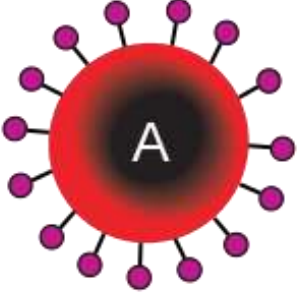
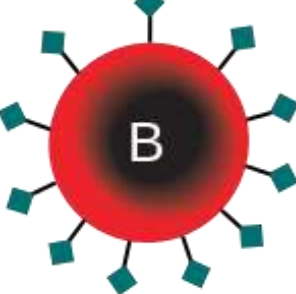
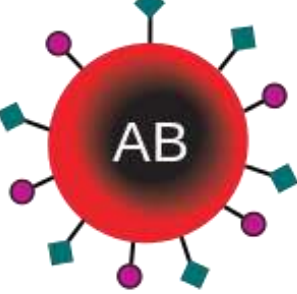
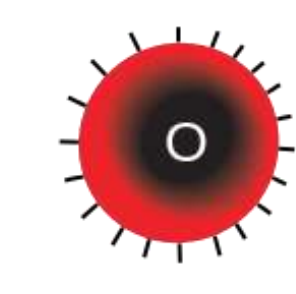
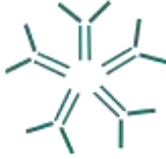

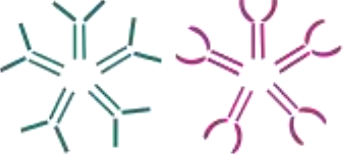







	Group A	Group B	Group AB	Group O
Red blood cell type	 <p>A</p>	 <p>B</p>	 <p>AB</p>	 <p>O</p>
Antibodies in Plasma	 <p>Anti-B</p>	 <p>Anti-A</p>	None	 <p>Anti-A and Anti-B</p>
Antigens in Red Blood Cell	 <p>A antigen</p>	 <p>B antigen</p>	 <p>A and B antigens</p>	None

Blood group inheritance by phenotype only

Blood type	O	A	B	AB
O	O	O or A	O or B	A or B
A	O or A	O or A	O, A, B or AB	A, B or AB
B	O or B	O, A, B or AB	O or B	A, B or AB
AB	A or B	A, B or AB	A, B or AB	A, B or AB

ABO and Rh blood type donation showing matches between donor and recipient types

		Donors							
		O+	A+	B+	AB+	O-	A-	B-	AB-
Recipients	O+	✓				✓			
	A+	✓	✓			✓	✓		
	B+	✓		✓		✓		✓	
	AB+	✓	✓	✓	✓	✓	✓	✓	✓
	O-					✓			
	A-					✓	✓		
	B-					✓		✓	
	AB-					✓	✓	✓	✓

