Current FDA-Related Drug Information

Approvals, Submission, and Important Labeling Changes for US Marketed Pharmaceuticals

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This monthly feature will help readers keep current on new drugs, new indications, dosage forms, and safety-related changes in labeling or use. Efforts have been made to ensure the accuracy of this information; however, if there are any questions, please let me know at danial.baker@wsu.edu.

Table 1. New drugs approved by the US Food and Drug Administration (FDA): September 21, 2013 through October 18, 2013

Antihemophilic factor (recombinant) – Novoeight (Novo Nordisk)	
<i>Comparative agents:</i>	Coagulation factor VIII
<i>Indication:</i>	Treatment of adults and children with hemophilia A
<i>Mechanism of action:</i>	Factor replacement with recombinant formulation
<i>Common adverse effects:</i>	Injection site reaction, increased hepatic enzymes, and pyrexia
<i>Dosage form & strength:</i>	Injection; 250, 500, 1000, 1500, 2000, and 3000 international units
<i>Product labeling:</i>	http://www.fda.gov/downloads/BiologicsBloodVaccines/BloodBloodProducts/ApprovedProducts/LicensedProductsBLAs/FractionatedPlasmaProducts/UCM371094.pdf
Conjugated estrogens and bazedoxifene – Duavee (Pfizer)	
<i>Comparative agents:</i>	Estrogen and progestin products
<i>Indication:</i>	To treat moderate to severe hot flashes and to prevent postmenopausal osteoporosis in women
<i>Mechanism of action:</i>	Estrogen replacement therapy (conjugated estrogen); estrogen agonist/antagonist (bazedoxifene)
<i>Common adverse effects:</i>	Muscle spasms, nausea, diarrhea, dyspepsia, abdominal pain upper, oropharyngeal pain, dizziness, and neck pain
<i>Dosage form & strength:</i>	Tablet; conjugated estrogens 0.45 mg / bazedoxifene 20 mg
<i>Product labeling:</i>	http://labeling.pfizer.com/ShowLabeling.aspx?id=1174
Diclofenac – Zorvolex (Iroko Pharmaceuticals)	
<i>Comparative agents:</i>	Diclofenac
<i>Indication:</i>	Mild to moderate acute pain in adults
<i>Mechanism of action:</i>	Inhibition of prostaglandin synthesis
<i>Common adverse effects:</i>	Edema, nausea, headache, dizziness, vomiting, constipation, pruritus, flatulence, pain in extremity, and dyspepsia
<i>Dosage form & strength:</i>	Capsule; 18 mg and 35 mg
<i>Product labeling:</i>	https://www.zorvolex.com/_assets/pdf/Zorvolex_Approved_PI.pdf

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Table 1. New drugs approved by the US Food and Drug Administration (FDA): September 21, 2013 through October 18, 2013 (CONT.)

