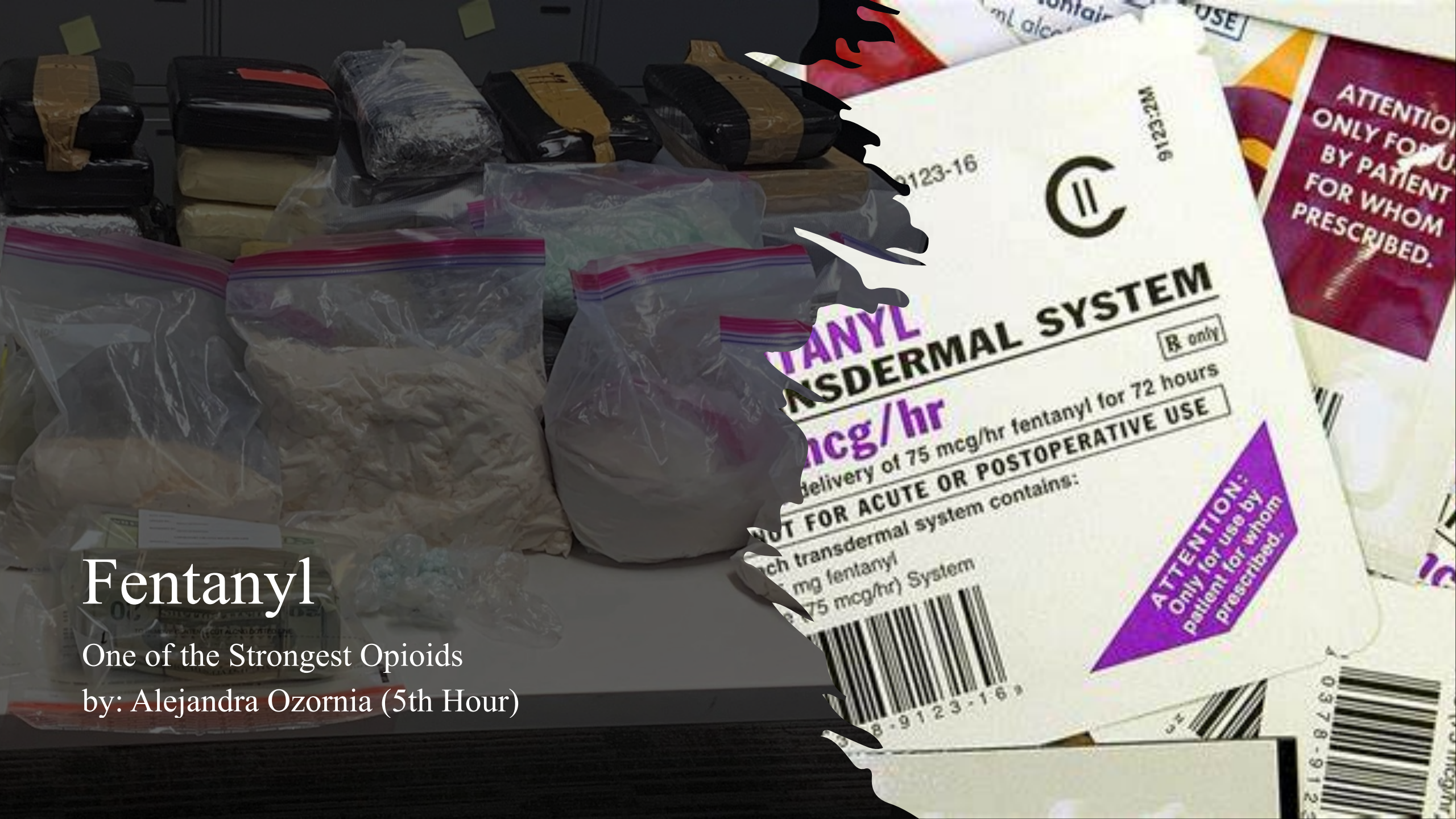


Fentanyl

One of the Strongest Opioids
by: Alejandra Ozornia (5th Hour)



9123-16

ATTENTION:
ONLY FOR USE
BY PATIENT
FOR WHOM
PRESCRIBED.

ATTENTION:
Only for use by
patient for whom
prescribed.

**FENTANYL
TRANSDERMAL SYSTEM**

75 mcg/hr

delivery of 75 mcg/hr fentanyl for 72 hours

NOT FOR ACUTE OR POSTOPERATIVE USE

Each transdermal system contains:
75 mcg fentanyl
(75 mcg/hr) System

8-9123-16

History of the Drug:

