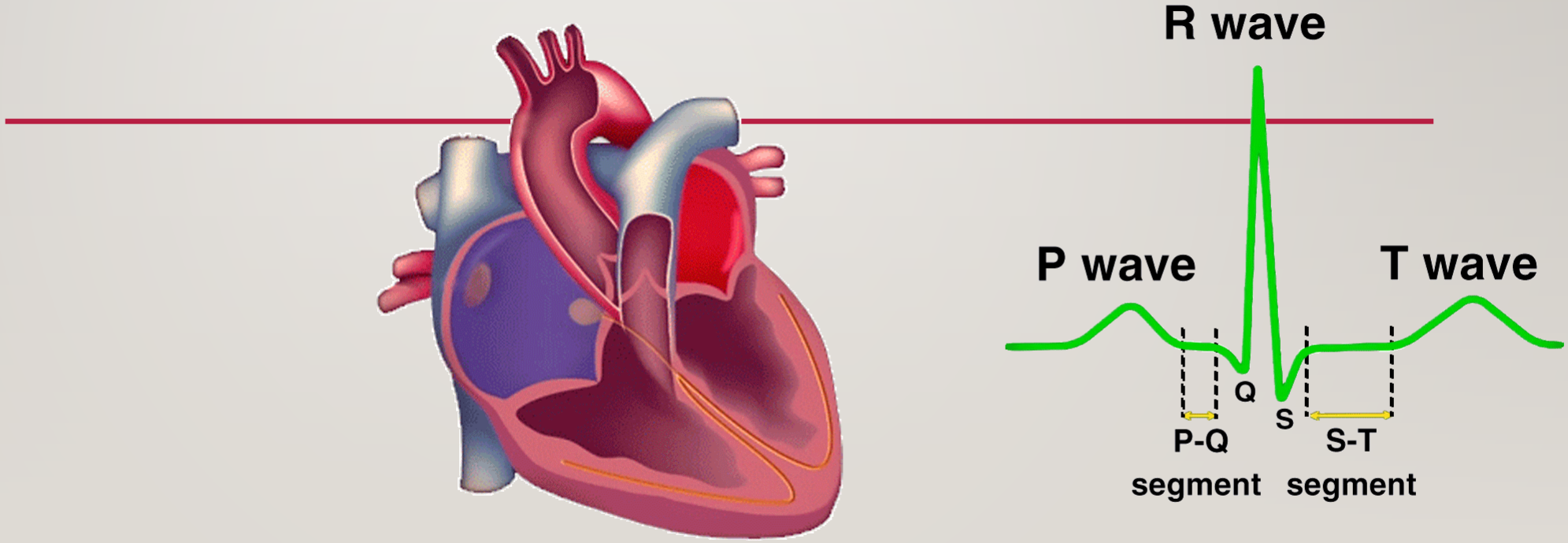
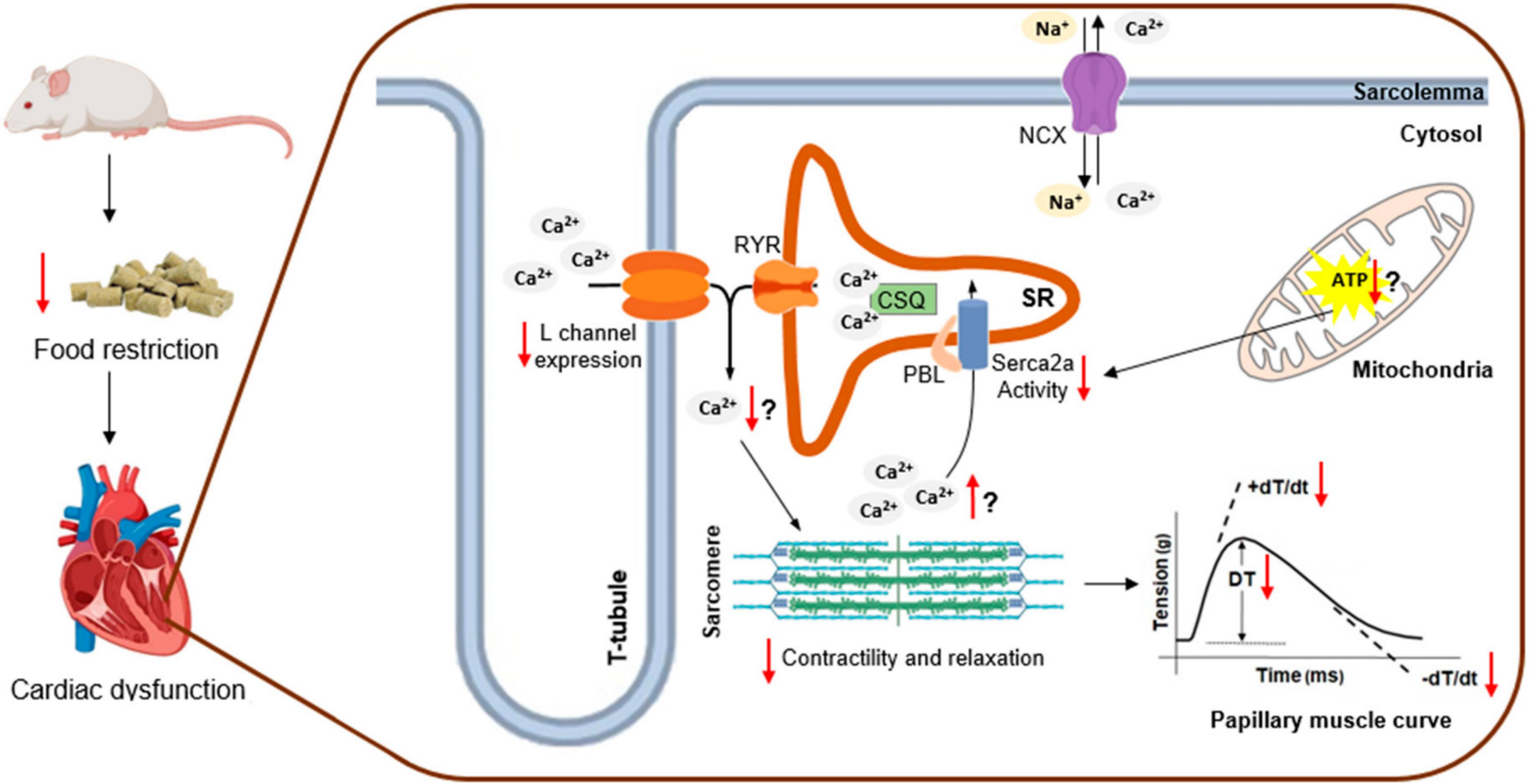
