

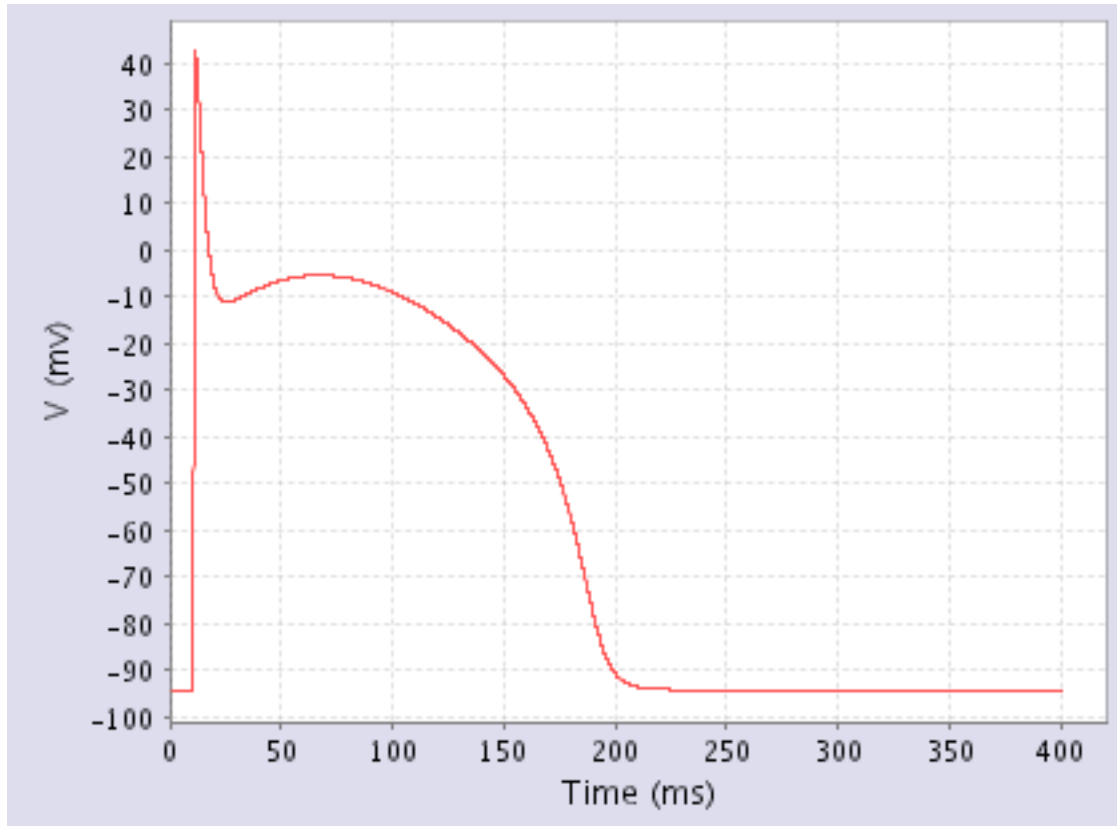
# Canine Ventricular FMG02-SM

**Simucore Model Based Upon: Fox, McHarg, Gilmour Model of Canine Ventricular Cardiac Action Potentials, 2002; v. 1.4**

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## 1 Description



The model is used to simulate canine ventricular action potentials. It uses modified current formulations from Luo-Rudy II guinea-pig and Winslow et al. canine ventricular models. The simplified  $\text{Ca}^{2+}$  handling is included.

Abstract excerpt: "...we developed a new ionic model using formulations of currents based on previous models and recent experimental data. Compared with existing models, the inward rectifier  $\text{K}(+)$  current ( $I(\text{K1})$ ) was decreased at depolarized potentials, the maximum conductance and rectification of the rapid component of the delayed rectifier  $\text{K}(+)$  current ( $I(\text{Kr})$ ) were increased, and  $I(\text{Kr})$  activation kinetics were slowed. The slow component of the delayed rectifier  $\text{K}(+)$  current ( $I(\text{Ks})$ ) was increased in magnitude and activation shifted to less positive voltages, and the L-type  $\text{Ca}(2+)$  current ( $I(\text{Ca})$ ) was modified to produce a smaller, more rapidly inactivating current. Finally, a simplified form of intracellular calcium dynamics was adopted."

## 2 References

- Fox JJ, McHarg JL, Gilmour RF Jr.  
Ionic mechanism of electrical alternans.  
Am J Physiol Heart Circ Physiol. 2002 Feb;282(2):H516-30.  
PMID: [11788399](#)

## 3 Ordering

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