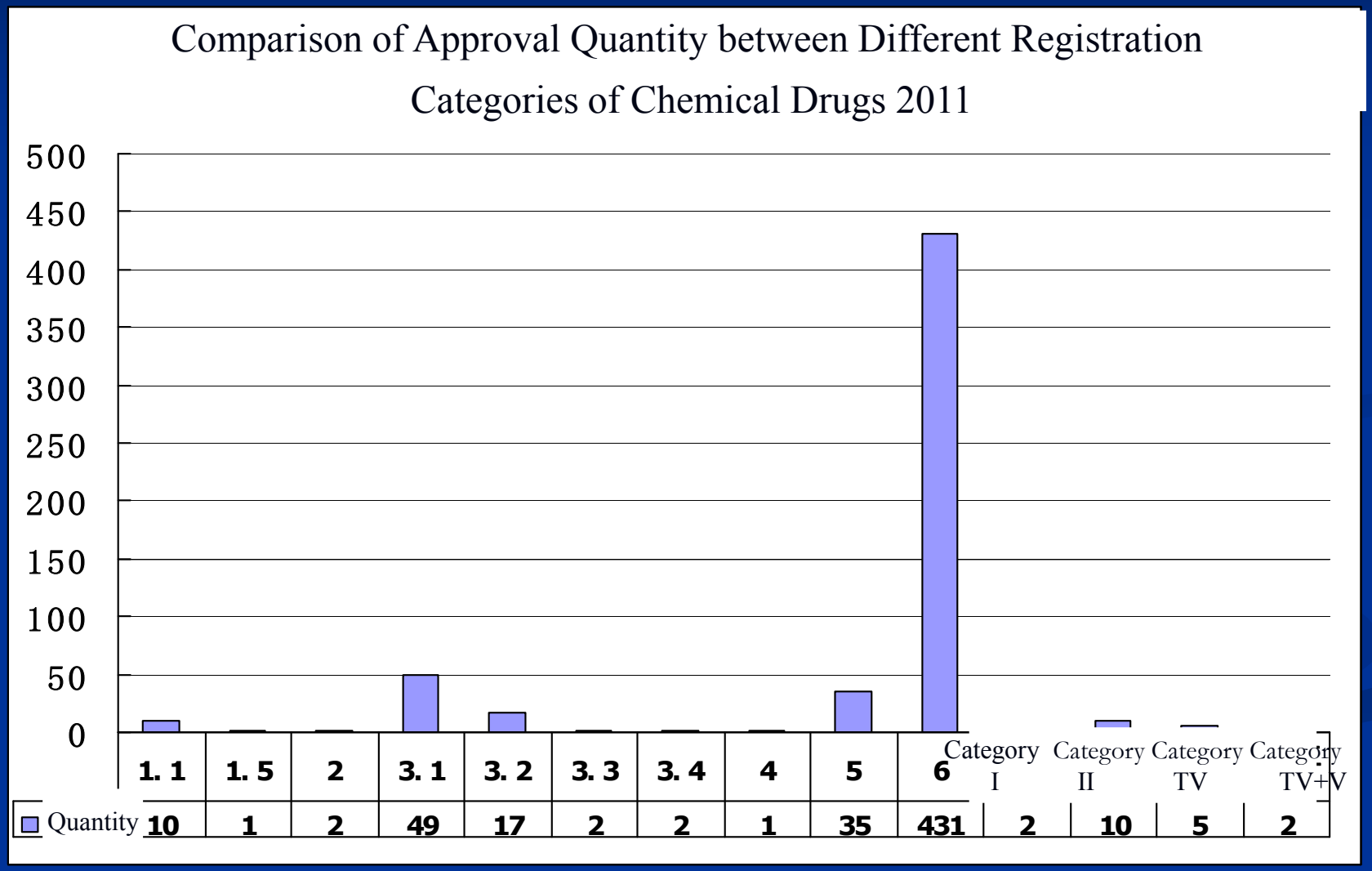

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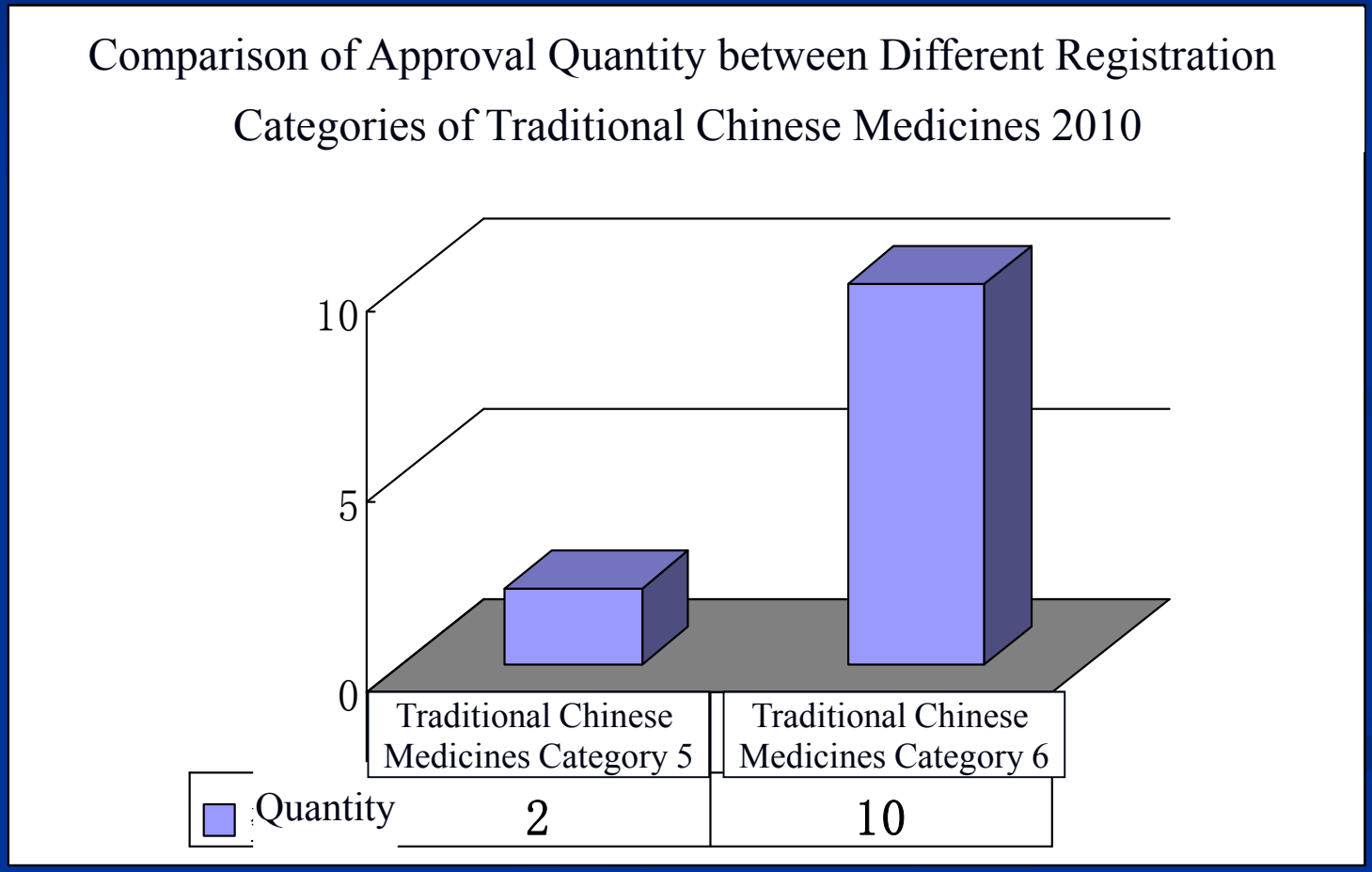

