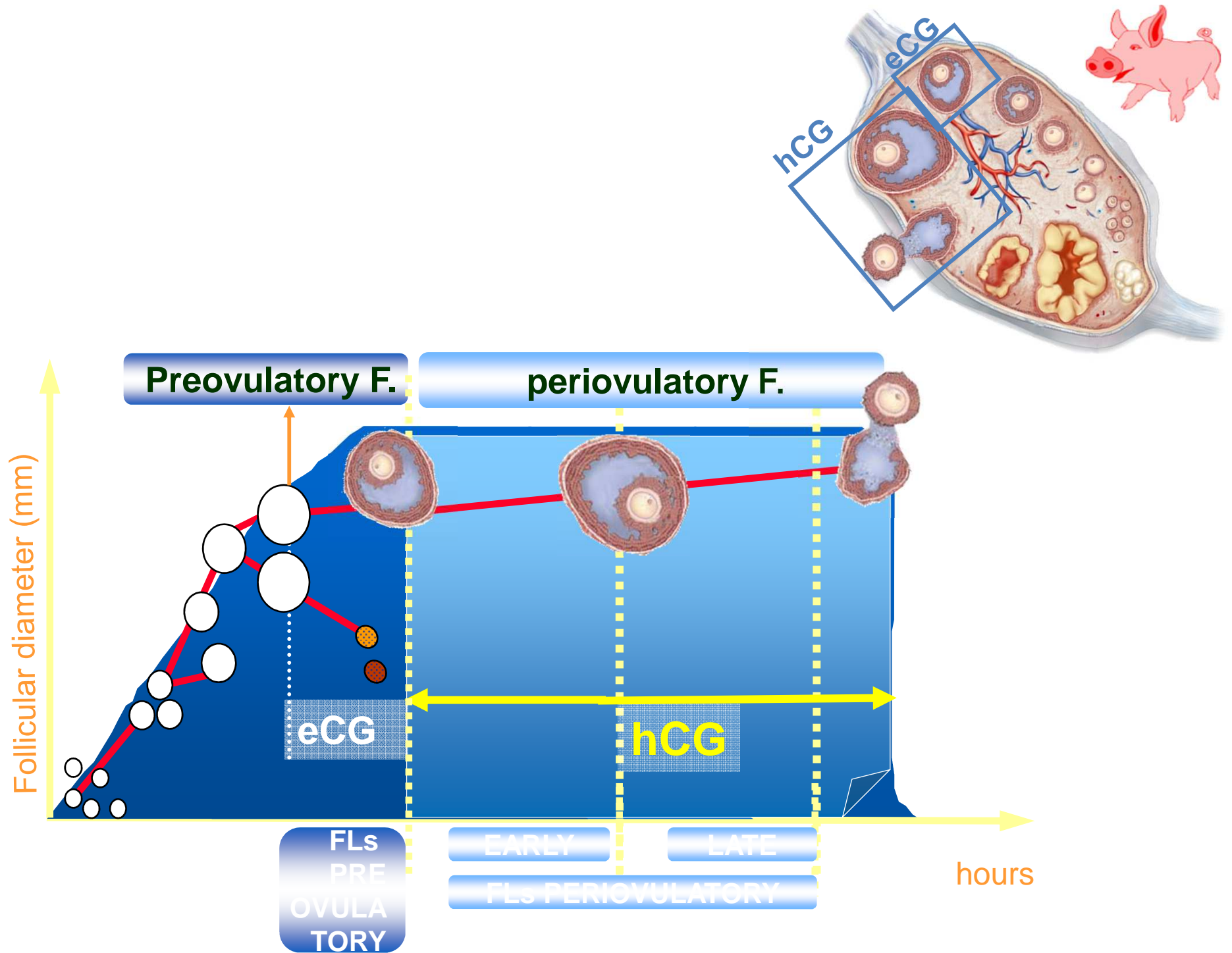
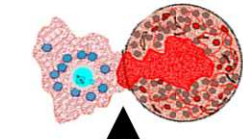


**Ovarian folliculogenesis  
and angiogenesis:  
periovulatory follicles**

This is a black and white micrograph of an ovary section. The image shows several layers of cells. At the top, there is a thick, dark-stained layer, likely the tunica albuginea. Below it is the tunica vaginalis. The main part of the image shows the ovarian cortex, which is densely packed with small, dark-stained cells, representing the granulosa cells of various stages of follicular development. A prominent feature is a large, circular structure in the lower-left quadrant, which is a periovulatory follicle. This follicle has a distinct, multi-layered structure, including a thick, dark-stained outer layer (theca) and a lighter-stained inner layer (granulosa). The overall appearance is that of a highly cellular, organized tissue structure.



# PERIOVULATORY PHASE



36h hCG

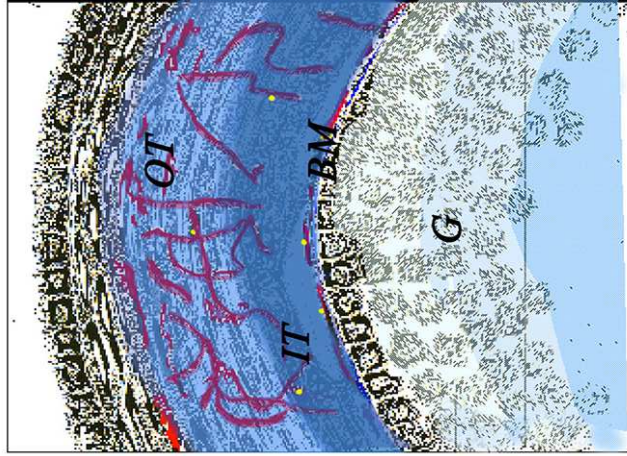
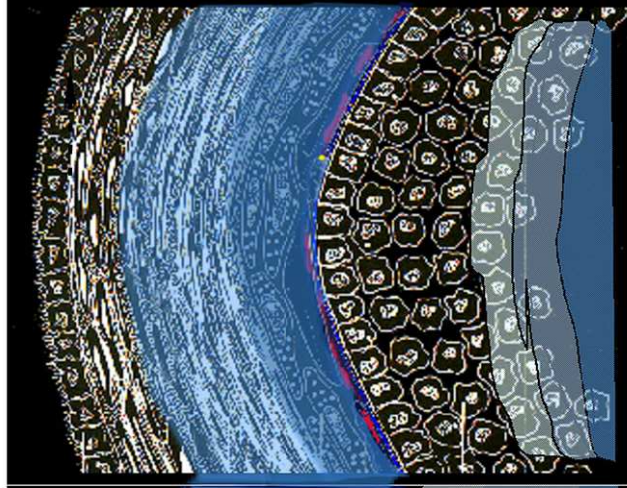
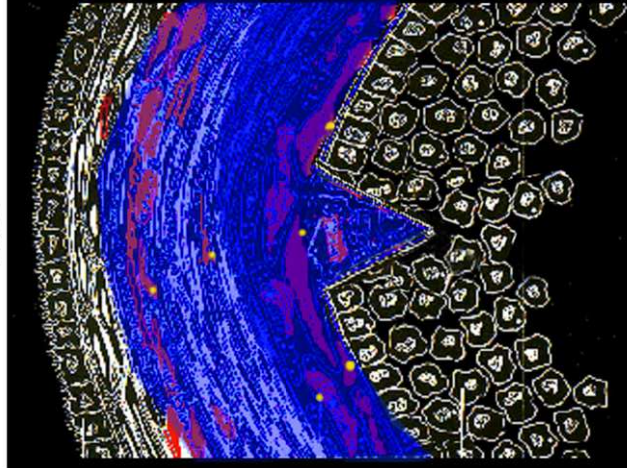
18h hCG

