Highlights of FDA Activities – 7/1/16 – 7/31/16

FDA Drug Safety Communications & Drug Information Updates:

Drug Information Update: FDA Approves First Absorbable Stent for Coronary Artery Disease: 7/5/16
The FDA approved the first fully absorbable stent to treat coronary artery disease. The Absorb GT1 Bioresorbable Vascular Scaffold System (BVS) from Abbott Vascular, which releases the drug everolimus to limit the growth of scar tissue, is gradually absorbed by the body in approximately three years.

Drug Information Update – FDA Issues Two Draft Guidance Documents on Compounding 7/7/16
The FDA issued two guidance documents describing policies with regard to implementation of federal law that restricts compounding human drug products that are essentially copies of commercially available or approved drug products. Included in the guidance documents are recommended record-keeping and prescription notations for those compounding products containing approved drug products.

Drug Information Update: FDA approves Differin Gel O.1% for over-the-counter use to treat acne 7/8/16
Differin Gel 0.1% (adapalene, Galderma Laboratories, L.P.) is a once-daily topical gel for the over-the-counter (OTC) treatment of acne in people 12 years of age and up. This is the first retinoid to become available OTC.

Device Information Update: Dedicated syringe to be used with Humulin R U-500 insulin 7/8/16
A dedicated syringe for use with Humulin R U-500 insulin has been approved. Previously healthcare practitioners and patients had to make dose conversions to deliver the correct dose using a U-100 insulin syringe or a tuberculin (volumetric) syringe. The approved syringe for use with Humulin R U-500 insulin vials will only be available by prescription and should be co-prescribed with U-500 insulin.

Device Information Update: FDA Approves First MRI-guided Focused Ultrasound Device to Treat Essential Tremor 7/11/16
This is the first focused ultrasound device to treat essential tremor in patients who have not responded to medication. ExAblate Neuro uses magnetic resonance (MR) images taken during the procedure to deliver focused ultrasound to destroy brain tissue in a tiny area thought to be responsible for causing tremors.

FDA Statement – Investigation of Adverse Event Reports: WEN by Chaz Dean Cleansing Conditioners 7/19/16
The FDA is investigating reports of hair loss, hair breakage, balding, itching, and rash associated with the use of the WEN hair cleansing product. The FDA reminds healthcare professionals and consumers to report adverse effects associated with this product and other cleansing products and cosmetics through the FDA MedWatch program.

Drug Safety Communication: FDA strengthens warning for fluoroquinolones 7/26/16
The FDA has approved changes to the labels of fluoroquinolone antibacterial drugs for systemic use. Due to their disabling and potentially permanent side effects of the tendons, muscles, joints, nerves, and central nervous system, the FDA has determined that fluoroquinolones should be reserved for patients who have no other treatment options for acute bacterial sinusitis, acute exacerbation of chronic bronchitis, and uncomplicated urinary tract infections because of the risk of these serious side effects generally outweighs the benefits.

Major Drug-Related Product Recalls Announced Through MedWatch:

Oral Liquid Docusate Sodium by PharmaTech : Recall - Contaminated with *Burkholderia cepacia* 7/16/16
PharmaTech LLC, recalled all non-expired lots of Diocto Liquid, a docusate sodium solution distributed by Rugby Laboratories with a Rugby label in one pint (473 mL) bottles. The FDA confirmed the product has been contaminated with *B. cepacia*, a bacteria linked to an outbreak in five states. The FDA joins CDC in recommending that clinicians not use any liquid docusate sodium product as a stool softener or for any other medical purpose while an investigation of the outbreak continues.

Angiodynamics Soft Vu Omni Flush Angiographic Catheter: Class I Recall - Tip Separation 7/22/16
Stryker Sustainability Solutions (formerly Ascent Healthcare Solutions) is recalling Angiodynamics Soft Vu Omni Flush Angiographic Catheters, used to inject contrast dye into blood vessels in preparation for a cardiac angiogram, due to reports of separation of the tip of the catheter from the main body. The recalled products include manufacturing dates: 11/7/03 to 10/18/08, and distribution dates 1/5/04 to 12/3/08.

