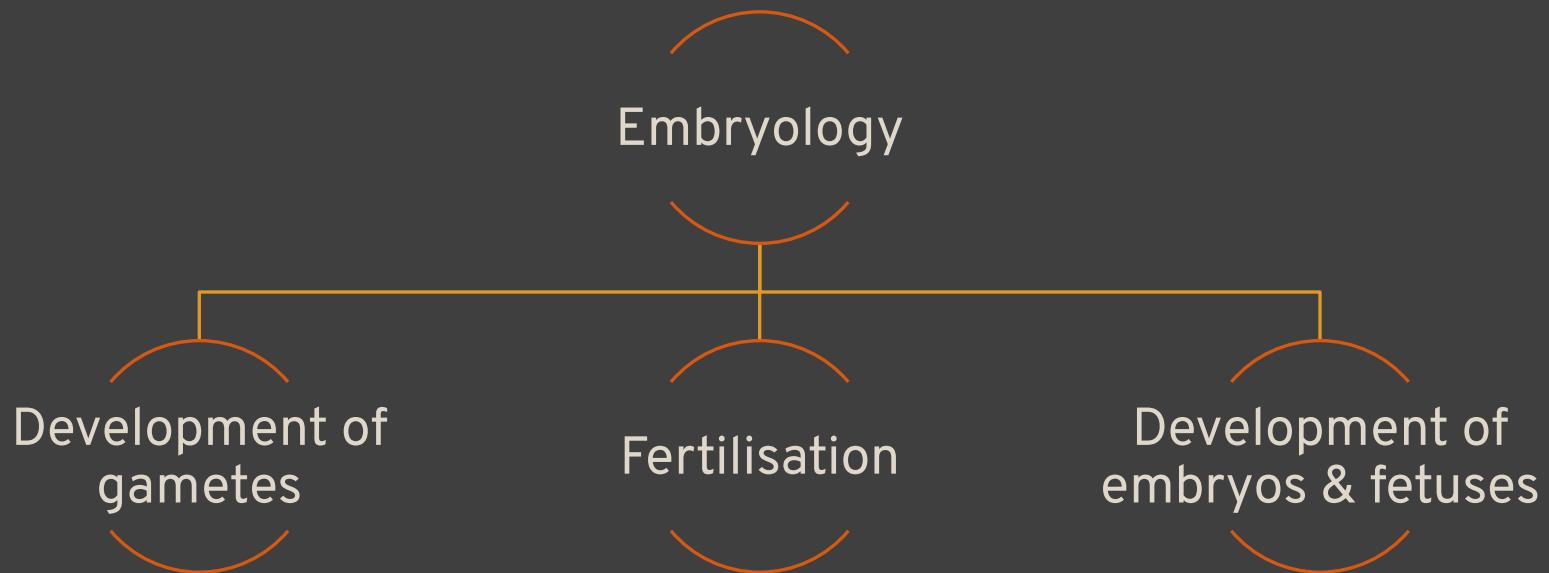




Embryology

Performed: Student Korkunov Roman
Group 26B181(1)