Agglutination

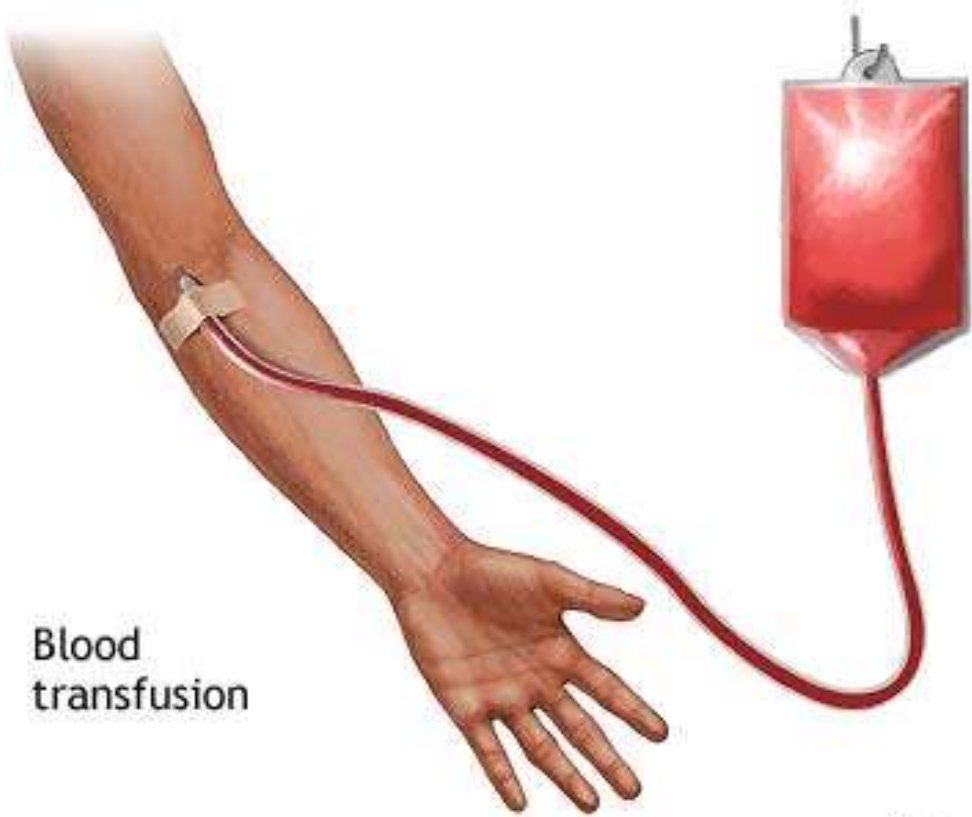


**GIVE
BLOOD**



GIVE LIFE

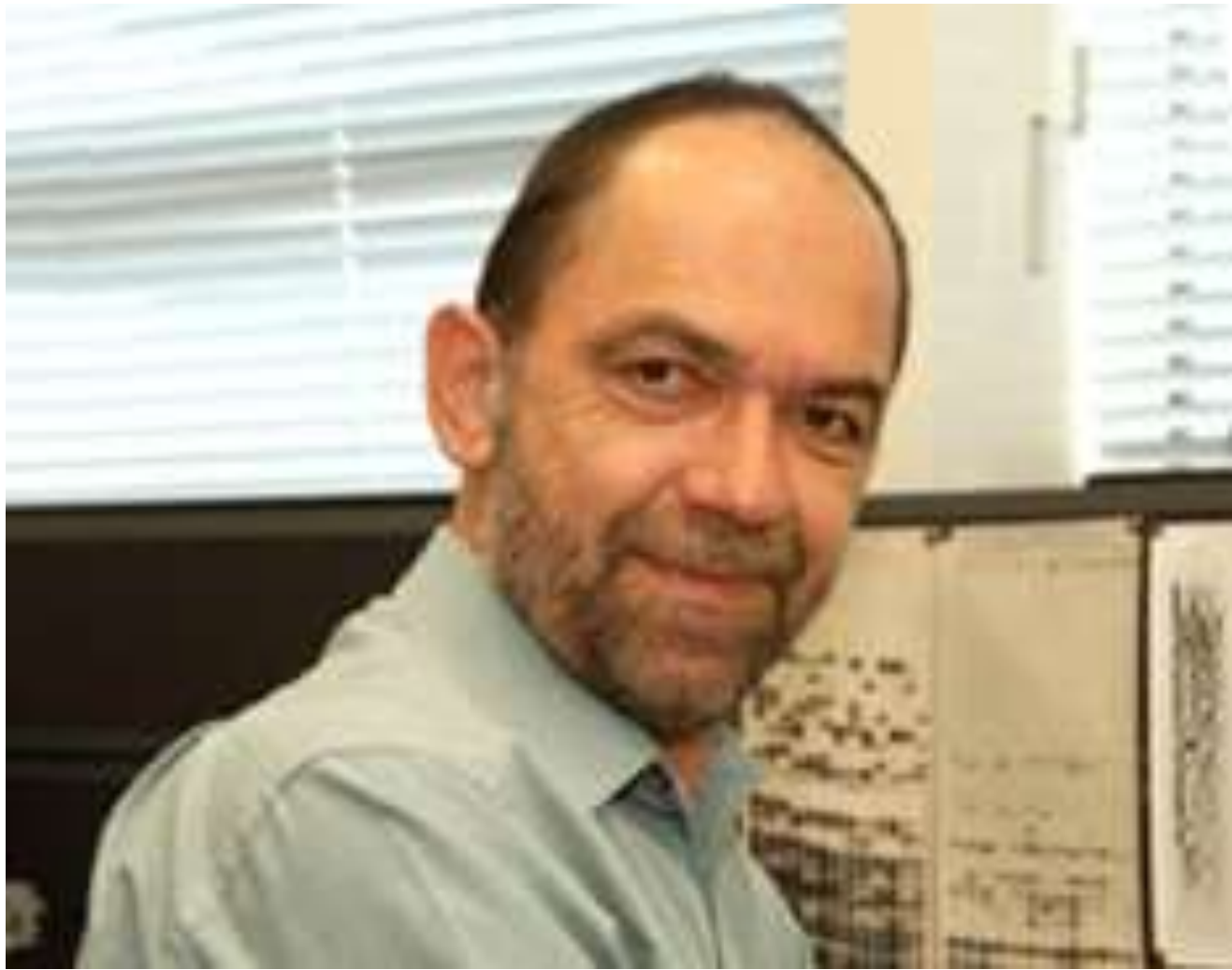