*Peri-ovulatory follicles*

*late*

*early*

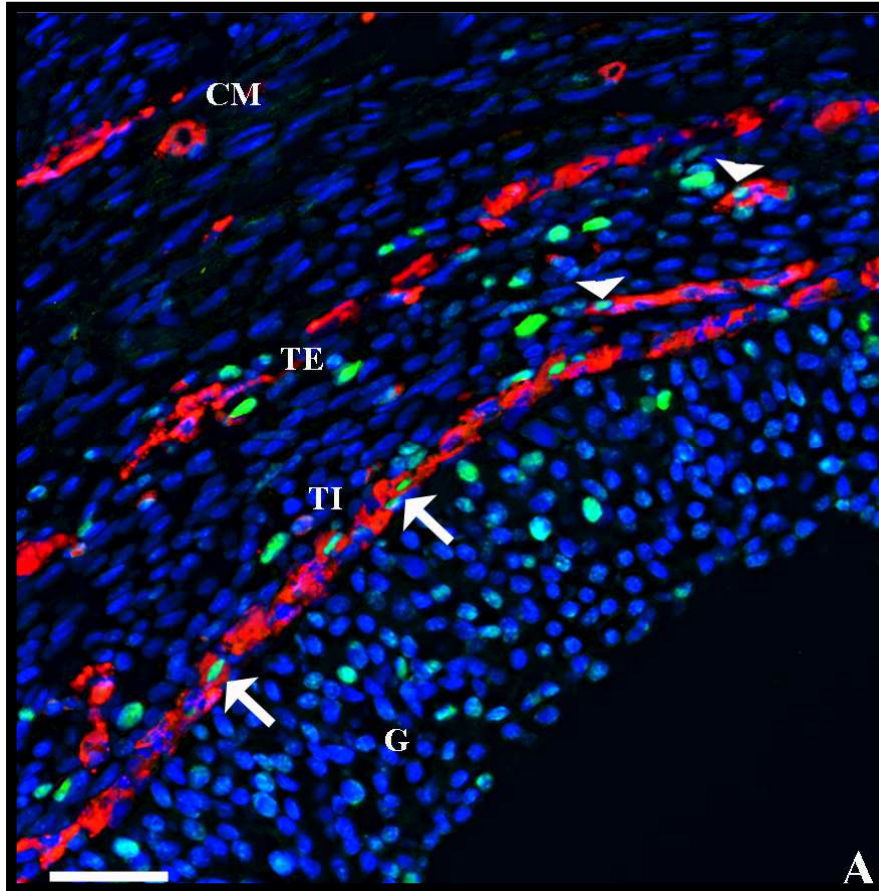
*Dominant follicle*



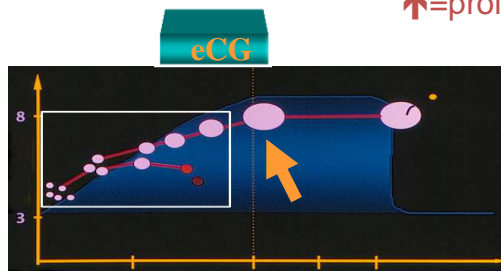
# PREOVULATORY FOLLICLES

⇨ vWF Ki-67 DAPI

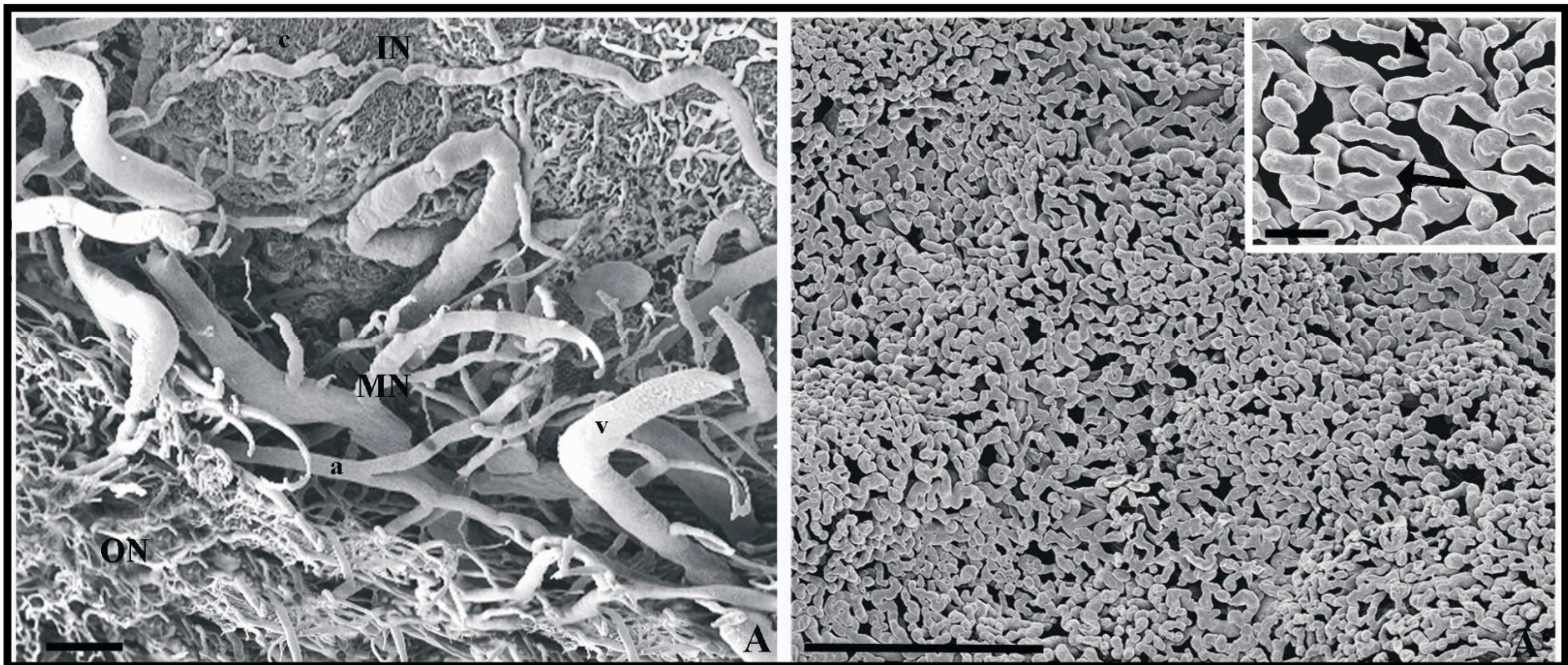
α-SMA vWF



**LEGEND:** G= granulosa cells, TI= theca interna, TE= theca externa, CM=capsule of smooth muscular fibres,  
 ↑=proliferating endothelial cells in the TI, ▲= proliferating endothelial cells in the TE



# PREOVULATORY FOLLICLES

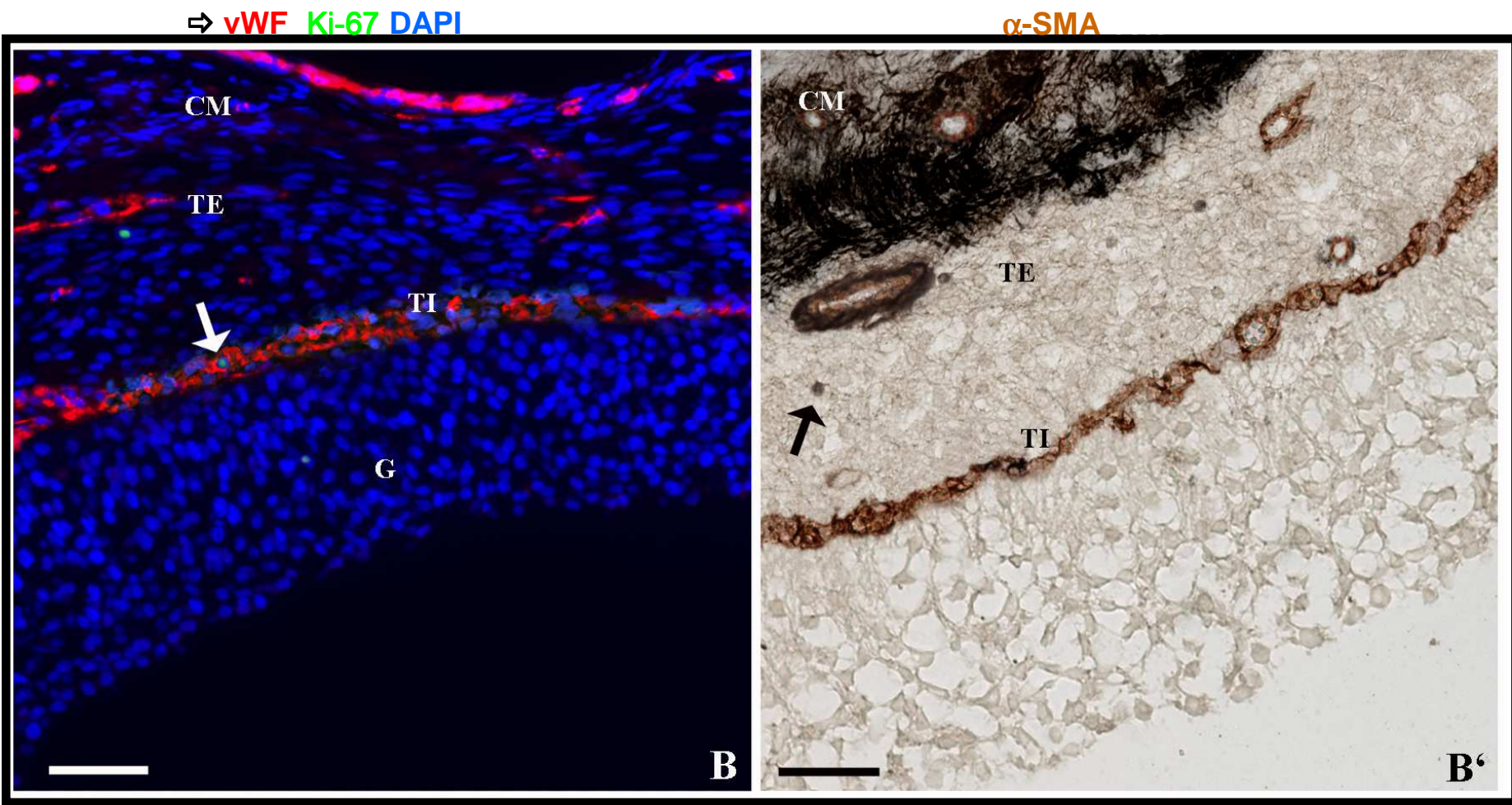


c= capillaries, v= veins, a= arterioles, IN, MN and ON = inner, middle, and outer network, r= resin leakage artifacts,  $\hat{u}$ = sprouting,  $\Delta$ = budding,  $*$ = infolding-intussusception

