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SFDA Promulgated Annual Report on Drug Registration Approval 2011

I. Drug Marketing Approvals

In 2011, a total of 718 applications for drug registration were approved, including 644 domestic applications and 74 overseas applications.

Among the 644 domestic applications, 569 are for chemicals, accounting for 88.4%; 50 for traditional Chinese medicines, accounting for 7.8%; and 25 for biological products, accounting for 3.8%.

From the perspective of registration Categorization, of the domestic applications, 149 are for new drugs, accounting for 22.9%; 59 for change of dosage form, accounting for 9.3%; 436 for generic drugs, accounting for 67.7%. Compared with 2010, the number of approved chemicals and generic drugs reduced, while that of new drugs increased, among which a total of 10 chemical drug applications under Category 1.1 have been approved, marking a significant increase compared to 2009 and 2010.

II. Approval for drug clinical research

In 2011, a total of 621 registration applications have been approved for clinical research. Among them there are 39 applications for registration of Category 1, and more than110 applications for international multi-center clinical research. The drugs approved for clinical trials cover both the common diseases and frequent diseases that take important positions in the spectrum of disease in China, such as the therapeutic drugs for cancer, cardiovascular disease etc., and also the therapeutic drugs for some rare diseases with significant social influence. For those that meet the requirements of Special Review Procedure for New Drug Registration, review and approval shall be conducted according to special review and approval procedures to expedite the process of drug research can apply to those drugs

III. Acceptance of Registration Applications

In 2011, the total number of the SFDA-accepted new drug registration applications amounts to 3620, and among them, there are 2913 domestic registration applications and 707 supplemental applications for imported drugs. Among the 2913 domestic registration applications, there are 1078 applications for new drugs, accounting for 37.0%; 169 for changed dosage forms (5.8%); 1666 for generics, accounting for 57.2%. Compared to 2010, new registration applications increased by 20%, the amount of new drug application witnessed a slight increase, and the applications for changed dosage forms and generics increased by 34%.

IV. The approved varieties in important therapeutic areas

1. Drugs in Urgent Clinical Demand

Ranibizumab Injection is a recombinant antibody drug that inhibits endothelial growth factors for the treatment of age-

国家食品药品监督管理局发布《2011年药品注册审批年度报告》

一、药品批准生产上市情况

2011年，共批准药品注册申请718件。其中批准境内药品注册申请644件，批准进口74件。

在644件境内药品注册申请中，化学药品569件，占88.4%；中药50件，占7.8%；生物制品25件，占3.8%。

从注册分类看，境内药品注册申请中，新药149件，占22.9%；改剂型59件，占9.3%；仿制药436件，占67.7%。与2010年相比较，批准化学药品仿制药品的数量减少，批准新药的数量增加，其中，1.1类化学药品共批准10件，相比2009年及2010年有显著增长。

二、药物临床研究批准情况

2011年，共批准621个注册申请开展临床研究。其中39个为注册分类1类的化学药品注册申请，110件为国际多中心临床研究申请。批准进入临床试验的药物，既涵盖在我国疾病谱中占重要位置的常见疾病和多发疾病，如肿瘤、心血管病等的治疗药物，也包括了社会影响度高的一些罕见性疾病的治疗药物。对于符合《新药注册特殊审批管理规定》要求的，按照特殊审批程序开展审评审批，促进药物研究进程。

三、注册申请受理情况

2011年，国家局共受理药品新注册申请3620件，其中境内药品注册申请2913件，进口药品注册申请707件。在2913件境内药品注册申请中，新药1078件，占37.0%；改剂型169件，占5.8%；仿制药1666件，占57.2%。与2010年相比，境内新注册申请量增加20%，新药申报量与2010年相比略有增加，改剂型及仿制药申报量与2010年相比增加34%。

四、批准重要治疗领域药品品种情况

1．临床急需药品

雷珠单抗注射液是抑制血管内皮生长因子

Published by
China Center for Pharmaceutical International Exchange & Servier (Tianjin) Pharmaceutical Co., Ltd.

表1. 2011年批准的药品情况
Table 1. 2011 approved drugs

注册分类 Registration Category	新药 New Drug	改剂型 Changed Dosage Form	仿制药 Generic Drugs	进口药 Imported Drugs	合计 Total
化学药品 Chemical Drugs	103	35	431	68	637
中药 Traditional Chinese Medicines	21	24	5	2	52
生物制品 Biologics Products	25			4	29
合计 Total	718				

注：
1. 表中数据以受理号计，受理号系申请人提出的一件申请事项的编号。对各申请企业的原料药、制剂、制剂不同规格分别予以编号。
2. 表中新药系根据《药品注册管理办法》规定按照新药管理的药品。化学药品新药包括化学药品注册分类1-4，中药新药包括中药、天然药物注册分类1-7。
3. 表中化学药品改剂型为化学药品注册分类5，中药改剂型为中药、天然药物注册分类8。
4. 表中化学药品仿制药为化学药品注册分类6，中药仿制药为中药、天然药物注册分类9。
5. 生物制品不进行分类。

Note:
1. Statistics in Table 1 are calculated according to acceptance number, which is a code generated for one application raised by the applicant. Applications are coded according to the APIs, preparations, and different specifications of preparations of applicants.
2. The New Drugs in the table refers to drugs that are administrated as New Drugs in accordance with the stipulations of the "Provisions for Drug Registration". New Chemicals include chemical drugs registration Categorization 1-4, TCM new drugs include Category 1-7 for TCM and natural medicine.
3. The changed dosage forms of chemicals drugs in Table 1 refer to Category 5 for chemical drug registration, and changed dosage forms of TCM refers to Category 8 for TCM and natural drug registration.
4. The generic drugs in the table refer to Category 6 for chemical drug registration, and the TCM generics refer to Category 9 for TCM and natural medicine registration.
5. There is no categorization of biological products.

表2. 2011年批准的化学药品新药分布
Table 2. Distribution of new chemical drugs approved in 2011

注册类别 Registration Category	1.1	1.5	2	3.1	3.2	3.3	3.4	4	其他 Others
批准数量 Number of Approvals	10	1	2	49	17	2	2	1	19
合计 Total	103								

注： “其他”指按《药品注册管理办法》（2005年版）分类申报的一、二、三、四类药品。数量以受理号计。
Note: "Others" refer to drugs applied in accordance with Category I, II, III and IV in the "Provisions for Drug Registration" (2005 edition). The figures are counted according to acceptance numbers.