Lipid injectable emulsion – Clinolipid (Baxter Healthcare Corporation)	
<i>Comparative agents:</i>	Fat emulsion, injection
<i>Indication:</i>	Intravenous feeding in adult patients, providing a source of calories and essential fatty acids for adult patients who are unable to eat or drink
<i>Mechanism of action:</i>	Nutritional supplement
<i>Common adverse effects:</i>	Infectious complications, nausea, vomiting, high blood sugar, and abnormal liver function tests
<i>Dosage form & strength:</i>	Injectable
<i>Product labeling:</i>	http://www.accessdata.fda.gov/drugsatfda_docs/label/2013/204508s000lbl.pdf
Macitentan – Opsumit (Actelion)	
<i>Comparative agents:</i>	Ambrisentan, bosentan
<i>Indication:</i>	Treatment of pulmonary arterial hypertension (PAH, WHO Group I) to delay disease progression. Disease progression includes death, initiation of intravenous (IV) or subcutaneous prostanoids, or clinical worsening of PAH (decreased 6-minute walk distance, worsened PAH symptoms and need for additional PAH treatment). Macitentan also reduced hospitalization for PAH.
<i>Mechanism of action:</i>	Endothelin receptor antagonist
<i>Common adverse effects:</i>	Anemia, nasopharyngitis/pharyngitis, bronchitis, headache, influenza, and urinary tract infection
<i>Dosage form & strength:</i>	Tablet; 10 mg
<i>Product labeling:</i>	http://opsumit.com/splash/pdf/OPSUMIT-Full-Prescribing-Information.pdf
Riociguat – Adempas (Bayer Healthcare)	
<i>Comparative agents:</i>	Epoprostenol
<i>Indication:</i>	Treatment of adults with persistent/recurrent chronic thromboembolic pulmonary hypertension (CTEPH; WHO Group 4) after surgical treatment or inoperable CTEPH to improve exercise capacity and WHO functional class. It is also approved for the treatment of adults with PAH (WHO Group 1) to improve exercise capacity, improve WHO functional class, and delay clinical worsening.
<i>Mechanism of action:</i>	Guanylate cyclase stimulator that causes vasodilation
<i>Common adverse effects:</i>	Headache, dizziness, dyspepsia/gastritis, nausea, diarrhea, hypotension, vomiting, anemia, gastroesophageal reflux, and constipation
<i>Dosage form & strength:</i>	Tablets; 0.5 mg, 1 mg, 1.5 mg, 2 mg, and 2.5 mg
<i>Product labeling:</i>	http://labeling.bayerhealthcare.com/html/products/pi/Adempas_PI.pdf
Vortioxetine – Brintellix (Takeda Pharmaceuticals)	
<i>Comparative agents:</i>	Selective serotonin reuptake inhibitors
<i>Indication:</i>	Treatment of major depressive disorder
<i>Mechanism of action:</i>	Enhanced serotonergic activity in the central nervous system through inhibition of serotonin reuptake
<i>Common adverse effects:</i>	Nausea, constipation, and vomiting
<i>Dosage form & strength:</i>	Tablet: 5 mg, 10 mg, 15 mg, and 20 mg
<i>Product labeling:</i>	http://www.takeda.com/news/files/20131001_en.pdf

Table 2. New dosage forms and indications approved by the FDA: September 21, 2013 through October 18, 2013

Generic name	Brand name (Company)	Indication and comments
New dosage forms/strength/route of administration		
Buprenorphine	<i>Butrans</i> (Purdue Pharma)	15 mcg/hour system for the treatment of moderate to severe chronic pain when a continuous, around-the-clock opioid analgesic is needed for an extended period of time
Methotrexate	<i>Otrexup</i> (Antares Pharmaceuticals)	Self-injection device that is prefilled with methotrexate for the treatment of patients with rheumatoid arthritis; available in 10 mg, 15 mg, 20 mg, and 25 mg strengths
Tobramycin inhalation solution	(Teva Pharmaceuticals)	Generic product equivalent to <i>Tobi</i>
Triamcinolone acetonide	<i>Nasacort</i> allergy 24 hour (Chattem)	Nasal spray transferred from prescription status to over-the-counter status.
New indications		
Certolizumab pegol	<i>Cimzia</i> (UCB)	Treatment of adult with active psoriatic arthritis
Immune globulin subcutaneous (human)	<i>Hizentra</i> (CSL Behring)	20% liquid; treatment of primary immunodeficiency in adults and pediatric patients 2 years and older for biweekly administration.
Pertuzumab	<i>Perjeta</i> (Genentech)	Neoadjuvant treatment of breast cancer; patients with early stage breast cancer before surgery
Ustekinumab	<i>Stelara</i> (Johnson & Johnson)	Active psoriatic arthritis alone or in combination with methotrexate

Table 3. Agents pending FDA approval: September 21, 2013 through October 18, 2013