Talon Compounding Pharmacy HCG and Sermorelin: Recall - Lack of Sterility Assurance 7/22/16
Talon Compounding Pharmacy (TCP) of San Antonio, Texas recalled all lots of lyophilized HCG and sermorelin compounded and packaged by TCP due to concern over lack of sterility assurance. The products were distributed to patients and providers nationwide between 1/18/16 and 7/18/16. The recalled lots were packaged in 10 ml amber glass vials bearing a label containing the name and strength of the drug, the lot number, and the beyond-use date.

INRatio and INRatio 2 PT/INR Monitor System by Alere: Recall – Potentially Inaccurate Results 7/12/16
Alere initiated a withdrawal of these monitoring systems following FDA rejection of the studies supplied by Alere to demonstrate the companies software enhancements adequately addressed previous concerns regarding the accuracy of INR results obtained with the system.

Dietary Supplement Recalls & Public Notifications

In July, the FDA issued notifications to the public regarding undeclared active ingredients in the following products. Patients are advised not to purchase or use these products.

Product	***Promoted Use***	***Hidden/Undeclared Drug Ingredient(s)***
Dream Body 450 mg*	Weight loss	Sibutramine[1]
Dream Body Advanced 400 mg*	Weight loss	Sibutramine[1]
Dream Body Advanced + Acai Weight Loss & Cleanse	Weight loss	Sibutramine[1], fluoxetine[2], sildenafil[3]
Dream Body Extreme Gold 800 mg*	Weight loss	Sibutramine[1]
Dream Body Extreme Gold	Weight loss	Sibutramine[1], fluoxetine[2], sildenafil[3]
Dream Body Original Formula	Weight loss	Sibutramine[1]
Extra Slim Plus Acai Berry Weight Loss Formula	Weight loss	Sibutramine[1]
The Golden Root	Sexual Enhancement	Sildenafil[3]
Libi Girl	Sexual Enhancement	Sildenafil[3]
Mang Luk Power Slim	Weight Loss	Sibutramine[1]
Mang Luk Power Slim Detox	Weight Loss	Sibutramine[1]
Maxx Easy	Weight Loss	Sibutramine[1]
Power Spring (XXX) Oral Liquid	Sexual Enhancement & Increased Energy	Sildenafil[3]
SBF Bee Pollen	Weight loss	Sibutramine[1]
Shangai Ultra X	Sexual Enhancement	Sildenafil[3]
Slim Fit X	Weight Loss	Sibutramine[1]
Super Bull 6000	Sexual Enhancement	Sildenafil[3]
Super Shangai	Sexual Enhancement	Sildenafil[3]
Ultimate Lean	Weight Loss	Sibutramine[1]
Xcelerated Weight Loss Turbo Charge	Weight loss	Sibutramine[1]
Xcelerated Weight Loss Charged Up	Weight loss	Sibutramine[1]
Xcelerated Weight Loss Ultra Max	Weight loss	Phenolphthalein[4] and sildenafil[3]

Ziyinzhuangyang	Sexual Enhancement	Sildenafil[3]
Zi Xiu Tang Beauty Face and Figure	Weight Loss	Fluoxetine[2] and phenolphthalein[4]

**Recalled*

[1]Sibutramine: oral anorexiant; risk - increased cardiovascular events; discontinued 2010
[2]Fluoxetine: antidepressant; risk - suicidal ideation, serotonin syndrome
[3]Sildenafil: used to treat erectile dysfunction, may interact with nitrates to lower blood pressure to dangerous levels
[4]Phenolphthalein: laxative; risk - cancer-causing; discontinued 1999

New Product Shortages Reported by the FDA:	***Date Initially Posted***
Dihydroergotamine Mesylate Injection	7/14/16

Product Discontinuations/Withdrawals	***Date Posted***
Alere INRatio® and INRatio®2 PT/INR Monitoring System: Patients using the Alere monitoring systems will need to be converted to an alternate point-of-care monitoring system.	7/11/16
Daunorubicin Citrate Liposome Injection (DaunoXome) No equivalent daunorubicin citrate liposomal injectable is available; patients should be converted to an alternative treatment.	7/20/16