Embryology



History *ANCIENT TIMES*

Preformism

Hippocrates



History XVIII-XIX

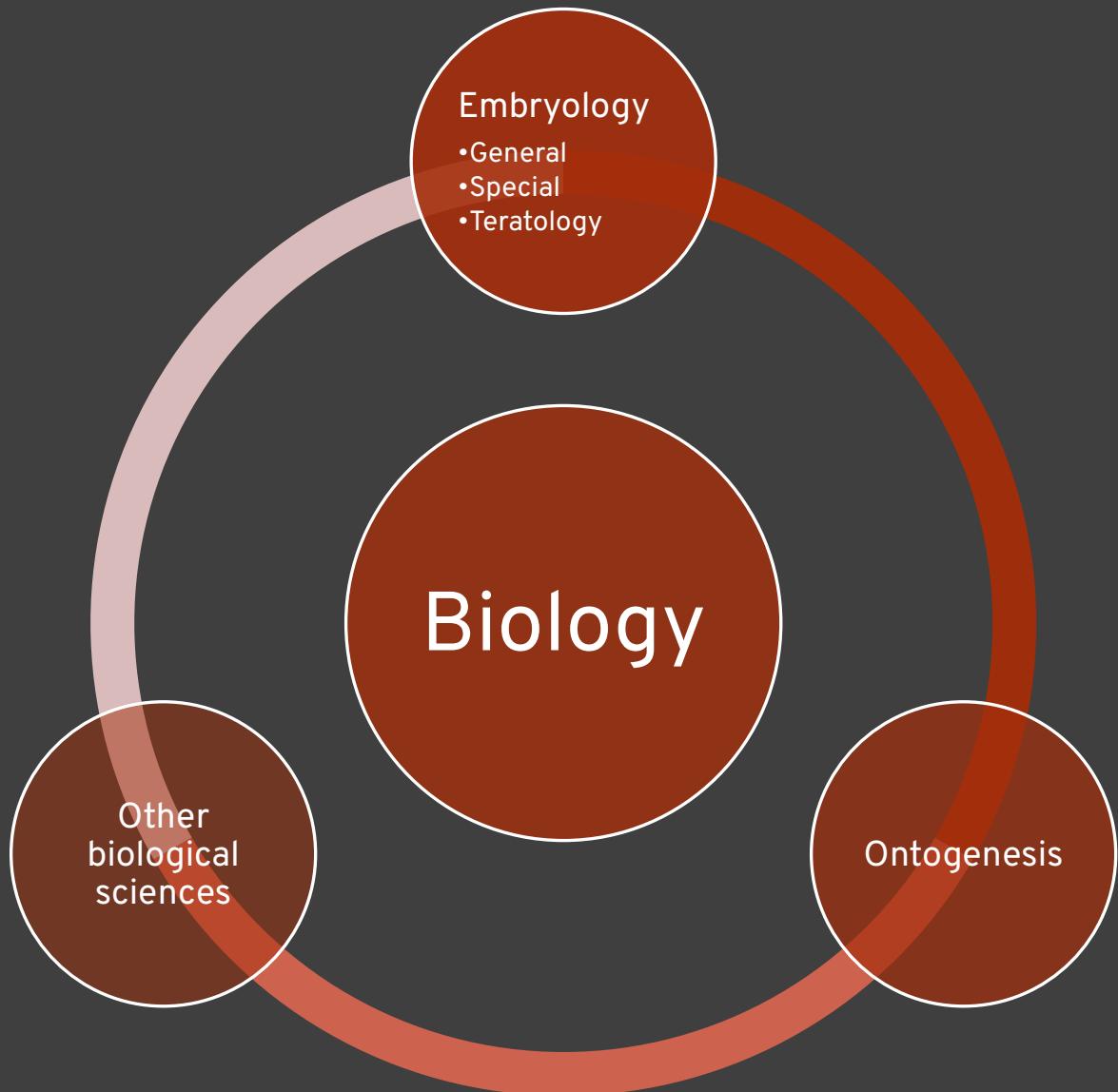


Karl Ernst von Baer



Caspar Friedrich von Wolf

Embryology TAXONOMY