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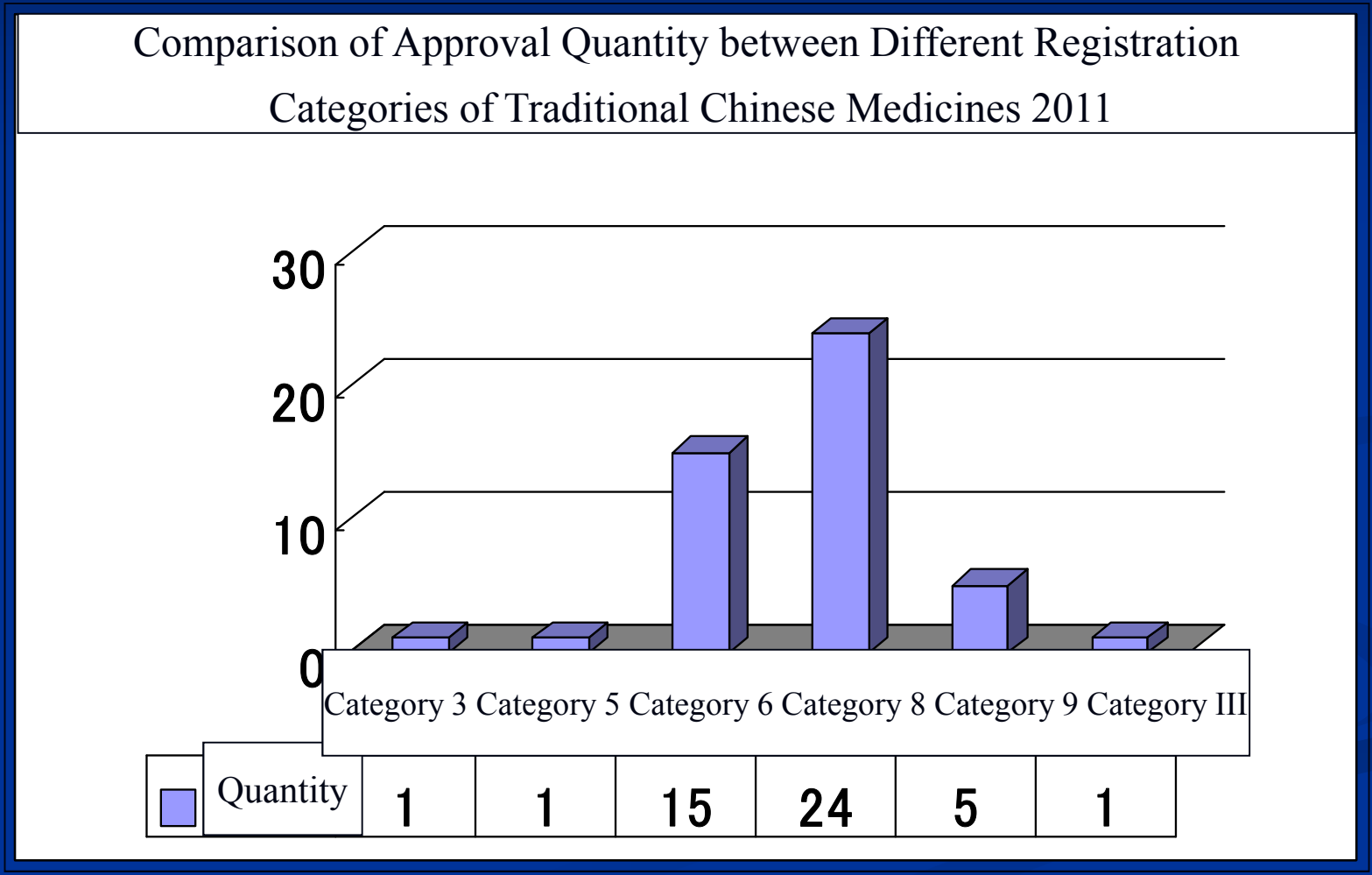


