

# Drug-Induced Valvulopathy

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LLSA Medical Toxicology Review

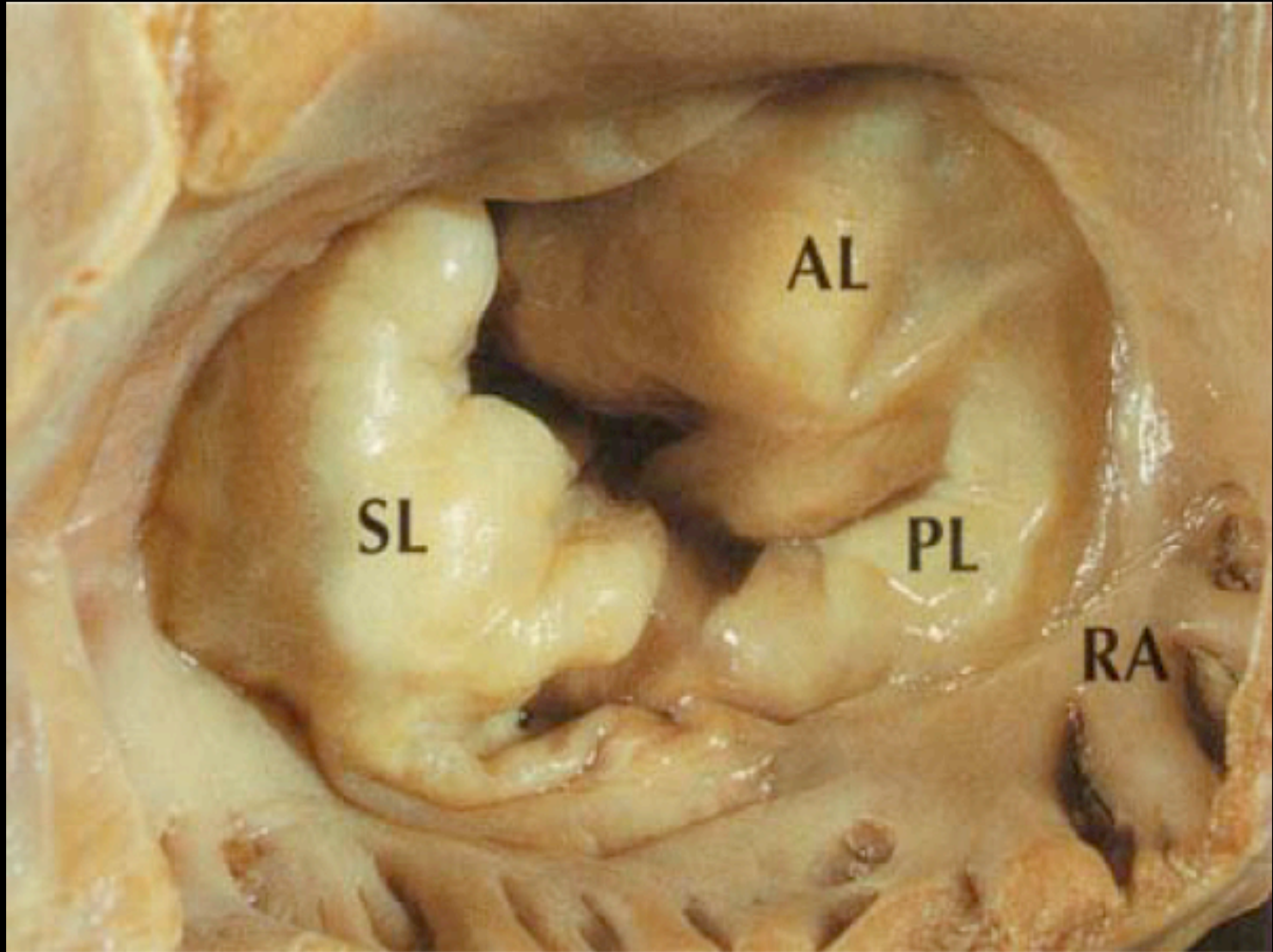
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Roth BL. Drugs and valvular heart disease. *NEJM* 2007;356:6-9.





Schade R, et al. Dopamine agonists and the risk of cardiac-valve regurgitation. *NEJM* 2007;356:29-38.