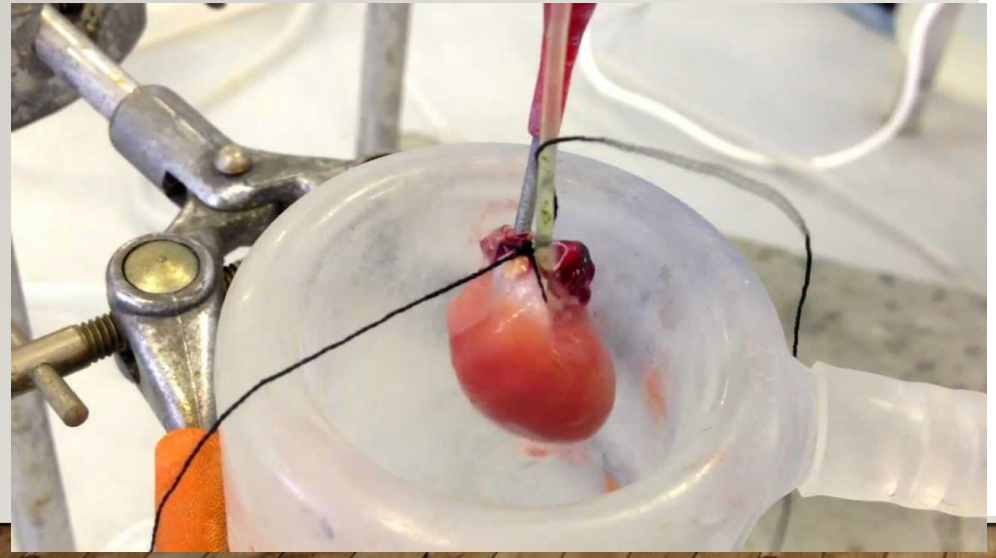
