

EMBRYOLOGY PRACTICAL LECTURE - 3 - CLEAVAGE AND IMPLANTATION

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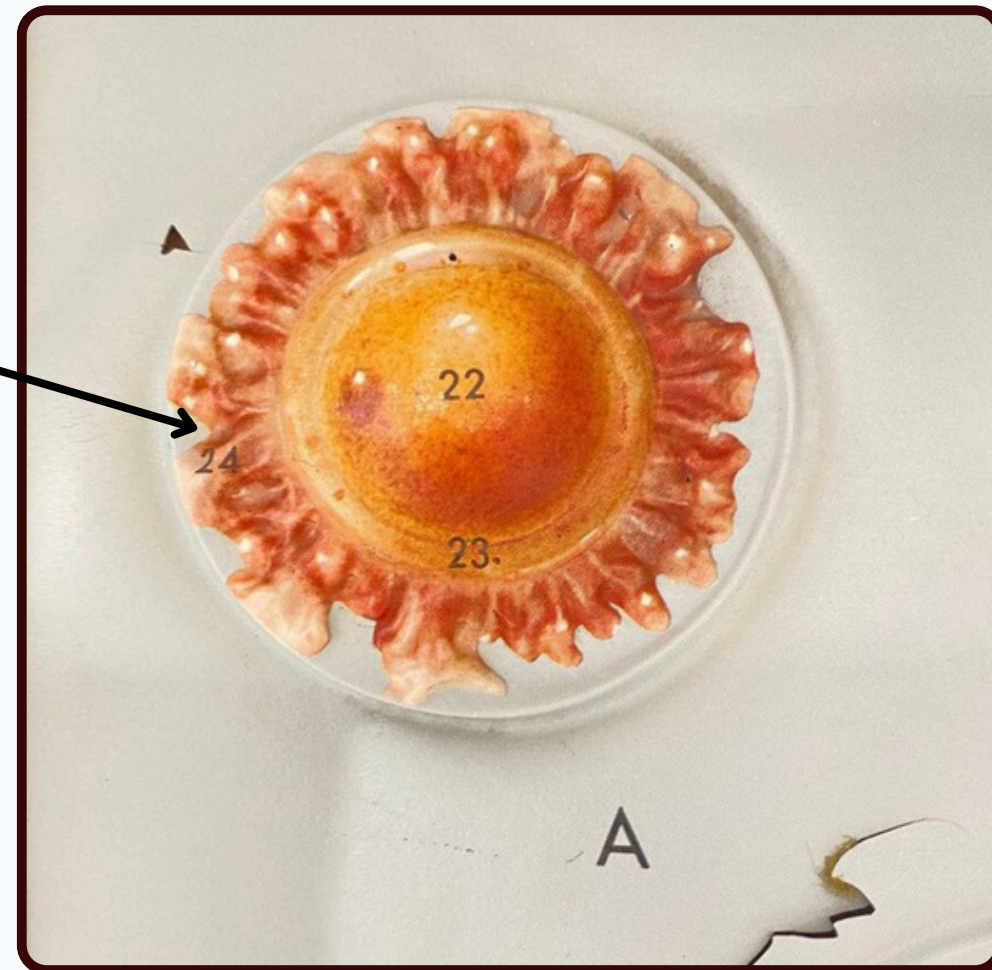
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CLEAVAGE AND IMPLANTATION



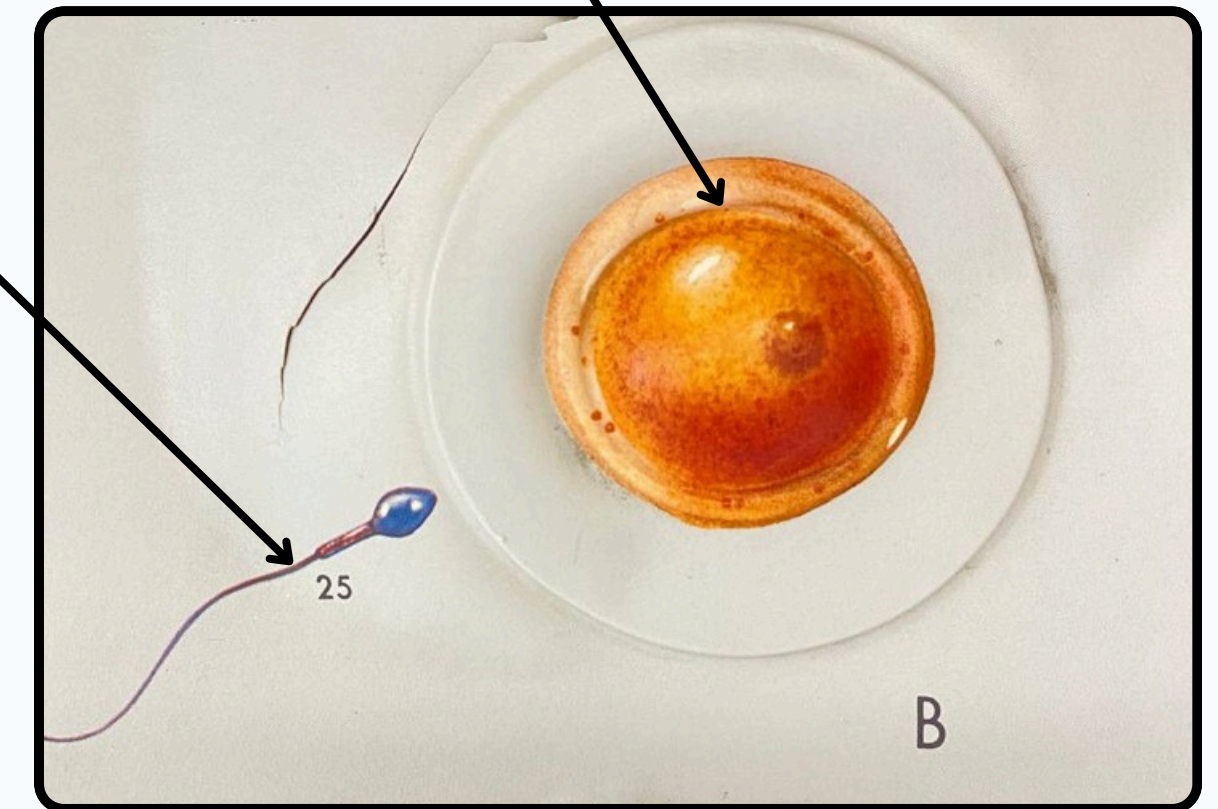
Secondary oocyte (Ovulated)