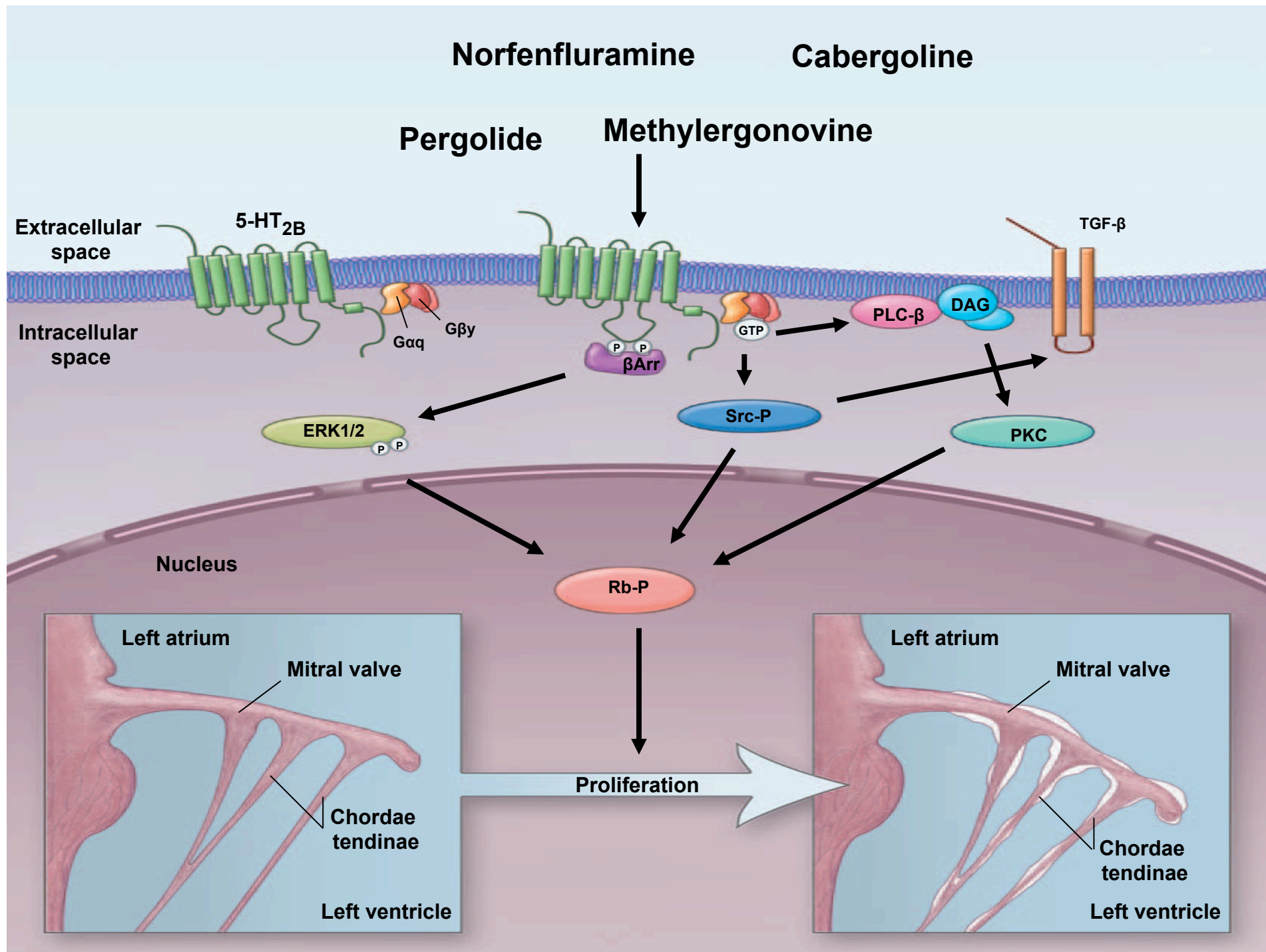
- Cabergoline and pergolide significantly associated with cardiac-valve disease
- Aortic, mitral, and tricuspid valves affected
- Amantadine associated with an increased risk of valvular heart disease



Zanettini R, et al. Valvular heart disease and the use of dopamine agonists for Parkinson's disease. *NEJM* 2007;356:39-46.

- Clinically significant regurgitation was discovered only in patients taking cabergoline or pergolide
- Rates of drug-induced valvulopathy were high
- Drug-induced insufficiency was evident in aortic, mitral, and tricuspid valves





# Take Home Points

- 5-HT<sub>2B</sub> receptors are abundant in human cardiac valves
- Several drugs are potent 5-HT<sub>2B</sub> agonists
- Several studies have implicated activation of 5-HT<sub>2B</sub> receptors as a key step in initiating drug-induced valvulopathy
- Two recent studies have associated cabergoline and pergolide with valvular disease
- Avoid prescribing drugs that are potent 5-HT<sub>2B</sub> agonists