Data changes - the analysis of overall trend to the drug registration

- The proportion of new drug reporting is increased, indicating the implementation of the legislative ideas of encouraging innovation and improving imitation.
- With the constant improvement of the drug review and approval system, strengthen the on-site verification of drug registration, strictly control the drug review and approval standards, and effectively control the phenomenon of fraud, and purify the drug registration environment in a certain degree.
- The quantity and structure of drug registration application are gradually returned to normal, the overtime review and approval are improved in different degrees, and the public satisfaction to the drug registration administration is gradually increased.

Drug Clinical Trial Approval Situations

Approvals of Drugs Clinical Research in 2010

Registration type	Chemical drugs	Traditional Chinese Medicines	Biological Products
Clinical trials	600	55	81
Bioequivalence test	180	—	—
Total	780	55	81
Total	916 (32 new compounds, 168 international multi-centers clinical)		

Drug Clinical Trial Approval Situations

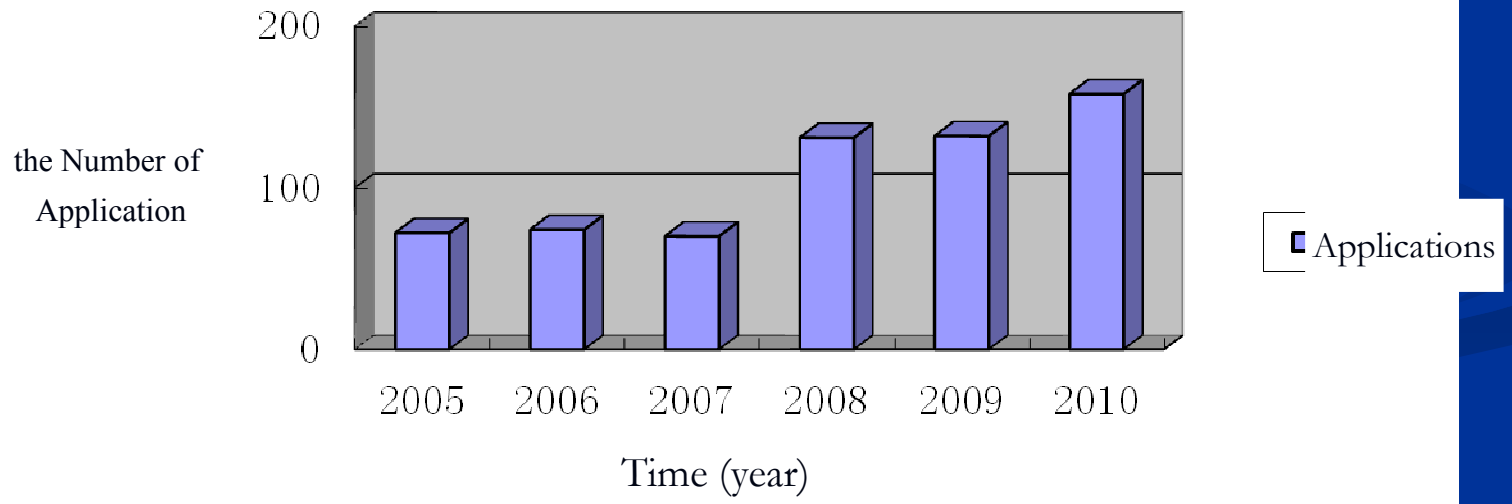
Approvals of Drugs Clinical Research in 2011

Registration type	Chemical drugs	Traditional Chinese Medicines	Biological Products
Innovative drugs clinical research	159	47	62
Verification clinical research	185	—	—
Generics clinical research	121	—	—
Total	574		

International multi-center clinical trials conducted in China

- Our involvement in the synchronization research of global new drug development and research is increased year after year
- In 2009, it approved 320 clinical trials of foreign applicants, of which there were 132 international multi-center clinical trial applications; In 2010, it approved to put a total of 32 new compounds into clinical trials, and it approved 168 applications of international multi-center clinical trials.

Changes of the Number of International multi-center clinical trials application since 2005



Declaration and review of the international multi-center clinical trials in China

- Review conclusion:

The above declared varieties, 168 applications of international multi-center clinic trials have been completed the technical review, as follows:

138 registrations were approved	**accounting for 82.1%**
23 applications were canceled by the companies	**accounting for 13.7%**
7 applications were not approved	**accounting for 4.2%**

Disapproved reasons: the program had security problems, the drug test report was disqualified, and the information was too simple to be evaluated.

The international multi-center clinical trials Conducted in China

1. With the rapid social and economic development of China, the wide distribution of diseases, the abundant clinical resources, and the relative less costs of research and development, China becomes one of the important options for the global R & D.
2. China aims for gradual integration to the international standards & criterion and inter-coordination, so we are constantly refining and improving the legal system, the approval system and regulatory capacity.
3. In the face of the general trend of the global synchronization R & D, China shall have the courage to meet the challenges and grasp the opportunity to further optimize the allocation of review resources and improve the capability, quality and efficiency of review.
4. Actively participate and response to the profound changes in subjects protection system, the Ethics Committee setting, the clinical trials supervision mode brought by global R & D.