Consist of : secondary oocyte
Zona pellucida Corona radiata



Sperm

Secondary oocyte

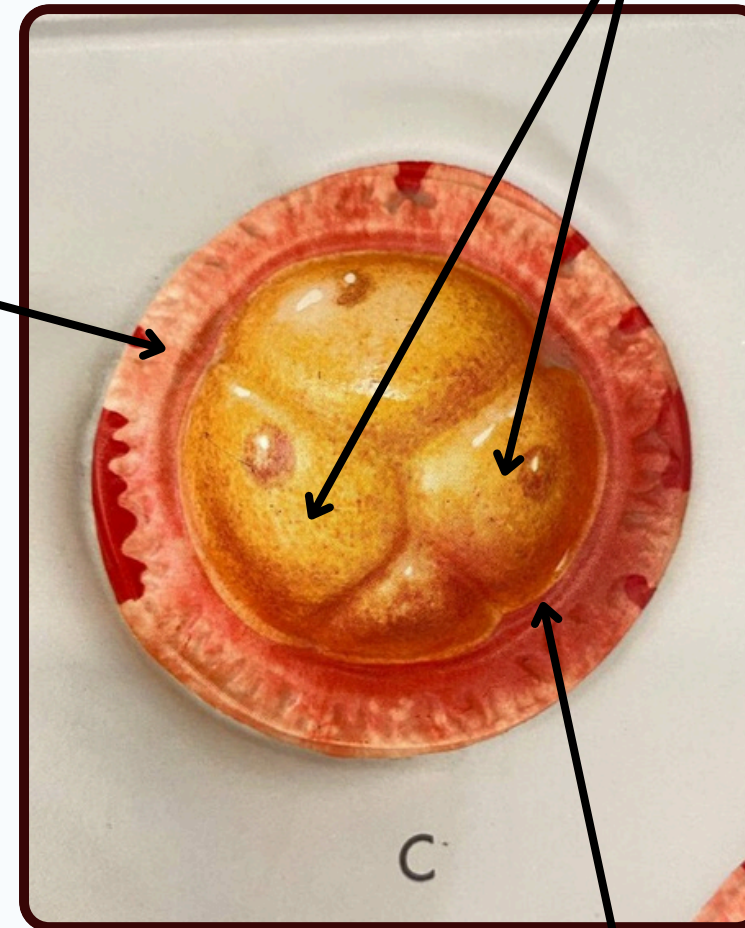


Sperm inter to the cytoplasm of secondary oocyte and fertilization occur, than Zygote (fused two pronuclei male, female) Begins of meiosis II , and determination of sex Finally start the process of cleavage.

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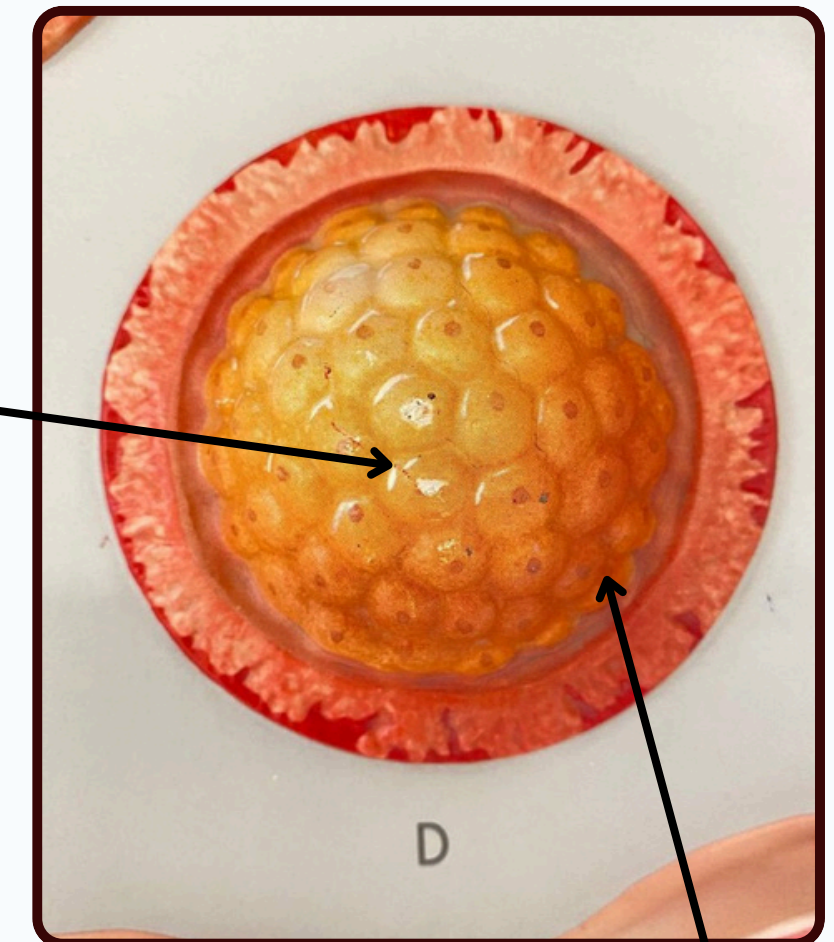


