

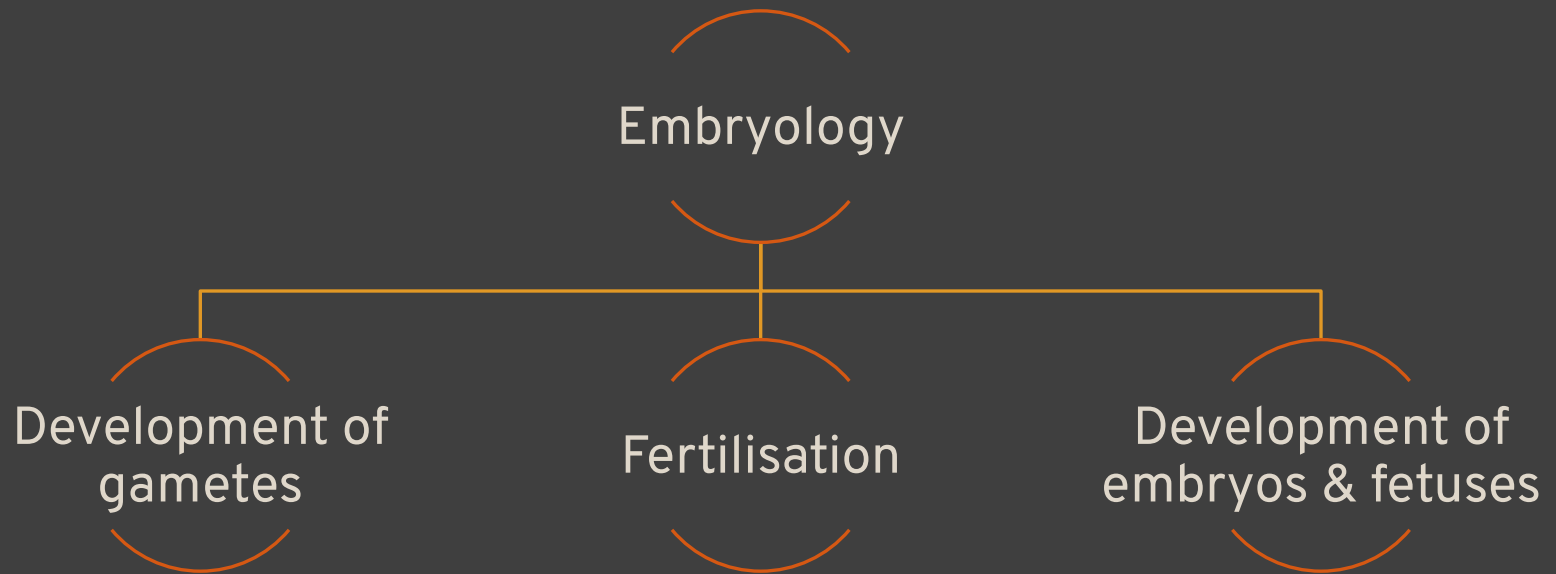


# Embryology

Performed: Student Korkunov Roman  
Group 26B181(1)