Trends of the new drugs R&D in China

- Implement and build the strategy of “innovative country”, increase the support from the “major new drugs” and other policies
- Implement the intellectual property strategy of “encouraging innovation, effectively use, protect according to law, scientific management”

1. Achieve the leap transfer of drug R&D

   Focus on imitation ⟹ Combine with imitation and creation → Focus on creation

2. R & D investment entities

   Focus on national investment ⟹ Focus on the national support and enterprise investment.

3. Actively participate in the globalization of drug development and research

The level and stage of the innovation and R & D

1. Research about high-level imitation

- Resolve the problem of availability.

2. Tracking innovation based on the original target (me- too, me-better)

- Resolve the problem of intellectual property and availability.

3. Brand-new innovation of new target with clinical value

- Provide the therapeutic means for the clinical demands

From the view of category 1.1 accepted situations, our country still focus on the innovation of the first and second levels.
The level of innovation is in the stage of imitation to the combination of imitation and creation.

The Latest Developments and Future Prospects of Drug Registration Administration in China

Learn from the scientific supervision concepts of FDA

Definition of supervise science by FDA

- **Development**
  - New tools, new standards, new methods
- **Evaluation**
  - Security, effectiveness, quality and performance

Ensure that FDA has prepared for the evaluation of innovative technology, which is one the eight prior fields.

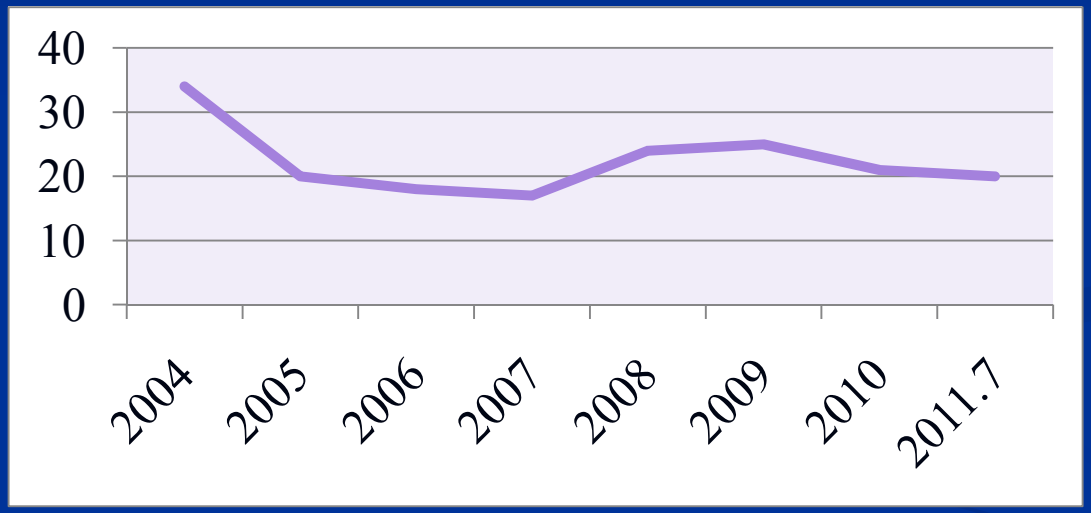
Learn from the scientific supervision concepts of FDA

- Two important ideas:

1. Scientific advances has caused essential changes to the development and use of medical treatment and diagnostic methods-bringing new challenges to the review
2. The FDA must prepare the necessary tools and methods in advance to reliably assess the safety and efficacy of these products generated under these new scientific advances

Learn from the scientific supervision concepts of FDA

- New drug approvals of FDA



- The quantity of approved new drugs by FDA is increase in the first half of this year, thanks to the pharmaceutical companies have changed the development strategy of new drugs, from the me-too drugs with recognized better effects to the development of new drugs in unknown therapeutic areas.
- Compared with the clinical drugs, the newly approved drugs have distinct advantages in the action mechanism and therapeutic effects.

Learn from the scientific supervision concepts of FDA

- The core power to the innovation growth in - the clinical value

- Clinical value Example 1: the approval of first drug to extend the survival of melanoma
- Clinical value Example 2: the first drug to cure the lupus in the past 50 years
- Clinical value Example 3: 2 kinds of hepatitis C drugs with better treatment effects than existing drugs

The full clinical value also has a good market expectation: there will be over 20 kinds of innovative drugs with the annual sales of more than one billion U.S. dollars to be approved.

Thinking about the future domestic pharmaceutical R & D and innovation

- Change the domestic cognitive environment of clinical trials of innovative drugs (change the mind of mouse)

- For the R & D direction, it is still targeted at the category with good market reaction, most of which are generic and me-too categories.

- The R & D investment is significantly less than the level of industrial growth, the R & D team is accounting for small proportion of employees

- Emphasize the intellectual property rights, neglect the clinical value, resulting in a high level repeat of R & D (TKI explosive phenomena)

Thinking about the future domestic pharmaceutical R & D and innovation

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Progress in the legal construction of drug registration administration and the reform of institutional mechanism in China

General mode for the international drug registration approval:

(1) internal audit-based

(2) external audit -based

(3) combined the internal and external audit

Chinese mode: internal audit-based, consulting to the external

Expert advices

Changes in the Policy of Drug Review and Evaluation

Innovative drugs IND: lenient entry, stringent exit, concern about the clinical value

CHEAP EARLY / FAIL EARLY

Generics: stringent entry and exit, concern about the availability (attainability and affordability), and promote the internationalization

Progress in the drug registration administration mechanism of China

The reform of institutional mechanisms of review and approval

Several considerations to accelerate the institutional reform of drugs review, evaluation and approval

- The objects are to reduce the unnecessary procedures and improve the efficacy, to actively explore the scientific dividing to the rights of technical review and administrative review.
  The objects are to enhance the risk control, to improve the predictability of review processes, to actively explore the reform to the clinical review and production review and the adjustment to the management strategies.
  The objects are to establish the united, high-efficient, coordinated and flexible review system, to further optimize the resources allocation of drugs registration review and approval (central and local, internal of state bureau, management of experts)
  Research and develop the encouraging and binding strategy to the drugs registration review and approval.