Blastomere



Zona pellucida

Morula



Outer cells

Second stage of cleavage

Consist of 4 cells each cell called blastomere
Still envelope of the zona pellucida
These cells enlarged during implantation and cause rupture of Zona pellucida

Inner mass cells

More of the blastomeres and forming to the compact ball like ,Now it's called Morula which consist of inner mass cells and outer cells complementation of it in 3rd day , in 4th day inter to the uterine cavity and occur implantation beginning in 6th day and end at the end of 7th day (at first week)



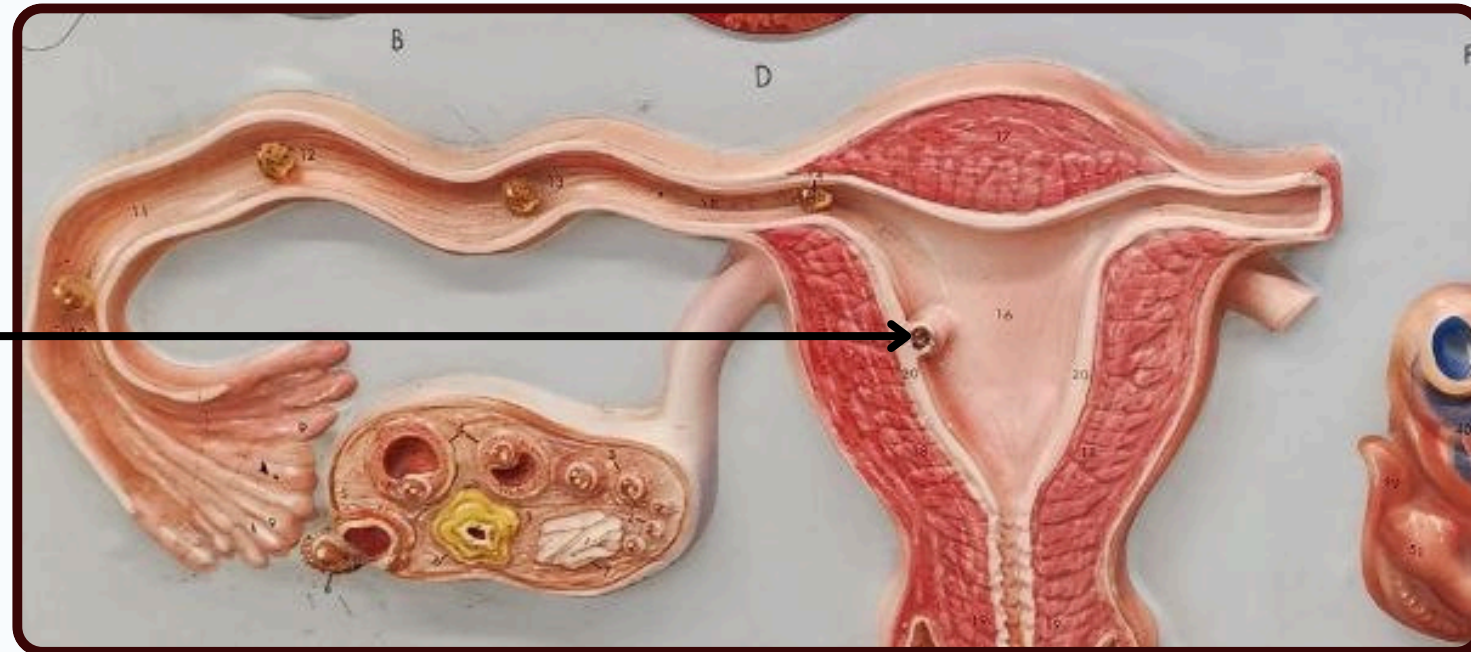
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Implantation