表4. 2011年批准的1.1类新药
Table 4. New Drugs of Category 1.1 approved in 2011

药品名称 Drug Name	注册类别 Registration Category	剂 型 Dosage Forms	生产企业 Manufacturer
艾瑞昔布 Imrecoxib	化药1.1类 Chemical Drug Category 1.1	原料药 APIs	江苏恒瑞医药股份有限公司 Jiangsu Hengrui Medicine Co., Ltd.
艾瑞昔布片 Imrecoxib Tablets	化药1.1类 Chemical Drug Category 1.1	片剂 Tablet	江苏恒瑞医药股份有限公司 Jiangsu Hengrui Medicine Co., Ltd.
盐酸埃克替尼 Icotinib Hydrochloride	化药1.1类 Chemical Drug Category 1.1	原料药 APIs	浙江贝达药业有限公司 Zhejiang Beta Pharmaceutical Co., Ltd.
盐酸埃克替尼片 Icotinib Hydrochloride Tablets	化药1.1类 Chemical Drug Category 1.1	片剂 Tablet	浙江贝达药业有限公司 Zhejiang Beta Pharmaceutical Co., Ltd.
艾拉莫德 Iguratimod	化药1.1类 Chemical Drug Category 1.1	原料药 APIs	先声药业有限公司 Simcere Pharmaceutical Co., Ltd.
艾拉莫德片 Iguratimod Tablets	化药1.1类 Chemical Drug Category 1.1	片剂 Tablet	先声药业有限公司 Simcere Pharmaceutical Co., Ltd.
吡非尼酮 Pirfenidone	化药1.1类 Chemical Drug Category 1.1	原料药 APIs	上海睿星基因技术有限公司 Shanghai Genomics
吡非尼酮胶囊 Pirfenidone Capsule	化药1.1类 Chemical Drug Category 1.1	胶囊剂 Capsule	上海睿星基因技术有限公司 Shanghai Genomics
托伐普坦片 Tolvaptan Tablet	化药1.1类 Chemical Drug Category 1.1	片剂 Tablet	浙江大冢制药有限公司 Zhejiang Zjotsuka Pharmaceutical Co., Ltd.
托伐普坦片 Tolvaptan Tablet	化药1.1类 Chemical Drug Category 1.1	片剂 Tablet	浙江大冢制药有限公司 Zhejiang Zjotsuka Pharmaceutical Co., Ltd.

图1. 2009～2011年批准国产药品的对比
Figure 1. Approval for Domestic Drugs between 2009 and 2011

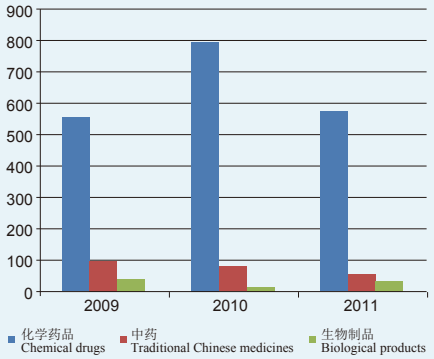


表3. 2011年批准的中药新药分布
Table 3. Distribution of TCM New Drugs Approved in 2011

注册类别 Registration Category	3	5	6	其他 Others
批准数量 Number of approvals	1	4	15	1
合计Total	21			

注： “其他”指按《药品注册管理办法》（2005年版）分类申报的三类药品。数量以受理号计。
Note: "Others" refer to three categories of drugs for application under the DRR (2005), with the quantity calculated based on acceptance number.

表5. 2011年药物临床研究批准情况
Table 5. Approvals for drug clinical research in 2011

注册分类 Registration Category	临床试验 Clinical Trials	生物等效性试验 Bioequivalence Tests	合计 Total
化学药品 Chemical Drugs	359	124	483
中 药 Traditional Chinese Medicine	54	/	54
生物制品 Biological Products	84	/	84
总计Total	621		

注： 以受理号计。
Note: The figures are counted according to acceptance numbers.

表7. 2011年药品补充申请受理情况表
Table 7. Acceptance of Drug Supplementary Applications in 2011

注册分类 Registration Category	补充申请 Supplementary Application
化学药品 Chemical Drugs	2522
中药 Traditional Chinese medicine	529
生物制品 Biological Products	260
合计Total	3311

注： 以受理号计。
Note: The figures are counted according to acceptance numbers.

表6. 2011年药品新注册受理情况表
Table 6. Acceptance of New Drug Registrations in 2011

注册分类 Registration Category	国内申请 Domestic applications			进口申请 Imported Drug Applications	小计 Sub-total
	新药 New Drug	改剂型 Change Dosage Form	仿制药 Generic Drug		
化学药品Chemical Drug	885	145	1648	640	3318
中药Traditional Chinese Medicine	107	21	16	2	146
生物制品Biological Products	86	3	2	65	156
合计Total	2913			707	3620

注：以受理号计。
Note: The figures are counted according to acceptance numbers..

related macular degeneration (AMD), it is one of the clinical urgently needed drugs. In 2011, SFDA approved the import of this drug to meet the medication needs of our patients.

Idiopathic Pulmonary Fibrosis is a rare disease with serious impact on lung functions with unfavorable prognosis. Currently there has been no effective therapy. SFDA approved the production of the first Pirfenidone capsule in 2011, so that our patients have an effective treatment drug at an early date.

To mitigate the supply shortage coagulation blood products, SFDA approved the clinical trials of recombinant human coagulation factor VIII or IX fusion protein, to provide opportunities for hemophiliacs to participate in clinical medication and treatment.

2. Preventive Biological Products

SFDA approved the production of recombinant human hepatitis E vaccine developed indigenously in China. As the world's first hepatitis E vaccine that has been approved, this vaccine has provided for prevention approaches for high-risk groups in endemic regions of hepatitis E.

SFDA approved the Sabin strain inactivated polio vaccine (IPV) developed indigenously in China for Phase III clinical trial. The vaccine has great significance for the prevention of poliomyelitis-related cases as a result of mutation and immune defects as a secondary onset of oral live attenuated poliomyelitis vaccine, and the elimination of polio disease.

To effectively address to the threat of foot and mouth disease to public health, following the Phase I and II clinical trials of enterovirus 71 (EV71) inactivated vaccine applied by three domestic companies and approved by special approval procedures in 2010, under the SFDA collaborating mechanism for clinical trials, SFDA Center for Drug Evaluation provided technical guidance in 2011 for the concrete implementation of clinical trials, to guarantee the steady, orderly and successful conduct of the Phase III clinical trials.

3. Drug Use for Special Groups

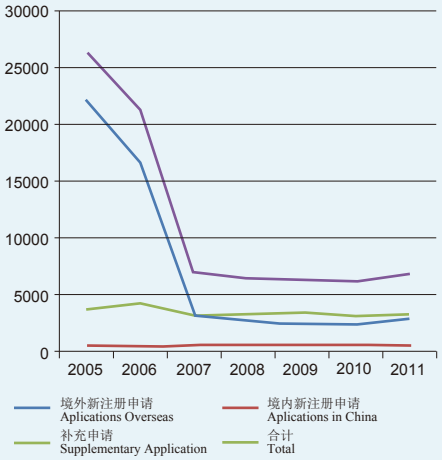
SFDA approved the domestic manufacturing and import product marketing of hydrochloride donepezil orally disintegrating tablet, which can address the problem of medication compliance in patients with Alzheimer's disease and has considerable effect to mitigating the progress of Alzheimer's disease.

4. Drugs for the Treatment of Rheumatoid Arthritis and Osteoarthritis

At present, there are very few slow action drugs for rheumatoid arthritis, and most of them are off-label empirical drugs uses with serious adverse reactions. SFDA approved the first marketing of Iguratimod and Imrecoxib tablet, and both of them China has Proprietary IPRs and listed into the support for major special projects of new drug invention. Iguratimod tablets are for the treatment of rheumatoid arthritis, with slow-acting action mechanism and relatively minor adverse reactions, which is expected to mitigate the course of disease. Imrecoxib tablet is non-steroidal anti-inflammatory drug with analgesic effect by inhibiting the cyclooxygenase (COX), and is used for the mitigation of pains related to osteoarthritis.

5. Drugs for the Treatment of HIV Infections

图2. 2005至2011年药品注册申请数量变化趋势
Figure 2. Tendency in the Number of Drug Registration Applications between 2005 and 2011



注：以上数据以受理号计；补充申请包括境内、境外的补充申请。
Note: The figures above are counted according to acceptance numbers; the supplementary applications including domestic and overseas supplementary applications.