The reform of institutional mechanisms of review and approval

Several measures to optimize the system of drugs registration review and approval

- 1. Develop the overall plan for the right divisions of supplementary applications and carry out the pilot practices.
  2. Research and develop the specific measures to encourage the innovation to actually reflect encouraging innovation.
  3. Accelerate the promotion to develop and implement Drugs Registration Quality Management Practices and GRP, the draft of GRP of China has been formed primarily.
  4. Explore to build the expert consulting committee for the drugs registration management
  5. Explore to build the internal and external control system for the review and approval

The reform of institutional mechanisms of review and approval

The institutional reform of Center for Drug Evaluation of SFDA

- **Focus on the working system, review quality and efficacy**
  Establish the system for the review correction, academic supervision and quality evaluation
  Professionalize and specialize the duty system of review
  Released the Principles and Guidelines to the Technical Review
  Communication and Exchange-the key to the efficacy of review and decision-making

The institutional reform of Center for Drug Evaluation of SFDA

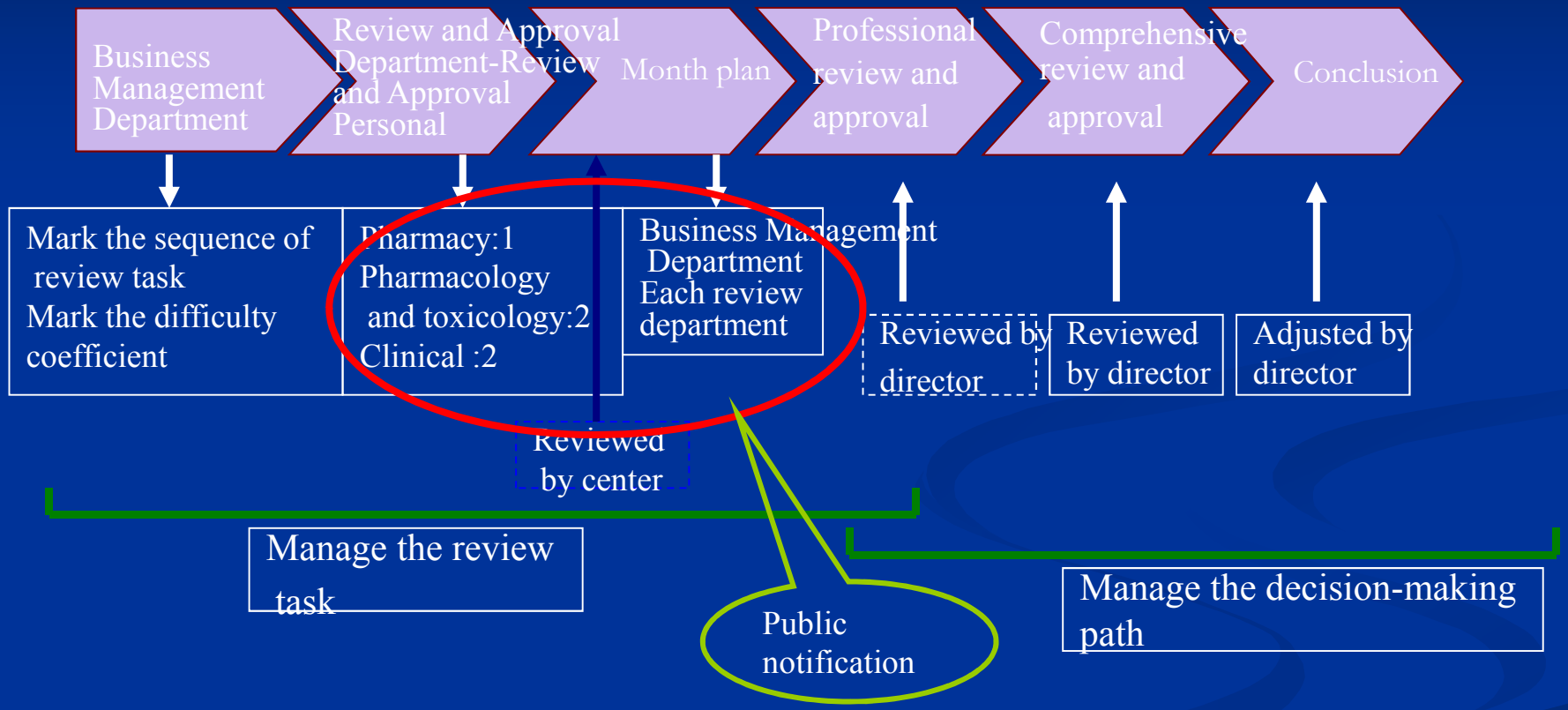
According to the review task classification and the level of risk, respectively develop the appropriate review procedure for the IND, NDA, ANDA:

- New drug applications for clinical and marketing - Parallel review
- Chemical generic drug application - single specialized review
- Category for supplementary application or single specialized review - simple review
- If the category of single specialized review is met many multi-disciplinary problems - sequential review