First stage of cleavage

Each cell is called blastomere

More blastomere

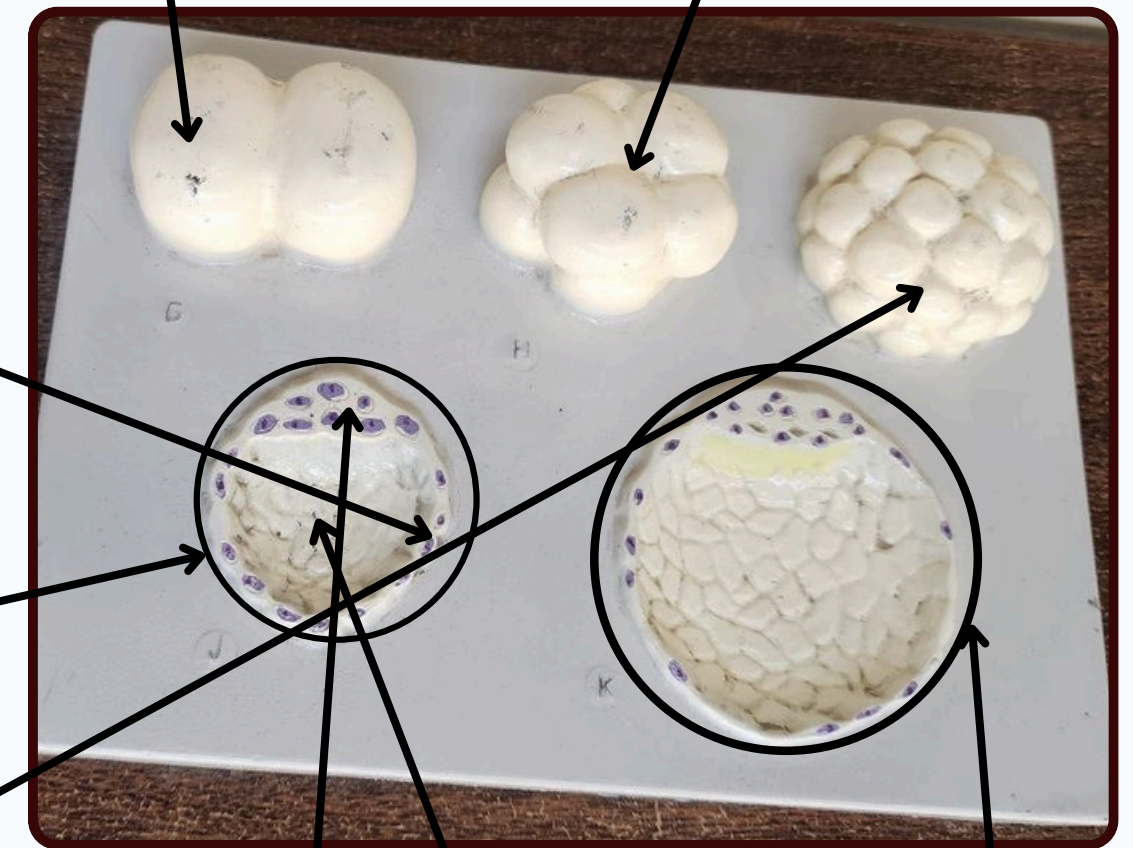


Blastocyst

Consist of :
Embryo blast (inner mass cells)
Blastocel
Trophoblast

Trophoblast

Blastocyst



Compact ball (Morula)

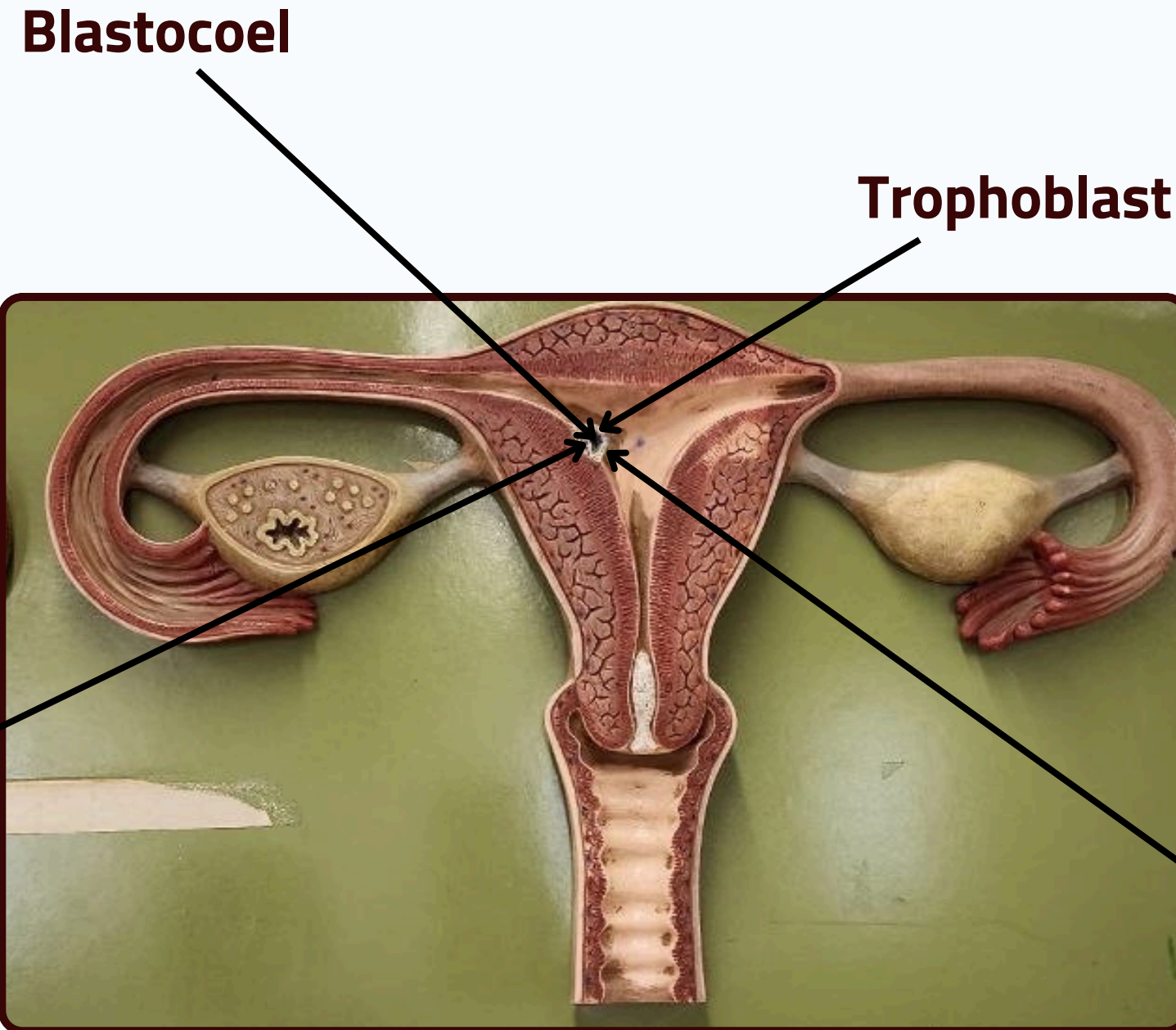
Then fluid inter to it and makes a cavity separate it into inner mass cells (embryo blast) and outer cells (trophoblast)