的重组抗体药物，用于治疗老年性湿性黄斑变性，是临床急需药品之一。2011年，批准了该药品进口，满足了我国患者的用药需求。

特发性肺纤维化属于罕见病，严重影响肺功能，预后效果差，目前尚无有效治疗药物。2011年，批准了国内首个吡非尼酮胶囊生产，使我国患者能尽早获得有效的治疗药物。

为缓解凝血因子类血液制品供应紧缺局面，批准了重组人凝血因子VIII或IX因子融合蛋白开展临床试验，为血友病患者提供参与临床用药及治疗的机会。

2．预防用生物制品

批准了我国自主研发的重组人戊型肝炎疫苗生产，这是全球首家获得批准的戊型肝炎疫苗，为戊型肝炎流行区高危人群提供了预防途径。

批准了我国自主研发的Sabin株脊髓灰质炎灭活疫苗进入III期临床试验。该疫苗对于防止继发于口服脊髓灰质炎减毒活疫苗之后因突变、免疫缺陷等导致的脊髓灰质炎相关病例以及彻底消灭脊髓灰质炎疾病具有十分重要的意义。

为有效应对手足口病对公共卫生健康的威胁，继2010年启动特殊审批程序批准国内3家企业申报的肠道病毒71型（EV71）灭活疫苗进入I期、II期临床试验后，2011年在我局制定的临床试验联合工作机制下，我局药品审评中心对临床试验具体实施给予了技术指导，保障了III期临床试验的稳步、有序、顺利开展。

3．特殊人群用药

SFDA approved the manufacturing of the first domestically made compound preparation nevirapine, lamivudine and stavudine tablets (II). The product is a compound preparation for anti-HIV treatment (adults and adolescents) with reference to the WHO-recommended treatment program of "stavudine or zidovudine + lamivudine + nevirapine or efavirenz".

SFDA approved Zidovudine tablet and Zidovudine-Lamivudine Tablet. Both are classic Nucleoside Reverse Transcriptase Inhibitors (NRTIs) recommended by WHO and China's HIV/AIDS Treatment Guides as first-tier standard anti-virus treatment, the approval of their production will provide more supply of AIDS therapeutic drugs, which is consistent with national strategies on disease control and prevention.

Based on the research results of preliminary HIV/AIDS prevention, SFDA approved the clinical trials of larger scale of AIDS vaccine (DNA vaccine in combination with recombinant lymph vaccine) for the treatment of adult HIV/AIDS, to examine the effects of the vaccine of inducing body fluid and cell immunity in HIV-infected patients, enhance specific immunity through joint application with antiretroviral drugs, and control viral replication.

6. Drugs for the Treatment of Hepatitis B

Tenofovir disoproxil fumarate tablet is one of the internationally recognized nucleoside (acid) analogues for the treatment of hepatitis B. In 2011, SFDA approved the clinical trials of this variety for hepatitis B indications. In addition, SFDA approval the Phase I clinical trial of tenofovir dipivoxil fumarate tablet, which is not marketed at home and abroad, for the treatment of hepatitis B.

7. Drugs for the Treatment of Malaria

SFDA approved the production of first domestically made Artesunate and Amodiaquine Hydrochloride tablets. The product is a first-choice antimalarial drug designated by the Global Anti-malarial Commission, WHO and other organizations, and it can avoid resistance drop of anti-malarial drugs and contain drug resistance of plasmodium, thereby it can control and treatment of malaria more effectively.

8. Diuretics

SFDA approved the manufacturing of the first domestically made tolvaptan tablet, which is a arginine vasopressin V2 receptor antagonist, through inhibition of the binding of vasopressin and V2 receptor of kidney collecting duct, it can promote the kidney water discharge without increasing sodium discharge, and significantly increase blood sodium concentration for non-hypovolemic hyponatremia caused by various reasons.

9. Anticoagulant

SFDA approved the manufacturing and marketing of the first bivalirudin for Injection, as direct thrombin inhibitor (DTI), Bivalirudin exerts its inhibition effect through specific binding with the catalytic sites of free thrombomodulin and thrombomodulin on thrombin and with anion binding sites, which is used for treatment of adult percutaneous coronary intervention (PCI).

10. Drugs for the Treatment of Osteoporosis

SFDA approved the imports of teriparatide injection. As the world's first marketed human parathyroid hormone (PTH) (1-34) biological product, Teriparatide injection acts directly on osteoblast to stimulate bone formation. It applies to the treatment of osteoporosis of post-menopause women with high risks of bone fracture, and it provides a new therapeutic method for osteoporosis of post- menopause women.

11. Drugs for the Treatment of Diabetes

SFDA approved the import of saxagliptin tablet and liraglutide injection. Saxagliptin tablet is a competitive inhibitor of Dipeptidyl peptidase-4 (DPP4), which can be used jointly with deltamine for further improvement of the blood sugar control for diabetes patients. Liraglutide injection is a GLP-1 analogue biological agent first marketed in China, which is characterized by long-term effect, and can be administered once per day. Both drugs stimulate the secretion of insulin in glucose concentration-

批准了盐酸多奈哌齐口腔崩解片的国内生产及进口上市。该口腔崩解片可解决老年性痴呆症患者的用药顺应性问题，对减缓老年性痴呆症进展具有一定意义。

4 . 治疗类风湿性关节炎和骨关节炎药品

目前，用于类风湿关节炎的慢作用药有限，大多为说明书外的经验用药，且不良反应严重。批准了艾拉莫德片和艾瑞昔布片在全球首家上市，两者均为我国自主知识产权、并列入新药创制重大专项支持的药物。艾拉莫德片用于治疗类风湿关节炎药物，其作用机理趋向于慢作用药，有望缓解疾病病程，现有资料提示不良反应相对较小。艾瑞昔布片为非甾体抗炎药，通过抑制环氧酶（COX）发挥镇痛作用，用于缓解骨关节炎的疼痛症状。

5. 治疗HIV感染的药品

批准了首家国产复方制剂奈韦拉平司他拉米双夫定片（II）的生产。该产品是参照WHO推荐的抗HIV治疗（成人及青少年）治疗方案"司他夫定或齐多夫定＋拉米夫定＋奈韦拉平或依法韦伦"组成的复方制剂。

批准了齐多夫定片和齐多拉米双夫定片。两者均为经典的核苷类逆转录酶抑制剂（NRTIs），是WHO和我国艾滋病治疗指南中抗病毒治疗的一线标准用药，它们的获批，提高了治疗药物的供给性，符合国家传染病防控策略。

在前期预防艾滋病研究结果基础上，批准了艾滋病疫苗(核酸疫苗与重组痘苗联合使用)增加用于治疗成人艾滋病的临床试验研究，以考察疫苗在HIV感染者中诱导体液和细胞免疫、与抗逆转录病毒药物联合应用增强特异性免疫反应、以及控制病毒复制的作用。

6. 治疗乙肝的药品

富马酸替诺福韦二吡呋酯片是国际上公认的治疗乙肝的核苷（酸）类似物之一。2011年，批准了该品种针对乙肝适应症进行临床试验。此外，还批准国内外均未上市、用于乙肝治疗的富马酸替诺福韦双特戊酯片进行I期临床试验。

7. 治疗疟疾的药品

批准国产首家青蒿琥酯阿莫地喹片生产。该品种是全球抗疟委员会、WHO等组织确定的抗疟首选药，可避免抗疟药物抗性下降和遏制疟原虫耐药性，从而更有效地控制和治疗疟疾。

8 . 利尿药

批准国产首家托伐普坦片生产。该品种是非肽性选择性精氨酸加压素V2受体拮抗剂，通过抑制加压素与肾集合管的V2受体结合，促肾脏排水但不增加排钠，对各

dependent mode with relatively low incidence of low blood sugar, and they have provided new treatments for Type II diabetes patients.