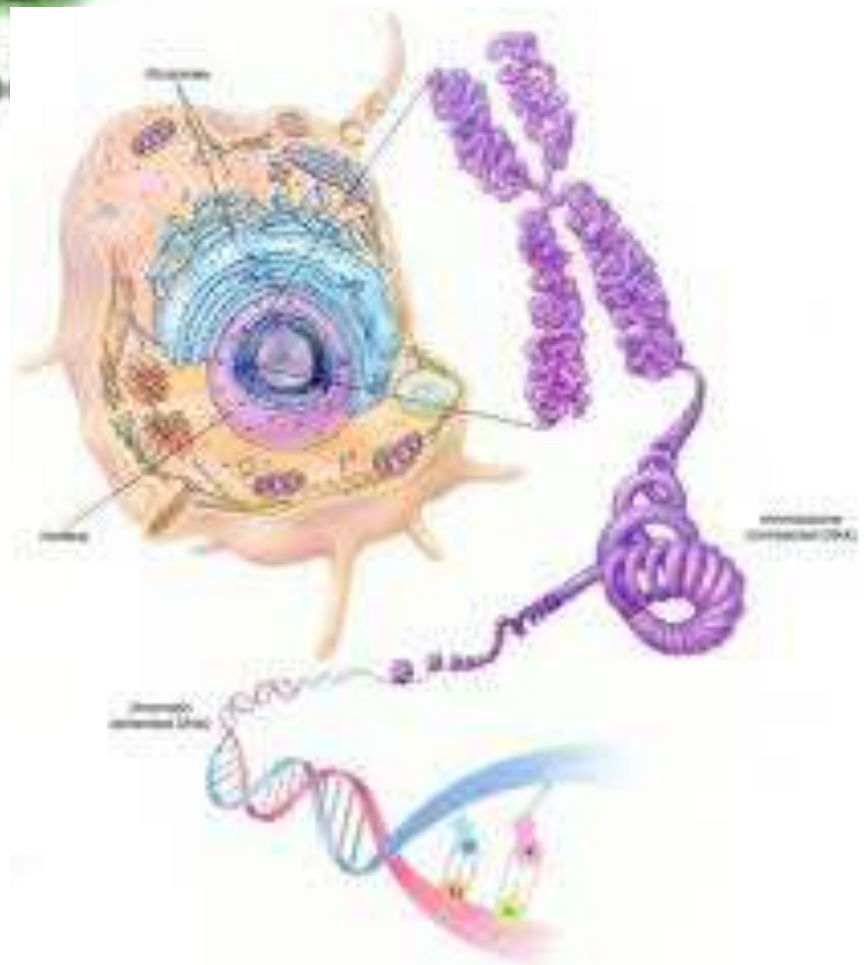
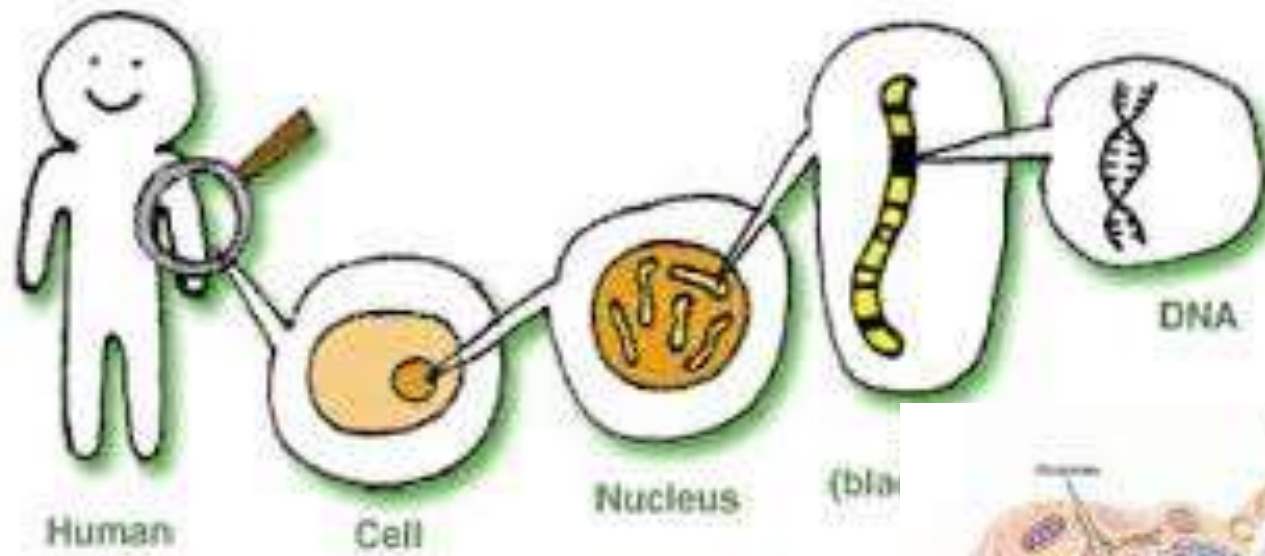
Blood
transfusion

 ADAM.