# Embryology

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# History *ANCIENT TIMES*

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Preformism

Hippocrates



# History *xviii-xix*

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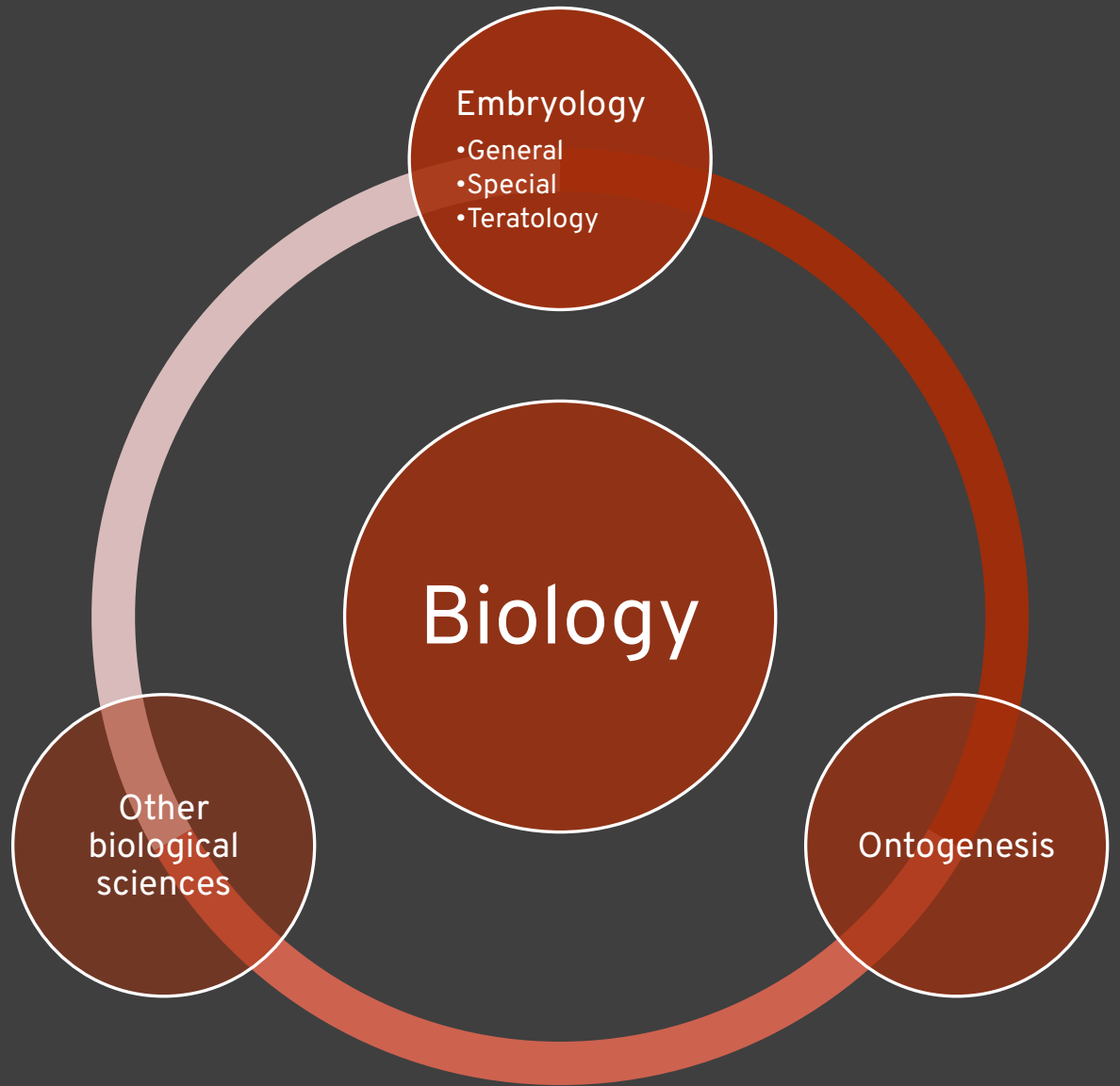
Karl Ernst von Baer