Blastocel

Inner mass cell (Embryo blast)

More development blastocyst

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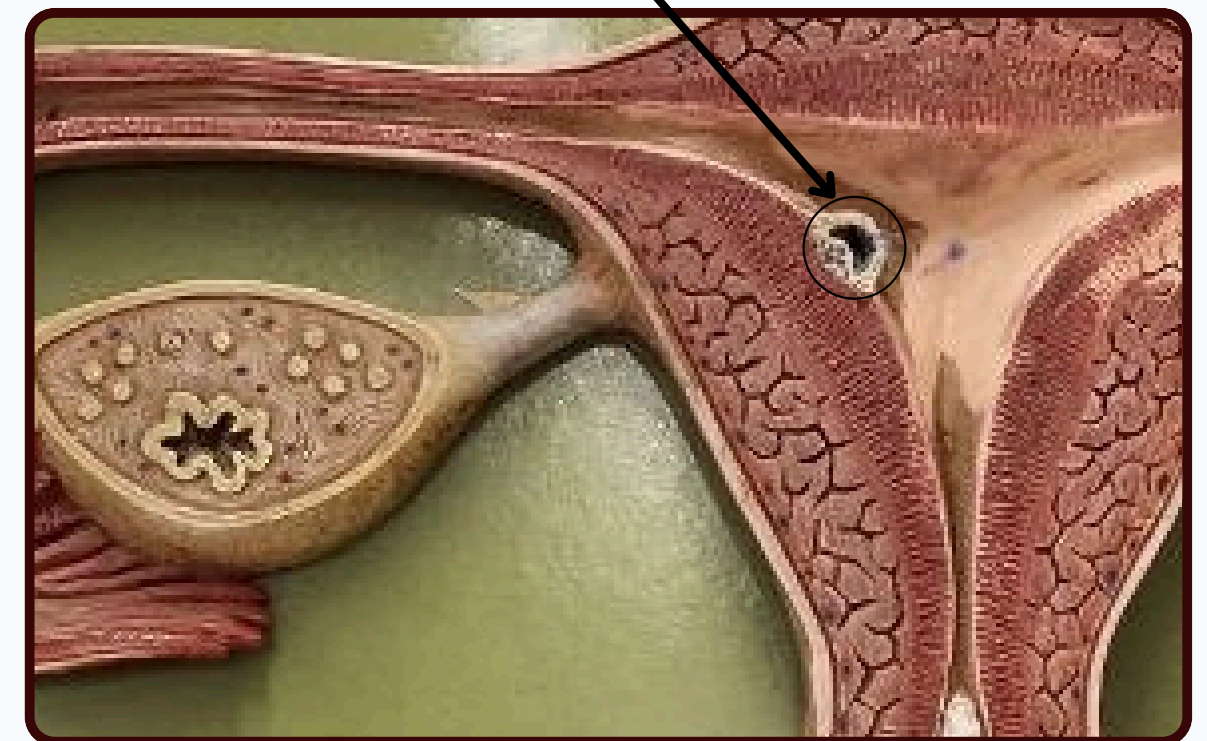
Name this structure and enumerate type of cells ?

Blastocyst consist of :