New Drug Approvals:	***Description***	***Date Approved***
Lifitegrast / Xiidra / Shire US, Inc.	See attached drug summary	7/11/16
Lixisenatide / Adlyxin / Sanofi	See attached drug summary	7/27/16

New Indications:	***Description***	***Date Approved***
Adalimumub / Humira / AbbVie	New indication for the treatment of noninfectious, intermediate and posterior uveitis, and pan-uveitis; first non-corticosteroid approved for this indication.	7/1/16
Omalizumab / Xolair / Genentech, Inc.	Moderate to severe persistent allergic asthma indication expanded to include patients 6 years of age and older with moderate to severe persistent asthma who have a positive skin test or in vitro reactivity to a perennial aeroallergen and whose symptoms are inadequately controlled with inhaled corticosteroids.	7/6/16
Pneumonia Vaccine / Prevnar 13 / Pfizer	Indication expanded to include adults 18 to 49 years of age – aligning with the CDC's Advisory Committee on Immunization Practices recommendation that adults 19 years of age and older with immunocompromising conditions be vaccinated.	7/12/16
Dexlansoprazole / Dexilant / Takeda Pharmaceuticals	Indicated expanded to include use in patients 12 to 17 years of age with gastroesophageal reflux disease.	7/13/16
Darunavir / Prezista / Janssen Therapeutics	Indication expanded to include use in pregnant and postpartum patients with HIV.	7/20/16
AbobotulinumtoxinA / Dysport / Ipsen Biopharmaceuticals	Indication expanded to include treatment of lower limb spasticity in pediatric patients 2 years of age and older	7/29/16

New Dosage Forms or Formulation:	***Description***	***Date Approved***
Dronabinol oral solution / Syndros / Insys Dev Co Inc	New dronabinol oral solution	7/1/16
Atazanavir;Cobicistat / Evotaz / BMS	New combination dosage form containing 300 mg atazanavir and 150 mg cobicistat	7/1/16
Evolucumab / Repatha Pushtronex System/ Amgen	On-body infuser with prefilled cartridge – single-use 420 mg monthly subcutaneous injection	7/11/16
Lipid emulsion / SMOFlipid / Fresenius Kabi	New 1 g and 2 g injectable formulation contains medium chain triglycerides, fish, soya and olive oil. Standard dose is 1.0 – 2.0 g fat/kg/day.	7/14/16
Lorcaserin Hydrochloride Extended-Release/ Belviq XR / Arena Pharmaceuticals INC.	New extended-release 20 mg tablet dosage form.	7/15/16
Riboflavin 5'-Phosphate Sodium /Photrexa and Photrexa Viscous in Dextran 20% / Avedro INC	For the treatment of corneal ectasia following refractive surgery.	7/15/16
Methylnaltrexone bromide tablets / Relistor / Salix Pharmaceuticals	New tablet formulation; see attached drug summary.	7/19/16
Dasabuvir; Ombitasvir; Paritaprevir; Ritonavir extended-release tablet / Viekira XR / AbbVie Inc.	New extended release tablet formulation for treatment of genotype 1 hepatitis C	7/22/16
Lisinopril oral solution / Qbrelis / Silvergate	Ready-to-use oral solution for the treatment of hypertension in patients 6 years of age and older, as adjunct therapy for heart failure, and for treatment of acute myocardial infarction in adults	7/29/16