The institutional reform of Center for Drug Evaluation of SFDA

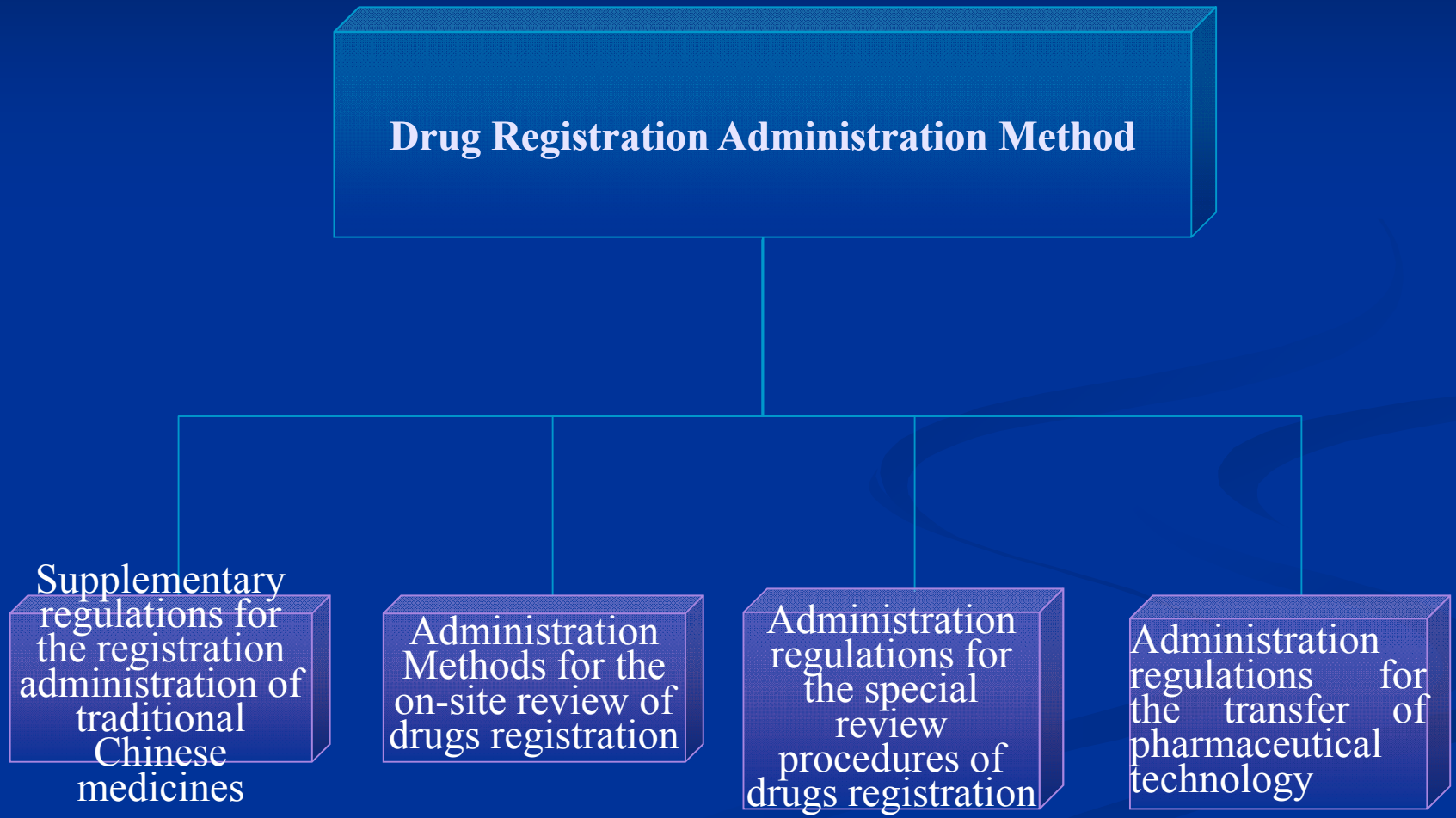
- Procedures of Technical Review and Evaluation of Center for Drug Evaluation of SFDA(Trial)
- Principles and procedures of Drug Technical Review and Evaluation
- Review and Evaluation Task Management Standards of Center for Drug Evaluation of SFDA (Trial)
- Technical Review and Evaluation Decision-making Path Management Standards of Center for Drug Evaluation of SFDA(Trial)