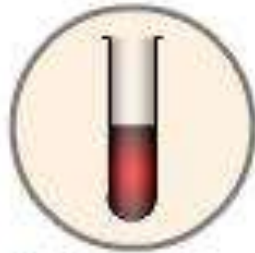




Alec Jeffreys



DNA fingerprinting



Blood sample



DNA extracted from blood & cut into fragments by enzyme



DNA segment separated into bands (by electrophoresis). Band pattern transferred to nylon membrane (southern blotting)



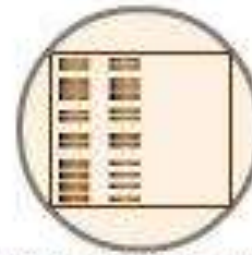
Radioactive DNA probe is prepared



Probe binds to specific DNA sequences



Excess DNA probe is washed off



X-ray film is placed next to the membrane to detect the radioactive pattern. The x-ray film is developed to make visible. The pattern of bands which is known as DNA fingerprinting

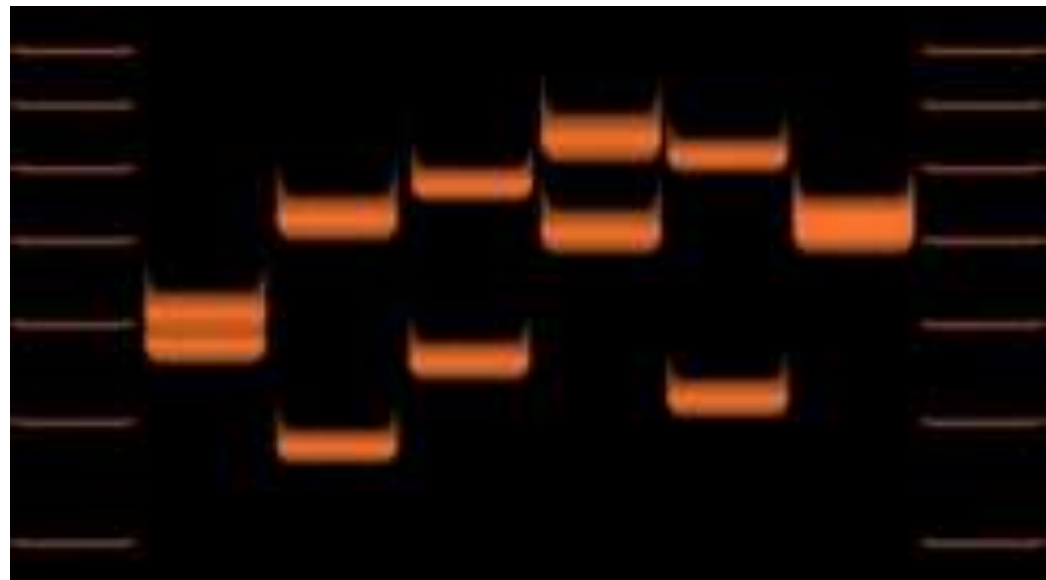
CCCAACACATTACACATTACACATTACACATTATTTCC



Minisatellites

CACATTA*
GTGTAAT*

Probe – synthesis from minisatellite and labelled with isotopes which can bind onto each minisatellite for visualization.