Caspar Friedrich von Wolf

# Embryology

## TAXONOMY



# Embryogenetic periods

## *EMBRYONIC*



Cleavage

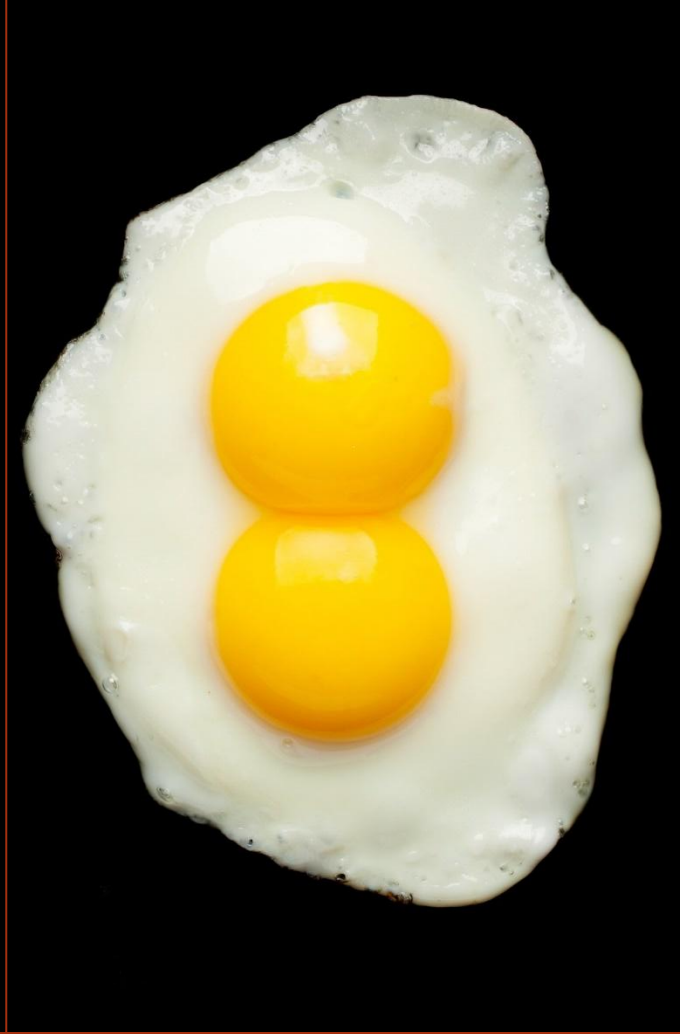


Gastrulation



Organogenesis





# Ovulum

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

# Ovulum *IMPORTANCE*

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Maternal set of chromosomes



Nourishment



Protection





# Spermatozoon

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## A MOTILE SPERM CELL – SPERMATOZOON



