

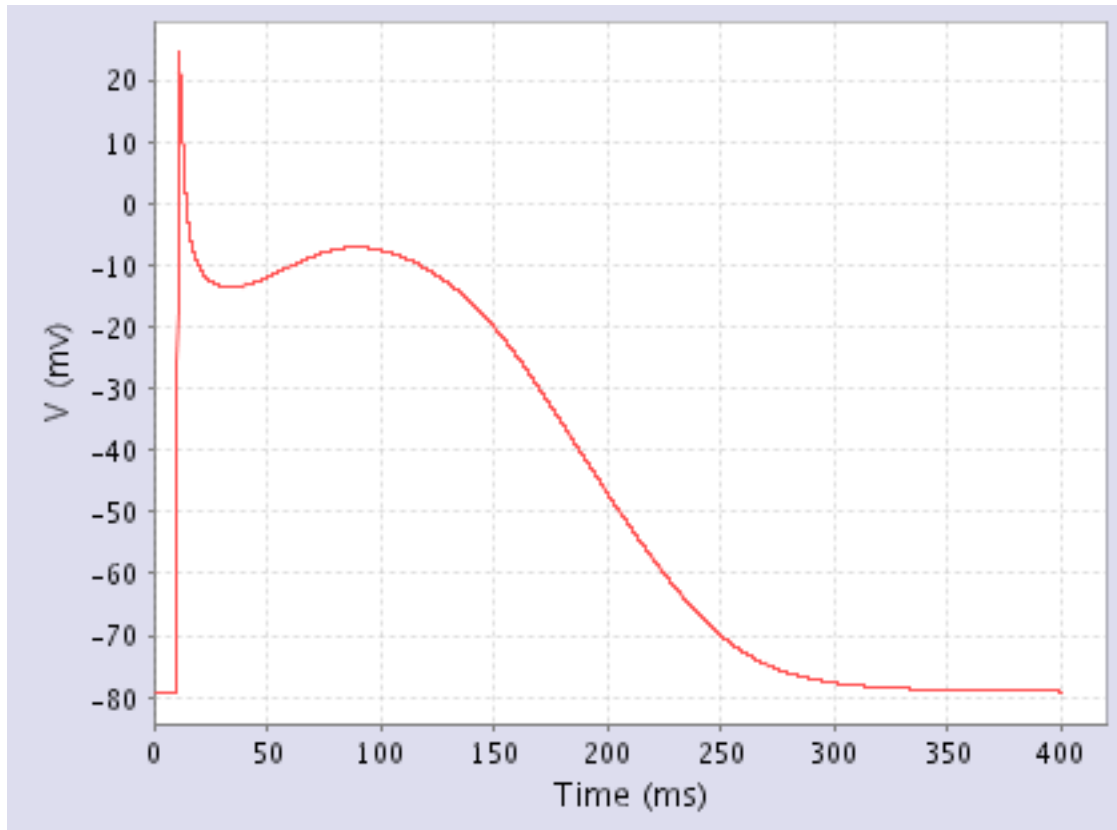
# Human Atrial CRN98-SM

**Simucore Model Based Upon: Courtemanche, Ramirez,  
Nattel Model of Human Atrial Cardiac Action Potentials,  
1998; v. 1.4**

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## 1. Description



Example action potential (BCL = 400 ms).

This model simulates human atrial action potentials. The model formulation is based on Luo-Rudy II guinea-pig ventricular model with currents modified to mimic the configuration of human atrial action potential.

Abstract excerpt: *"Using specific formulations of the  $K^+$ ,  $Na^+$ , and  $Ca^{2+}$  currents based on data recorded from human atrial myocytes, along with representations of pump, exchange, and background currents, we developed a mathematical model of the AP. The model AP resembles APs recorded from human atrial samples and responds to rate changes, L-type  $Ca^{2+}$  current blockade,  $Na^+/Ca^{2+}$  exchanger inhibition, and variations in transient outward current amplitude in a fashion similar to experimental recordings."*

## 2. References

- Courtemanche M, Ramirez RJ, Nattel S.  
Ionic mechanisms underlying human atrial action potential properties: insights from a mathematical model.  
Am J Physiol. 1998 Jul;275(1 Pt 2):H301-21.  
PMID: [9688927](#)

### **3. Ordering**

- [Order this model](#) or [request further information](#).