12. Drugs for the Treatment of Mental Illness

SFDA approved the import of Paliperidone Palmitate Injection, which is the only 1-month long-term treatment preparation among marketed mental illness drugs, it helps to improve the schizophrenia patients' clinical medication compliance and prevent the recurrence of the disease. SFDA also approved the import of Agomelatine tablet, which is a new anti-depression drug, and the study results show that the drug does not hinder sleep structure and improves the sleep of patients with depression to some degree.

13. Antineoplastic Drugs

Currently, the treatment methods for imatinib-resistant or imatinib-intolerant chronic myelocytic leukemia are rather limited. In 2011, SFDA approved the import of dasatinib tablets for the treatment of adult patients in chronic phase, accelerated phase and blast phase (myeloid blast and lymphocytic blast) of imatinib-resistant or intolerant Philadelphia chromosome-positive (Ph+) chronic myelocytic leukemia. It has provided a new alternative after nilotinib for patients with imatinib resistant and imatinib intolerant chronic myelocytic leukemia.

14. Non-CFC Metered Dose Inhales (MDIs)

In accordance with the work plan on China's implementation of the Montreal Convention, and the technical requirements for alternative of inhaled aerosol propellants, to accelerate the elimination of pharmaceutical aerosols freon, SFDA approved the manufacturing and clinical research of non-CFC salbutamol sulphate MDIs, so as to ensure that the supply of first-tier treatment drugs for asthma and Chronic Obstructive Pulmonary Diseases. At the same time, SFDA approved the production of non-freon Beclometasone Dipropionate Aerosol, to promote work progress of China's phase-out of CFC in pharmaceutical MDIs..

15. Traditional Chinese Medicine

According to Basic Technical Requirements on the Research of Traditional Chinese Medicine and Natural drug Injections, SFDA approved after rigorous risk-benefit evaluation the manufacturing of two TCM injections with relatively clear material basis, higher quality controllability and effective injection positions. The other approved TCM drugs mainly include: drugs for symptoms improvement digestive diseases (valerian extract capsules, Liansu capsules, etc.), osteoarthritis and rheumatoid symptom improvement drugs (Salvia Tongluo ointment), enuresis in children (pediatric Yima particles), ADHD (pediatric Huanglong particles), prostatitis (Dan Yi tablets, etc.), prostate hyperplasia (Lingze tablets), mainly cold (Jingan capsule) and other virus-infection self-limited diseases.

V. Measures on Enhancing Drug Registration Administration

The year of 2011 marked the first year for implementation of the National Drug Safety "12th Five-Year Plan", drug registration administration proactively implemented the scientific concept of supervision, continued to focus on improving the quality and efficiency, laid emphasis on strengthening the supervision of drug clinical trials and registration administration, steadily pushed forward the reform of institutional mechanisms and laws and regulations, comprehensively strengthened the whole process management of pharmaceutical researches, and constantly improved drug standards administration.

1. Improve drug registration administration regulations and the systems of technical guidance principles

Further improve the systems of technical

种原因引起的非低容量性低钠血症具有明显提高血钠浓度的作用。

9. 抗凝药

批准了首家注射用比伐芦定生产上市，比伐芦定做为凝血酶直接抑制剂，通过与游离及血栓上凝血酶的催化位点和阴离子外结合位点特异结合起抑制作用，用于成人择期经皮冠状动脉介入治疗（PCI）。

10. 治疗骨质疏松的药品

批准了特立帕肽注射液进口。特立帕肽注射液是全球第一个上市的人甲状旁腺激素（PTH）（1-34）生物制品，它直接作用于成骨细胞，刺激骨骼形成，适用于有骨折高发风险的绝经后妇女骨质疏松症的治疗，为绝经后妇女骨质疏松症提供了新的治疗手段。

11. 治疗糖尿病的药品

批准了沙格列汀片和利拉鲁肽注射液进口。沙格列汀片属二肽基肽酶4（DPP4）竞争性抑制剂，不仅可以单独使用，还可与盐酸二甲双胍联用，进一步改善糖尿病患者的血糖控制。利拉鲁肽注射液为国内首家上市的GLP-1类似物的生物制剂，其特点为具有长效作用，可一天给药一次。两者均以葡萄糖浓度依赖的模式刺激胰岛素的分泌，低血糖的发生率相对较低，为 = 2 * ROMAN II型糖尿病患者提供了新的治疗手段。

12. 治疗精神类疾病药品

批准了棕榈酸帕利哌酮注射液进口，该药品属于已上市精神类药物中唯一的1个月长效治疗制剂，有利于提高精神分裂症患者临床用药的依从性及防止疾病的复发。批准了阿戈美拉汀片进口，该品种为新型抗抑郁药，研究结果显示，该药不妨碍睡眠结构，对抑郁患者的睡眠有一定改善作用。

13. 抗肿瘤药

目前，对于伊马替尼耐药或不耐受的慢性髓细胞白血病患者的治疗手段有限。2011年，批准了达沙替尼片进口，用于伊马替尼耐药或不耐受的费城染色体阳性（Ph+）慢性髓细胞白血病慢性期、加速期和急变期（急粒变和急淋变）成年患者的治疗。该品种为继尼洛替尼之后另一个用于伊马替尼耐药和不耐受的慢性髓细胞白血病患者的药品，为此类患者提供了更多的治疗手段。

14. 非氟利昂吸入式气雾剂

按照我国履行《蒙特利尔国际公约》的有关工作计划，为加快药用气雾剂用氟利昂的淘汰，按照吸入式气雾剂抛射剂替代的技术要求，批准了非氟利昂硫酸沙丁胺醇气雾剂的生产和临床研究，保证了哮喘、慢性阻塞性肺部疾病的一线治疗用

guidance principles. To strengthen the management of Biosample Analysis of Drug Clinical Trials, and improve the quality and management level of data analysis of bio-ample analysis data, SFDA promulgated the "Management Guide for Biological Samples Analysis Laboratory in Drug Clinical Trials (Interim)". To scientifically regulate and guide the research of TCM changed dosage forms, and the clinical research of TCM and natural medicine, SFDA promulgated the "Technical Guideline for Marketing Post-Approved Changes to TCM Products (A)", "Technical Guidelines on Clinical Research for the Treatment of Coronary Disease & Angina Pectoris Using TCM and Natural Drugs", and "Technical Guidelines on Clinical Research for Treatment of Menopause Syndrome Using TCM and Natural Drugs" and other guidelines.