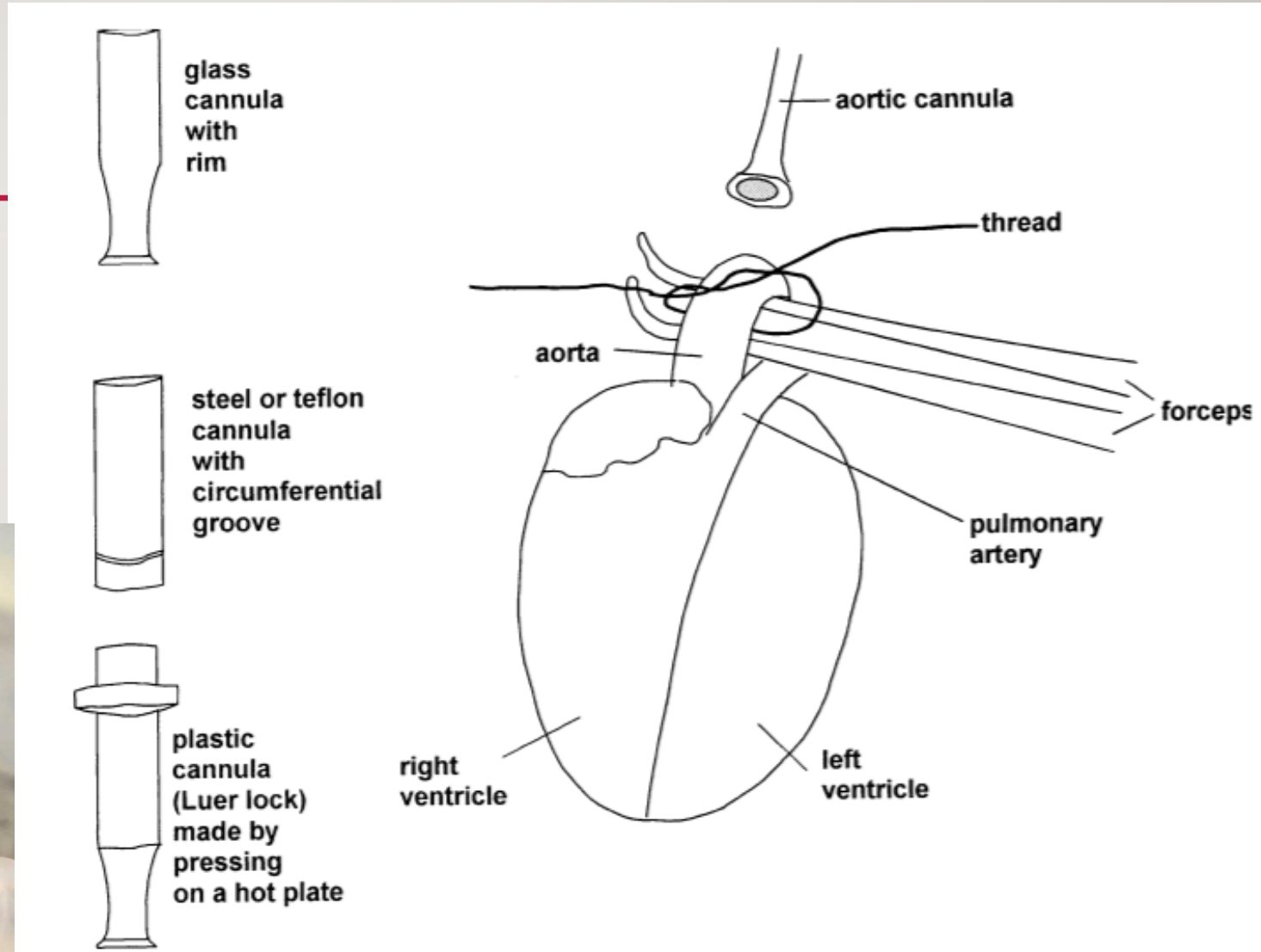
KALP KASILMA KAYITLARININ KAYDEDİLMESİ