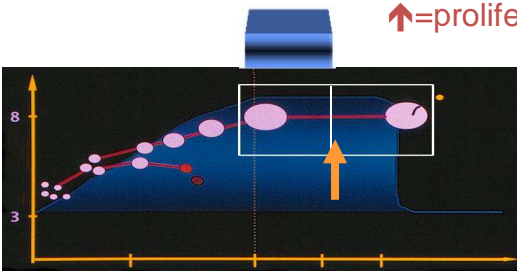
Bar= 100  $\mu$ m

Bar in insert panel= 25  $\mu$ m

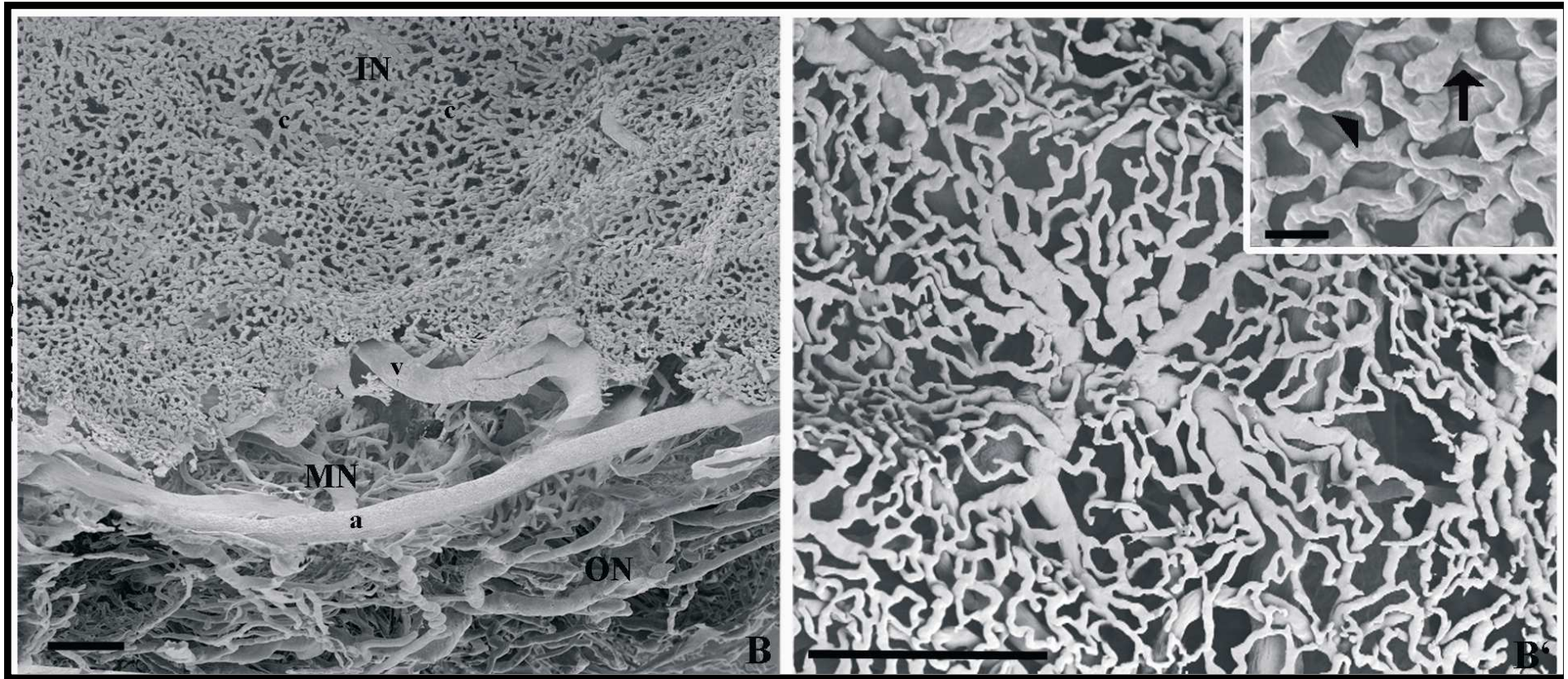
# PERIOVULVATORY FOLLICLES (EARLY)



**LEGEND:** G= granulosa cells, TI= theca interna, TE= theca externa, CM=capsule of smooth muscular fibres,  
↑=proliferating endothelial cells in the TI, ↑= single α-SMA immunopositive cells



## PERIOVULVATORY FOLLICLES (EARLY)

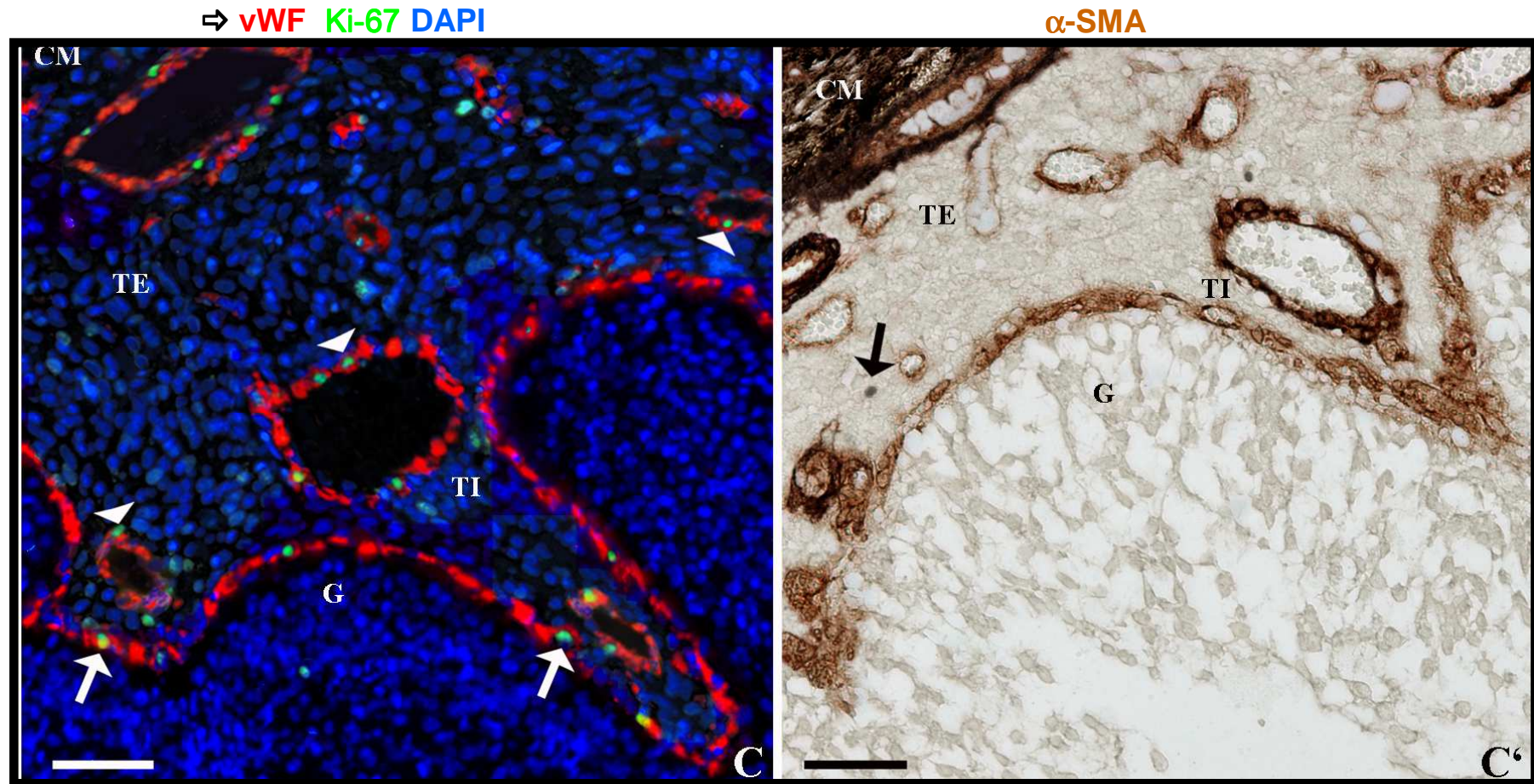


c= capillaries, v= veins, a= arterioles, IN, MN and ON = inner, middle, and outer network, r= resin leakage artifacts,  $\hat{u}$ = sprouting,  $\triangle$ = budding,  $*$ = infolding-intussusception