Take the international multi-center clinical research application as example



The progress of the construction of drug registration laws and regulations

Drug Registration Administration Method and Supporting Documents

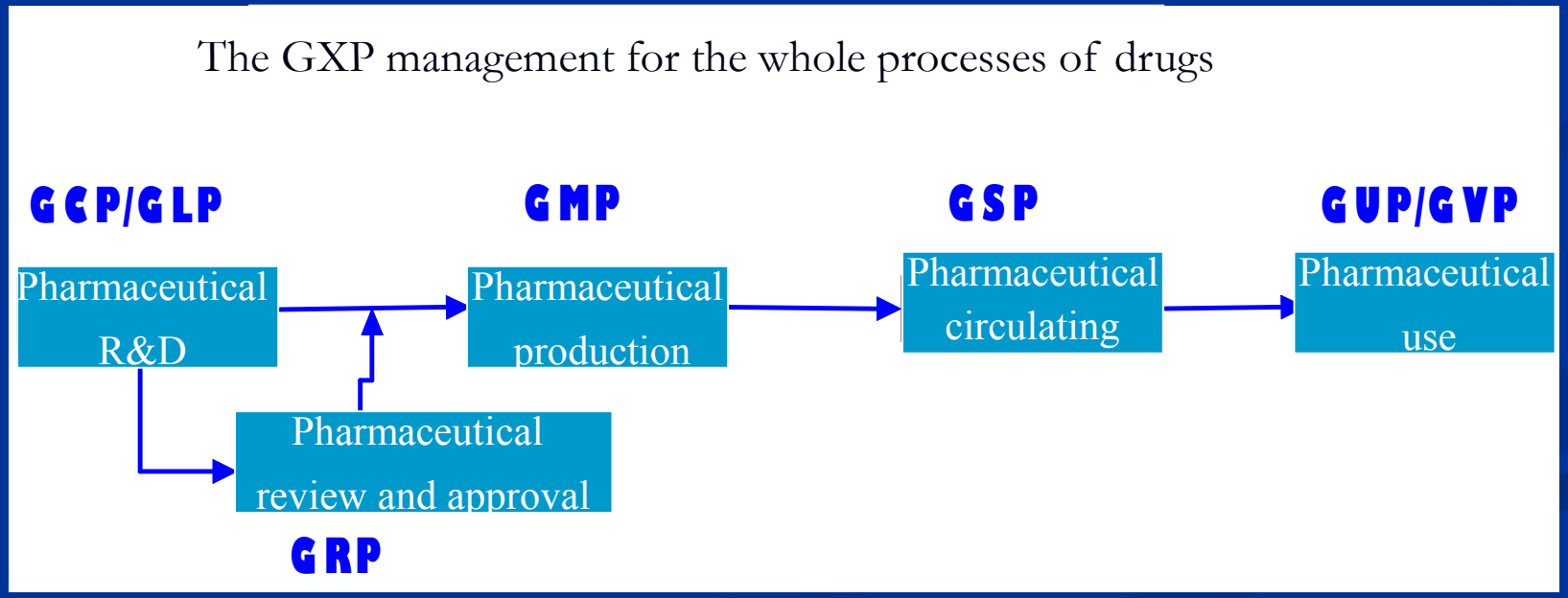


Revise and update progress of the drug registration laws and regulations

- DMF - medicinal raw and auxiliary materials record management regulations
- Pharmaceutical standards management regulations
- Guiding principle for the registration of natural pharmaceutical products
- Drugs research supervision and management regulations and the series of supporting normative documents
- GRP (drug registration / review quality management practices)
- Electronic submission and CTD General Technical Document

The whole process GXP of drugs (management practices)

- actively explore GRP for the field of drug review and evaluation
- actively explore GUP for the use link of a drug
- Promote the information exposure of each public part of review and evaluation



Construction for the system of technical guidelines of pharmaceutical research

The role of technical guidelines of pharmaceutical research

- Guide the pharmaceutical R & D activities, regulate the R & D of drugs, and improve the overall level of R & D
- Introduce the essence of the ICH guidelines to deal with the global simultaneous development of drugs and promote the international mutual recognition of drug registration and the standards coordination
- Unify the scale of pharmaceutical review and evaluation, reflecting the fair and justice

The composition of technical guidelines for pharmaceutical research

- Officially released: 81
- Chemical drugs: 30
- traditional Chinese medicine: 12
- Biological products: 26
- Comprehensive disciplines: 6
- General principles: 5

Technical guidelines for pharmaceutical research

- To standardize the clinical trials research is very important to encourage the innovation
- The level and conclusions of clinical trials is directly related to the clinical significance of the innovation
- 18 technical guidelines based on clinical trials have been released recently.


监督管理局药品审评中心 - Windows Internet Explorer
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Google
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国家食品药品监督管理局药品审评中心
模版下载
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使用手册下载
审评动态
审评计划 more
2011年
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2011年 2010年 2009年
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注册
相关链接
国内链接:
中华人民共和国卫生部
中华人民共和国科技部
国家食品药品监督管理局
各部门审评任务公示
药品注册相关专利信息公开公示专栏
学术交流
电子刊物 more
20111014 综合管理 《药品审评中心审评任务管理规范》相关问与答（Q&A）
20111014 综合管理 《药品审评中心技术审评决策路径管理规范（试行）》相关问与答（Q&A）
20111014 综合管理 审评计划管理相关问与答（Q&A）
20110922 临床安全性和有效性评价 在我国2型糖尿病患者中开展心血管终点事件临床研究的风险控制指导意见
20110920 临床安全性和有效性评价 从药品技术指导原则的变迁看调脂药临床研究评价策略的进展
常见技术问题 more
20090813 羟乙基淀粉系列产品研究中需关注的问题（三）--羟乙基淀粉130/0.4原料药及制剂研究需关注的问题
20090813 关于新法规品种临床期间修改处方工艺的几点
20090813 羟乙基淀粉系列产品研究中需关注的问题（二）--羟乙基淀粉200/0.5原料药及制剂研究需关注的问题
20090810 “新法规下化药仿制药研究和评价中的关键问
20090810 羟乙基淀粉系列产品研究中需关注的问题（一）--立题方面的问题
研究课题
“十五”攻关：用于抗感染、抗肿瘤和心血管药物临床试验对照药品的示范研究
国家科技支撑计划：中药研发与上市前技术评价标准的研究（2006BAI21B10）
2011年度《药品技术审评论坛》在线订购
点击进入
交流反馈
研讨班
开放日
会议纪要
征求意见
指导原则征求意见
技术要求征求意见
共性问题征求意见
指导原则
国内指导原则
国外参考指导原则
《药品技术审评论坛》
工作动态
编读交流
目录浏览
稿约与投稿
在线预订
共性问题
共性问题公布
共性问题总结

The progress of pharmaceutical research supervision

Changes in supervision philosophy and management style

Emphasize the approval, and enhance the supervision

- Strengthen the supervision and inspection to the clinical research process, and manage the whole process of pharmaceutical research and development.
- Combine the institutional supervision and the supervision to different varieties
- Make the internal quality assurance system of administrative counterpart play more important role
- Implement the classification and grading management to the clinical trials institutions