DOÇ.DR. ERKAN TUNCAY



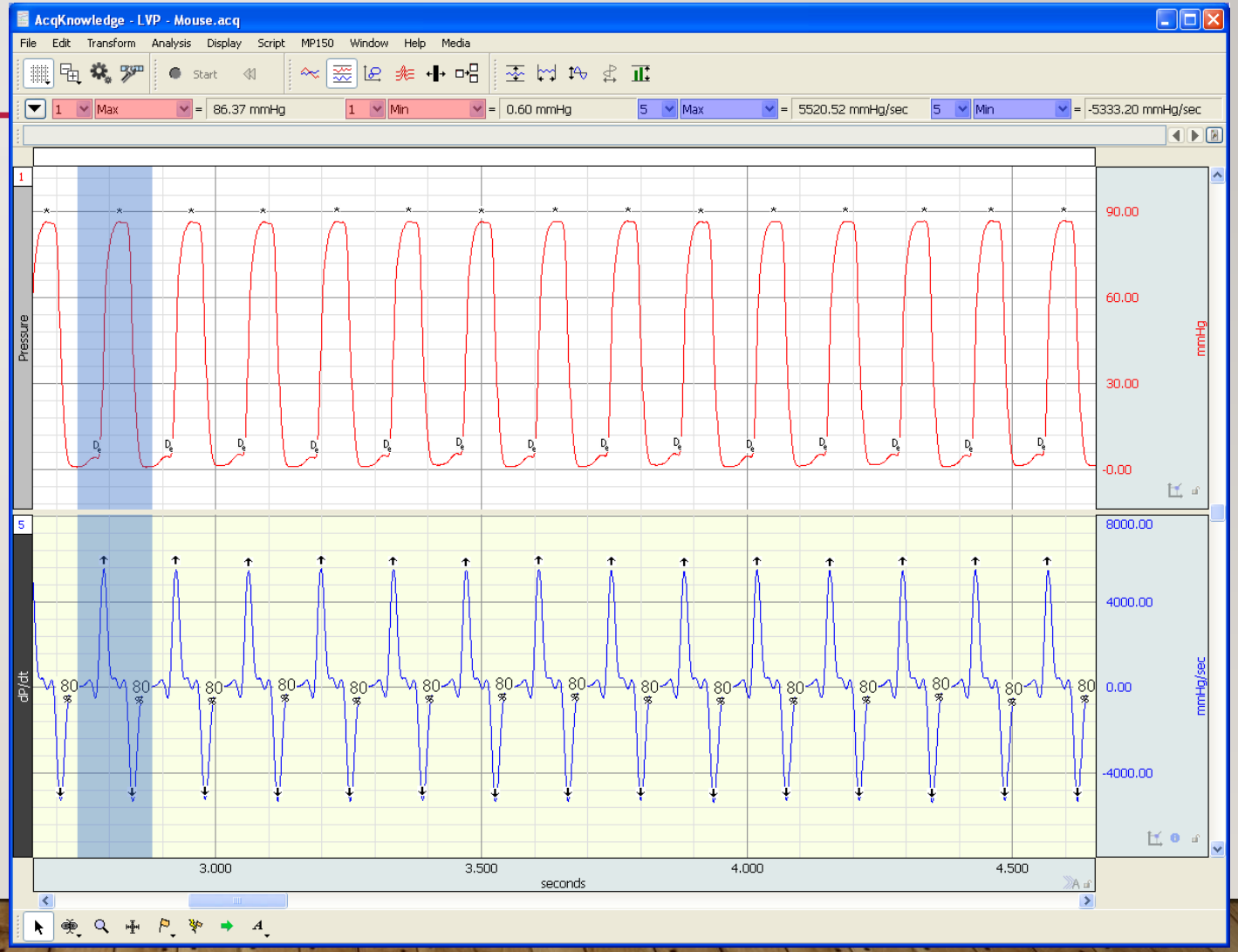

Food restriction
Cardiac dysfunction
Na+
Ca2+
Sarcolemma
NCX
Cytosol
Ca2+
RYR
CSQ
SR
L channel expression
PBL
Serca2a Activity
ATP
?
Mitochondria
T-tubule
Sarcomere
Contractility and relaxation
+dT/dt
DT
Tension (g)
Time (ms)
-dT/dt
Papillary muscle curve




glass cannula with rim
steel or teflon cannula with circumferential groove
plastic cannula (Luer lock) made by pressing on a hot plate
aortic cannula
thread
aorta
forceps
pulmonary artery
right ventricle
left ventricle

KAYITLARIN ALINMASI

- aortic flow AF
- coronary flow CF
- cardiac output CO
- aortic pressure AP
- ventricular pressure
- electric activity (ECG)



EX VIVO ÇALIŞMALARININ AVANTAJLARI

- Quick, relatively cheap, and easy to perform technique
- High reproducibility, large number of experiments
- Suitable for screening
- Broad spectrum of biochemical, physiological, morphological and
- pharmacological studies
- Suitable for investigating cardiac-specific effects
- Controlled environment
- Ischemia/reperfusion
- Allows those experiments to be continued which would lead to
- termination of an in vivo experiment (e.g. infarction-induced loss ofpump function, cardiac arrest or arrhythmias)

EX VIVO ÇALIŞMALARININ DEZAVANTAJLARI

- in vivo modele göre daha az fizyolojiktir
- Zamana bağlı olarak örnekler bozulabilmektedir
- Sadece akut çalışmalar yapılabilir (genellikle 3 saatten daha az)