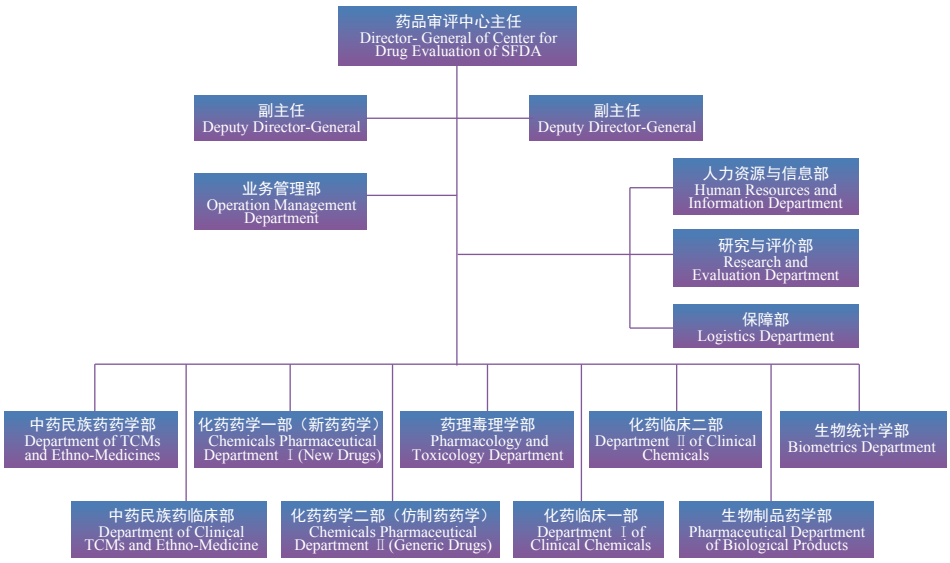
Continuously regulate drug technical review. SFDA released the "Review Principles and Procedures, Specification for the Administration of CDE's Technical Review Decision-Making Path and Specification for the Administration of CDE's Review Tasks (trial) to clarify the decision-making mechanism and models of technical review to ensure the quality and efficiency of the technical review.

2. Continuously promote scientific drug and approval

To further ensure the quality of review, and increase review efficiency, SFDA has adjusted the internal structure (see figure 3), innovative drugs and generic drugs shall be reviewed by different departments; the review models are improved, the review procedures are determined according to the Categories of review tasks and the risk levels, drug registration applications (including supplementary applications) shall be reviewed in six channels. The time limit for review of innovative drugs is further shortened, the queuing time for approval of clinical trials has been reduced from 9-10 months in the past to current 5-8 months, and the review time for production approval is 10-11 months in average. A professional and the specialized review job title system has been established to enhance the responsibility of principal reviewers and the review team, the review mistakes correction, academic oversight and quality evaluation mechanisms have been improved to further ensure the quality of the review.

The scientific nature and fairness of technical review has been continuously guaranteed by major theme meetings, communication meetings for innovative product, expert consultation meetings, as well as third-party verification, expert votes, etc. The disclosure and transparency of the review is further improved, we respect for the applicants' and the public's right to be informed and accept

图3. 药品审评中心组织机构
Figure 3. CDE's Organizational Chart



药。同时，批准了非氟利昂丙酸倍氯米松气雾剂的生产，推进了我国药用吸入式气雾剂淘汰氟利昂的工作进展。

15. 中药

根据《中药、天然药物注射剂研究基本技术要求》，经过严格的风险效益评估，批准了2个物质基础相对明确，质量可控程度较高的有效部位中药注射剂生产。批准的其它中药新药主要包括：消化系统疾病的症状改善用药（缬草提取物胶囊、连苏胶囊等）、骨性关节炎和类风湿改善症状用药（丹参通络膏等）、小儿遗尿（小儿益麻颗粒）、多动症（小儿黄龙颗粒）、前列腺炎（丹益片等）、前列腺增生（灵泽片）等症状改善用药，感冒（荆感胶囊）等病毒感染为主的自限性疾病等。

五、 加强药品注册管理的工作举措

2011年是实施国家药品安全"十二五"规划的开局之年，药品注册管理工作积极践行科学监管理念，继续以提高"质量和效率"为中心，以加强药物临床试验监管和规范药品注册管理行为为重点，稳步推进体制机制改革和法规建设，全面加强药物研究全过程的管理，不断完善药品标准管理工作。

1. 完善药品注册管理法规和技术指导原则体系

进一步完善技术指导原则体系。为加强药物临床试验生物样本分析实验室的管理，提高生物样本分析数据的质量和管理水平，发布实施《药物临床试验生物样本分析实验室管理指南（试行）》。为科学规范和指导中药变更研究和中药、天然药物临床研究工作，发布实施了《已上市中药变更研究技术指导原则（一）》、《中药、天然药物治疗冠心病心绞痛临床研究技术指导原则》、《中药、天然药物治疗女性更年期综合征临床研究技术指导原则》等指导原则。

不断规范药品技术审评工作。发布了《审评原则和程序》、《药品审评中心技术审评决策路径管理规范（试行）》和《药品审评中心审评任务管理规范（试行）》，明确了技术审评的决策机制和模式，保证技术审评的质量与效率。

2. 持续推进药品审评审批的科学化

为进一步保证审评质量，提高审评效率，我局药品审评中心调整了内部机构(见附图3)，创新药和仿制药分别由不同的部门进行审评；完善了审评模式，按照审评任务分类和风险等级分类设定审评程序，将药品注册申请（含补充申请）按照六个通路开展审评。创新药审评时限进一步缩短，批准临床试验的排队等待时间由过去

public supervision, the review schedules for new registration application and publicize in accordance with their different sequences; public notifications have been made for the review sequence of supplementary information according to corresponding review departments; in the review process, relevant information has been made public, including the information of the completion of review by various disciplines, the target review time for various principal reviewer and reporters to fulfill review tasks, and conference information related to review activities, etc.

3.Enhance supervision and administration of drug research

Up to now, a total of 2438 clinical professions in 356 medical institutions of China have passed the GCP certification. In 2011, SFDA collaborated with the Ministry of Health completed the verification on the qualification of 134 drug clinical trial institutions, 51 problematic institutions or professions have been ordered for rectification or been disqualified, which has given a strong impetus to the implementation of drug GCP. We organized and convened national drug clinical trial quality management working conference, clarified the regulatory philosophies and work plans, intending to conduct Category-based guidance and prioritized development on the basis of the existing regulatory practices, so that a number of drug clinical trial institutions with advanced conditions can come to the fore to assume the important task of innovative drug research, and a new professional and networked work pattern shall be formed, which is based on confirmatory clinical trial research institutions , and guided by exploratory clinical trial research institutions, in this way we can provide a vigorous support for the implementation of the 12th Five-year Planning for major new drug inventions .

So far, a total of 46 non-clinical safety evaluation institutions across the country have passed the certification of “Good Laboratory Practice (GLP) for Nonclinical Research". Among them, four institutions have applied and passed GLP inspection of

OECD member states, and two institutions have received and passed U.S. FDA’s GLP inspection, indicating that China's drug safety evaluation capacity has been internationally recognized, it is of great importance for China to realize the objectives of the national major new drug inventions to enhance our level and the launch of China’s innovative drugs in the international market at an early date.

All provincial drug regulatory authorities have continuously regulated and refined the inspection requirements and strictly controlled the quality of application dossiers in the implementation of registration on-site inspection. Some registration applications with substandard application documents or for substandard drugs have been rejected or withdrawn actively by the enterprises as required. In the manufacturing site inspection, the feasibility inspection on manufacturing processes is strengthened and has played an important role in the fight against dishonest research activities and the maintenance of the order of drug registration.

