



Supplemental Figure

Online Supplement

Table

Comparison of Transmembrane Action Potential Parameters Recorded With Microelectrode in Adult and Aged Rat Hearts

	Adult			Aged		
	Baseline N=25	H ₂ O ₂ N=17	P	Baseline N=8	H ₂ O ₂ N=8	P
Resting Membrane Potential (mV)	-83±1	-85±1	NS	-83±3	-83±3	NS
APA(mV) at PCL of 250ms	108±11	111±5	NS	107±8	111±7	NS
APD90 at a PCL of 250ms (ms)	86±10	83±2	NS	104±5	105±4	NS
APD90 at a PCL of 200ms (ms)	86±9	83±2	NS	101±4	100±4	NS
APD90 at a PCL of 150ms (ms)	83±9	82±2	NS	92±3	91±3	NS
APD90 at a PCL of 130ms (ms)	75±7	76±3	NS	83±3	84±3	NS
APD50 at a PCL of 250ms (ms)	23±7	26±6	NS	34±4	35±2	NS
APD50 at a PCL of 200ms (ms)	22±5	29±7	NS	35±4	36±3	NS
APD50 at a PCL of 150ms (ms)	22±3	32±8	NS	35±4	34±3	NS
APD50 at a PCL of 130ms (ms)	22±4	29±7	NS	30±3	32±3	NS
dV/dt(max) (V/S) at PCL of 250ms	211±25	235±19	NS	190±17	187±22	NS
Max Slope of Restitution Curve						
APD90	0.9±0.5	0.9±0.3	NS	1.3±0.5	1.2±0.5	NS
APD50	0.3±0.1	0.3±0.2	NS	0.4±0.1	0.4±0.2	NS

APA; action potential amplitude, APD90 and 50; action potential duration of 90% and 50% repolarization respectively; dV/dt(max) is maximum depolarization rate of phase zero (upstroke) of AP in (volt/sec); N= number of hearts.

Supplemental Figure Legend

Schematic presentation of the distribution of myocyte (M) to fibroblast (F) couplings in a 2D simulated tissue. Panel A shows the details of random F distribution in the fibrotic zone of a 2D tissue shown in panel B, with the central elliptic region representing the fibrotic zone. The F-M ratio was systematically changed in the fibrotic zone and its effect on EAD and triggered activity evaluated as shown in Figure 8.