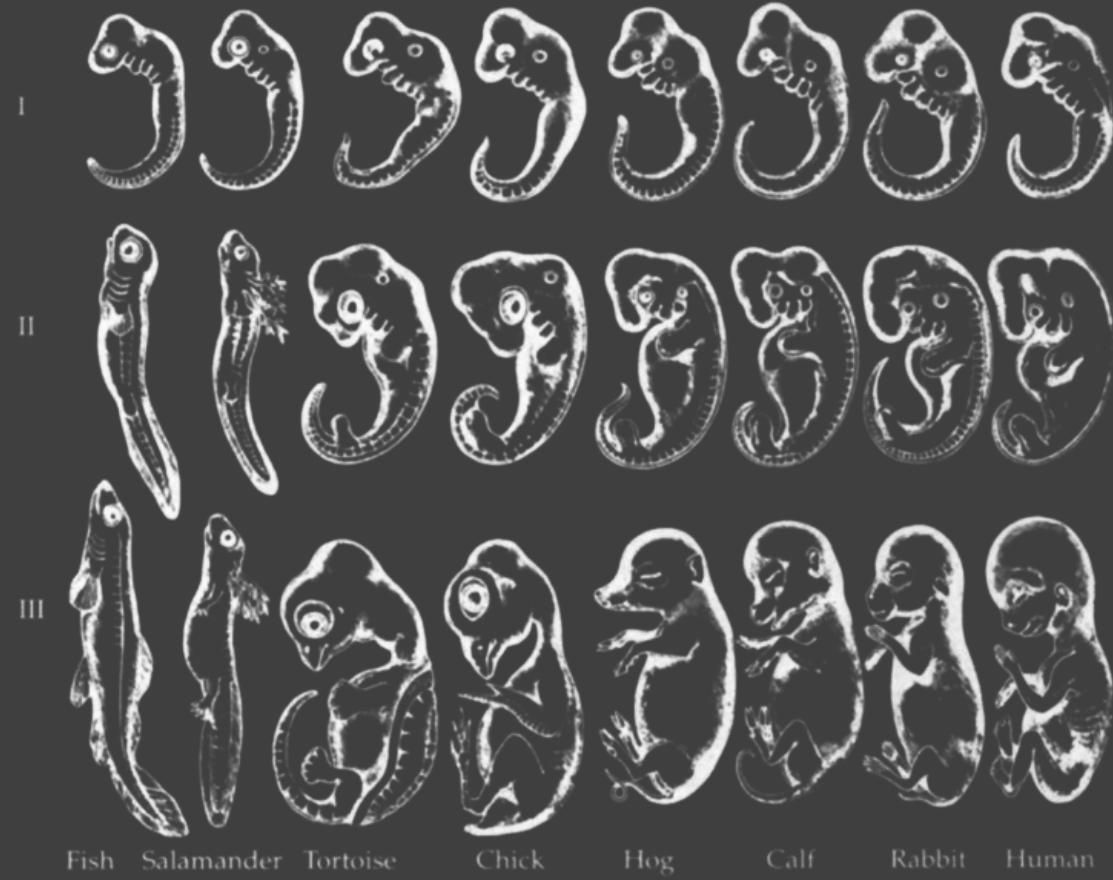
Embryogenetic periods

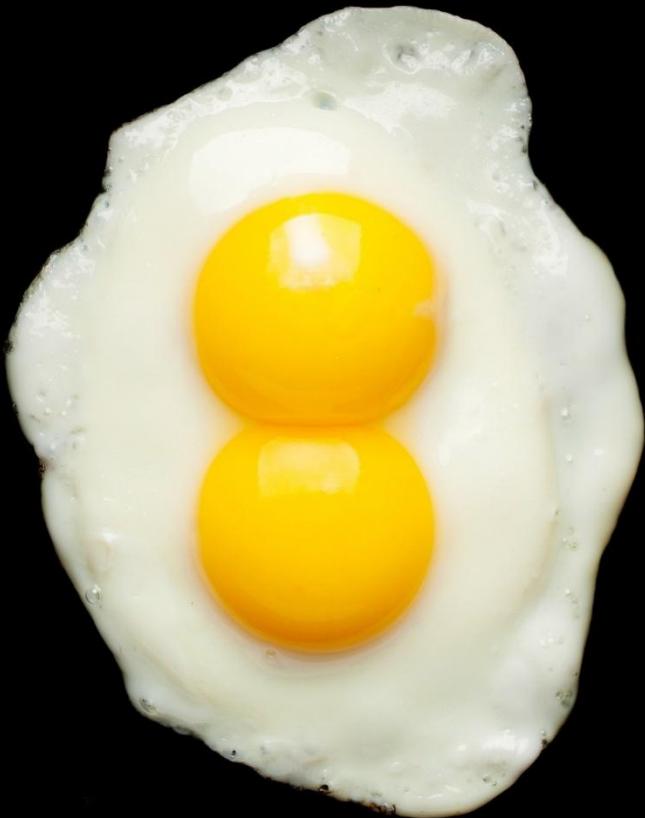
EMBRYONIC

Cleavage

Gastrulation

Organogenesis





Ovulum

In the picture: A fertilized egg and a couple of yolks.