SIÇANDAN İZOLE EDİLEN PAPİLER KASTA KASILMA DENEYLERİ

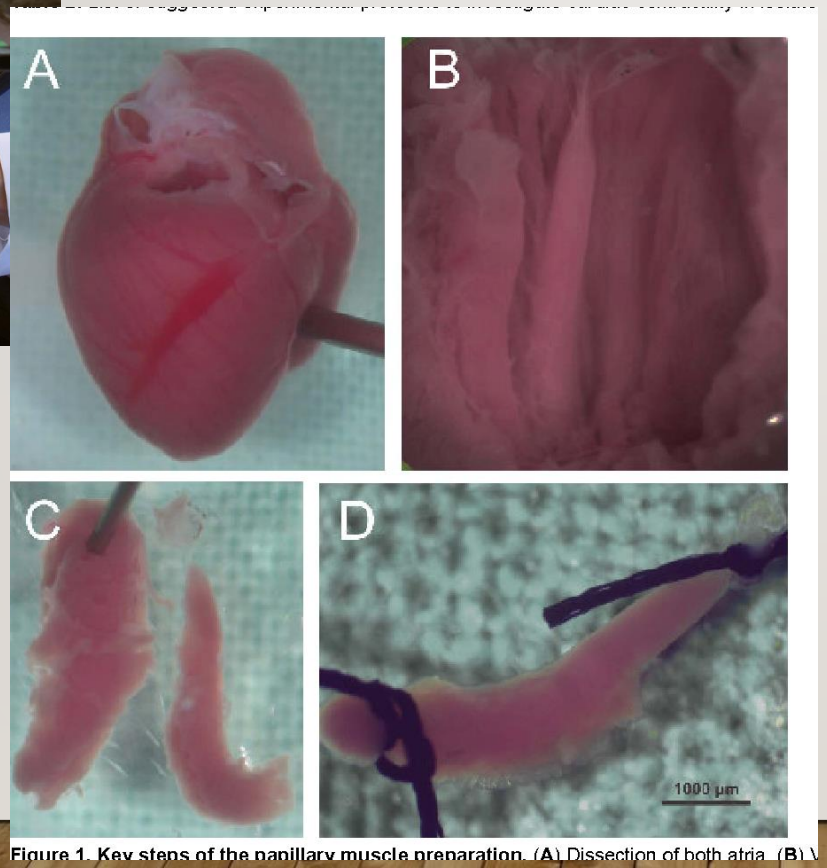