fentanyl (fentanyl citrate) was discovered by chemist Paul Jansse

the drug was first introduced in 1960

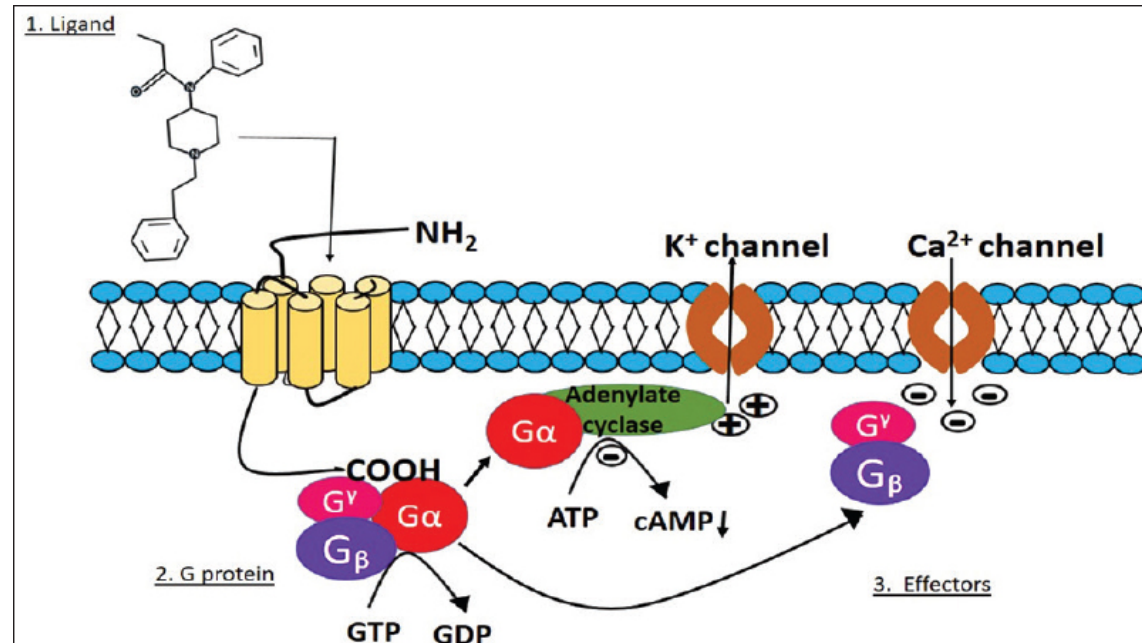
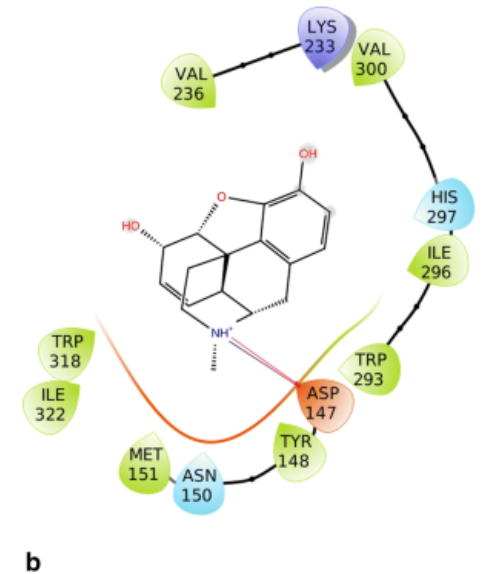
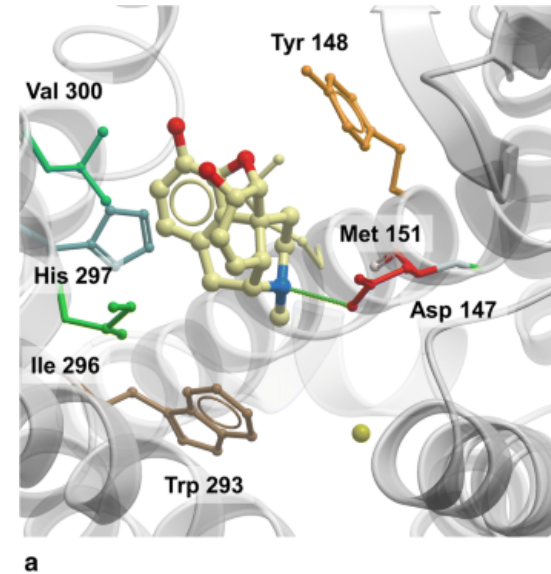
fentanyl (fentanyl citrate) became a therapeutic medicine around the 1960s, as it was mainly used for surgical anesthesia and pain reliever

Mechanism of Therapeutic Action:

- this drug was used to treat "breakthrough cancer pain or other types of moderate-to-severe chronic pain, including back pain and pain caused by sickle cell anemia."
- the drug, fentanyl, is extremely effective in treating chronic pain that is a symptom of cancer and sickle-cell anemia

Mechanism of Action:

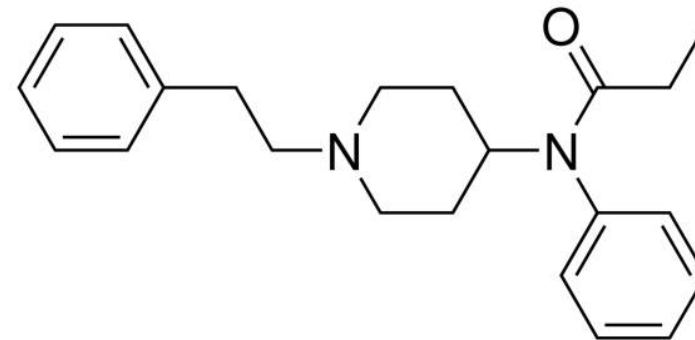
- “Fentanyl is a[n] m-opioid receptor agonist with high lipid solubility and a rapid onset and short duration of effects. It rapidly crosses the blood-brain barrier.”