Ovulum *IMPORTANCE*

Maternal set of chromosomes



Nourishment



Protection



Spermatozoon

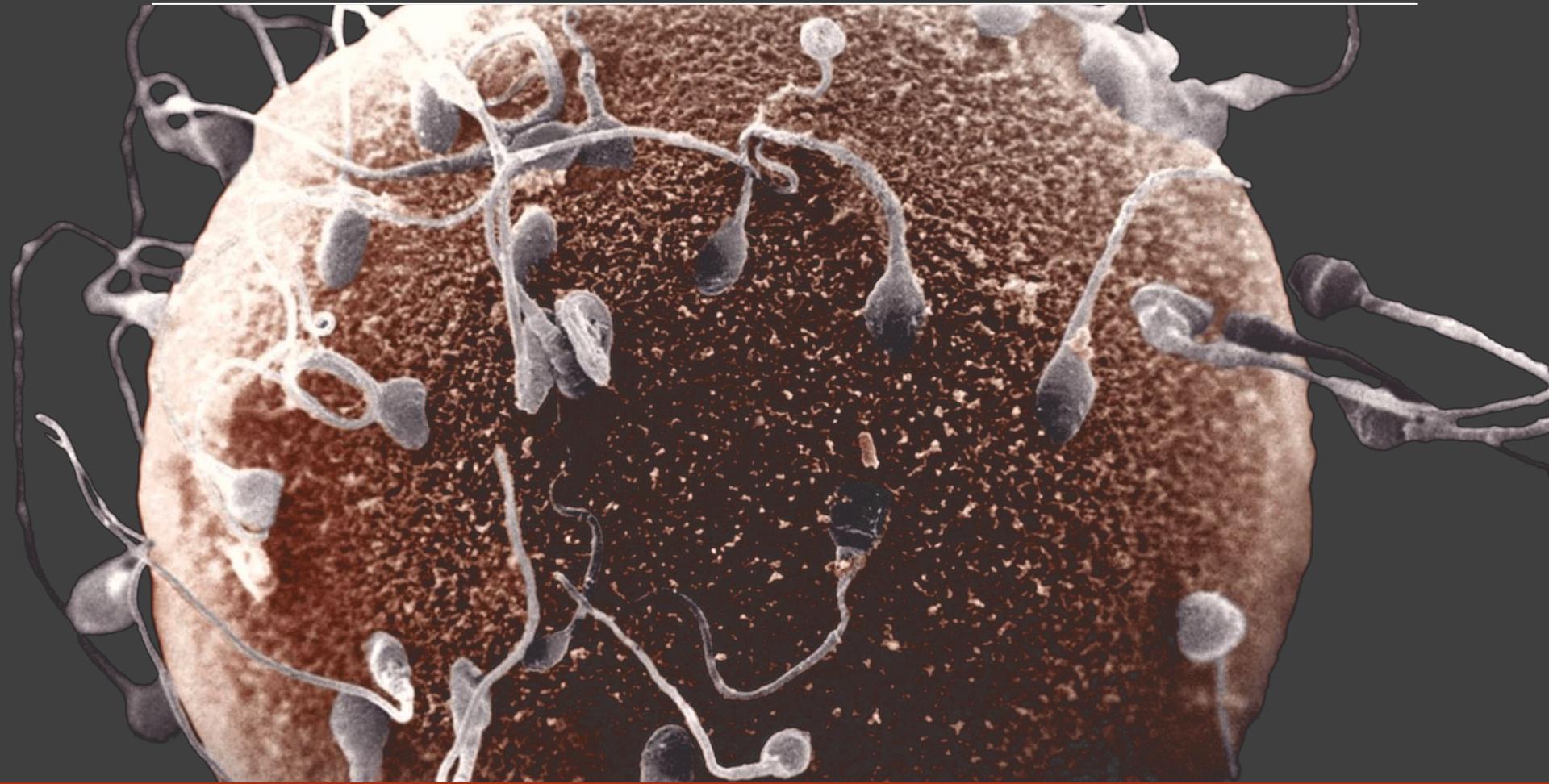
A MOTILE SPERM CELL –
SPERMATOZOOON



WHY IMPORTANT

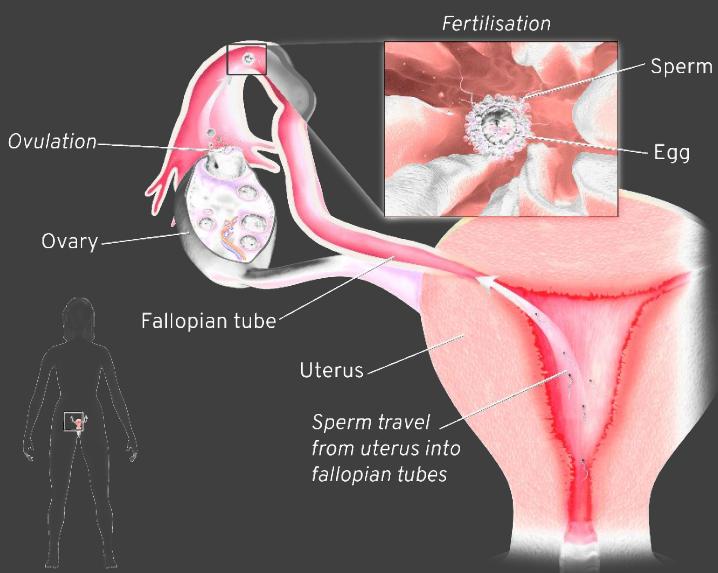
- Motile activity towards the ovulum
- Carrier of the paternal chromosome
- Baby sex determination
- Integral in mitochondrial DNA
- Part in fragmenting a signalling protein
- Completion of meiosis egg stimulation

