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PHARMAPEDIA

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FIRST ONCE A WEEK PARENTERAL DOSAGE FORM FOR CONTROLLING DIABETES

The U.S. Food and Drug Administration approved Mounjaro (tirzepatide) injection to improve blood sugar control in adults with type 2 diabetes, as an addition to diet and exercise. Mounjaro was effective at improving blood sugar and was more effective than the other diabetes therapies with which it was compared in clinical studies.

Glucagon-like peptide1 and glucose-dependent insulinotropic polypeptide (GIP) are hormones involved in blood sugar control. Mounjaro is a first-in-class medicine that activates both the GLP-1 and GIP receptors, which leads to improved blood sugar control. Mounjaro is administered by injection under the skin once weekly, with the dose adjusted as tolerated to meet blood sugar goals.

The efficacy of Mounjaro was compared to placebo, a GLP-1 receptor agonist (semaglutide) and two long-acting insulin analogs. In trials comparing Mounjaro to other diabetes medications, patients who received the maximum recommended dose of Mounjaro had lowering of their HbA1c by 0.5% more than semaglutide, 0.9% more than insulin degludec and 1.0% more than insulin glargine.

Reference-<https://www.fda.gov/news-events/press-announcements/fda-approves-novel-dual-targeted-treatment-type-2-diabetes>.

MULTIVITAMIN GUMMIES-Vitamin supplements are incredibly popular all over the world. Many people believe that taking vitamins can improve health or make up for a diet that's low in nutrients. There are several different types of vitamins, including chewable gummies. Gummy vitamins are chewable vitamins that have a texture and taste similar to gummy candies and come in a variety of flavors, colours, and shapes. These vitamins appeal to children as well as adults who may not like swallowing pills. Gummy vitamins are commonly made from gelatin, corn starch, water, sugar, and added colourings. Popular flavours include lemon, raspberry, cherry, and orange. They may include several vitamins and minerals or just a few select nutrients, such as vitamin D and calcium.

Potential benefits: Gummy vitamins have several upsides, including their desirable taste and the nutrients they provide. Since they're loaded with nutrients, gummy vitamins may benefit some populations having trouble in absorbing some nutrients, older adults, alcohol-dependent individuals, strict vegetarians, pregnant women.

Markedly available- 1. *Gluten free multivitamin by meadbury.*
2. *Radiplex by Solista pharmaceuticals.*

Reference-<https://m.timesofindia.com/most-searched-products/health-and-fitness/health-care/multivitamin-gummies-delicious-options-for-adults-kids-to-take-essential-nutrients-easily/articleshow/82176442.cms>

WORLD'S FIRST NANO BASED UNDER EYE GEL

ENTOD Pharmaceuticals in collaboration with the UK based cosmetic research laboratory NuSkin London has developed nanotechnology-based eye gel serum under the brand name Eyecirque. This bio cellular formula containing vitamin A+ C+ E complex, this unique gel gets easily absorbed into the skin around the eyes giving highly prominent results.

Through nanotechnology, ingredients have undergone an advanced particle size reduction process to give particle sizes of less than 50 nanometres. Such extremely small potent nano-particles are absorbed almost 20 times better and faster into the skin providing deeper skin penetration. One needs to use it for at least 6 weeks in order to start seeing significant improvements

Reference-<https://www.biospectrumindia.com/news/73/21182/entod-pharma-unveils-worlds-first-nanotech-based-under-eye-gel-serum.html>

NOVEL APPROACH IN PERSONALISED MEDICINE

Three-dimensional printing technologies are continuously applied to novel fields in pharmaceutical sciences and its products are emerging as innovative tools in personalised medicine. Solid oral dosage forms can be printed in a wide range of dosages, release profiles, geometries and sizes by simply modifying a digital model, thus providing patients with tailored therapies. This helps to provide formulation scientists with essential information to approach the development of 3D printed drug products, from digital design to final product quality control application of 3D.

Aprecia Pharmaceuticals received FDA approval for its 3D printed Spiritam medication, making it the first 3D printed pharmaceutical to be approved by the FDA. The medication is designed to treat seizures in people with epilepsy and was approved for commercial manufacturing operations. Several types of 3D printing include-stereolithography, selective laser sintering, fused deposition modelling.

Reference-<https://link.springer.com/content/pdf/10.1007/s40964-020-00127>

FELLOWSHIP-AWARDEES:

1) V.Rajakumari and S.Savitha have received financial assistance from Tata fellowship for pursuing M.Pharm program.

2) Mythili.G, Bharathi.P, Shanmuganathan Viswesh.B (M.Pharm 2nd year) were selected for Summer Research Fellowship program-2022 offered by IAS, INSA, NAS.

Ancient recipes

The scientists, Pliny the Elder and Dioscorides both describe how zinc compounds or calamina collected from the walls of copper furnaces were used to treat the eyes and skin complaints.

The Latin calamina later became the name of the zinc ore calamine, a mix of smithsonite and zinc silicate, and later the zinc oxide containing pink lotion to soothe itching was named after it. But zinc compounds today are used for treating chickenpox.

PUZZLE – HIDDEN WORDS

C			P	O	N	I	O	D
R	L	U	I	R		N	X	E
O	I	G	E	A	E	T	I	C
W	P	E	U	N	Y	R	E	
N	I		T	G	D	A	R	S
C	T	T	E	E	R	V	D	C
A	O	I	C	B		E	O	E
P	R	C	T	O	C	N	A	T
B		Q	I	O	A	O	I	H
A	W	P	C	K	R	U		A
Y	E	L	L	O	W	S	G	N
X	C	S			O	X	U	O
	M	A	C	R	O	G	O	L

1. A closure system which can withstand storage for several decades?
2. By which route of administration 100% bioavailability is achieved?
3. The list of drugs & pharmaceuticals that the USFDA has approved safe & effective?
4. Original colour of soft paraffin?
5. Best selling drug of all time?

CORNER OF APPRECIATION:

Congratulating the participants of previous news letter puzzles.

1. Femina marium, Pharm D.
2. Madhumitha.A, Pharm D.
3. Sneharshini.G, M Pharm.

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ANSWERS FOR THE PREVIOUS E-NEWSLETTER PUZZLE:

MISSING LETTERS:

1. Buccal tablet, 2. Generic, 3. Carotenoids, 4. Eutectic, 5. Carbowax.

MATCH THE MANUFACTURING SYMBOLS:

1. Non-Pyrogenic
2. Expiry date
3. Upper limit of temperature
4. Keep away from heat and radiation.

Send your correct answers to psgcp.ceutics@gmail.com.

The first three participants with correct answers will be acknowledged in the next issue.