Cost of Fentanyl on the Street and Prescribed:

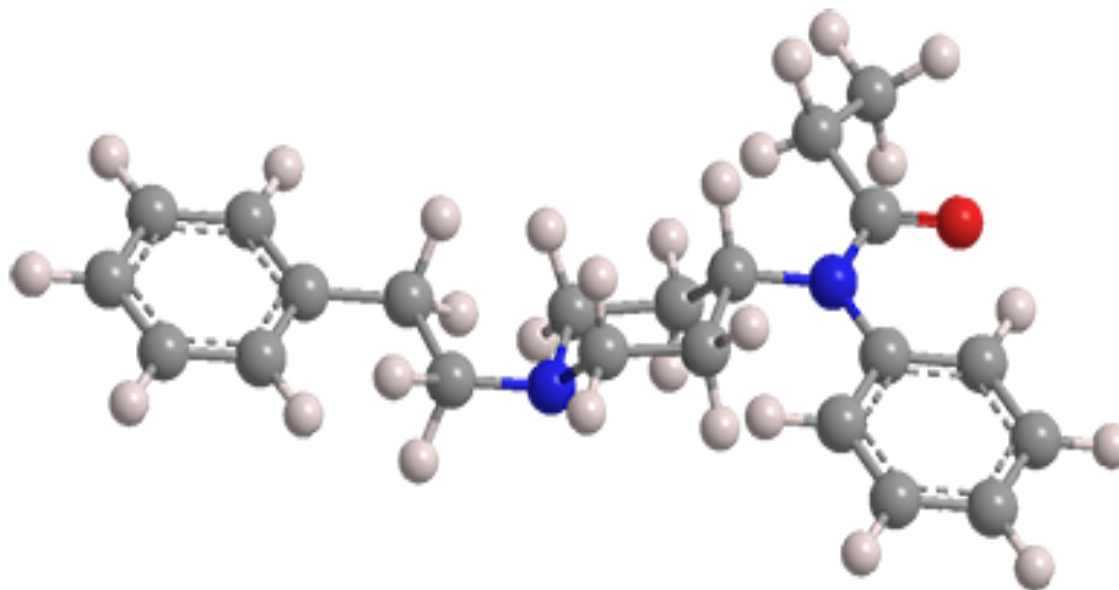
- according to AddictionResource.net, fentanyl on the street is "one of the most dangerous and unfortunately also one of the cheapest opioids found... today."
- the price of prescription fentanyl can vary depending on the type it is, the brand, and whether your insurance will cover it

Fentanyl



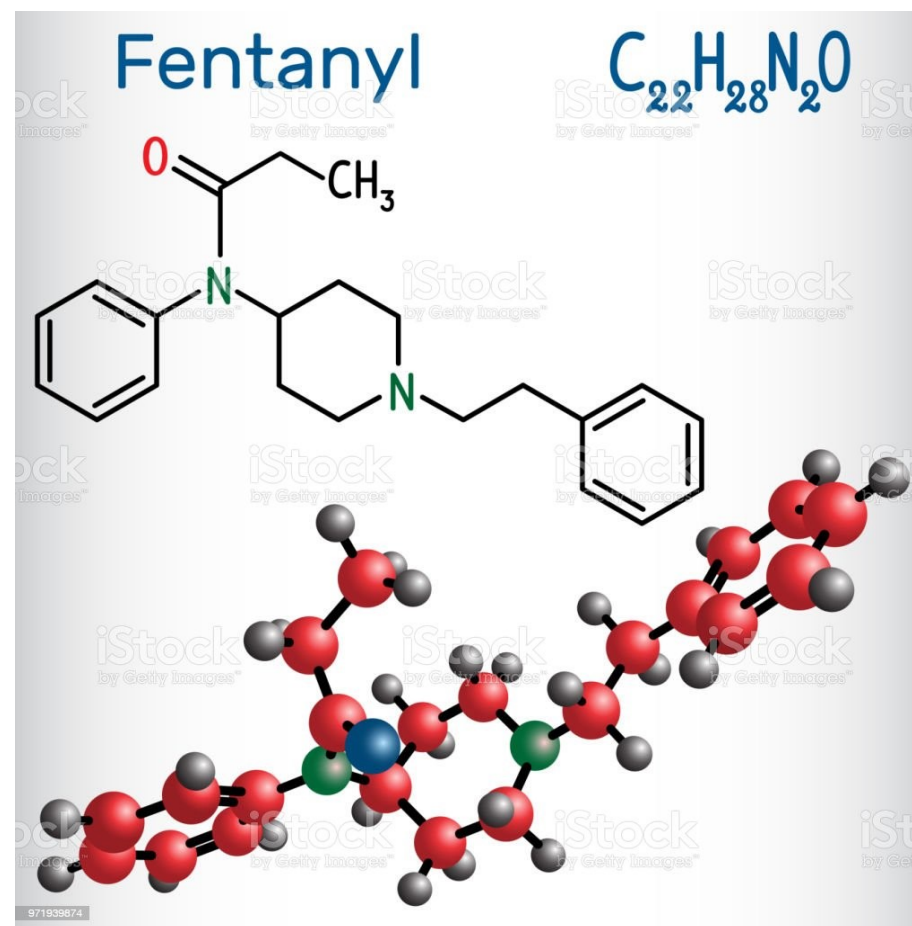
Name and the Other Names:

- scientific name: *N*-Phenyl-*N*-[1-(2-phenylethyl)-4-piperidinyl]propanamide 2-hydroxy-1,2,3-propanetricaboxylate
- other names: Actiq, Duragesic, Fentanest, Leptanal, Pentanyl, and Sublimaze

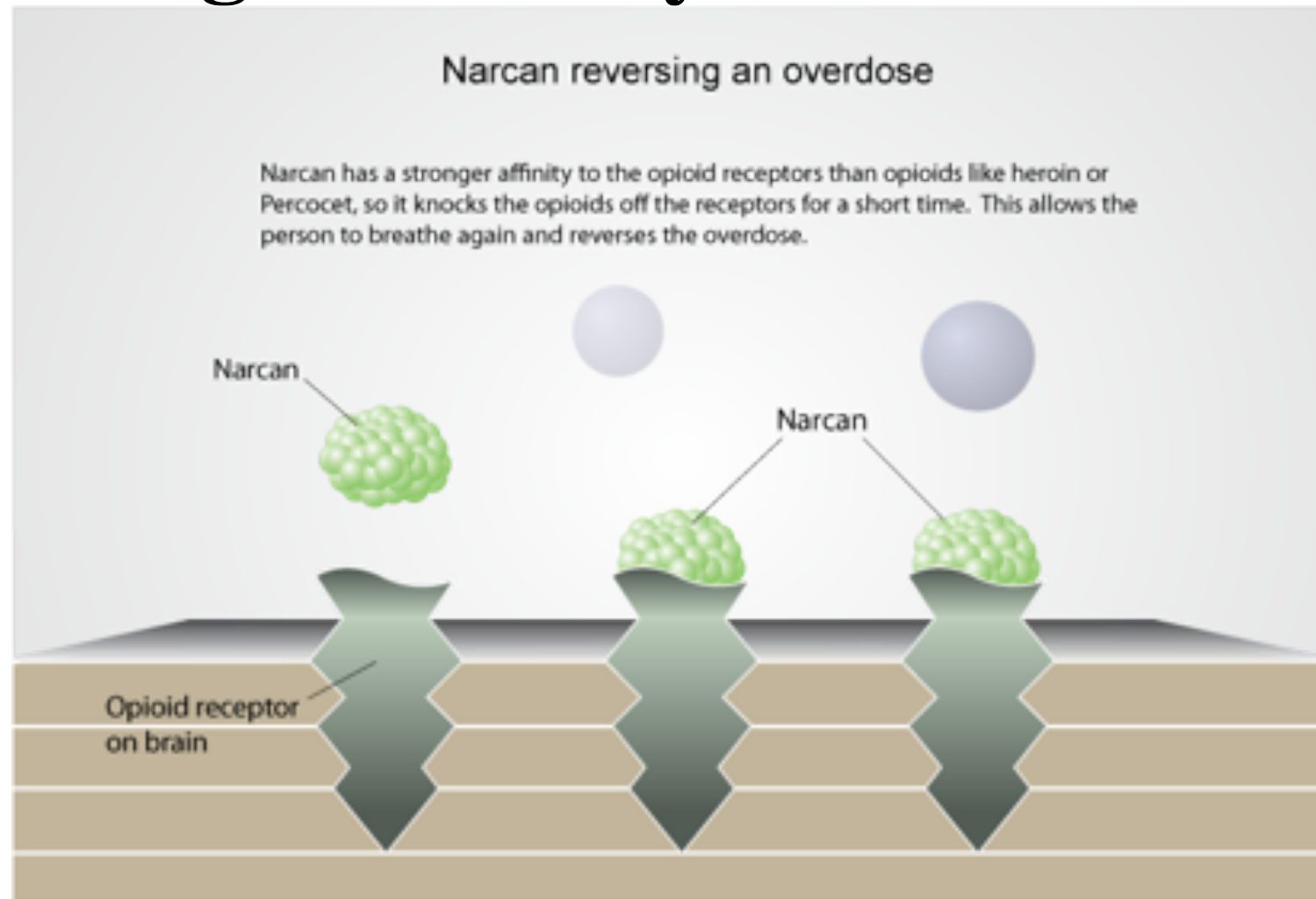


CAS Registry, Chemical Formula, and Structure:

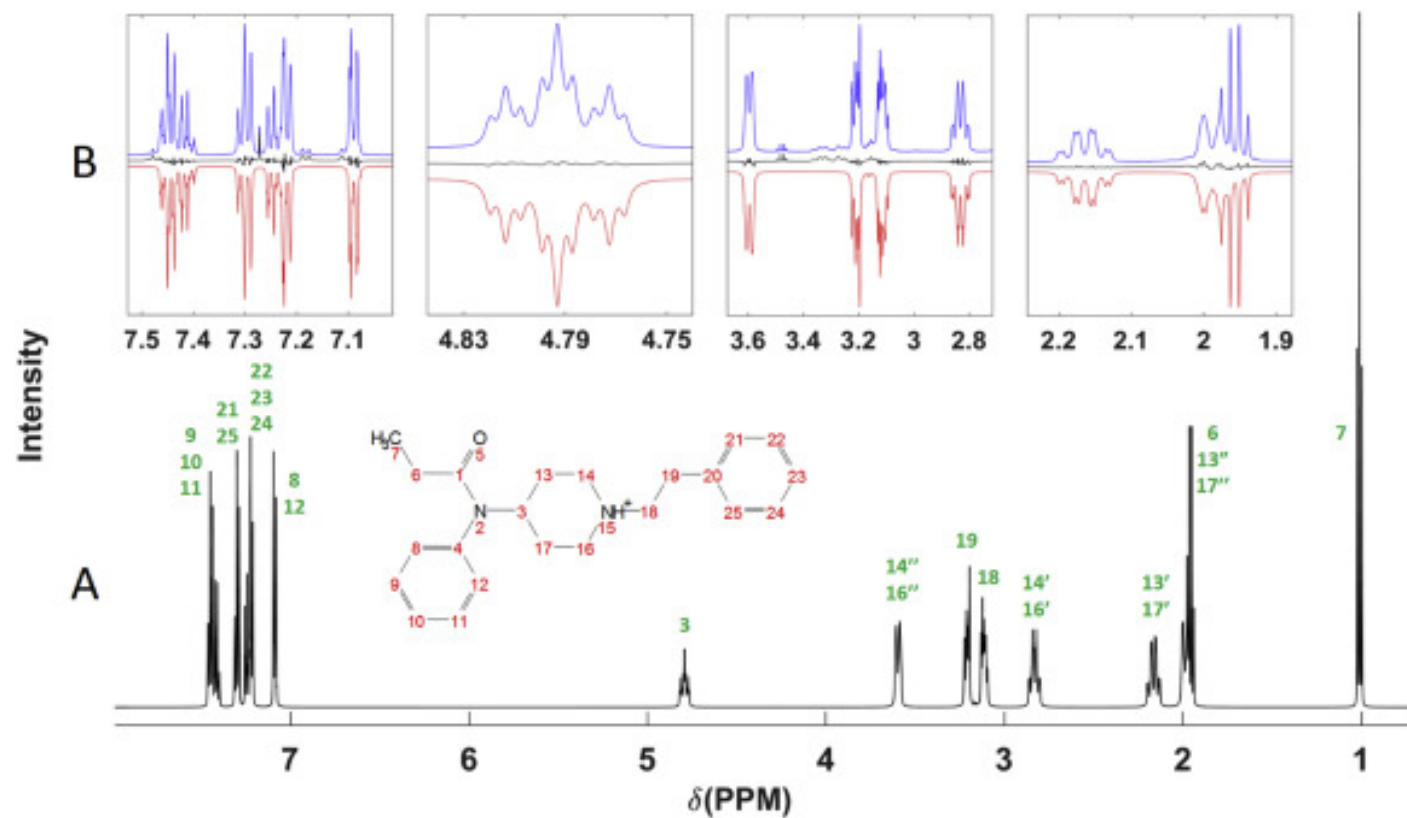
- CAS registry: 990-73-8
- chemical formula: $C_{22}H_{28}N_2O$
- chemical structure: down below :)