Embryoblast

Trophoblast

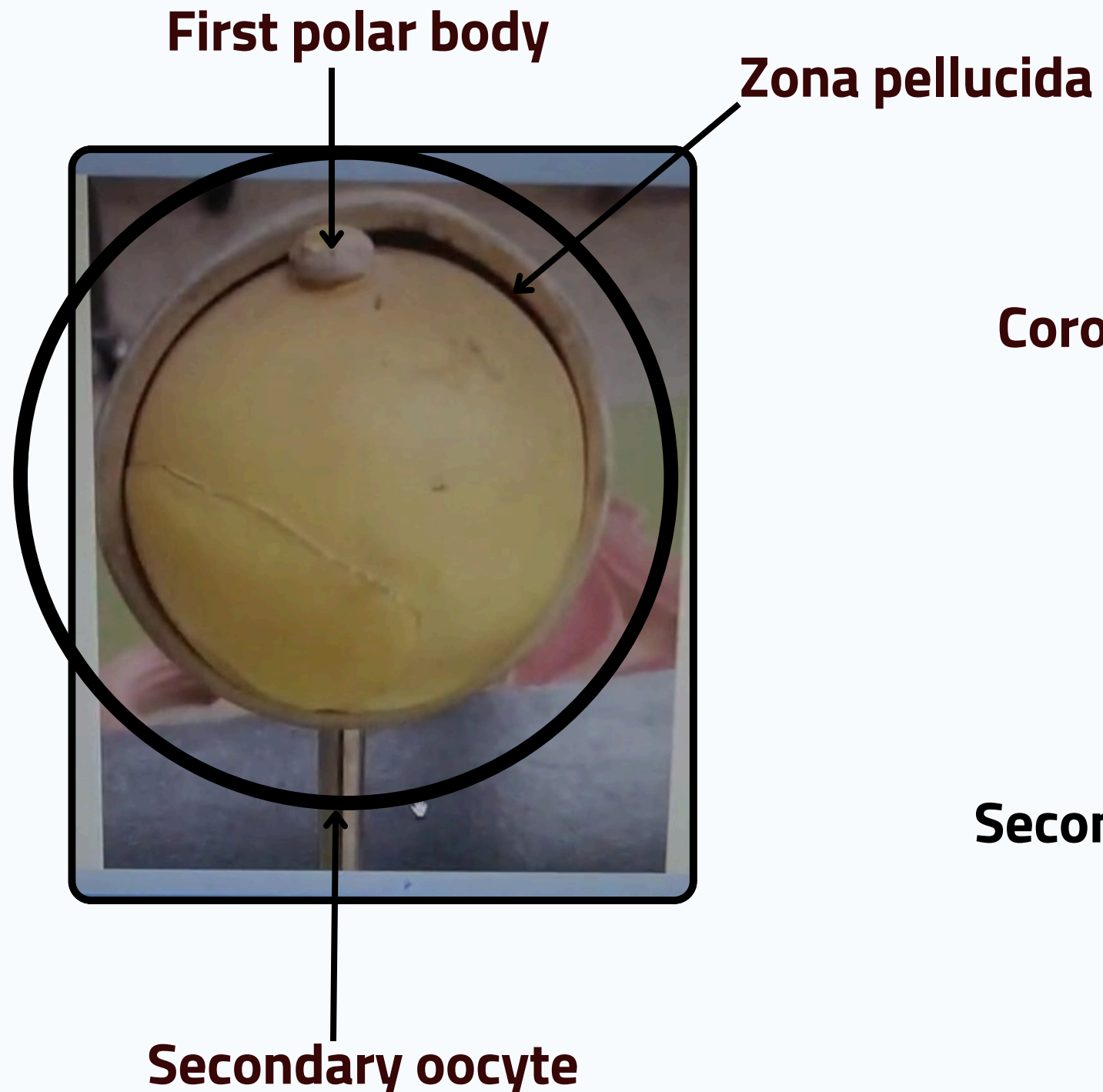
Blastocoel



Inner mass cell
(Embryo blast)

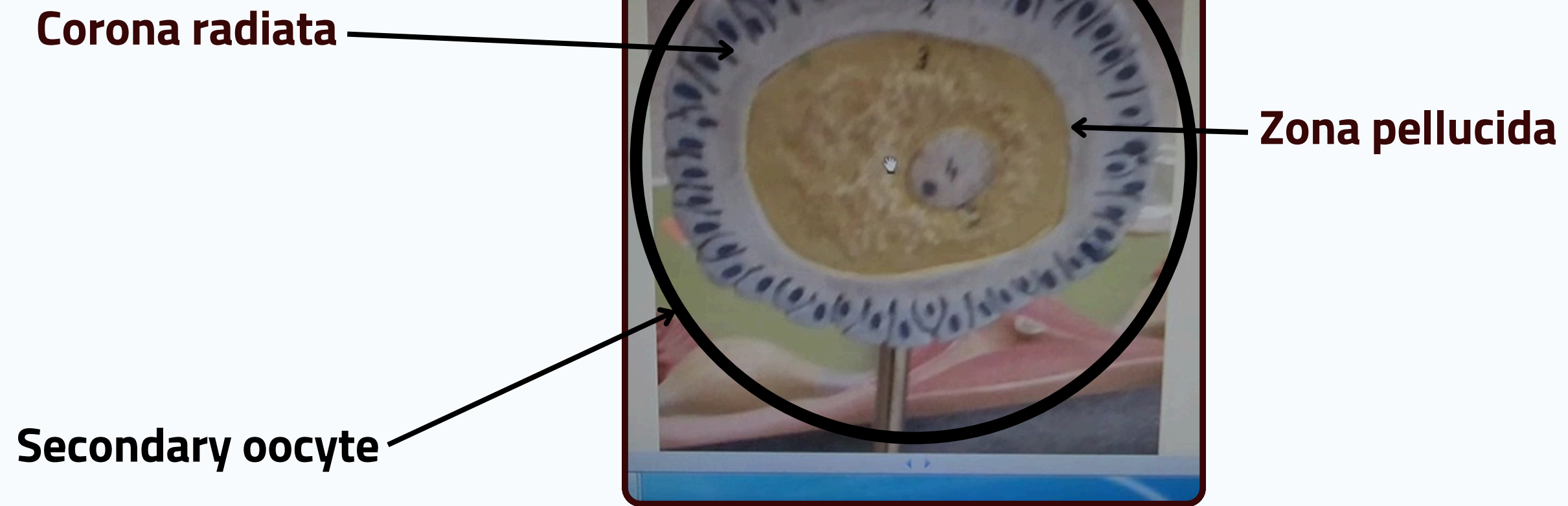
Implantation occurs in the upper part of uterine cavity at the end of 7th day

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Secondary oocyte (ovulated), because of the presence of first polar body, Zona pellucida, secondary oocyte