Crime scene



Suspect 1



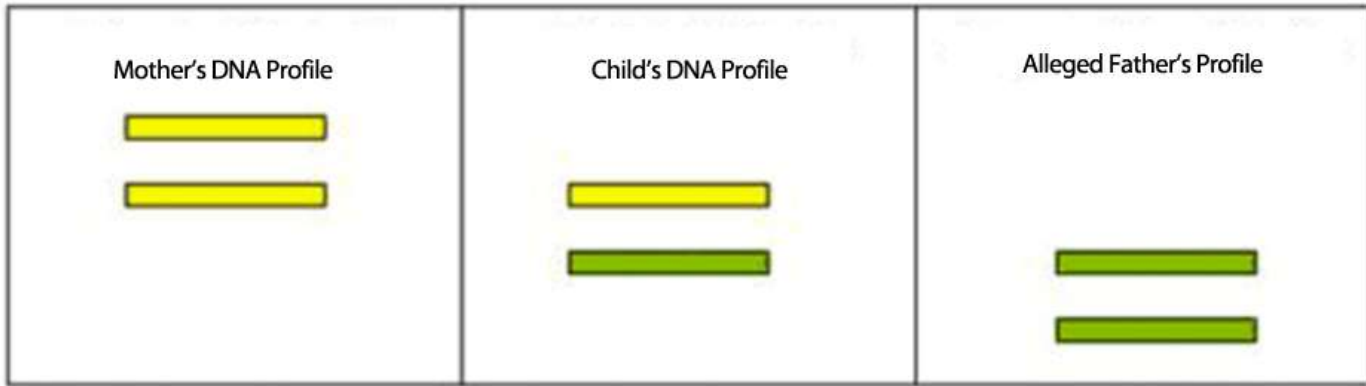
Suspect 2



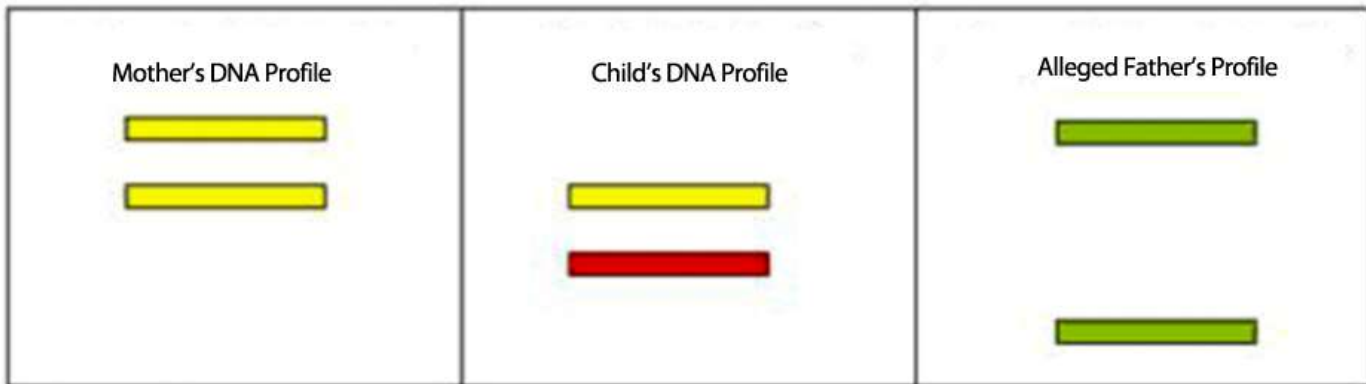
Suspect 3

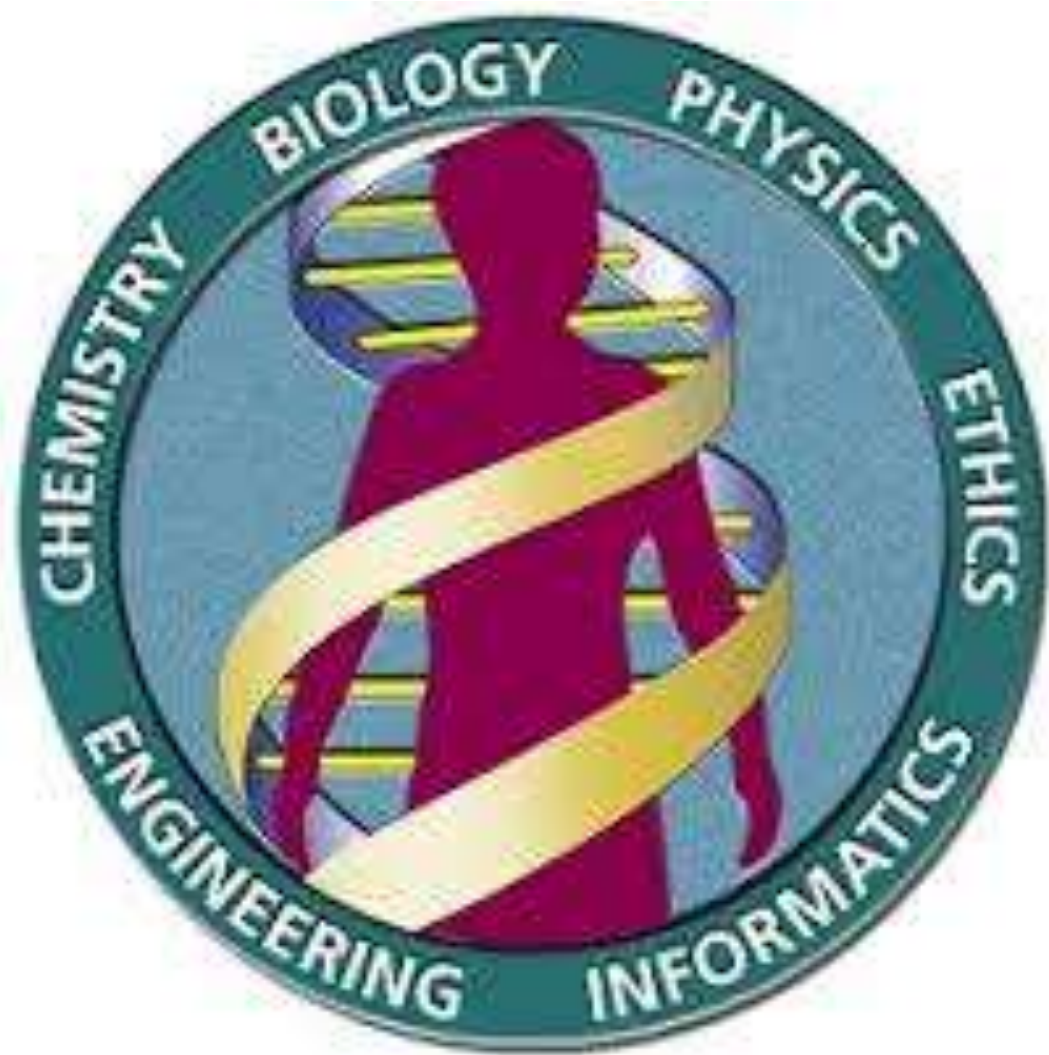