Generic name	Brand name (Company)	Indication and comments
Delayed decision by the FDA		
Ferumoxitol	<i>Feraheme</i> injection (AMAG Pharmaceuticals)	Supplemental new drug application (sNDA) to include all adult patients with iron deficiency anemia who have failed or cannot tolerate oral iron treatment
Recommended for approval by an FDA advisory panel		
Miltefosine	<i>Impavido</i> (Paladin Labs)	Treatment of leishmaniasis
Recommended for NON-approval by an FDA advisory panel		
Fish oil	<i>Vascepa</i> (Amarin)	Expanded approval for the treatment of patients with high triglyceride levels and heart disease who are already receiving a statin drug

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Table 3. Agents pending FDA approval: September 21, 2013 through October 18, 2013 (CONT.)

Generic name	Brand name (Company)	Indication and comments
Agents scheduled for review by an FDA advisory panel		
Alemtuzumab	<i>Lemtrada</i> (Genzyme)	Treatment of patients with relapsing forms of multiple sclerosis to slow or reverse the accumulation of physical disability and reduce the frequency of clinical exacerbations
Droxidopa	<i>Northra</i> (Chelsea Therapeutics International)	Treatment of symptomatic neurogenic orthostatic hypotension
Metreleptin	(Amylin Pharmaceuticals)	Treatment of metabolic disorders associated with lipodystrophy
Sweet vernal grass, perennial ryegrass, Timothy grass, orchard grass, and Kentucky bluegrass mixed pollens allergen extract	<i>Oralair</i> (Stallergenes/Merck)	Tablet that is administered sublingually
Tasimelteon	<i>Hetlioz</i> (Vanda Pharmaceuticals)	Treatment of non-24-hour sleep-wake disorder in blind individuals without light perception
Vedolizumab	<i>Entyvio</i> (Millennium Pharmaceuticals)	Treatment of adult patients with moderately to severely active ulcerative colitis who have had an inadequate response to, have lost response to, or were intolerant to either conventional therapy or a tumor necrosis factor-alpha antagonist

Table 4. New drug/biologics license applications filed by manufacturer: September 21, 2013 through October 18, 2013

Generic name Brand name (Company)	Comparative agents	Indication	Mechanism of action	Common adverse effects	Dosage form or route	Comments
Dalbavancin (Durata Therapeutics)	Telavancin	Treatment of acute bacterial skin and skin structure infections caused by susceptible Gram-positive microorganisms, including methicillin-resistant <i>Staphylococcus aureus</i>	Inhibition of bacterial cell wall biosynthesis formation by complexing with the C-terminal d-alanyl-d-alanine of growing peptidoglycan chains	Nausea, diarrhea, headache, pruritus, hypertension, rash, and asthenia	Injection	Designated qualified infectious disease product by the FDA; this will allow the drug to be evaluated under the priority review process by the FDA.

Table 5. Significant labeling changes or “Dear Health Professional” letters related to safety^a

Generic name Brand name (Company)	Warning
Ofatumumab <i>Arzerra</i> (GlaxoSmithKline)	Boxed Warning: Risk of reactivation of hepatitis B infection
Rituximab <i>Rituxan</i> (Genentech)	Boxed Warning: Risk of reactivation of hepatitis B infection
Tigecycline <i>Tygacil</i> (Pfizer)	New Boxed Warning regarding an increased risk of death when intravenous <i>Tygacil</i> is used for FDA-approved uses as well as for non-approved uses. This analysis showed a higher risk of death among patients receiving <i>Tygacil</i> compared to other antibacterial drugs: 2.5% vs 1.8%, respectively. The adjusted risk difference for death was 0.6% with corresponding 95% confidence interval (0.0%, 1.2%); the deaths generally resulted from worsening infections, complications of infection, or other underlying medical conditions. http://www.fda.gov/Safety/MedWatch/SafetyInformation/SafetyAlertsforHumanMedicalProducts/ucm370170.htm

^aPractitioners are encouraged to check the FDA’s MEDWATCH Web site (<http://www.fda.gov/medwatch/safety.htm>) for updated information.

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