Cross section of secondary oocyte



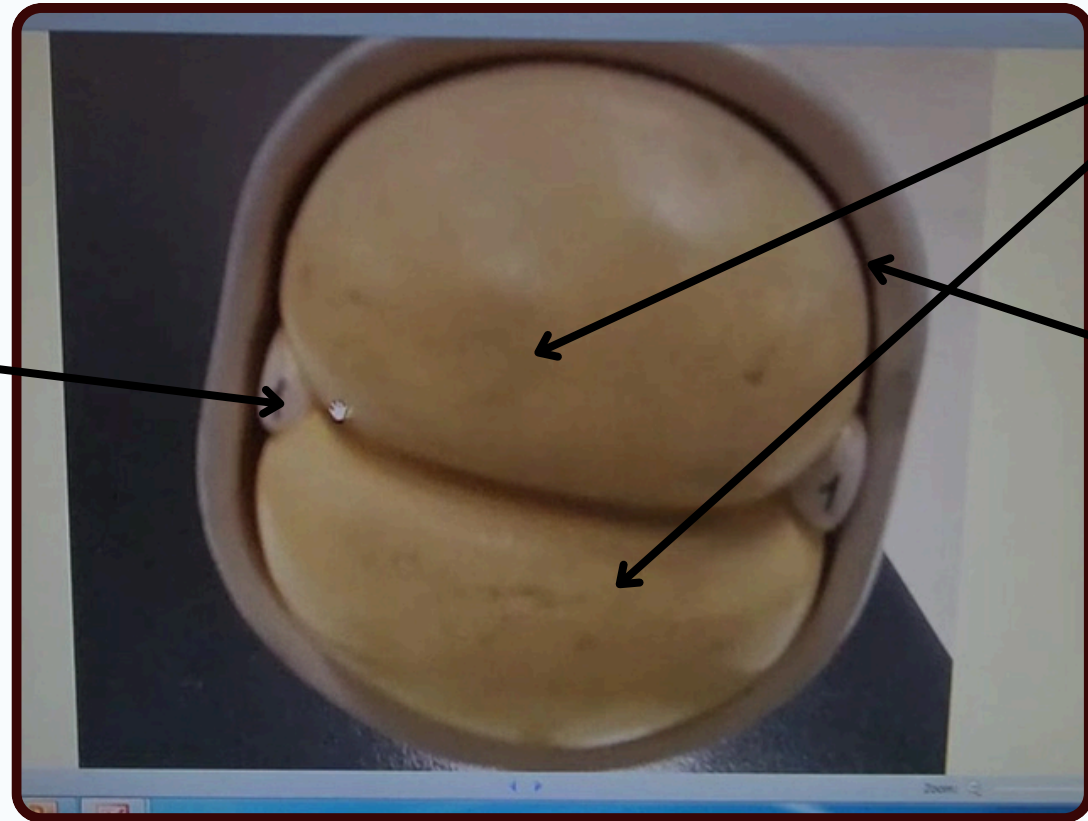
Ovulated of secondary oocyte



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First stage of cleavage

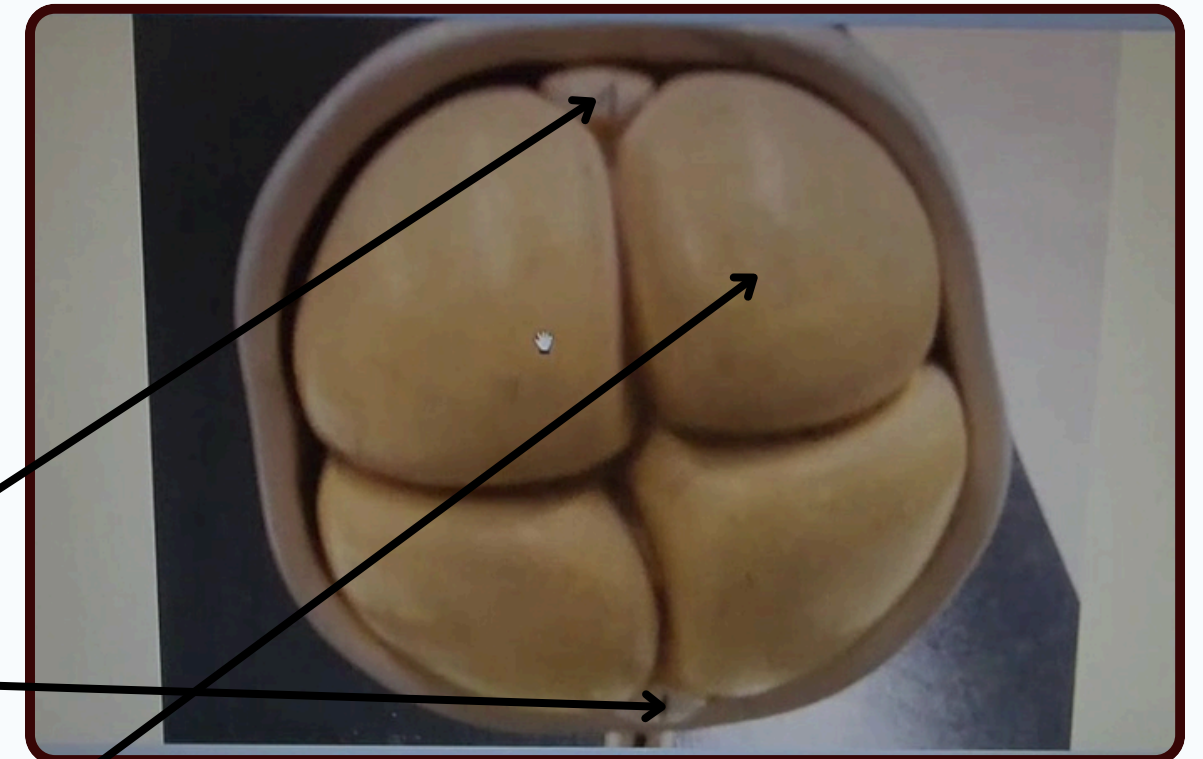


Secondary polar body

Blastomere

Zona pellucida

Second stage of cleavage



First and second polar bodies

Consist of 4 cells each cell called blastomere