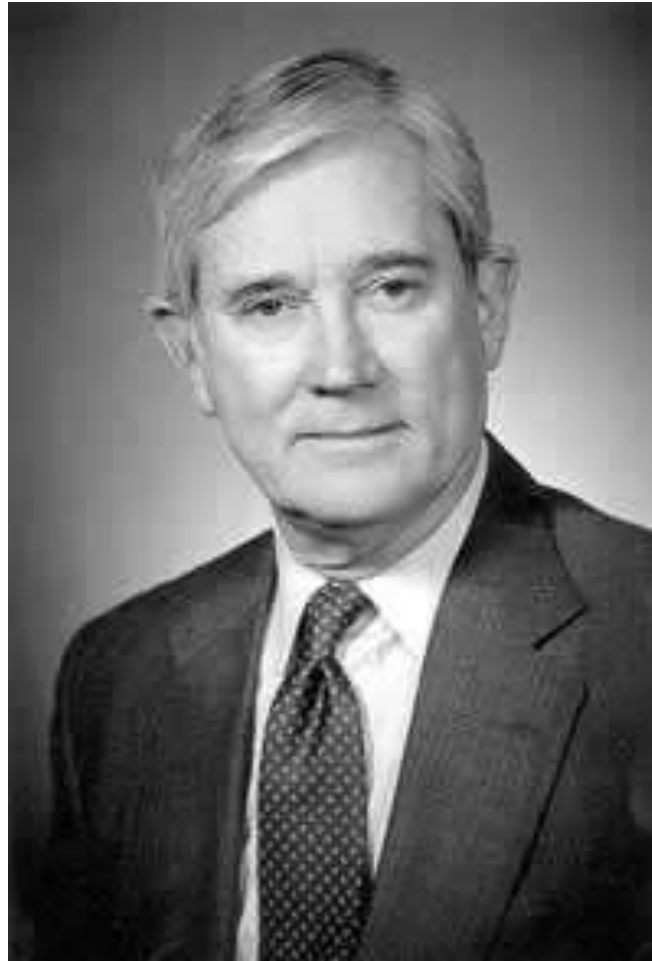
Paternity Not Excluded



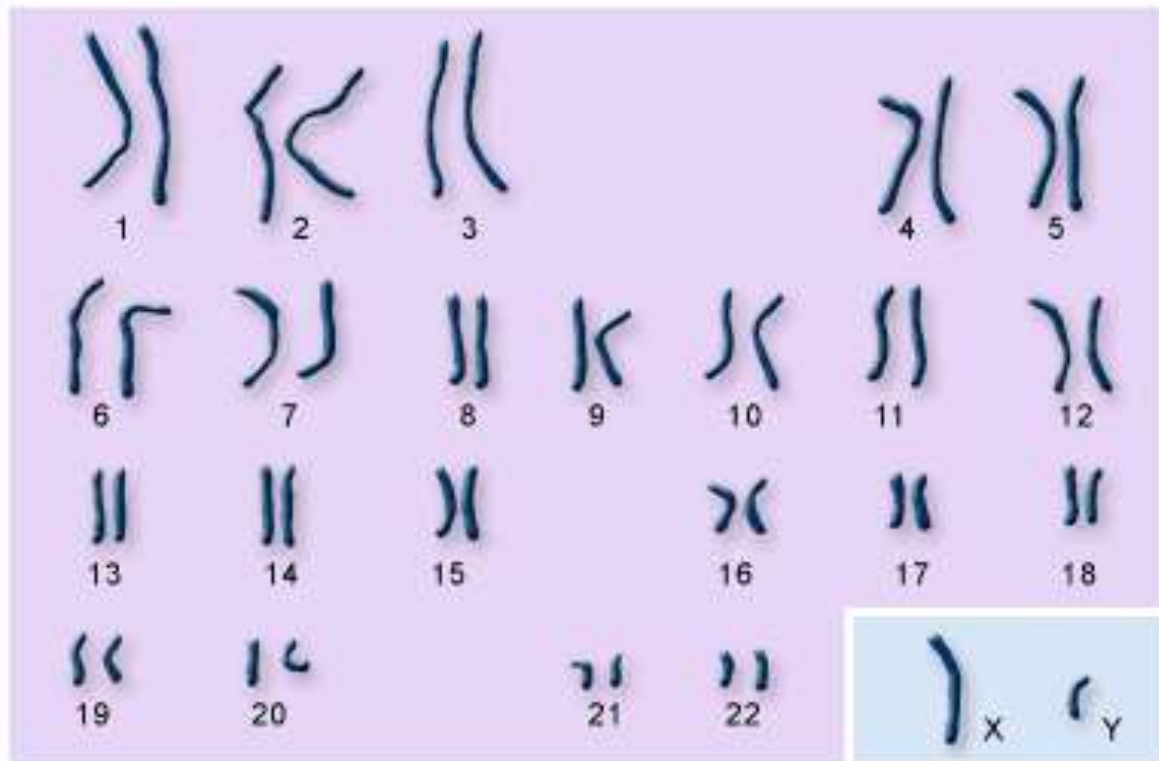
Paternity Is Excluded







Alvin Trivelpiece



autosomes