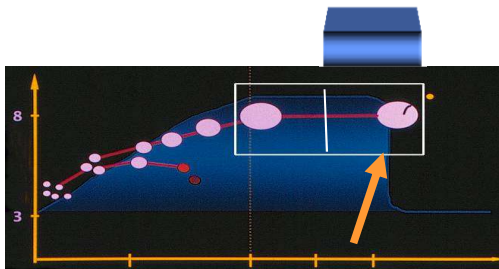
Bar= 100  $\mu$ m

Bar in insert panel= 25  $\mu$ m

# PERIOVULVATORY FOLLICLES (LATE)

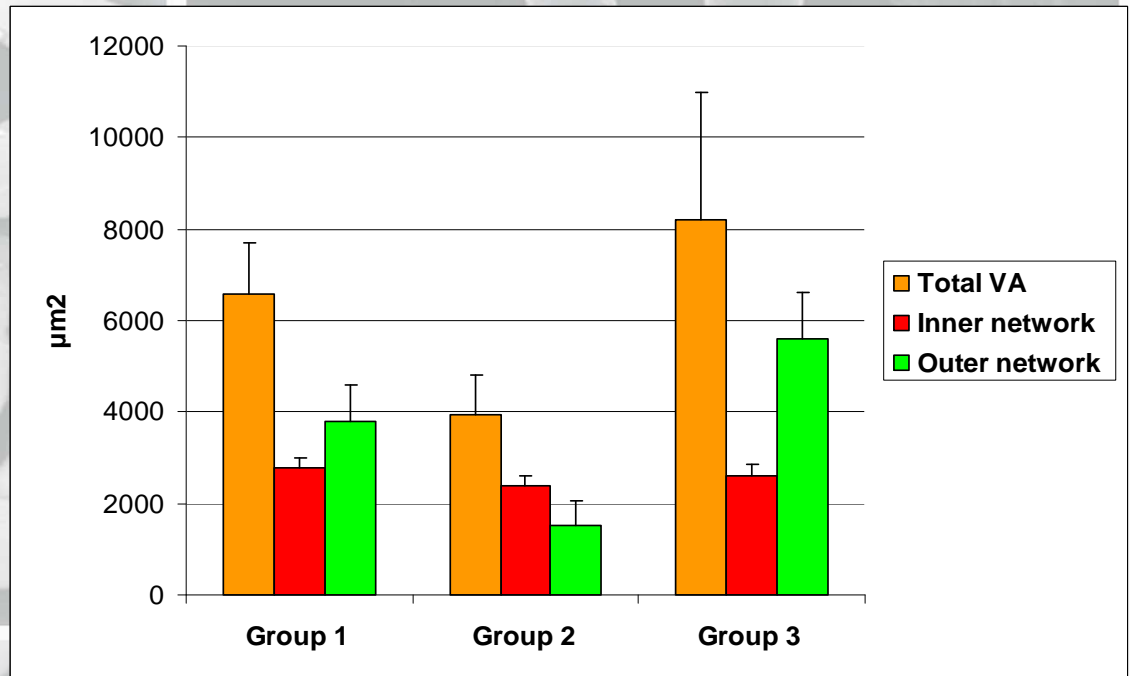


**LEGEND:** G= granulosa cells, TI= theca interna, TE= theca externa, CM=capsule of smooth muscular fibers, ↑=proliferating endothelial cells in the TI, ↑= single α-SMA immunopositive cells, ▲ = proliferating endothelial cells in the TE



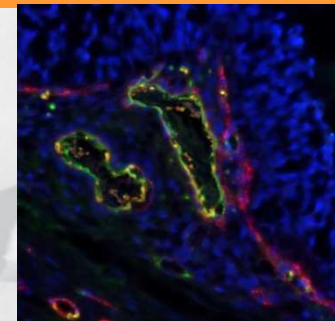
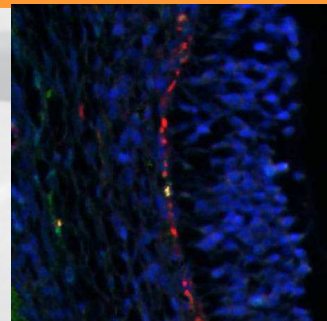
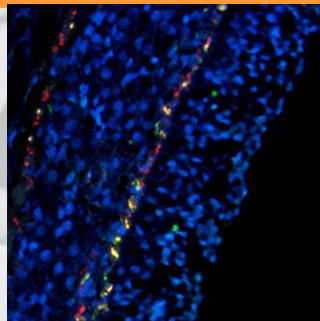


**VESSELS DIAMETER: P<0.05**



**VASCULAR AREA (VA)**

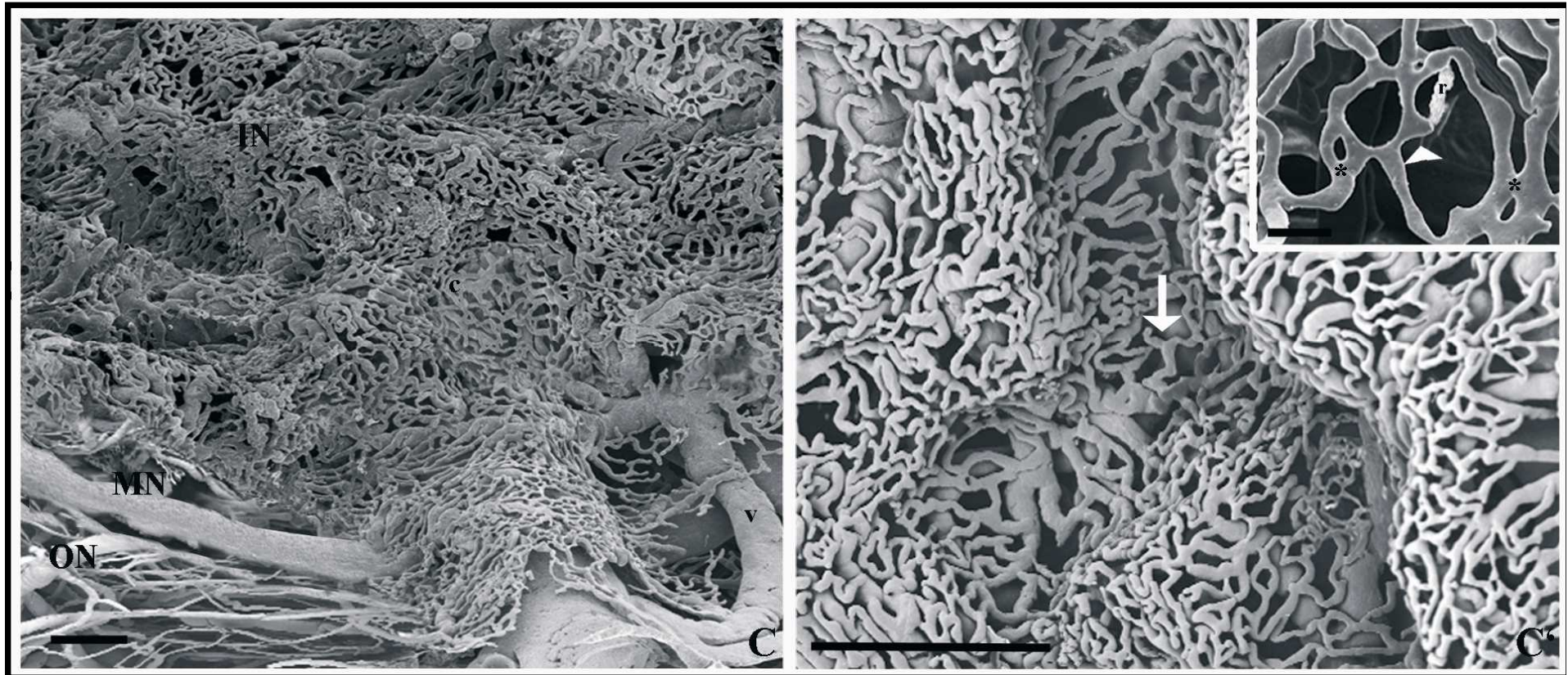
	<b>60h-eCG</b>	<b>18h-hCG</b>	<b>36h-hCG</b>
<b>EPI (%)</b>	11.43 ± 3.11 <sup>a</sup>	0.35 ± 0.24 <sup>b</sup>	14.28 ± 2.98 <sup>a</sup>



C

D

# PERIOVULVATORY FOLLICLES (LATE)



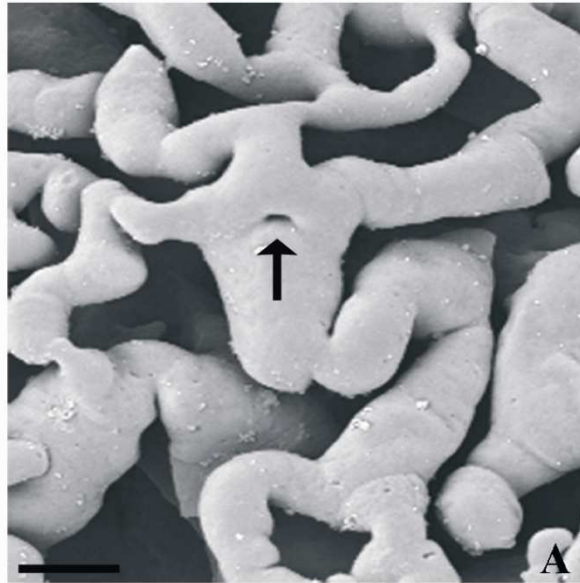
c= capillaries, v= veins, a= arterioles, IN, MN and ON = inner, middle, and outer network, r= resin leakage artifacts, ↑= sprouting, △= budding, \*= infolding-intussusception