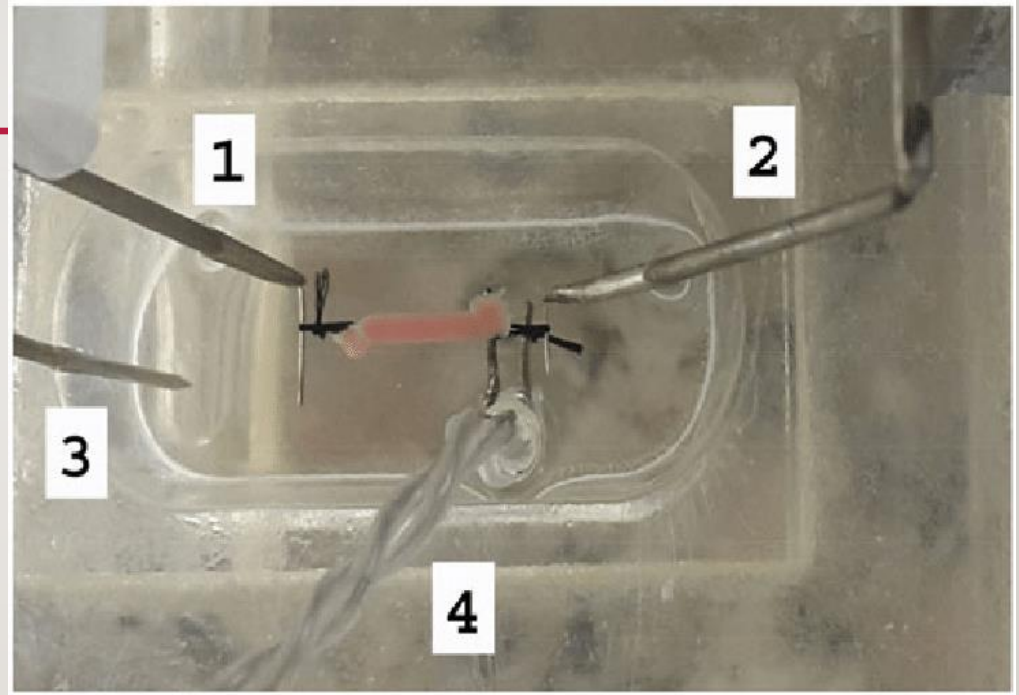
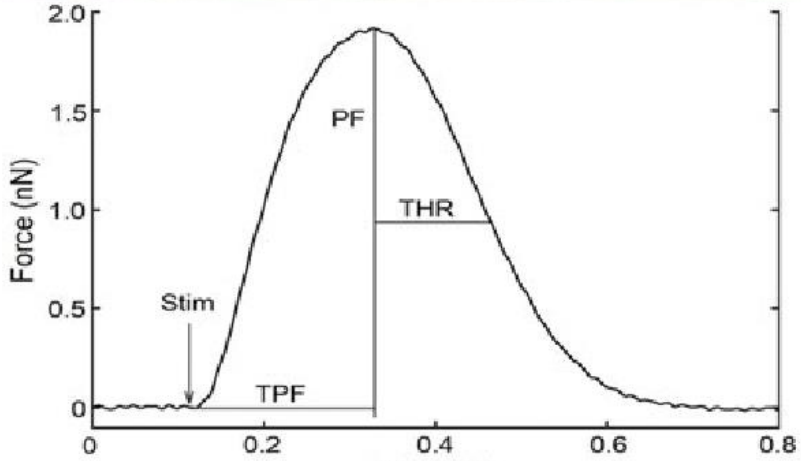
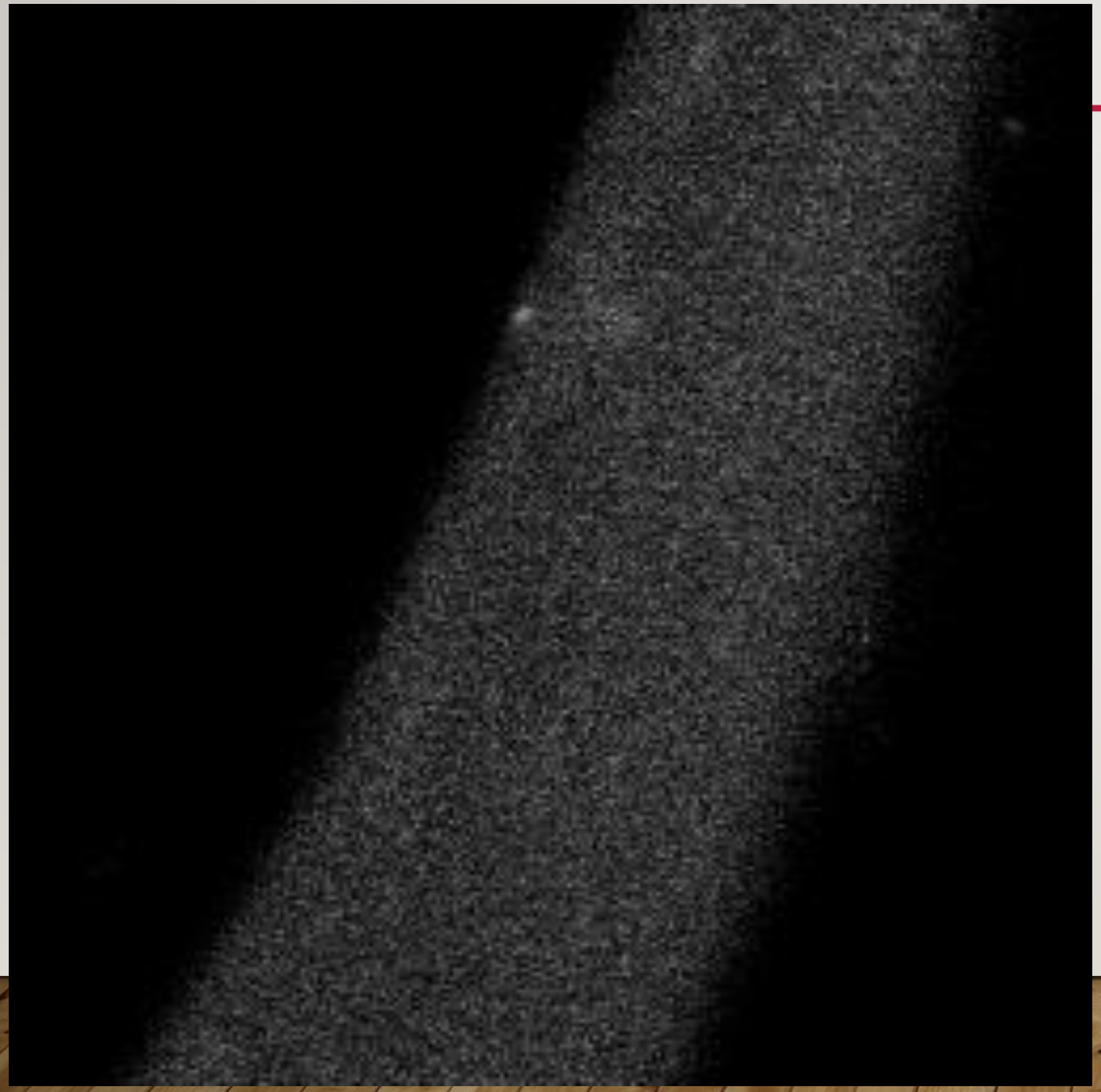