Changes in supervision philosophy and management style

- **Emphasize the approval, and enhance the supervision**

- **Encourage the administrative counterpart to strengthen the self-discipline, and strengthen the main responsibility and consciousness for the re-evaluation of drugs after marketed**
- **Establish the integrity files to the drug R & D institutions, and explore to establish the on-site review mechanism linked with the integrity in the drug registration site.**
- **Use the information technological means to strengthen the supervision of the clinical trials of drugs**

Strengthen to manage the whole process of drug registration

- **Earlier stage of registration**
  - **Policy guidance, early intervention**
- **Middle stage of registration**
  - **Emphasize the a risk-benefit assessment**
  - **Require the new drug to reflect the innovative features**
  - **Require the dosage form changing to reflect the superiority**

Strengthen to manage the whole process of drug registration

- **Later stage of registration**
  - Strengthen the supervision to the clinical research process
  - Strengthen the verification to the production site before marketed
  - Strengthen the interface before and after marketed
  - Require the generics to reflect the consistency

Construction to the supervision and management system of drug research

- **Develop the Pharmaceutical Research Supervision and Management Methods and the supporting documents.**
  Clear the legal responsibility to each parties involved in the pharmaceutical research
  Enhance the management of undertaker, research institutions and ethic committee to the clinical trials
  Enhance the supervision and inspection of the administration authorities to the pharmaceutical research institutions and the processes of pharmaceutical research

  Enhance the protection to the subjects
  Explore the force responsibility insurance of drugs clinical trials and related relieving system, independent ethic committee system and the inform consent system.

  Standardize and enhance the supervision and inspection
  Develop and issue the standard documents to manage the record and extent the supervision to the register, CRO, SMO and pharmacy research institutions, etc.
  Develop the guidelines for supervision and inspection to guide the activities

Construction to the supervision and management system of drug research

- **Establish the inspector team in the drugs supervision system**
  Complete the selection, appointment, evaluation and management of inspector, improve the management to the expert team.

  On-site approval system and the supervision and inspection of clinical trials
  Establish the scientific on-site approval system for the clinical trials and the supervision and inspection system of clinical trials based on the technical review and supported by the on-site inspection.

  Requirements and standards of supervision and inspection
  Subdivide and improve the requirements and standards to the supervision and inspection of clinical trials, standardize the on-site inspection of clinical trials, enhance to guide the implementation and management of the clinical trials in each province.

  Risk management and Process supervision
  Establish the scientific reasonable united standard supervision processes and coordinated working system based on the information system, focused on risk management and processes supervision.

Carry out overseas on-site inspection

- develop the overseas on-site inspection pilot program to the imported drugs and the procedures for the overseas production site inspection to the imported drugs
- organize six working groups to go 7 countries to carry out on-site inspection to 7 varieties

Preliminary practice situation of electronic supervision to the pharmaceutical research

- □it has carried out the pilot electronic supervision to the clinical trials in Tianjin, and obtained the preliminary experiences.
- □it has developed and published a unified information construction data standards and management practices
- □Goals: to establish a unified national information platform to the supervision of drug clinical trials

Analyze the reasons of slow review to the innovative drugs

Problems in technical review	•Quality and efficacy of technical review •Incomplete technical guidelines system •Obvious conflict in the human resources of registration review
Problems in the applicants	•The applicant has poor research basis and deficiency of the test data. •The researcher and reporter do not learn enough laws and¥ technical requirements. •The declaration materials are not sufficient, so it can not conduct the evaluation of security and effectiveness.
Problems in clinical research	•Insufficient protection to the subjects •Lower level of ethic review •Problems in the research plan design, risk control of research. •The problem of trueness in the research

Planned Measures

- **The institutional reform of Center for Drug Evaluation of SFDA and the adjustment of review procedures and principles**
  Scientific classification for innovative drugs and generics
  The review of innovative drugs is focused on security, while the review of generics is focused on the quality control level.

  Communication and exchange between the reviewer and applicant
  Important measure to improve the quality and efficacy of review
  Have significant meaning to improve the quality and efficacy of registration review

  Optimize the drugs registration processes and assign the tasks
  Further promote the improvement of the quality and efficacy
  Fully use the existing resources through the institutional reform

  Electric submission of CTD format materials
  Fully use the information tools to scientifically classify the technical data and lay the basis for electric review.

Table of difficulty coefficient of each specialty under different tasks sequence

		Pharmacy	Clinical	Pharmacology and toxicology
New drugs clinical trials application	New drugs	2.5	3	5
	Special dosage form	3.5	3	2
New drugs marketing application	Registration category 1,2	5	5	2
	Registration category 3,4	3.5	3	1
	Special dosage form	3	3	3
Verification clinical trials application	Registration category 3 (first reporting)	3.5	2	0.5
	Registration category 3 (not first reporting)	2.5	1	
	Registration category 3,4	0.5	2	
	Registration category 4	3.5	2	4
Generics and dosage form changing application	First generics	3	2	0.5
	Others (clinical application)	2	0.5	0.5
	Others (production application)	2.5	0.5	0.5
Re-registration		1	0.5	
Supplementary application		1(exclude 3, 4)	2(exclude 3, 4)	0.5

Outlook the policies to encourage the innovation

Simplify the requirements to the clinical trials reporting materials, and adjust the focus of technical review

Parallel mode for the innovative drugs review and approval processes

Separate the focus of the innovative drugs review from that of generics, the critical factor of innovative drugs clinical program is security, while that of generics is quality control and verification test.

Optimize the human resources allocation, and enhance the supervision capacity and level of clinical trials

END Thanks!