Bar= 100  $\mu$ m

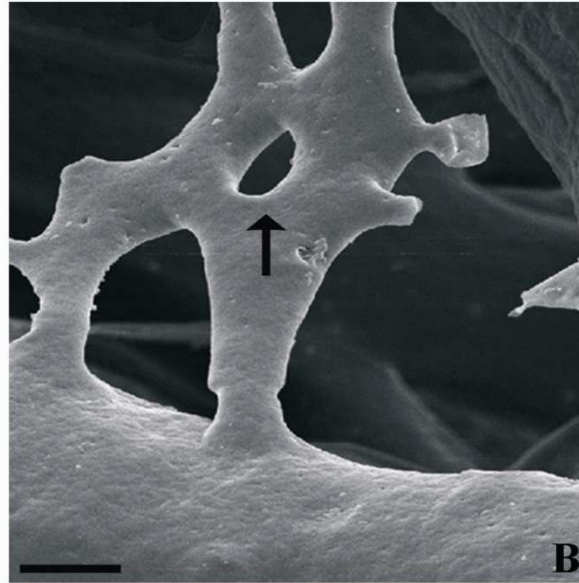
Bar in insert panel= 25  $\mu$ m

# PERIOVULVATORY FOLLICLES (LATE)

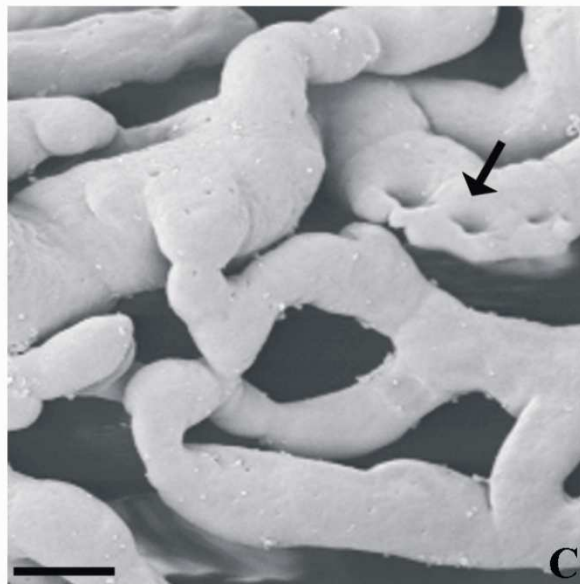
A=  
intussusceptive  
branching  
remodelling



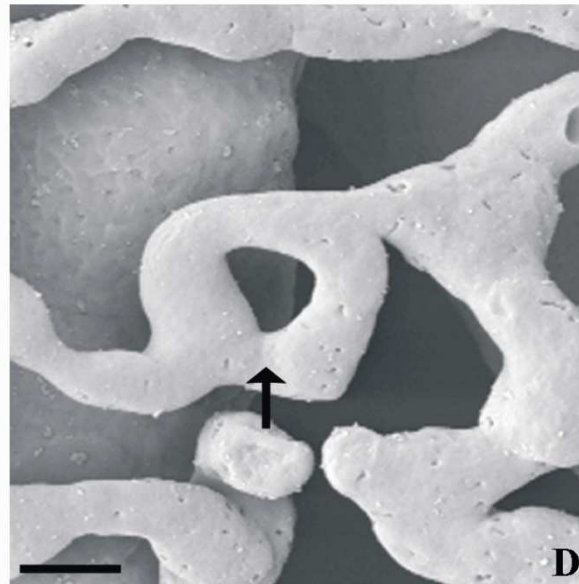
B=  
intussusceptive  
branching  
remodelling



C=  
intussusceptive  
arborisation

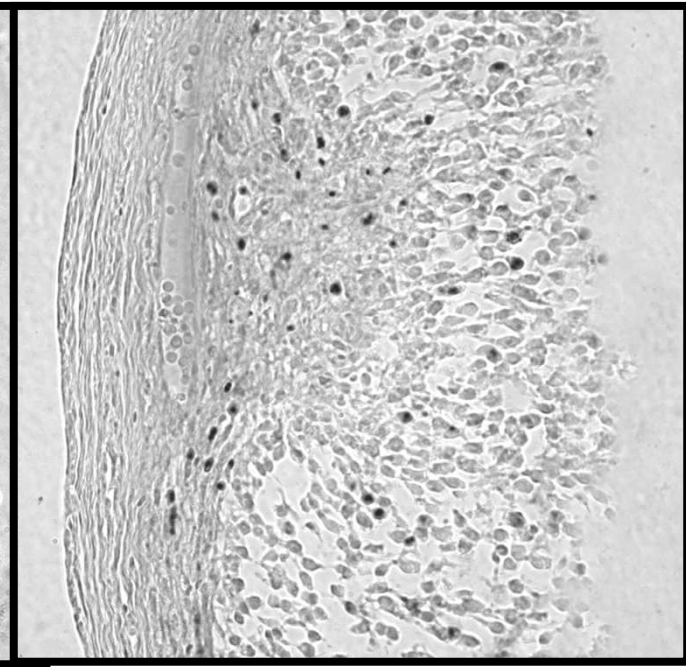
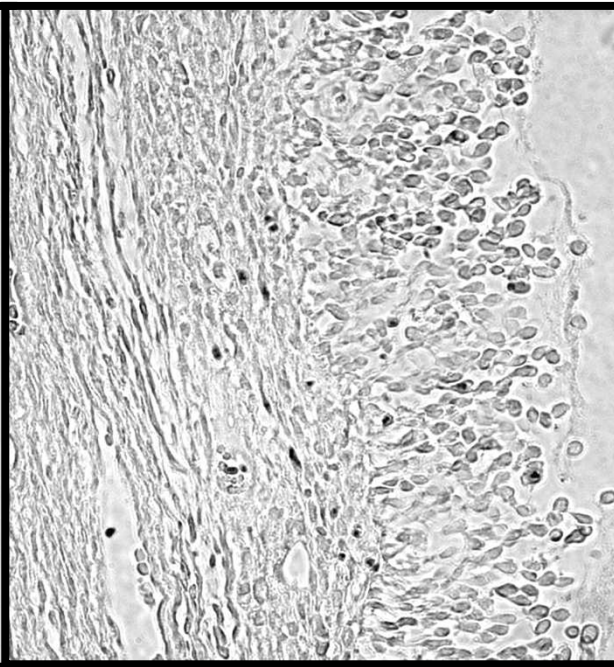
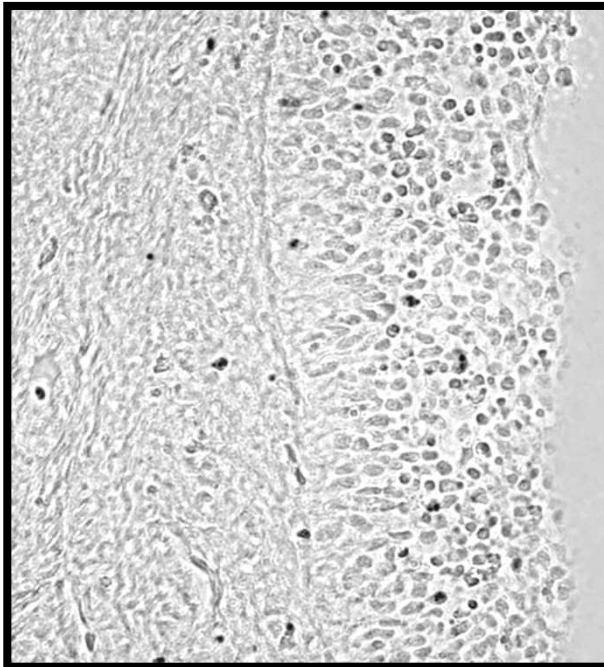
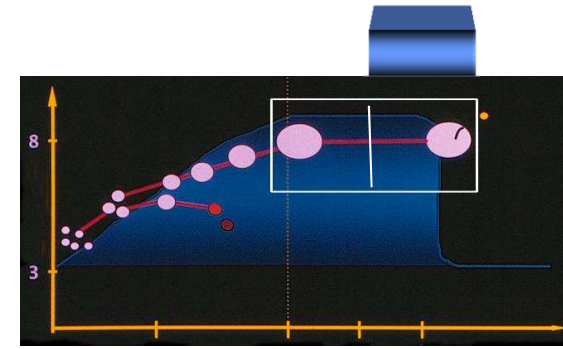
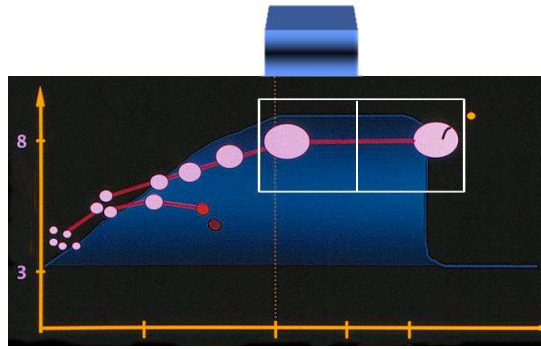
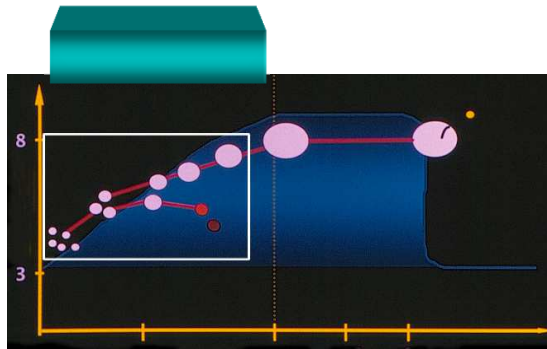


