

1. What was the biological question addressed in this paper?
2. What is Ciona?
3. Draw a general flowchart for heart development (you do not need more than the space below). Start from the gastrula or neurula stage embryo.

4. Distinguish  
pericardium

myocardium (myoepithelium)

endocardium

5. What does the term “transgenic” mean?

What use was made of transgenic Ciona embryos?

How does one make a transgenic Ciona?

How does one make a transgenic Xenopus?

Ditto mouse?

Ditto zebrafish?

6. The term “necessary and sufficient” is used in this paper. What does it mean?

Do you agree that FGF is necessary and sufficient for Ciona heart formation?

Why or why not?