4. Conduct overseas manufacturing site inspection for imported drugs for the first time

To enhance the management of imported drugs, fulfill the responsibilities under Drug Administration Law, we drafted the development of working procedures for overseas manufacturing site of imported drugs, and working schemes for pilot programs of overseas inspection of Imported drugs for 2011. Seven inspection groups have been dispatched to seven countries including the United States, France, Italy, India, Hungary, South Korea, and Japan,

的9-10个月减少至5-8个月，批准生产的审评时间平均为10-11个月。建立了职业化、专业化的审评职务体系，强化主审人员和审评团队负责，健全了审评纠错、学术监督和质量评价机制，进一步保证了审评工作质量。

继续通过重大专项专题会、创新品种沟通交流会、专家咨询会议，以及第三方验证、专家票决等方式，保证技术审评工作的科学性和公正性。继续加大公开透明力度，尊重申请人和社会公众的知情权并接受社会监督，将新注册申请的审评计划，按照不同的序列分别公示；将补充资料的审评队列按审评部门分别公示；将审评进程中的有关信息公开，包括各专业完成审评的信息、各主审报告完成审评任务的目标审评时间、与审评工作相关的会议信息等。

3. 强化药物研究监督管理工作

截止目前，全国共有356家医疗机构的2438个临床专业通过GCP认证。2011年，我局会同卫生部组织完成了对134家药物临床试验机构资格认定复核检查工作，对51家存在问题的机构或专业，责令整改或取消资格，有力地推动了药物临床试验质量规范的实施。组织召开了全国药物临床试验质量管理工作会议，明确了监管思路和工作方向，拟在现有管理基础上实施分类指导、重点培育，使一批条件较好的药物临床试验机构脱颖而出，承担起创新药物研究的重任，形成以探索性研究的临床试验机构为引领，以验证性研究的临床试验机构为基础的专业化、网络化的新格局，有力支持重大新药创制“十二五”规划的实施。

截止目前，全国共有46家非临床安全性评价研究机构通过《药物非临床研究质量管理规范（GLP）》认证。其中，有4家机构申请并通过了“经济合作与发展组织”（OECD）成员国的GLP检查，有2家机构接受了美国FDA的GLP检查，并获得通过，表明我国药品安全性评价能力得到国际认可，对于实现国家重大新药创制专项的目标，提升我国的新药研发水平，促进我国创新药物尽快走向国际市场具有重要意义。

各省级药品监管部门在开展注册现场核查中，不断规范和细化核查要求，严把申报资料质量。对一些申报资料不规范，质量不达标的药品注册申请，予以驳回或要求企业主动撤回。在生产现场检查中，加强对生产工艺可行性的检查，对打击研发中的弄虚作假行为、维护药品注册秩序发挥了重要作用。

4. 首次开展进口药品境外生产现场检查

to carry out overseas site inspection on seven products such as Bevacizumab injection, Dinoprost Injection, and Gemcitabine Hydrochloride for Injection, this has achieved a breakthrough in overseas inspection of imported drugs, fully demonstrated SFDA's confidence and strength as "gatekeepers and contributors for drug safety of the people", and also laid a foundation to strengthen the regulatory capacity building and carry out international regulatory cooperation.

VI. Future Prospects

In recent years, with the rapid development of the pharmaceutical industry and the rapid improvement of new drug research capabilities, drug registration administration cannot fully meet the expectations and demands of the society, the existing problems are manifested in the incompatibility of service capabilities with innovation needs, the incompatibility of review & approval strategies with innovation incentive policies, the incompatibility of institutional mechanisms with the targets of quality and efficiency improvement, and the incompatibility of the level of drug quality standards with public expectations etc. In 2012, according to the overall arrangements on the12th Five-year Planning for National Drug Safety", SFDA will concentrate on the following three areas of work:

(A) Creating a scientific drug registration administration system to further improve the quality and efficiency of drug review and approval. Taking into account the national and provincial two-tier registration administration system currently practiced in China, we will adjust the review & approval strategies and staffing, optimize the top-level design and management process, strengthening the supervision of clinical trials, improving information management systems and decision-making management mechanisms to ensure that innovative drugs and generics in urgent clinical demand can be reviewed in time, and an effective work pattern shall be formed, featuring clear responsibilities of the state and provincial regulatory departments, consistency of rights and responsibilities, mutual assistance and complementation.

First, adjust the review strategies, and establish a policy orientation that encourages innovation and advancement. Priorities shall be set to implement priority review policy, the limited review & approval resources shall be prioritized for innovative drugs, major new drug invention, generics that are in short supply or urgent clinical demand and other priority areas and key projects to ensure the public's accessibility to affordable drugs. A drug marketing evaluation system shall be explored and established, and restrictive policy and measures shall be researched and applied to applications for drug varieties that have been produced by many manufacturers and therefore saturated, to guide the enterprises for rational application.

Second, adjust the administrative powers of drug registration administration. Rationally defining the administrative powers of the central & local authorities, the administrative review & technical review, and take full advantage of human resources and technical capacity of provincial food and drug administration, authorize provincial food and drug administration departments with adequate qualifications and conditions to assume the responsibility of review and approval of some drug registration applications, and gradually establish an administrative pattern that integrates the SFDA central review with the auxiliary review carried out by regional centers for drug evaluation under state control.

(B) Comprehensively improving the quality of generic drugs and ensuring public drug use safety. Taking as the general guideline the integration of improvements with phasing out, government leadership with enterprise initiatives, and overall planning with prioritized promotion, focus on basic drugs and common clinical products, carry out consistency evaluation of the quality of generic drugs, promote the constant improvement of generic drug quality, and promote product upgrade. Drugs that meet quality compatibility requirements shall enjoy preferential policies in bidding procurement, pricing and other aspects, and

为加强对进口药品的监管，履行《药品管理法》赋予的职责，组织制定了进口药品境外生产现场检查工作程序和2011年进口药品境外现场检查试点工作方案。组成7个检查组，赴美国、法国、意大利、印度、匈牙利、韩国、日本等7个国家对贝伐珠单抗注射液、地诺前列素注射液、注射用盐酸吉西他滨等7个品种开展境外现场检查工作，实现了进口药品境外检查“零”的突破，充分展现了中国药品监管“为国把关、为民尽责”的信心和实力，也为加强监管能力建设、开展国际监管合作奠定了基础。

六、工作展望

近年来，随着医药产业的高速发展和新药研发能力的快速提高，药品注册管理工作不能充分满足社会各界的期望和要求，存在着服务能力与创新需求不相适应、审评审批策略与鼓励创新政策不相适应、体制机制与提高质量和效率的目标不相适应、药品质量标准水平与公众期望不相适应等问题。2012年，国家局将根据《国家药品安全“十二五”规划》的总体部署，做好以下三方面工作：

（一）构建科学的药品注册管理体系，进一步提高药品审评审批的质量和效率。从我国目前实行的国家和省两级注册管理体制的实际情况出发，调整审评审批策略和人力资源配置，优化顶层设计和管理流程，加强临床试验监管，完善信息管理系统及决策管理机制，确保创新药和临床亟需仿制药能够按时限开展审评，形成国家和省职责分明、权责一致、相互配合、互为补充的工作格局。

一是调整审评策略，建立鼓励先进的政策导向。要确立优先审评领域，实施优先审评策略，将有限的审评审批力量向创新药、新药创制重大专项支持项目以及临床短缺及亟需仿制药等优先领域、重点项目倾斜，确保公众用药可及性。要探索建立药品上市价值评估制度，对已有多家生产且不具备上市价值的申报品种，研究限制政策和措施，引导企业理性申报。

二是调整药品注册管理的事权。合理划分中央与地方，行政审批与技术审评事权，充分利用省局的人力资源和技术能力，授权具有资质和条件的省局承担部分药品注册申请事项的审评审批工作，逐步建立中央集中审评和国家管控的区域性药品审评中心辅助审评相结合的管理模式。

（二）全面提高仿制药质量，确保公众用药安全。以提高与淘汰相结合，政府引导推动与企业主动作为相结合，全面统筹与重点推进相结合为总体思路，以基本药

drugs that fail to meet the standards shall be phased out;

(C) Strengthening infrastructure development, and improving service capabilities. Vigorously strengthen team building, establish a professional and specialized drug registration manager with good attitude, perseverance and competencies covering e review, inspection and testing. Accelerate the development of IT application for drug standards information system, to realize the automation and networking of drug standard query, search, publication, analysis, research of management works, and improve the quality and efficiency of the standard administration.