D=  
intussusceptive  
microvascular  
growth

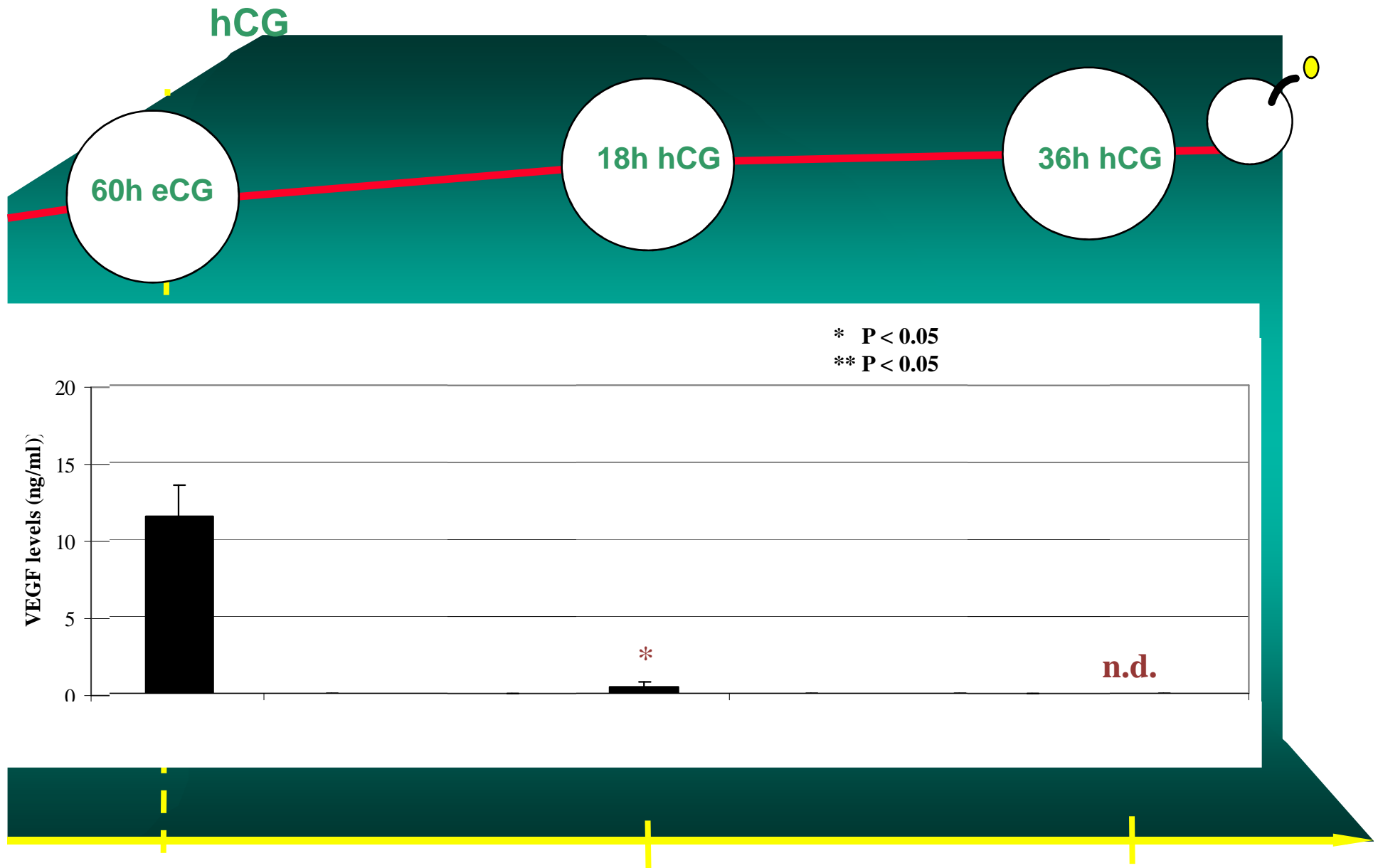


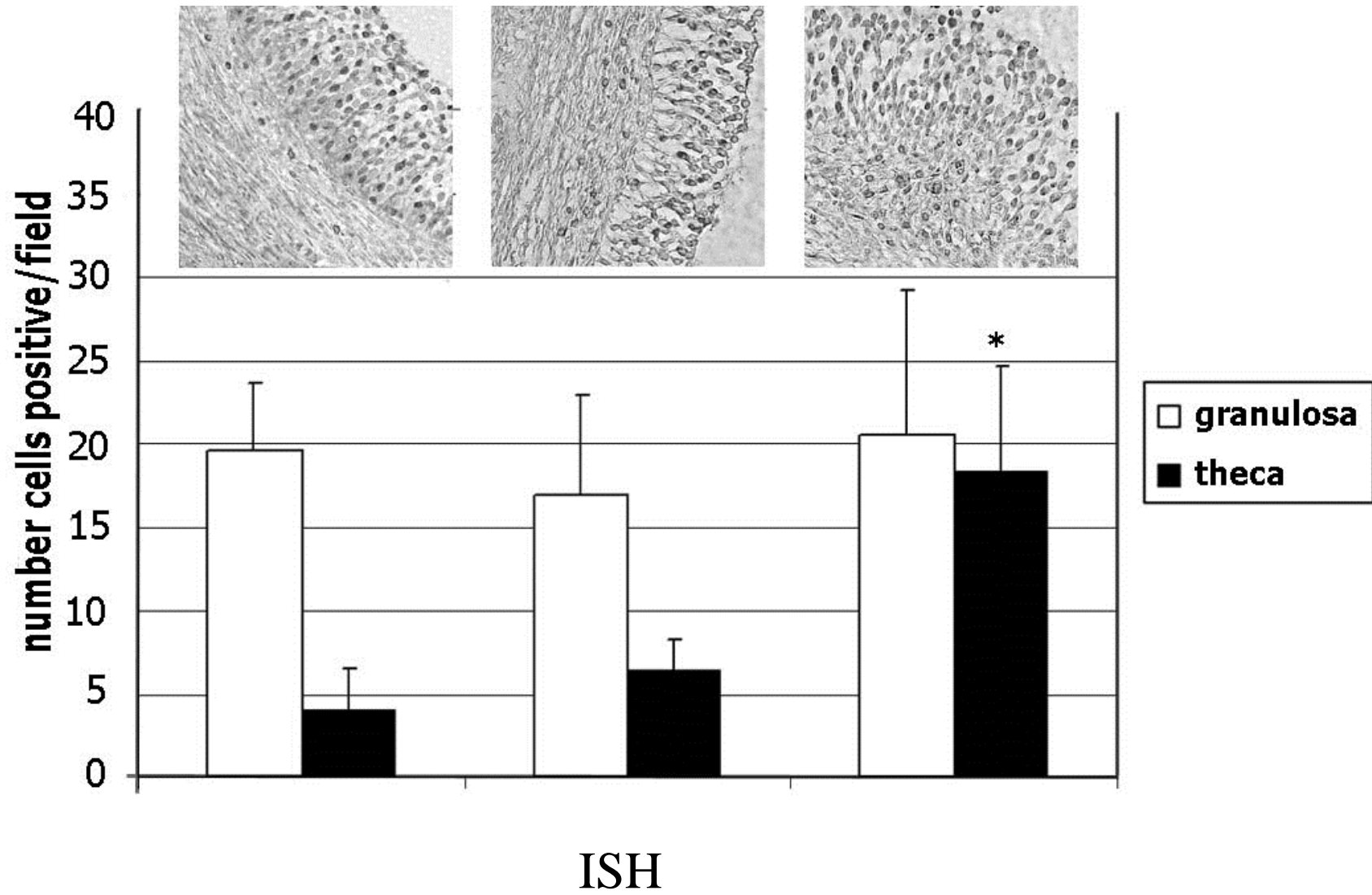
Bar= 100  $\mu$ m

# VEGF localization

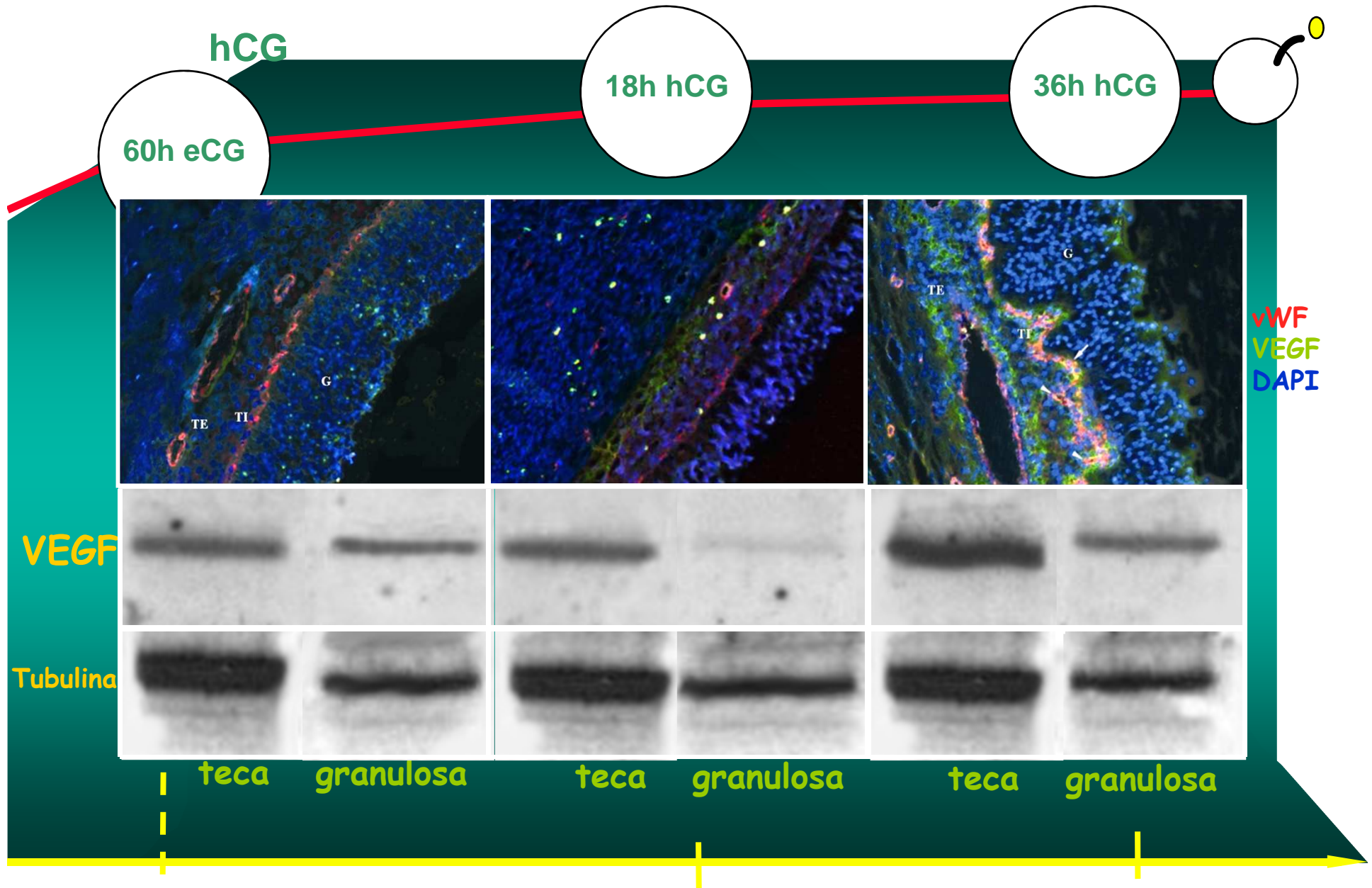


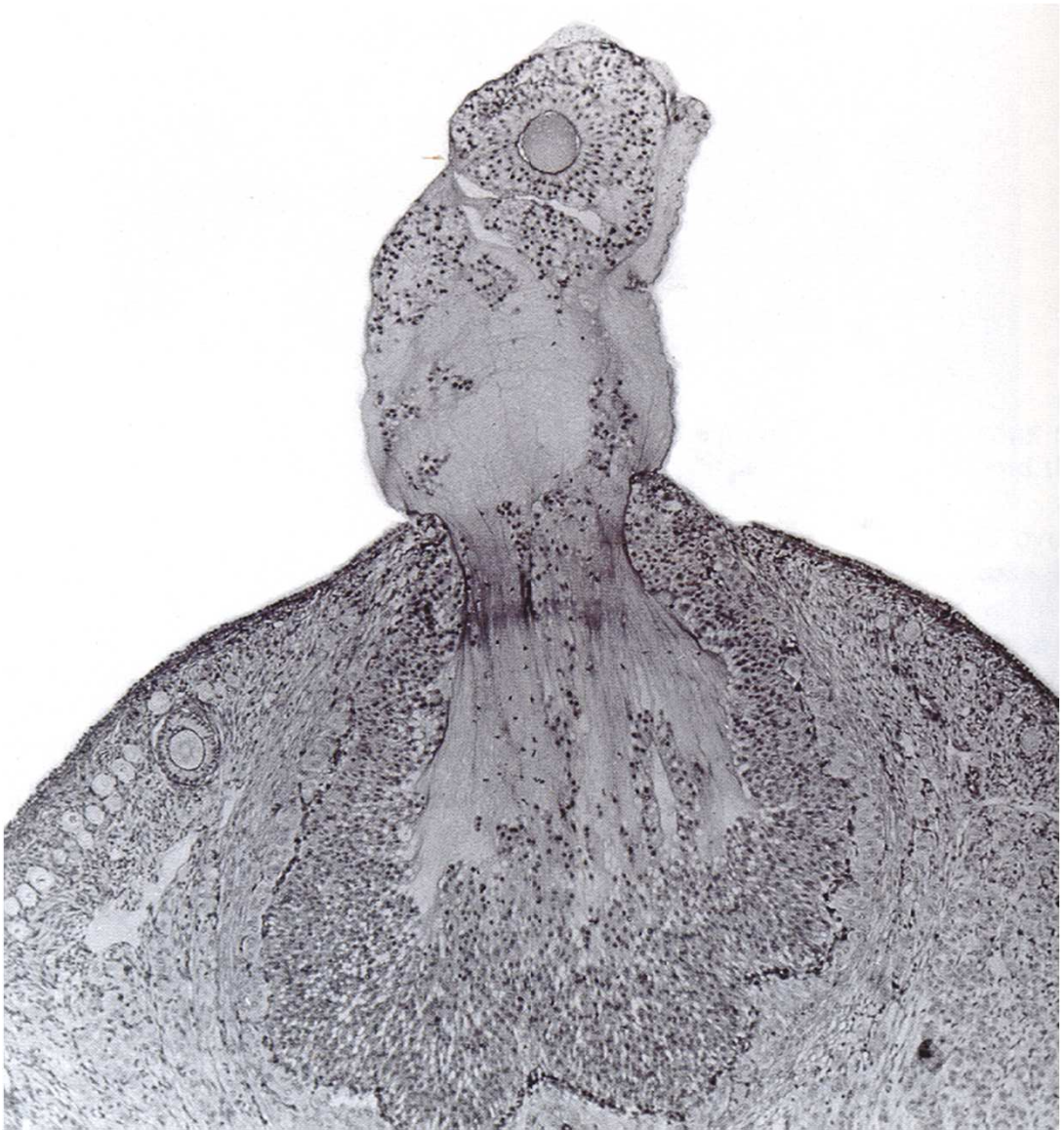
