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## PHYSICIAN DESK

### EBOLA VIRUS DISEASE (EVD)



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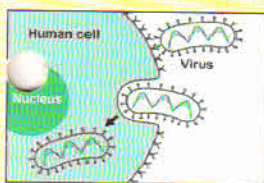
The EVD, previously known as Ebola hemorrhagic fever (Ebola HF) is a severe condition caused by a virus belonging to genus Ebola virus, family Filoviridae and order Mononegavirales. These five viruses are Bundibugyo virus (BDBV), Ebola virus or Zaire ebolavirus (EBOV), this is most fatal among all five, Sudan virus (SUDV), Tai Forest virus (TAFV). The fifth virus, Reston virus (RESTV), is not thought to be disease causing in humans.

**Transmission of the virus :** Coming into contact with the blood, secretions, organs or other bodily fluids of an infected person. Contact with the bodily fluids of an infected person who has passed away. Handling the meat from infected animals.

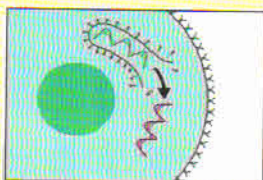
**Symptoms :** The incubation period for this disease is about one week.

♦ Fever ♦ Nausea ♦ Vomiting ♦ Muscle pain ♦ Bleeding from mucous membrane ♦ Skin rashes ♦ Sore throat.

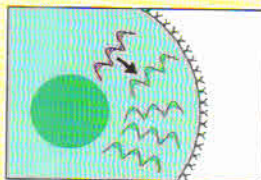
#### How Ebola virus spreads?



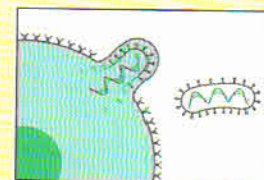
1. Ebola virus fuses with cells lining respiratory tract, eyes or body cavities



2. The virus's genetic contents are released into the cell



3. This genetic material takes over cell machinery to replicate itself



4. New copies of the virus are produced and released back into system

**Diagnosis :** Complete Blood Count, Coagulation studies, Viral antigen testing, LFT and Enzyme-linked immunosorbent assay (ELISA).

**Treatment :** There is no definitive treatment, and common anti-viral therapies do not work on the Ebola virus. Goal is to treat the symptoms and prevent secondary infections or complications like pneumonia and liver failure.

**Pharmacological therapy :** Nucleoside analogue inhibitors of the cell - encoded enzyme s-adenosyl homocysteine hydrolase (SAH) have been shown to inhibit Zaire ebolavirus (EBOV) replication in adult BALB/C mice infected with mouse adapted Ebola virus. SAH indirectly inhibits transmethylation reactions required for virus replication. Treatment response depends on dose. When dose of 0.7mg/kg or more, every 8 hours the treatment started, the mortality was completely prevented. ZMapp which seems to have saved their lives it's under development as a treatment for Ebola virus disease

**Supportive care and vaccines :** Efforts to help persons who are infected include giving either oral rehydration therapy (slightly sweet and salty water to drink) or intravenous fluids, maintaining their oxygen status and blood pressure and treating them for any complicating infections. There are no commercial vaccines available for Ebola virus. However, a recombinant human monoclonal antibody directed against the envelope GP of Ebola has been demonstrated to possess neutralizing activity. This Ebola neutralizing antibody must be useful in vaccine development as a passive prophylactic agent.

## CLINICAL RESEARCH

### Lung-Cancer Screening with Low-Dose Computed Tomography

A large randomized trial showed that low-dose CT screening reduced the risk of lung-cancer death by 20% among long-time smokers. Recent guidelines support consideration of screening but with attention to the possibility of false positive results and associated risks.

N Engl J Med 2014; 371:1813-1820 November 6, 2014  
DOI : 10.1056/NEJMcp1404071

### Government imposing ban on use of plastic containers in liquid oral preparations

Now in the near future, you may not see liquid orals in plastic containers because central government prohibits use of Polyethylene Terephthalate or Plastic containers for primary packaging of drug formulations in certain cases.

