

## **Involvement of P2Y<sub>2,4</sub> receptors in the regulation of myocardial contractility in growing rats**

Anikina T., Anisimova I., Zverev A., Sitdikov F., Zefirov T.  
*Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia*

---

### **Abstract**

Experiments with R<sub>2</sub>Y receptor blockers allowed identification of R<sub>2</sub>Y subtypes mediating the inhibitory effects of uridine triphosphate on myocardial contractility. In 100-day-old animals, the myocardial inotropic response to the administration of uridine triphosphate was mediated by R<sub>2</sub>Y<sub>2</sub> receptors. R<sub>2</sub>Y<sub>4</sub> receptors took part in the realization of negative inotropic response to uridine triphosphate in all age groups, but the most pronounced effects of this substance on myocardial contractility were found in 100-day-old rats. It was found that R<sub>2</sub>Y receptor blockers PPADS and reagent blue-2 affect amplitude-time parameters of myocardial contractility in rats of various ages. © 2014 Springer Science+Business Media New York.

<http://dx.doi.org/10.1007/s10517-014-2334-2>

---

### **Keywords**

heart, myocardial contractility, ontogeny, purine receptors