# VEGF in follicular fluid



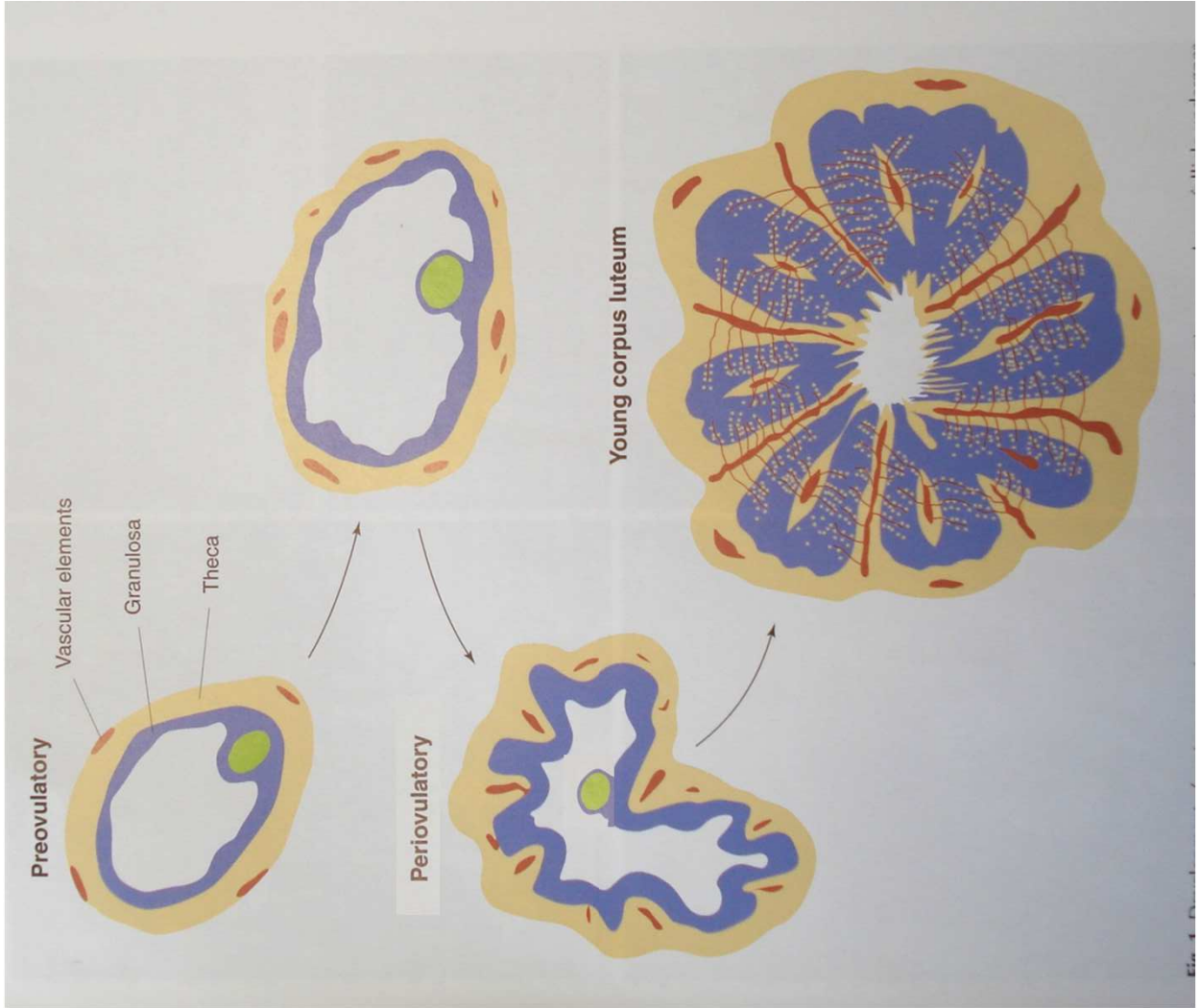


# VEGF

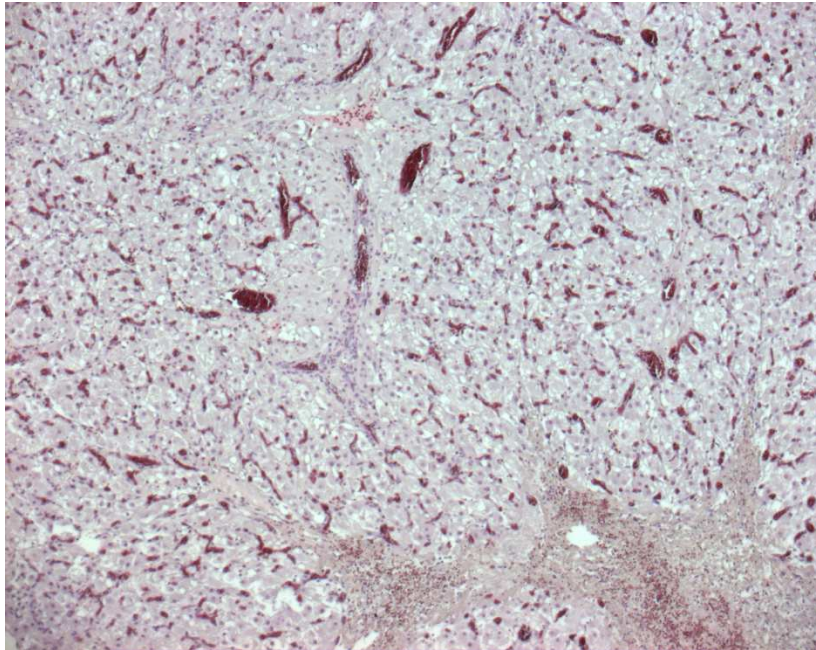






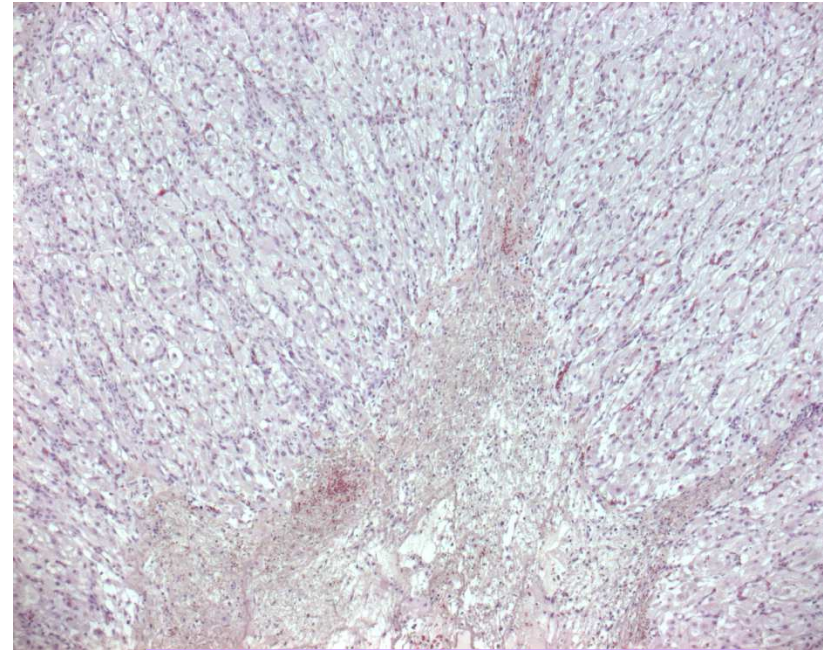


# Corpus luteum (5gg)



VA ( $\mu\text{m}^2$ ) 634.79  $\pm$  125.46