PharmaTutorNews- <http://www.pharmatutor.org/pharma-news/2014> (7th October, 2014)

### Egg-Rich Diet Not Harmful In Type 2 Diabetes

Eggs do not have an adverse effect on lipid levels in patients with type 2 diabetes, a new study indicates. Researchers also found that an egg-rich diet for 3 months was associated with better appetite control and may provide greater satiety. "These findings suggest that a high egg diet can be included safely as part of the dietary management of patients with type 2 diabetes. Epidemiological studies have also indicated "that high egg consumption, though not associated with adverse cardiovascular outcomes in the general population, may be associated with worse cardiovascular outcomes in people with type 2 diabetes. In Australia, the National Heart Foundation recommends a maximum of 6 eggs per week as part of a diet low in saturated fatty acids for healthy people and in those with type 2 diabetes. However, in the US, guidelines recommend dietary cholesterol be limited to less than 300 mg/day (1 egg has approximately 200 mg of cholesterol) for healthy individuals and suggest that those with type 2 diabetes stick to less than 4 eggs per week. "Eggs may also help with greater weight loss and less weight regain than a conventional diet, due to the greater satiety and less hunger reported with a high egg diet.:

[http://www.medscape.com/viewarticle/832832?nlid=67423\\_2843&src=wnl\\_edit\\_dail](http://www.medscape.com/viewarticle/832832?nlid=67423_2843&src=wnl_edit_dail)

### World's First Baby Born After Uterine Transplant

A 36-year-old woman who received a uterus transplant from a live donor in 2013 gave birth to a healthy baby boy in September 2014 according to an article published online October 6 in the Lancet. Uterus transplantation is used to treat women who have either no uterus or a nonfunctional uterus. It has been attempted 11 times worldwide, but until now no live births have resulted from the procedure. She underwent a uterus transplant from a postmenopausal woman aged 61 years, who had previously born two children. The recipient and her partner underwent in-vitro fertilization prior to the transplant, and had 11 cryopreserved embryos. The patient's postoperative course was uneventful, and she experienced her first menstruation 43 days after the transplantation. She continued to menstruate regularly every 26 to 36 days (median 32 days). The patient became pregnant 1 year after the transplantation, after her first single embryo transfer. She then began taking triple immunosuppression medications (tacrolimus, azathioprine, and corticosteroids), which she continued for the remainder of the pregnancy.

[http://www.medscape.com/viewarticle/832827?nlid=67423\\_2843&src=wnl\\_edit\\_dail](http://www.medscape.com/viewarticle/832827?nlid=67423_2843&src=wnl_edit_dail)

### Cardiology drugs research

New Detailed positive result from six phase 3 ODYSSEY trials that showed alirocumab significantly (Human monoclonal antibody) reduced low density lipoprotein cholesterol.

[http://en.sanofi.com/images/37627\\_20141118\\_alirocumab\\_en.pdf](http://en.sanofi.com/images/37627_20141118_alirocumab_en.pdf) (November 2014)

## RECENTLY APPROVED DRUGS BY FDA

S.No.	BRAND NAME / COMPANY	MOLECULE NAME	INDICATIONS	APPROVED MONTH AND YEAR
1.	Xigduo XR/ AstraZeneca	Dapagliflozin + Metformin hydrochloride	For glycemic control in adults with type II diabetes	October 2014
2.	Obizur/ Baxter	Antihemophilic Factor (Recombinant), Porcine Sequence	For the treatment of acquired hemophilia A	October 2014
3.	Harvoni/ Gilead	Ledipasvir and Sofosbuvir	For the treatment of hepatitis C	October 2014
4.	Trulicity/ Eli Lilly	Dulaglutide	To improve glycemic control in type II diabetics	September 2014
5.	Otezla/ Celgene	Apremilast	For the treatment of moderate to severe plaque psoriasis	September 2014
6.	Movantik/ AstraZeneca	Naloxegol	For the treatment of opioid-induced constipation in adults with chronic non-cancer pain	September 2014

## NEW DRUG PROFILE

### DIMETHYL FUMARATE DELAYED-RELEASE CAPSULES

### ALOGLIPTIN

#### Indication and Usage

Dimethyl fumarate is indicated for the treatment of patients with relapsing forms of multi sclerosis.