We welcome the continuous attention and support from all public circles for our drug registration administration.

(2012-09-27)

物和临床常用品种为重点，开展仿制药质量一致性评价工作，促进仿制药品质量的持续提高，推动产品不断升级。达到质量一致性要求的，将得到药品在招标采购、定价等方面的优惠政策；达不到要求的，将予以淘汰。

（三）加强基础建设，提升服务能力。大力加强队伍建设，建立一支思想过硬、作风顽强、技术精湛的涵盖审评、检查、检验的专业化和专职化的药品注册管理队伍。加快药品标准信息化建设，实现药品标准的查询、检索、发布、分析、研究等管理工作的自动化和网络化，提高标准管理工作的质量和效率。

希望社会各界继续关心和支持药品注册管理工作。（2012年9月27日）

SFDA Joined hands with Goso to construct an authoritative drug information inquiry platform: "Drug Safety, Jike Easy" product series on-line

On September 26, 2012, the SFDA-Goso Strategic Cooperation & "Drug Safety, Jike Easy" On-Line Product Release Ceremony was held in Beijing, which marked the debut of search engine technology in the field of drug information through SFDA-Goso collaboration. SFDA Commissioner Yin Li, Deputy Commissioner Sun Xianze, Deputy Editor-In-Chief of People's Daily, Chairman of Goso and other representatives attended the ceremony. With mutual witness of the two sides, the SFDA-Goso Jike Pharmaceutical Web Search Platform, Official Black List, Pharmaceutical Aides and other products become online, an authoritative drug information inquiry platform has been established for the public. (2012-09-27)

国家食品药品监管局与人民搜索合作打造权威药品信息查询平台“药品安全即刻查询”系列产品上线

2012年9月26日，国家食品药品监管局与人民搜索网络股份公司“药品安全，即刻查询”战略合作暨产品上线仪式在北京举行，这是国家食品药品监管局首次与互联网公司合作将搜索引擎技术应用于药品信息领域。国家食品药品监管局局长尹力，国家食品药品监管局副局长孙咸泽，人民日报社副总编辑、人民搜索董事长马利等出席仪式。在双方共同见证下，国家食品药品监管局与人民搜索共同打造的即刻药品类网页搜索平台、官方曝光台、医药助手等产品上线，为公众搭建权威的药品信息查询平台。（2012年9月27日）

Center for Drug Evaluation issued the “Relevant Instructions for Separate Sequential Review of Varieties Applied in CTD Format"

On September 25, 2010, the State Food and Drug Administration issued the "Notice on Relevant Issues Concerning the Requirements on Application Dossiers in CTD Format for Pharmaceutical Chemicals (SFDA Department of Drug Registration [2010] No.387)" (hereinafter referred to as "Notice"), in order to improve the quality and level of drug R & D of China to be in line with international practice. The Notice requires that the technology and evaluation department review the registration applications submitted in CTD format separately in sequence to encourage submission of application materials in CTD format. To effectively implement the requirements of the Notice, CDE recently began to review the registration

药品审评中心发布《关于按照CTD格式申报品种单独按序审评的有关说明》

2010年9月25日，国家食品药品监督管理局发布了“关于按CTD格式撰写化学药品注册申报资料有关事项的通知（国食药监注［2010］387号）”（以下简称“通知”），该通知旨在提高我国药物研发的质量和水平，逐步实现与国际接轨。通知要求为鼓励CTD格式提交申报资料，技术审评部门将对提交CTD格式申报资料的注

applications submitted in CTD format separately in sequence on the basis of actively carrying out various tasks, and elaborated relevant issues on September 27, 2012 as follows:

1. In accordance with the requirements of the Notice, CDE has listed into separate CTD sequence the varieties of Registered Classification 5&6 (including 3+5, 3+6, excluding varieties with monitoring period after production approval) that have applied for production and submitted the CTD-formatted application dossiers + CTD-formatted primary research information summary table (incl. electronic version), and CDE has reviewed the applications in sequence of their submission time, the review plan shall be published in the CDE website. In light of the requirements of the Provisions for Drug Registration, the approved registration for classification 3 & 4 varieties shall enter into the monitoring period, after which other applicants' applications for similar varieties that have been accepted but not yet approved for drug clinical trials shall be rejected. Therefore, in order to maintain the consistency of review progress for registered classification 3 & 4 varieties, applications for both types shall not be included in the separate CTD sequence.
2. To ensure that China's drug registration really keep abreast with international standards, CDE encourages the application and research carried out in accordance with the R&D concept and technical requirements embodied in the CTD format; and shall not approve the following applications: those which have not been carried out in accordance with the R&D concept and technical requirements embodied in the CTD format, those whose production process research, impurities research and other aspects have serious defects, those whose quality control system has no adequate supportive research data, such as the failure to conduct as required the impurity comparative studies with the products of original R & D plants, and the failure to conduct the research and control of toxic impurities or degradation products that shall be definitely controlled according to Pharmacopoeias at home and abroad. In these cases, the applicants can reapply after improvement. The technical standards shall be consistent, be it registration application in CTD format or Annex-2 format.

CDE shall continue to sum up the common problems found in the review of the application dossiers submitted in CTD format and publish this information on its website in the form of electronic publications, for the applicants' attention.

(2012-09-27)

册申请单独按序进行审评。

为落实好通知精神，药品审评中心在积极开展各项工作的基础上，于近期开始对CTD格式申报资料单独按序审评，并于2012年9月27日就有关事宜说明如下：

1.按照通知精神，将申报生产的、同时提交了CTD格式申报资料+CTD格式主要研究信息汇总表（含电子版）的注册分类5、注册分类6（包括3+5，3+6，批产后有监测期的品种除外）品种列入单独的CTD序列，并按照CTD资料进入中心时间的顺序依次审评，审评计划在中心网站公布。根据注册管理办法的要求，对于注册分类3、4的品种批准后将进入监测期，进入监测期后，已经受理但尚未批准进行药物临床试验的其他申请人的同品种申请将予以退回。因此，为保持注册分类3、4品种的审评进度的一致性，此两类申请不纳入单独的CTD序列范畴。

2.为真正推动我国药品注册与国际接轨，药品审评中心鼓励按照CTD格式所体现的研发理念与技术要求开展研究和申报。对于未按照CTD格式所体现的研发理念与技术要求开展研究和申报，工艺研究、杂质研究等方面存在重大缺陷的，质量控制体系没有充分的研究数据支持的，如未按要求与原研发厂产品进行杂质对比研究，未对国内外药典和同品种标准已明确控制的毒性杂质或降解产物进行相应的研究与控制等，药品审评中心将不予批准。申请人研究完善后可重新申报。无论按照CTD格式申报还是附件2格式申报，审评的技术标准是一致的。

药品审评中心将不断总结在CTD格式申报资料审评中发现的共性问题，以电子刊物的形式在网站公布，请申请人予以关注。

（2012年9月27日）

Q&A 问与答

Center for Drug Evaluation Replies Common Questions for New Drugs

药品审评中心关于新药共性问题解答

(To continue)

Q7: Our chemicals class III ordinary injection is applying for the clinical phase, the research unit is an Institute, and the sample batches for registration are produced in a production enterprise. Since the APIs of this variety do not belong to injection levels, we will complete relevant studies in accordance with the requirements of the No. 7 Document, but the problem is that where can we prepare the APIs?