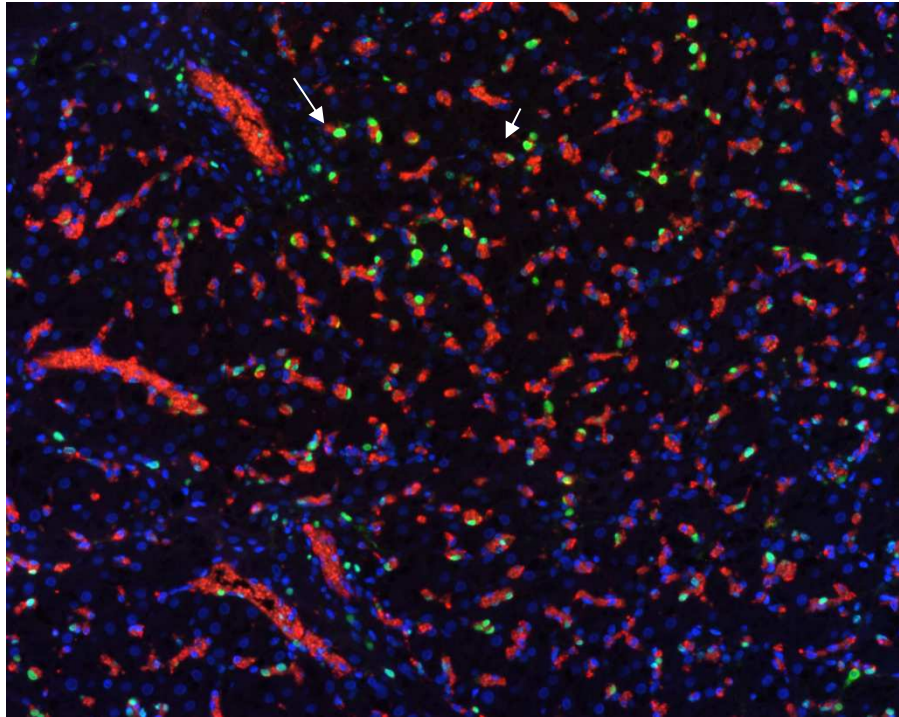
CTR



VA ( $\mu\text{m}^2$ ) 223.45  $\pm$  98.21 \*

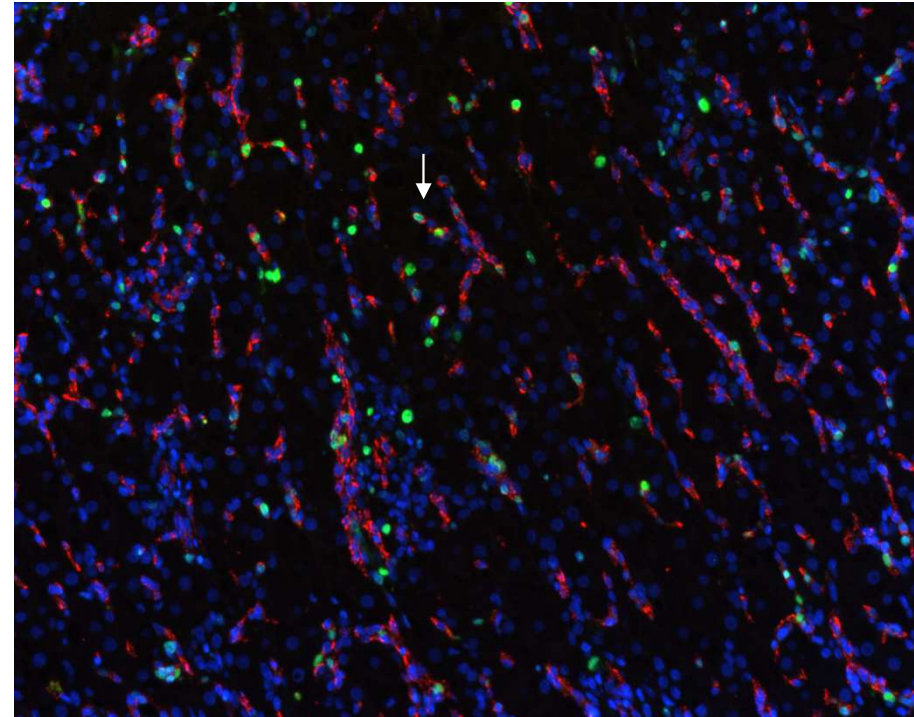
\* P < 0.001

# Corpus luteum (5gg)



PI (%)

13.42 ± 2.01



PI (%)

6.14 ± 2.28

CTR

FvW-Ki-67-DAPI