sex chromosomes

U.S. National Library of Medicine

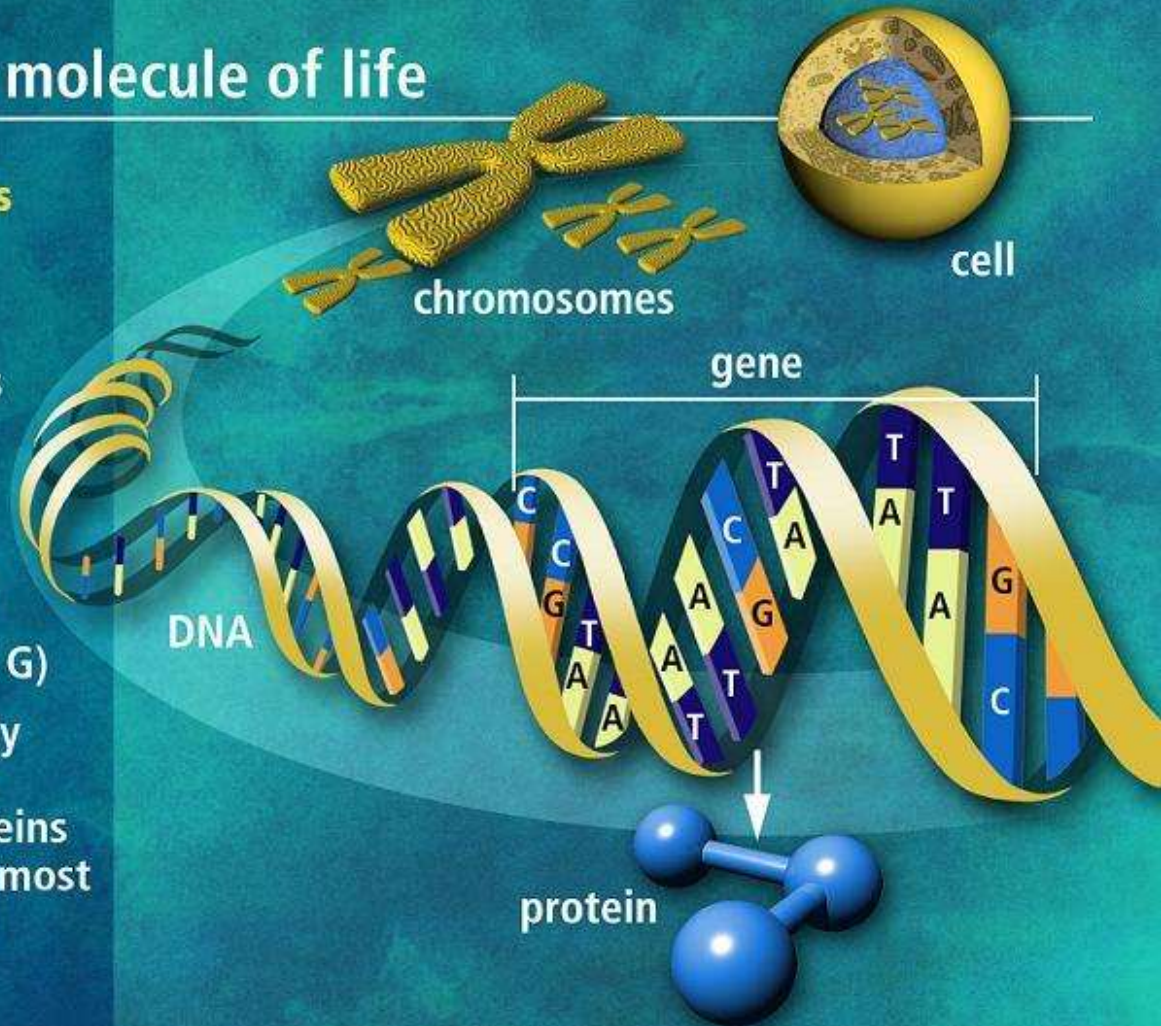
Image © Genetics Home Reference, US National Library of Medicine: <http://ghr.nlm.nih.gov>