1. *Does it need to be conducted in GMP workshop?*
2. *Whether the research units can prepare the APIs in the laboratories (with sterile rooms with local cleanness class 100 and room cleanness below class 10,000)?*

（接上期）

问题七：化药3类普通注射剂，申报临床阶段，研究单位是研究所，在生产企业制备注册批样品。该品种原料药没有注射级的，我们将按照7号文的要求完成相应的研究工作，但问题是原料药的制备在哪里进行呢?

1. 是否需要在GMP车间进行呢?
2. 研究单位是否可以在实验室（有无菌间，可达到万级下的百级）制备呢?

3. *The enterprise for drug preparation currently has no GMP workshops for APIs, but will the workshops meeting the GMP requirements do?*

4. *Can the preparation of APIs be entrusted to the enterprises with GMP workshops?*

A: The relevant researches of oral APIs for injection shall be subject to the requirements of the notice on Promulgating the basic technical requirements for chemical injection and multi-component biochemicals injection (SFDA Department of Drug Registration [2008] No. 7), the preparation of pilot scale-up samples is recommended to be conducted in API n workshops in accordance with the GMP requirements. If the R & D institutions do not have the production capacity, it is recommended to communicate as soon as possible with the transferor of technology (future production units), and conduct pilot scale-up research in the production units while applying for the clinical phase.

To avoid damage to the clinical subjects, the applicant should be highly concerned about the environmental conditions for the production of APIs and injections, and strictly abide by the requirements of drug GMP.

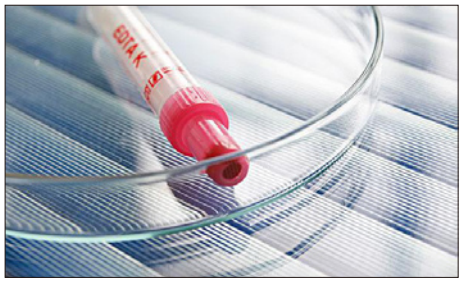
Q 8: We are developing a compound preparation, one compound is made into small tablets, another compound is made into tiny pellets, the small tablets and pellets shall be put in the same capsule, since they can be easily separated, when we establish quality standards, can we separate the small tablets and pellets for separate determination of the substance and content?

A: If the compound preparation applies to the dosage forms specified in the R&D issues, it is theoretically feasible to separate the small tablets and pellets in terms only of relevant substance testing and contents determination, but in the actual practice, close attention should be paid to the convenience of separation and the accuracy of the measurement results, therefore the application material should provide supportive research data to ensure accurate quantification.

Q 9: The APIs have a process impurity A, the quality of which has been controlled in the release standard of the APIs, the APIs and formulation stability test results have shown that this process impurities will not change, our question is that whether this process impurity A needs only to be quantified in the preparation quality standards without a separate report? That is: whether it can be excluded from the total impurity in the preparation quality standards?

A: Drug impurities can be divided according to the source into process impurities and degradation products, in accordance with the impurities technical research guidelines, the process impurities and degradation products of APIs should be studied and controlled in accordance with the preparation process and product structural characteristics; while for preparations, under normal circumstances, we only need to study and control the degradation products in accordance with the formulation process and API compatibility test etc. In other words, except for the degradation products and toxic substances, the impurities, which are controlled in the API quality standard and have not changed in the preparation production process and storage, no longer need to be controlled.

As has been stated in this question, impurity A is a process impurity that has been



3. 制备制剂的企业目前没有原料药GMP车间，但是有符合GMP要求的车间是否可以呢?

4. 原料药制备委托给有GMP车间的企业是否可行呢?

答：口服用原料药用于注射剂，应按《关于发布化学药品注射剂和多组分生化药注射剂基本技术要求的通知》（国食药监注[2008]7号）的要求进行相关的研究工作，中试放大样品建议在原料药生产车间制备，并符合GMP的相关要求。如研发机构不具备生产能力，建议尽早与技术转让方（将来的生产单位）接洽，申报临床阶段就在生产单位进行中试放大研究。

为避免对临床受试者的伤害，申请人应高度关注注射用原料药及注射剂生产的环境条件，严格执行《药品生产质量管理规范》的要求。

问题八：我们在开发一种复方制剂，一种药物制成小片，另一种药物制成微丸，小片和微丸共同装于同一粒胶囊中，因为小片和微丸很容易分离，我们在建立质量标准时，准备采用将小片和微丸单独拣出，单独测定有关物质和含量的方法，不知是否可行?

答：如果该复方制剂适合开发成问题中所述剂型，仅针对有关物质检查和含量测定而言，采用将小片和微丸单独拣出的方法理论上是可行的，但在实际操作中，需关注小片和微丸分离拣出的方便性以及所述方法测定结果的准确性问题，申报资料中应提供所用方法能够准确定量的支持性研究资料。

问题九：原料药有一个工艺杂质A，在原料药放行标准中已做了质控，原料药和制剂的稳定性考察结果是这个工艺杂质不会发生变化，请问该工艺杂质A是否只需在制剂质量标准中做定性，但是不需要报告？也就是工艺杂质A在制剂质量标准中不计入总杂?

答：药品中的杂质按照来源可分为工艺杂质和降解产物，根据杂质研究技术指导原则，对于原料药，需要结合制备工艺及产品的结构特征等，对工艺杂质和降解产物进行研究及控制；而对于制剂，一般情况下，仅需要结合制剂处方工艺及原辅料相容性试验等，对降解产物进行研究及控制。也就是说，除了降解产物和毒性物质外，已在原料药质量标准中控制，且在制剂生产及贮存过程中含量没有增加的杂质，制剂中一般可不再控制。

就本问题所言，杂质A为工艺杂质，已在原料药质量标准进行了控制，如杂质A为一般杂质，那么在制剂质量标准中不需

controlled in the API quality standard, if impurity A belongs to general impurities, then it needs not to be controlled in the preparation quality standards, and needs not to be included in the calculation of the total amount of degradation products. But what needs to be emphasized is that, if impurity A is a special toxic impurity or an impurity with a suspicious structure, such as genotoxic impurity, it needs to be controlled in the preparation quality standards.

In summary, the quality standards of preparations should include the test items of the following degradation products: each specific identified degradation product, each specific unidentified degradation product, any non-specific degradation product with concentration not greater than the identification limit, and the total amount of degradation products. (August 12, 2012)

要对其进行控制，即在计算降解产物总量时，不需要将其计算在内。但需要强调的是，如杂质A为特殊毒性杂质或具有可疑结构的杂质，比如基因毒性杂质，则应将其在制剂质量标准中予以控制。

综上，在制剂质量标准中应包括以下降解产物检查项：每种特定的、已鉴定的降解产物，每种特定的、未鉴定的降解产物，任何不大于鉴定限度的非特定降解产物，降解产物总量。（2012年8月12日）

Notes: • All Chinese information in Newsletter extracted from Newspapers and Internet. All English articles are the translations from the Chinese version.
• Read the electronic version of the newsletter please visit http://www.ccpie.org

备 注： • Newsletter中所有中文信息摘自报刊及网络。英文均系中文翻译。
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