Fertilization

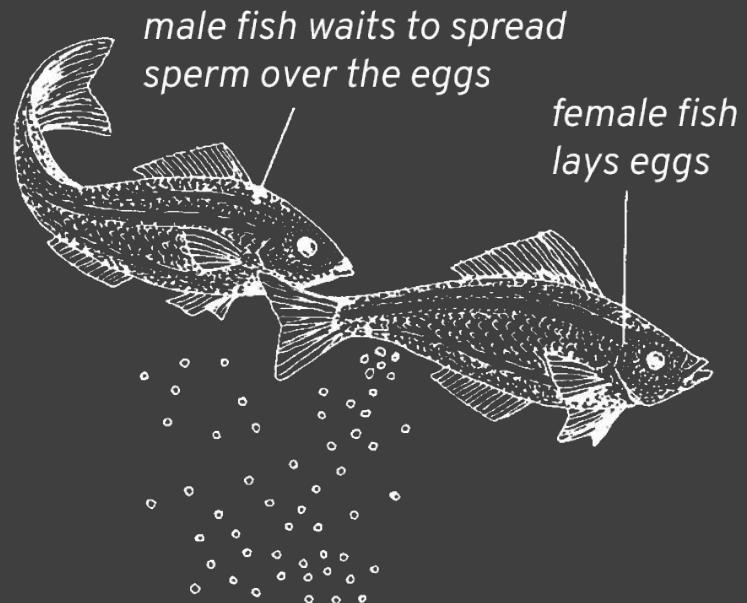


Fertilization *METHODS*

INTERNAL



EXTERNAL



Practical applications of embryology

- Artificial cultivating problem eggs
- Conducting in vitro fertilizations
- Conducting implantations of embryos in the uterus

A grayscale image showing a fetal embryo or fetus in utero. The fetus is curled up, with its head towards the top left and body extending towards the bottom right. Internal organs and blood vessels are visible through the translucent skin.

Thank you for your attention

Embryology

Performed: Student Korkunov Roman
Group 26B181(1)

Go back to...

Embryology

```
graph TD; Embryology --> Development[Development of gametes]; Embryology --> Fertilization[Fertilization]; Fertilization --> Development[Development of embryo & fetus]
```

History ANCIENT TIMES

Hippocrates

History XVIII-XIX

Thomas Hunt Morgan **Wilhelm Roux**

EMBRYOLOGY TAXONOMY

```
graph TD; Biology((Biology)) --- Gamete((Gamete)); Biology --- Zygote((Zygote)); Biology --- Embryo((Embryo))
```

Ontogenesis PERIODISATION

```
graph LR; Proembryonic[Pro-embryonic] --> Embryonic[Embryonic]; Embryonic --> Postembryonic[Post-embryonic]
```

Embryogenetic periods EMBRYONIC

Ovule
Gastrula
Organogenesis

Ovulum

Ovule
Interfollicular oogenesis with germinal cell

Ovulum IMPORTANCE

- Maternal set of chromosomes
- Nourishment
- Protection

Spermatozoon A MOTILE SPERM CELL – SPERMATOIDER

Very important!

- Ability mobility to move by flagella
- Ability of the paternal DNA
- High cell differentiation
- Response individualization DNA
- or in happening in fertilizing process
- Ability of immune resp. protection

Fertilization METHODS

INTERNAL
EXTERNAL

Internal
External
Sperm and卵子结合
Sperm and卵子结合

Practical applications of embryology

- Artificial cultivating problem eggs
- Conducting in vitro fertilizations
- Conducting implantations of embryos in the uterus

DAY 1
Sperm and卵子结合

DAY 2
分裂卵子

DAY 3-4
多细胞胚胎

DAY 5
囊胚

DAY 6
早期囊胚

DAY 7-8
晚期囊胚

DAY 9-10
原肠胚

DAY 11-12
晚期原肠胚

DAY 13-14
早期孵化

DAY 15-16
晚期孵化

DAY 17-18
植入

DAY 19-20
植入后

04 May 2020

EMBRYOLOGY

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References

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- [3] "Ontogeny," Wikipedia, 16 December 2019. [Online]. Available: <https://en.wikipedia.org/wiki/Ontogeny>. [Accessed 4 May 2020].
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