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Lifitegrast Ophthalmic Solution 5% / Xiidra / Shire Inc.	
Generic Name / Brand Name / Company	Lifitegrast ophthalmic solution 5% / Xiidra / Shire Inc.
Date of approval	July 11th, 2016
Drug Class (Mechanism of Action if novel agent)	Lymphocyte function-associated antigen 1 (LFA-1) antagonist. Lifitegrast binds to integrin LFA-1, a cell surface protein found on leukocytes and blocks the interaction of LFA-1 with its cognate ligand intercellular adhesion molecule-1 (ICAM-1). ICAM-1 may be overexpressed in corneal and conjunctival tissues in dry eye disease. LFA-1/ICAM-1 interaction can contribute to the formation of an immunological synapse resulting in T-cell activation and migration to target tissues.
Indication	Treatment of signs and symptoms of dry eye disease
Comparative agent – Therapeutic interchange?	First in class; alternative treatments include cyclosporine ophthalmic (Restasis) and
Dosage forms/strengths. Common Dose/sig	Ophthalmic solution 5% (50 mg/mL) supplied in a foil pouch containing 5 low density polyethylene 0.2 mL single-use containers. Instill one drop twice daily (approximately 12 hours apart) into each eye using a single-use container. Discard the single-use container immediately after using in each eye.
DEA Schedule	None
Date of market availability	July 18, 2016
Similar Medications (Look-Alike Sound-Alike)	Latanoprost
CLINICAL USE EVALUATION	
Common Adverse Effects	Instillation site irritation, dysgeusia, reduced visual acuity
Severe Adverse Effects	None known
Severe Drug-Drug Interactions	None known
Severe Drug-Food Interactions	None known
Important Labs Values to assess prior to order entry or at point of clinical follow up. (Need Pop Up?)	None
Used in Pediatric Areas	Safety and efficacy in pediatric patients have not been established.
Renal or Hepatic Dosing	None
Critical Issues (i.e., contraindications, warnings, etc) that should be emphasized	None listed in the prescribing information
Special administration technique or considerations	• Single-use containers are packaged in a foil pouch. Do not remove from the foil pouch until ready to use. • Once you have applied a drop to both eyes, throw away the opened single-use container with any remaining solution.
Prepared by	Onyii Nwude, Doctor of Pharmacy Candidate 2017

Lixisenatide / Adlyxin / Sanofi	
Generic Name / Brand Name / Company	Lixisenatide / Adlyxin / Sanofi
Date of approval	July 27, 2016
Drug Class (Mechanism of Action if novel agent)	Glucagon-like peptide-1 (GLP-1) receptor agonist
Indication	Treatment of adult patients with type 2 diabetes mellitus as an adjunct to diet and exercise
Comparative agent – Therapeutic interchange?	Albiglutide (Tanzeum), dulaglutide (Trulicity), exenatide (Byetta, Bydureon), liraglutide (Victoza)
Dosage forms/strengths. Common Dose/sig	Injection: 50 mcg/mL in 3 mL in green prefilled pen and 100 mcg/mL in 3 mL in burgundy prefilled pen. Initiate at 10 mcg once daily for 14 days. On day 15, increase dosage to 20 mcg once daily.
DEA Schedule	Not scheduled

Date of market availability	Unknown
Similar Medications (Look-Alike Sound-Alike)	Liraglutide, lacosamide
CLINICAL USE EVALUATION	
Common Adverse Effects	Nausea (25%), vomiting (10%), headache (9%), diarrhea (8%), dizziness (7%), and hypoglycemia (2-47% depending on concomitant therapy)
Severe Adverse Effects	Hypersensitivity reactions, pancreatitis, and acute kidney injury
Severe Drug-Drug Interactions	Lixisenatide delays gastric emptying, potentially affecting the absorption of some oral medications that are dependent of threshold concentrations (i.e., antibiotics) and those where a delay is undesirable (i.e., acetaminophen) – take such medications 1 hour before lixisenatide. Oral contraceptives should be taken at least 1 hour before administration or 11 hours after the dose of lixisenatide.
Severe Drug-Food Interactions	None known
Important Labs Values to assess prior to order entry or at point of clinical follow up. (Need Pop Up?)	Hemoglobin A1c, renal function
Used in Pediatric Areas	Safety and effectiveness have not been established in pediatric patients.
Renal or Hepatic Dosing	No dose adjustment in patients with mild to severe renal impairment; closely monitor in patients with any degree of renal impairment. Avoid use in patients with end stage renal disease. No pharmacokinetic studies has been performed in patients with acute or chronic hepatic impairment; however, hepatic dysfunction is not expected to affect lixisenatide pharmacokinetics.
Critical Issues (i.e., contraindications, warnings, etc) that should be emphasized	• Contraindicated in patients that are allergic to lixisenatide or any of the product ingredients • Warnings: o hypoglycemia with concomitant use of sulfonylurea or basal insulin o pancreatitis o acute kidney injury o development of antibodies to lixisenatide o do not share pen between patients
Special administration technique or considerations	Administer once daily within one hour before first meal of the day. Inject subcutaneously in abdomen, thigh or upper arm. Prior to first use of the pen, store in a refrigerator. After first use of the pen, store below 86°F (30°C), protect from light, and discard the pen 14 days after first use.
Prepared by	Mia Wurtz, Doctor of Pharmacy Candidate 2017

