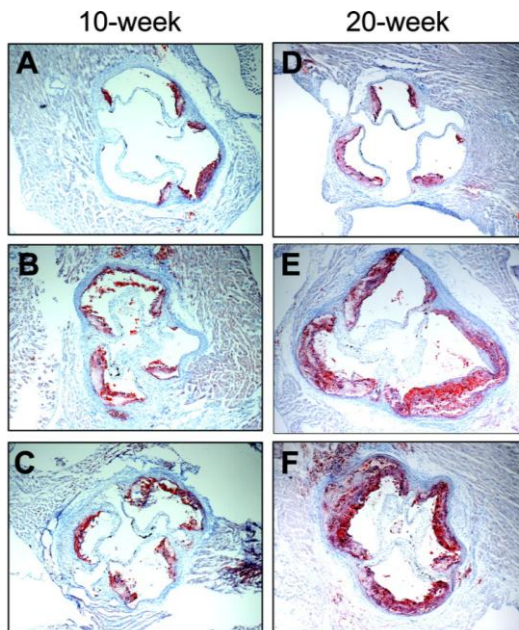


## Mouse Aortic Sinus sectioning for atherosclerosis analysis

- 1) Hearts are embedded with the cut end (in the middle of the heart in a plane parallel to the atria) down.
- 2) Before sectioning orient the chuck so that the blade cuts perpendicular to the block. Begin cutting through the heart muscle at 5  $\mu$ m thickness, and as soon as your heart tissue is visible keep 4 slides with three sections each. Then cut through 80 sections without keeping slides, keep 4 slides as above, and repeat. Continue this until you begin to reach the area of the aortic sinus, which you should be watching for once you see the atria appear in your sections.
- 3) When you start to see the first evidence of the aortic valve(s), label this as slide #1. If the orientation is off in that you only see the start of one valve instead of three, carefully re-orient the chuck to change the plane of sectioning to try to get all three valves in each section. Cut through a small number of slides to re-check your orientation and if you need to orient the chuck do so again and cut a small number of slides to re-check orientation.
- 4) With the chuck oriented as best as possible, cut through the aortic sinus at 5  $\mu$ m thickness keeping all sections, three per slide. As you move distally through the sinus, you should see three sets of valve leaflets as shown below if the orientation is correct.
- 5) Continue cutting through the aortic sinus and into the ascending aorta to keep 60 total slides from the aortic sinus region.



Chew P et al ATVB 2009