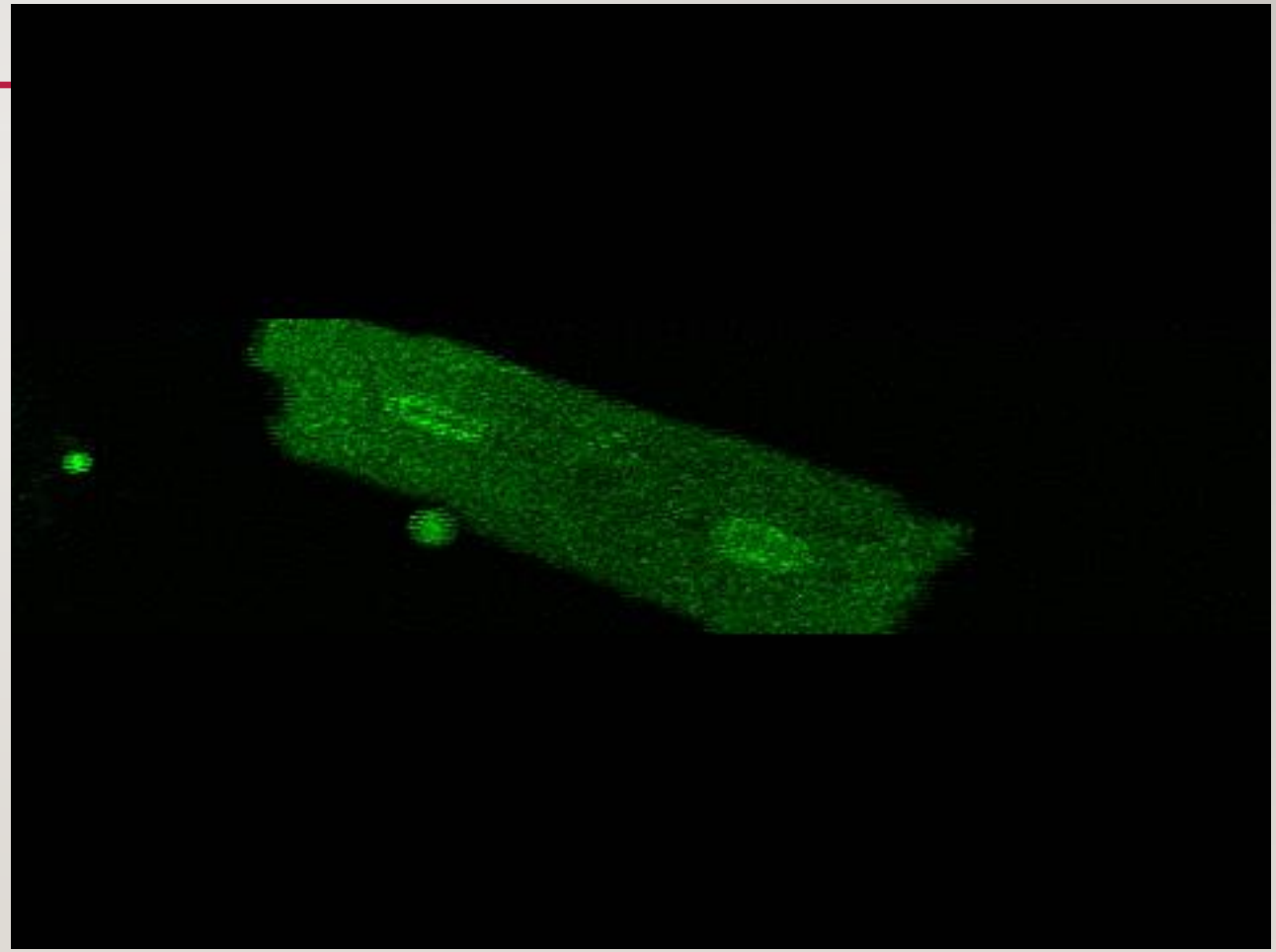
Figure 1. Key steps of the papillary muscle preparation. (A) Dissection of both atria. (B)