Methylnaltrexone bromide / Relistor / Salix Pharmaceuticals	
Generic Name / Brand Name / Company	Methylnaltrexone bromide / Relistor / Salix Pharmaceuticals
Date of approval	July 19, 2016 (Approval of new dosage form: oral tablets)
Drug Class (Mechanism of Action if novel agent)	Peripherally-acting mu-opioid receptor antagonist
Indication	Treatment of opioid-induced constipation in adults with chronic non-cancer pain
Comparative agent – Therapeutic interchange?	Naloxegol (Movantik)
Dosage forms/strengths. Common Dose/sig	Tablet: 150 mg Take three 150 mg tablets by mouth with water on an empty stomach at least 30 minutes before breakfast.
DEA Schedule	Not a controlled substance
Date of market availability	Expected 3rd quarter 2016
Similar Medications (Look-Alike Sound-Alike)	Naloxone, naltrexone, Nexterone, methotrexate, methoxsalen, mitoxantrone

CLINICAL USE EVALUATION	
Common Adverse Effects	Abdominal pain (14%), diarrhea (5%), headache (4%), abdominal distention (4%), vomiting (3%), hyperhidrosis (3%), anxiety (2%), muscle spasms (2%), rhinorrhea (2%), and chills (2%).
Severe Adverse Effects	Gastrointestinal perforation, severe or persistent diarrhea, opioid withdrawal symptoms
Severe Drug-Drug Interactions	Avoid use of other opioid antagonists concomitantly with methylnaltrexone due to additive effects leading to an increased risk of severe opioid withdrawal symptoms.
Severe Drug-Food Interactions	A single 450 mg dose of methylnaltrexone bromide taken with a high fat breakfast resulted in a 60% decrease in Cmax, a 43% decrease in AUC, and a time delay to Tmax of 2 hours.
Important Labs Values to assess prior to order entry or at point of clinical follow up.	None.
Used in Pediatric Areas	Safety and effectiveness have not been established in pediatric patients.
Renal or Hepatic Dosing	**Renal dosing**: A dose reduction to one 150 mg tablet once daily is recommended in patients with CrCl < 60 mL/min due to a significant increase in exposure to the drug seen in these patients. No adjustment needed for CrCL ≥ 60 mL/min. **Hepatic dosing**: A dose reduction to one 150 mg tablet once daily is recommended in patients with moderate or severe hepatic impairment. No dose adjustment is needed in patients with mild hepatic impairment.
Critical Issues (i.e., contraindications, warnings, etc) that should be emphasized	**Gastrointestinal perforation** • Methylnaltrexone is contraindicated in patients with GI obstruction due to their increased risk for gastrointestinal perforation. • Cases of gastrointestinal perforation have been reported in patients having advanced illness and conditions that may be associated with a reduction in the structural integrity of the GI tract wall (e.g. peptic ulcer disease). • Monitor for the development of severe, persistent, or worsening abdominal pain. Have patient discontinue methylnaltrexone if these symptoms develop. **Opioid withdrawal** • Monitor patients for pain control and severity of opioid withdrawal symptoms. • Symptoms of opioid withdrawal associated with methylnaltrexone therapy include: hyperhidrosis, chills, diarrhea, abdominal pain, anxiety, and yawning • Patients who have a disruption in their blood brain barrier (e.g. inflamed meninges) may be at an increased risk for opioid withdrawal.
Special administration technique or considerations	Patients should be advised to remain close to a toilet once methylnaltrexone has been administered. Patients should discontinue all maintenance laxative therapies prior to starting methylnaltrexone bromide. Laxatives can be resumed as needed after 3 days of treatment.
Prepared by	Alice Knotts, PharmD Candidate 2018