#### Dosage and Administration

- ✦ Starting dose: 120mg twice a day, orally, for 7 days
- ✦ Maintenance dose after 7 days: 240mg twice a day orally
- ✦ Not to crush, chew, or sprinkle capsule contents on food
- ✦ Should be administered with or without food

#### Dosage forms and Strengths

Delayed-release capsules: 120mg and 240mg

#### Warning and Precautions

Dimethyl fumarate may cause lymphopenia. A recent complete blood count should be available before initiating treatment with dimethyl fumarate. A complete blood count is recommended annually and as clinically indicated. Consider with holding treatment in patients with serious infections.

#### Adverse Reactions

Most common adverse reactions (incidence  $\geq 10\%$  and  $>2\%$  placebo) were flushing, abdominal pain, diarrhea and nausea.

#### Use in Specific Population

Pregnancy based on animal data, may cause fetal harm.

#### Indication and Usage

Alogliptin is a dipeptidyl -peptidase-4 (DPP-4) inhibitor and indicated as an adjunct to diet and exercise to improve glycemic control in adults with type 2 diabetes mellitus.

#### Important limitation of use

Not for treatment of type 1 diabetes or diabetic ketoacidosis.

#### Dosage and Administration

- ✦ Individualize the starting dose of Alogliptin based on the patient's current regimen.
- ✦ Alogliptin Should be taken twice daily with food.
- ✦ May adjust the dosing based on effectiveness and tolerability while not exceeding the maximum recommended daily dose of 25 mg Alogliptin.

#### Dosage forms and Strength

Tablets: 6.25mg / 12.5 mg / 25 mg Alogliptin

#### Contraindications

Renal impairment, metabolic acidosis, including diabetic ketoacidosis.

#### Warnings and Precautions

Lactic acidosis, Acute pancreatitis and Hypersensitivity

#### Adverse Reactions

Common adverse reactions were upper respiratory tract infection, nasopharyngitis, diarrhea, hypertension, headache, back pain and urinary tract infection.

#### Use in Specific Populations

Pregnancy Category B, Pediatrics and Geriatric Use.

## DEPARTMENT ACTIVITIES

### Guest Lecture by Dr. V. Kalaiselvan

Department of Pharmacy Practice organized a guest lecture on the topic "**Pharmacovigilance Programme of India**" on 20.06.2014. Dr.V.Kalaiselvan, Scientist, Indian Pharmacopoeia Commission, New Delhi delivered the lecture. During his lecture, he emphasized on role of Pharmacist in Pharmacovigilance Programme of India (PvPI) and its mission, vision, functions etc.



### Participated in Inaugural Convention of the Indian Association of Colleges of Pharmacy & Indian Congress of Pharmacy Practice 2014



Faculty, Pharm.D and M.Pharm students participated in Inaugural Convention of the Indian Association of Colleges of Pharmacy & Indian Congress of Pharmacy Practice 2014 held on 21<sup>st</sup> & 22<sup>nd</sup> February, 2014 held at Bangalore.



### Participated in Pharmacy Practice Module Advanced learning - series - 7

Dr.S.Ananda Thangadurai, Dr.A.Palanisamy, Dr.T.Suthanth and III.Pharm.D students participated in Pharmacy Practice Module Advanced learning series - 7 during 9<sup>th</sup> to 11<sup>th</sup> August 2014 held at School of Pharmaceutical Sciences, VEL'S University Chennai. Faculty and students had interaction with the speakers in regard to current scenario in therapeutic drug monitoring of chemotherapeutic agents and understood various case scenarios, prevention screening, and treatment strategies for the management of cancers prevalent in the world with their didactic lecture. Management strategies of some of the most prevalent cancer including colorectal cancer, breast cancer, lung cancer, head and neck cancer and cervical cancer also highlighted by-the speakers.



### Community Health Awareness Programme

Department of Pharmacy Practice organized Community health awareness programme among the higher secondary students towards the "World Pharmacist Day" celebrations on 25<sup>th</sup> September 2014 for higher secondary school students in and around Tiruchengode. Faculty and students visited nearly 8 schools educated around 1000 students in regard to chronic illness including Diabetes, Cardiovascular diseases, AIDS, Epilepsy, Neuropsychiatry diseases etc. The interaction was made by our staff and students in regard to causes, symptoms, diagnosis, prognosis, drug treatment etc.

Book Post



Please send your suggestions to

The Chief Editor

**CLINICAL PHARMA PRACTICE NEWSLETTER**

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To