## WHY IMPORTANT

Motile activity towards the ovulum

Carrier of the paternal chromosome

Baby sex determination

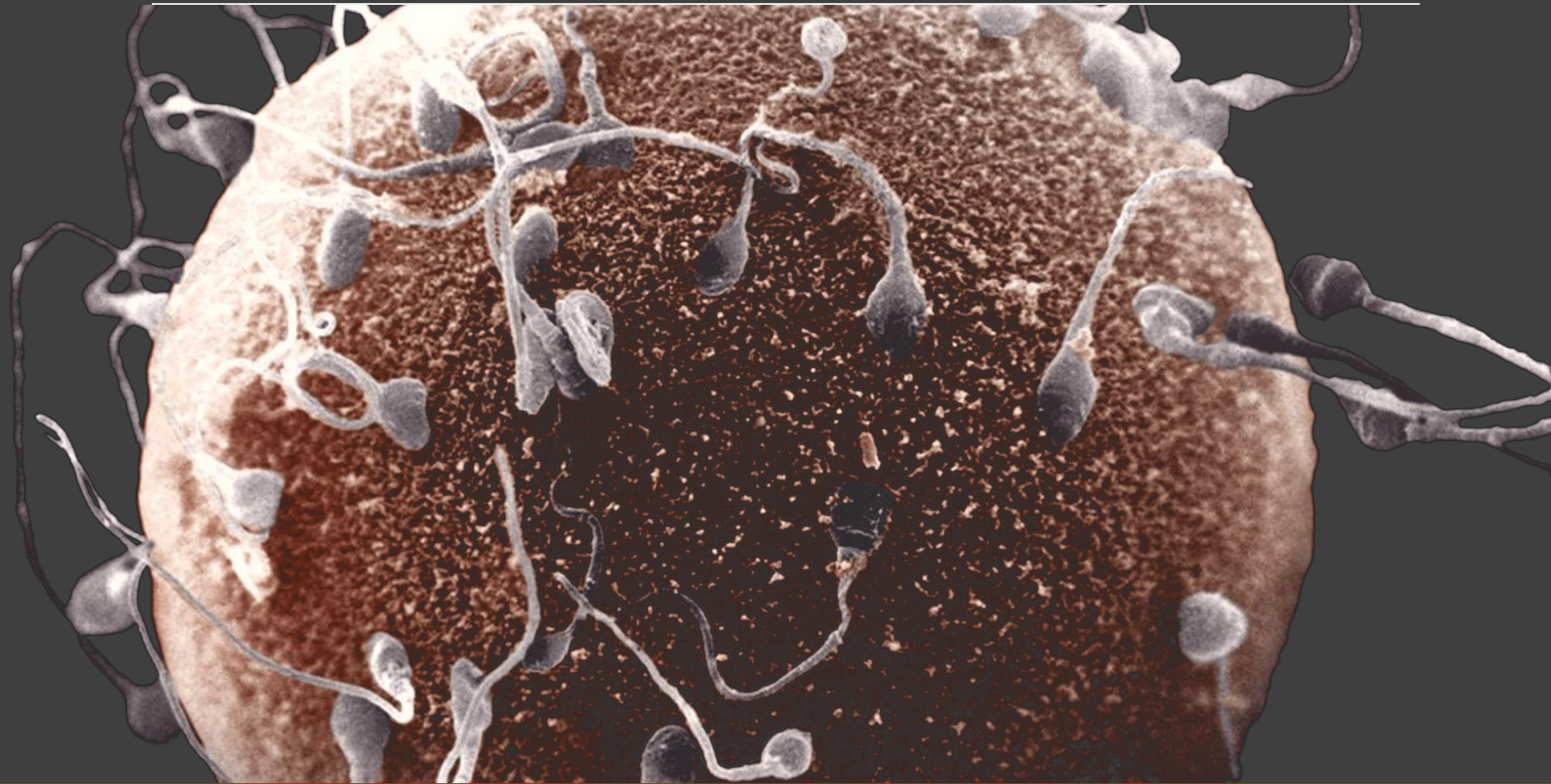
Integral in mitochondrial DNA

Part in fragmenting a signalling protein

Completion of meiosis egg stimulation

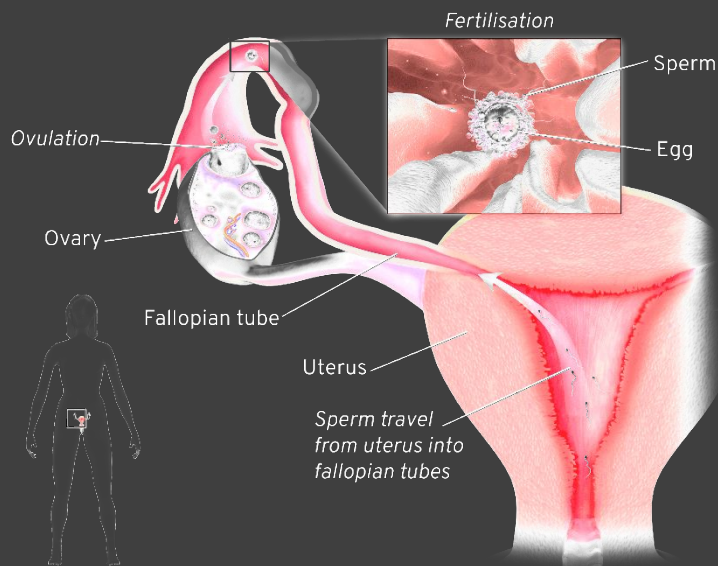
# Fertilization

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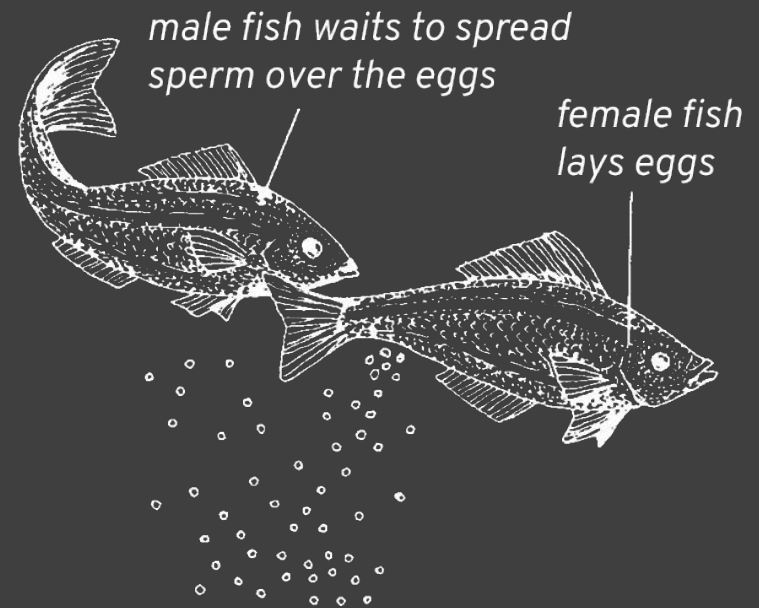


# Fertilization *METHODS*

## INTERNAL



## EXTERNAL




# Practical applications of embryology

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Artificial cultivating problem eggs

Conducting in vitro fertilizations

Conducting implantations of embryos in the uterus



**Thank you for your attention**

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# Go back to...

The image displays a grid of 13 educational slides related to embryology. The slides are arranged in three rows:

- Row 1:**
  - Embryology:** A flowchart showing the relationship between 'Embryology', 'Development of gametes', 'Fertilisation', and 'Development of embryo & foetus'.
  - History ANCIENT TIMES:** Features a bust of Hippocrates and the text 'Profession: Hippocrates'.
  - History XVII-XIX:** Features portraits of scientists and the text 'Profession: Hippocrates'.
  - Embryology TAXONOMY:** A circular diagram with 'Biology' at the center, surrounded by 'Embryology' and 'Taxonomy'.
  - Ontogenesis PERIODISATION:** A diagram showing the progression from 'Pre-embryonic' to 'Embryonic' to 'Post-embryonic'.
- Row 2:**
  - Embryogenetic periods EMBRYONIC:** A diagram showing the stages of embryonic development: Cleavage, Gastrulation, and Organogenesis.
