# Let's now look at the Insulin-like Growth Factor 2 gene

Questions

1. Design the status of methylation of IGF2 gene in the andro (blue genome) and gyno (red genome) embryo. When the gene is methylated insert a **black box** when it is un-methylated a **white box** as indicated in the normal fetus.

2. Explain the levels of IGF2 proteins in normal, androgenota and gynogenota fetus.

3. Link the effect of the abnormal transcription to the fetus developmental defect observed during the Surani experiment in andro and gynogenota fetuses.

trophoblast

Igf2   Igf2

NORMAL EMBRYO

AN

GY
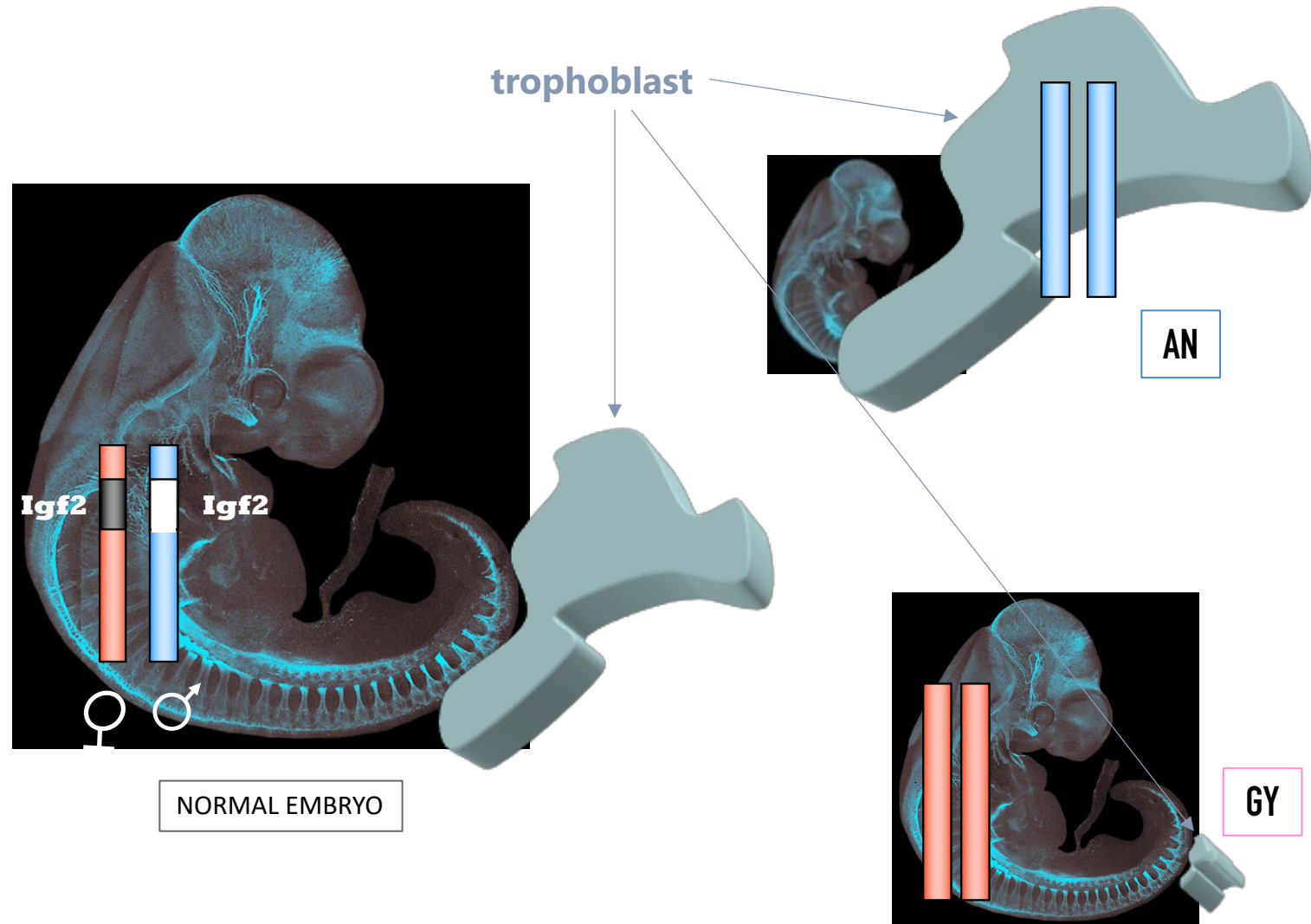
# Telomeres lenght influences embryo development

GROUP NUM

Premise

The group of the Prof. Blasco demonstrated for the first time that the oocyte used in ART have telomeres with sizes strongly related to the age of the patient

Oocyte derived from women of <30 years old have normal sized telomeres

Oocytes derived from women of >45 years old have significantly smaller telomeres structures

Question

1) Could you discuss which potential effects may take place when oocytes displaying a limited elengation of telomeres are enrolled in fertilization and embryo development processes?

2) Could you speculate about the mechanims involved in the smaller dimension of telomeres in women in advanced stage of reproduction (>45 years old)?
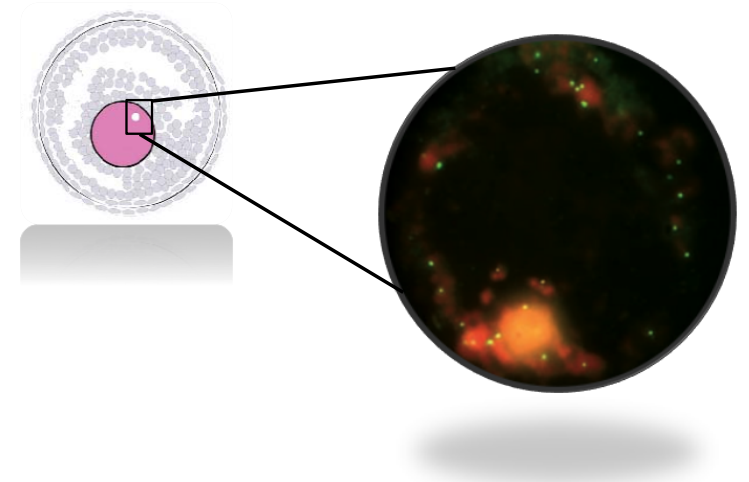
Am J Obstet Gynecol. 2005 Apr;192(4):1256-60; discussion 1260-1.
Telomere length predicts embryo fragmentation after in vitro fertilization in women--toward a telomere theory of reproductive aging in women.
Keefe DL1, Franco S, Liu L, Trimarchi J, Cao B, Weitzen S, Agarwal S, Blasco MA.