## Novel BZD receptor agonists (Z compounds)

- 1-They are chemically unrelated to BZD.
- 2- They bind selectively to the omega-I part of the BZD receptor.
- 1- they are hypnotics.
- 1. [They have sustained hypnotic efficacy without occurrence of rebound insomnia on abrupt discontinuation]
- 2. [with less or even no tolerance to their hypnotic effect]
- 2- their lack for the anxiolytic, muscle relaxant and anticonvulsant effects
- 3- They have shorter half-life when compared to commonly prescribed benzodiazepines
- 4- Z compounds are FDA category C for use during pregnancy.

Туре			Use	side effects
	Eszopiclone	<ul> <li>1- has a shorter half-life (1 h)</li> <li>2-Eszopiclone is metabolized by hepatic CYP3A4.</li> <li>3- The elimination half-life of eszopiclone is prolonged in elderly and in the presence of inhibitors of CYP3A4 (eg, ketoconazole).</li> </ul>	1-reducing sleep latency 2-treat initial insomnia.	The side effects of eszopiclone can include:  1- unpleasant taste in your mouth (bitter)and dry mouth 2- Drowsiness, dizziness, and headache 3- Rash and other allergic reactions. 4- symptoms of the common cold, such as sneezing or runny nose, even fever and chills could occur. 5- Urination problems. 6- Sleepiness in high doses.
	Zaleplon	1- 1½ is longer, about 6 h, and gives better sleep time (7-8 h) . 2-It is the only Z-drug approved for long term use 6-12 months		

		Flumazenil

- 1- competitive antagonist to BZD receptors.
- 2- It has extensive first pass metabolism>>so it is given i.v.
- 3- Its half-life is shorter than most of BZD>> so, repeated i.v doses (series of small injections than single bolus injection) are preferred.
- 4- it has a short duration of action (30-60 minutes)
- 1- treat overdose of BZD
- 2- reverse their sedative effect when given in diagnostic procedures (e.g. endoscopy).
- 3- used effectively in treating hepatic encephalopathy >> especially following exposure to BZD.
- 4- Administration of flumazenil may precipitate withdrawal symptoms in BZD dependent patients.

"من استكثر من الصّلاة والسّلام على النّبي على النّبي فهو يَستفتح لنفسِهِ وقلبه و رُوحه أبواب الكرم الإلهيّ، ويضيء نفسهُ و قلبه ورُوحه وعالمهُ بنورِ لا يبلى ولا ينفد ."