  - Ovulum IMPORTANCE:** A diagram of an ovulum with the text 'Ovulum: the female egg cell or ovule' and a list of functions: Maternal set of chromosomes, Nourishment, and Protection.
  - Spermatozoon:** A diagram of a spermatozoon with the text 'Spermatozoon: the male sperm cell or spermatozoon' and a list of functions: Moves actively towards the ovule, Pace of the paternal chromosome, Easy sex determination, Superior mitochondrial DNA, and Not so dependent on feeding system.
  - Fertilization:** A diagram showing a spermatozoon fertilizing an ovulum.
- Row 3:**
  - Fertilization METHODS:** A diagram comparing 'INTERNAL' and 'EXTERNAL' fertilization methods.
  - Embryonic Development:** A diagram showing the development of an embryo from Day 1 to Day 14, including stages like Zygote, Morula, and Blastocyst.
  - Practical applications of embryology:** A list of applications: Artificial cultivating problem eggs, Conducting in vitro fertilizations, and Conducting implantations of embryos in the uterus.

# References

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[1] "Embryology," 17 April 2020. [Online]. Available: <https://en.wikipedia.org/wiki/Embryology>. [Accessed 4 May 2020].

[2] J. Maienschein, "Epigenesis and Preformationism," 2005. [Online]. Available: <https://plato.stanford.edu/archives/fall2008/entries/epigenesis/>. [Accessed 4 May 2020].

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

[4] "The Will to Bud," 07 March 2019. [Online]. Available: <https://www.longdom.org/open-access/the-will-to-bud-25583.html>, [Accessed 4 May 2020].

[5] "Germ layer," 06 November 2009. [Online]. Available: <https://www.britannica.com/science/germ-layer>, [Accessed 4 May 2020].