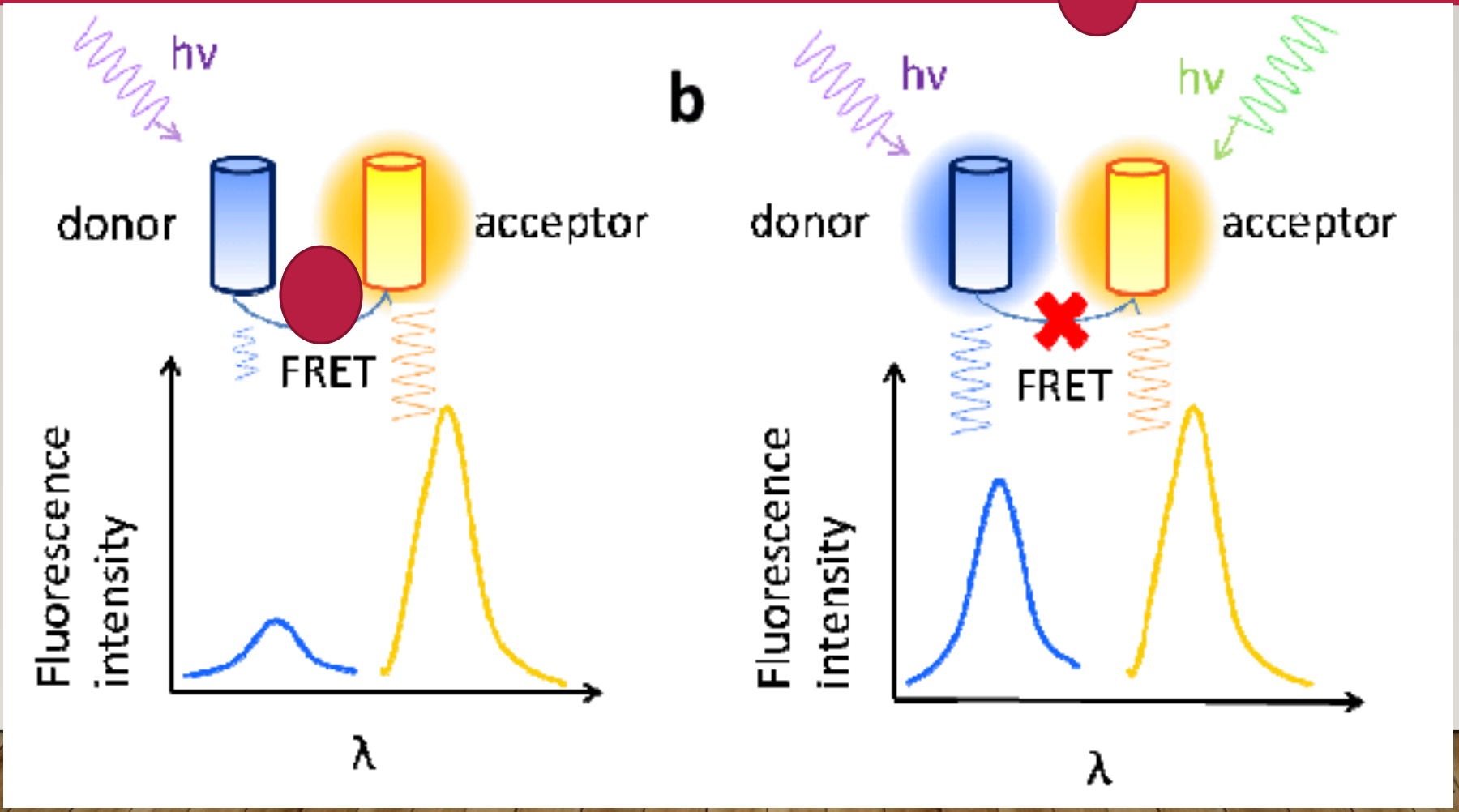


HÜCRE İÇİ İYON GÖRÜNTÜLEME:





FLUORESCENCE RESONANCE ENERGY TRANSFER (FRET) YÖNTEMİ



Cytosolic and S(E)R Free Zn2+ Levels in H9c2 cells