Blastomere

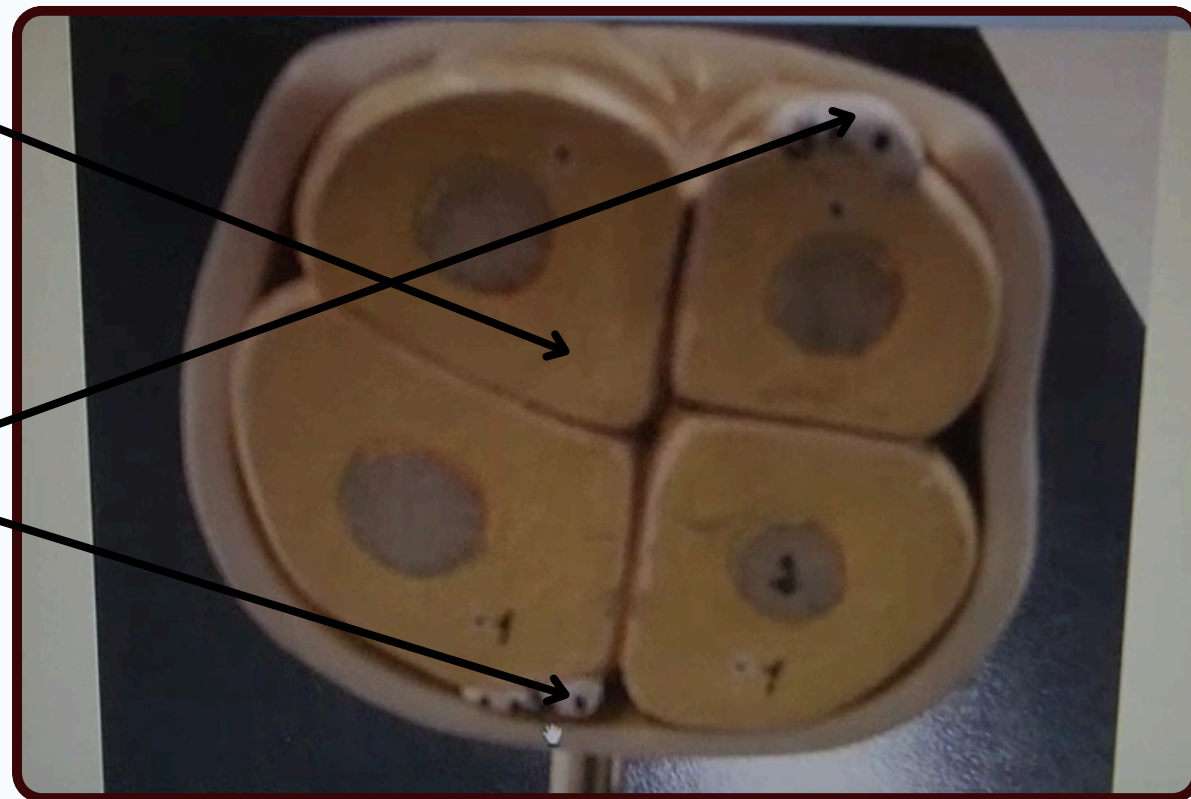
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Cross section of second stage

Blastomere

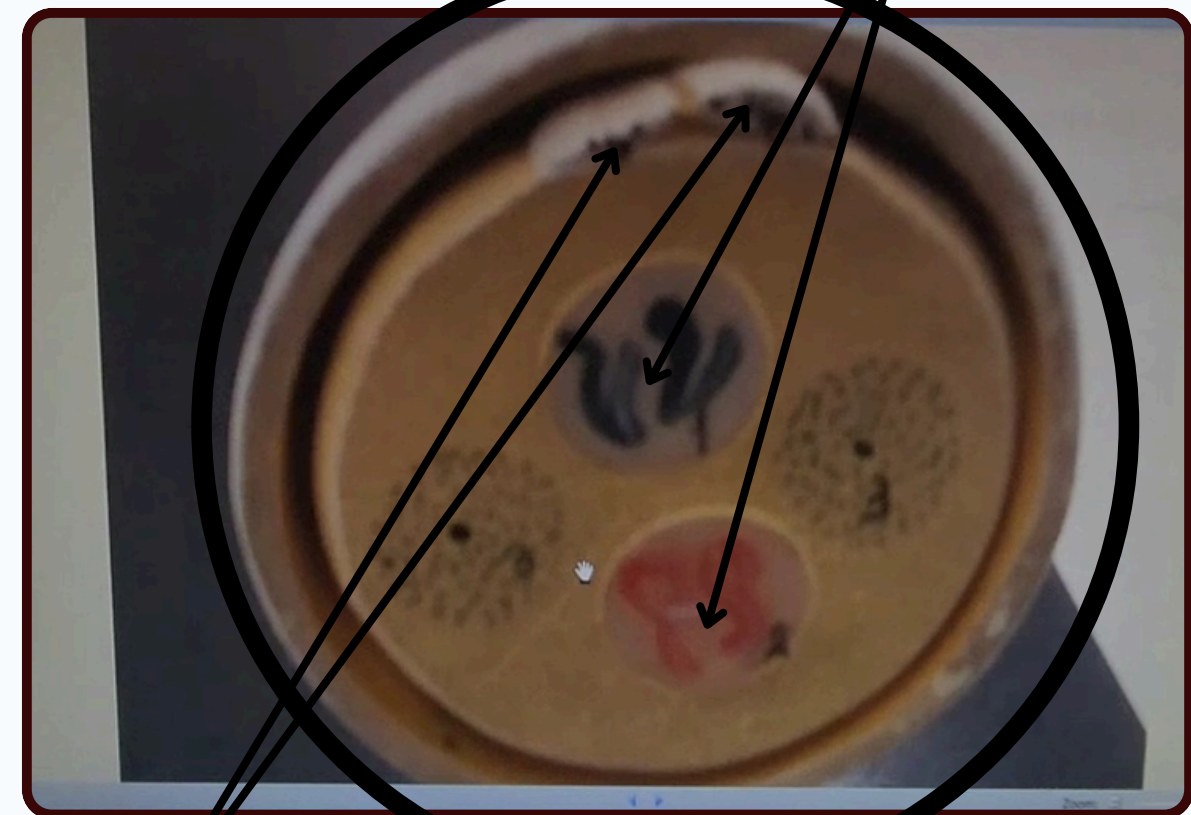
First and second polar bodies



Two pronuclei of male and female

First and second polar bodies

Zygote



THANK YOU

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