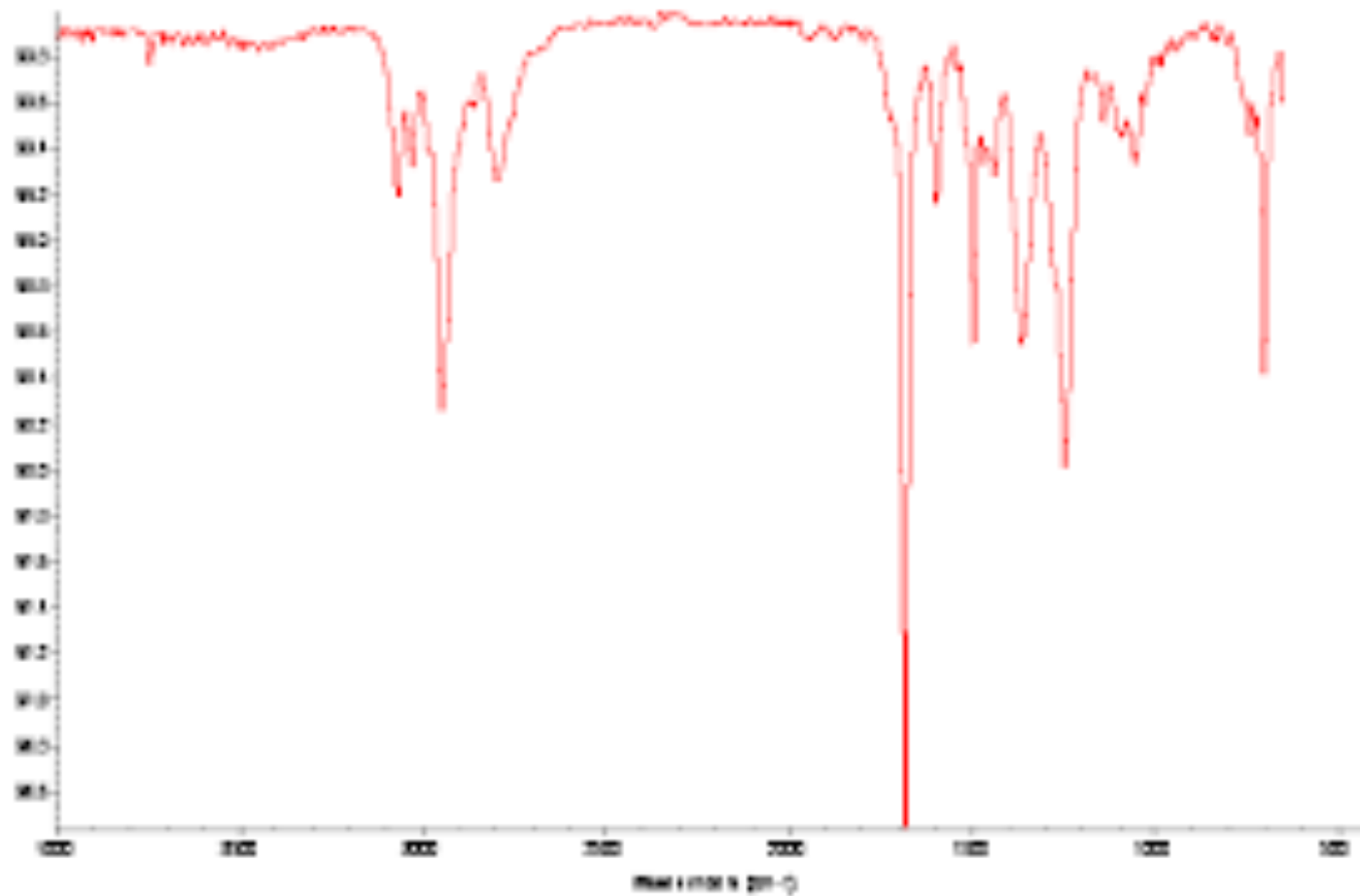
Reversing a Fentanyl Overdose:



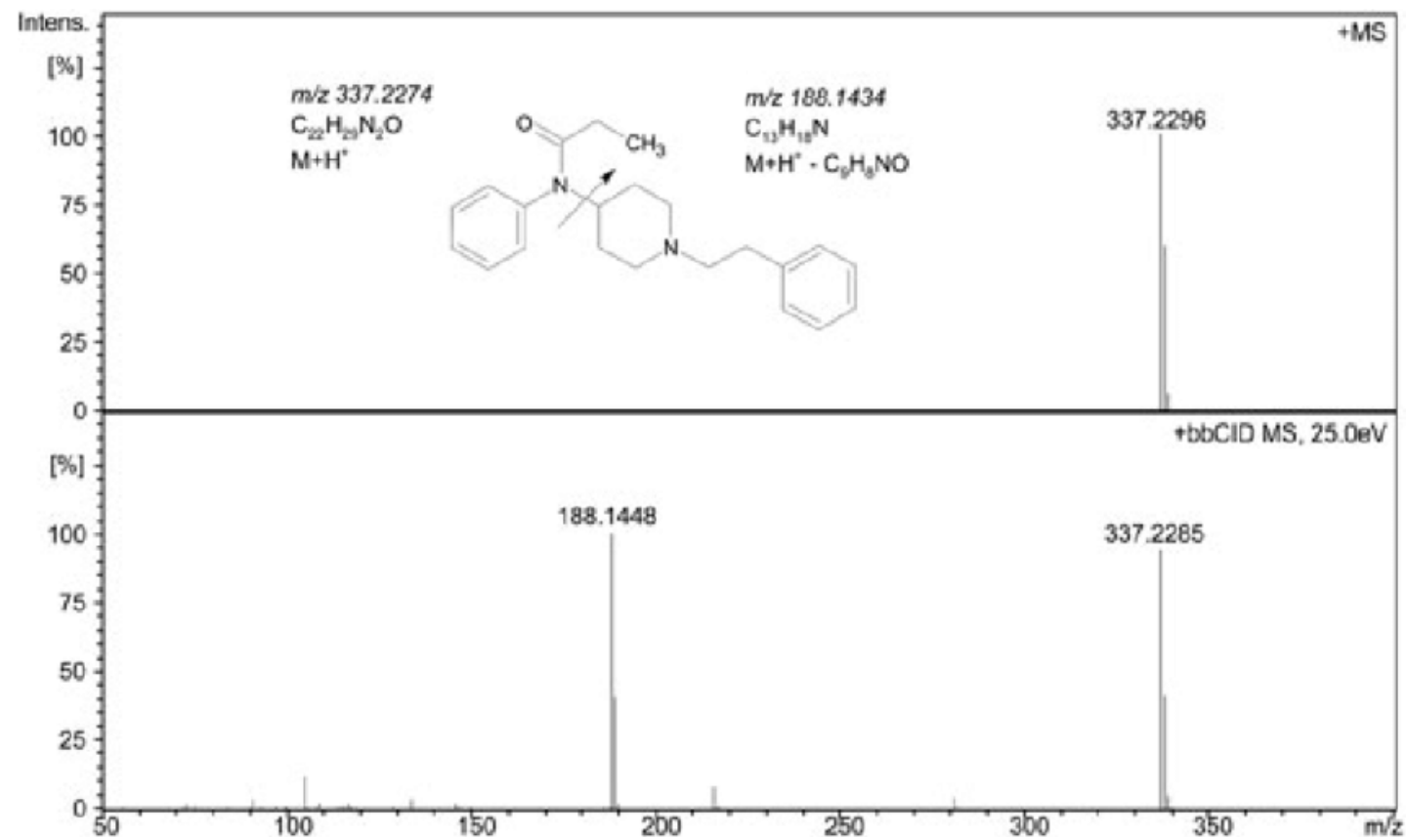
Fentanyl NMR:



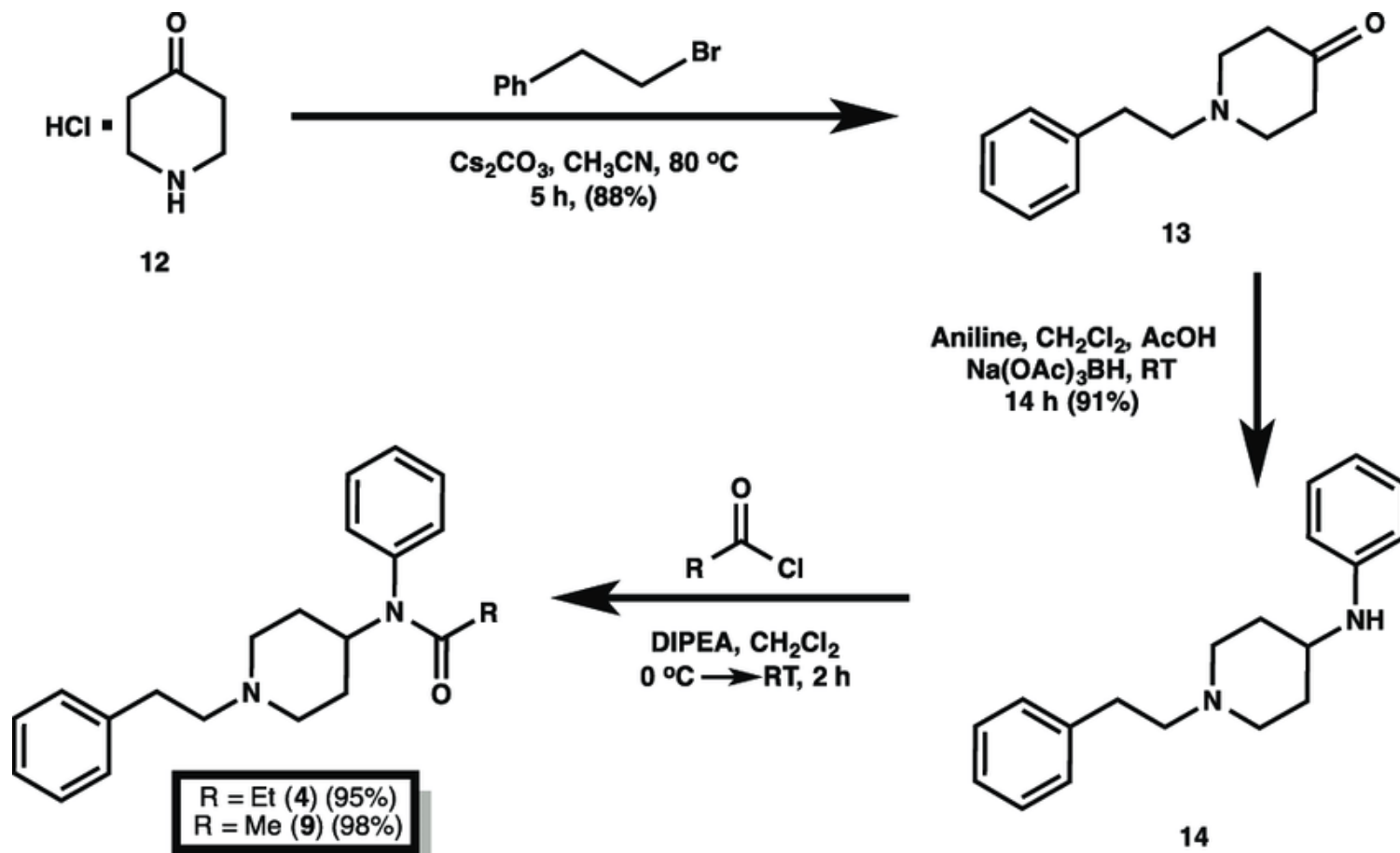
Fentanyl IR:



Fentanyl MS:

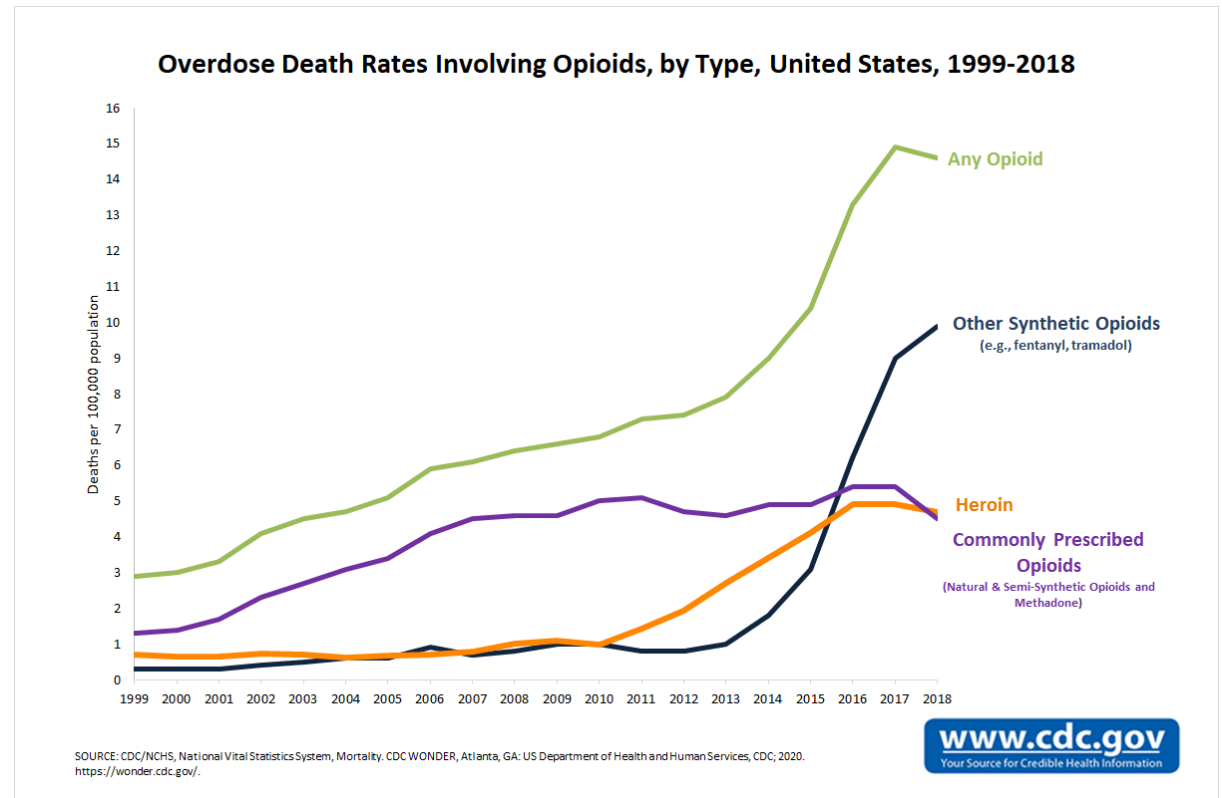


Synthesis of Fentanyl:



Personal Opinion :

- Fentanyl is a drug that only requires a small amount to become lethal. It is typically prescribed to individuals with severe pain, but it is now a staple in the drug industry; many deaths involving fentanyl were considered "accidental" as the buyers were not aware of its presence in the "drugs" they purchased



Major Sources:

- [C&EN Special Issue: Top Pharmaceuticals: Drug Index \(acs.org\)](#)
- [How Much Does Fentanyl Cost On The Street? - Addiction Resource](#)
- [Opioid Abuse Nursing CEU - Nursing CE Central](#)
- credits to the owners of the Google Images :)