DNA the molecule of life

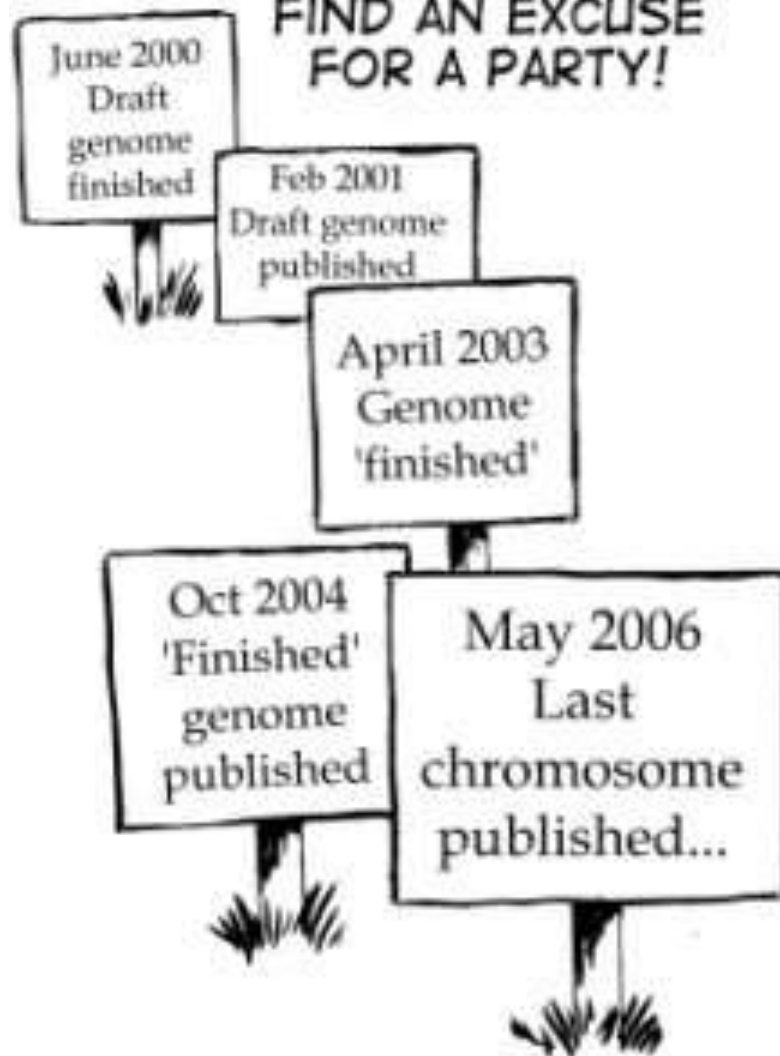
Trillions of cells

Each cell:

- 46 human chromosomes
- 2 meters of DNA
- 3 billion DNA subunits (the bases: A, T, C, G)
- Approximately 30,000 genes code for proteins that perform most life functions

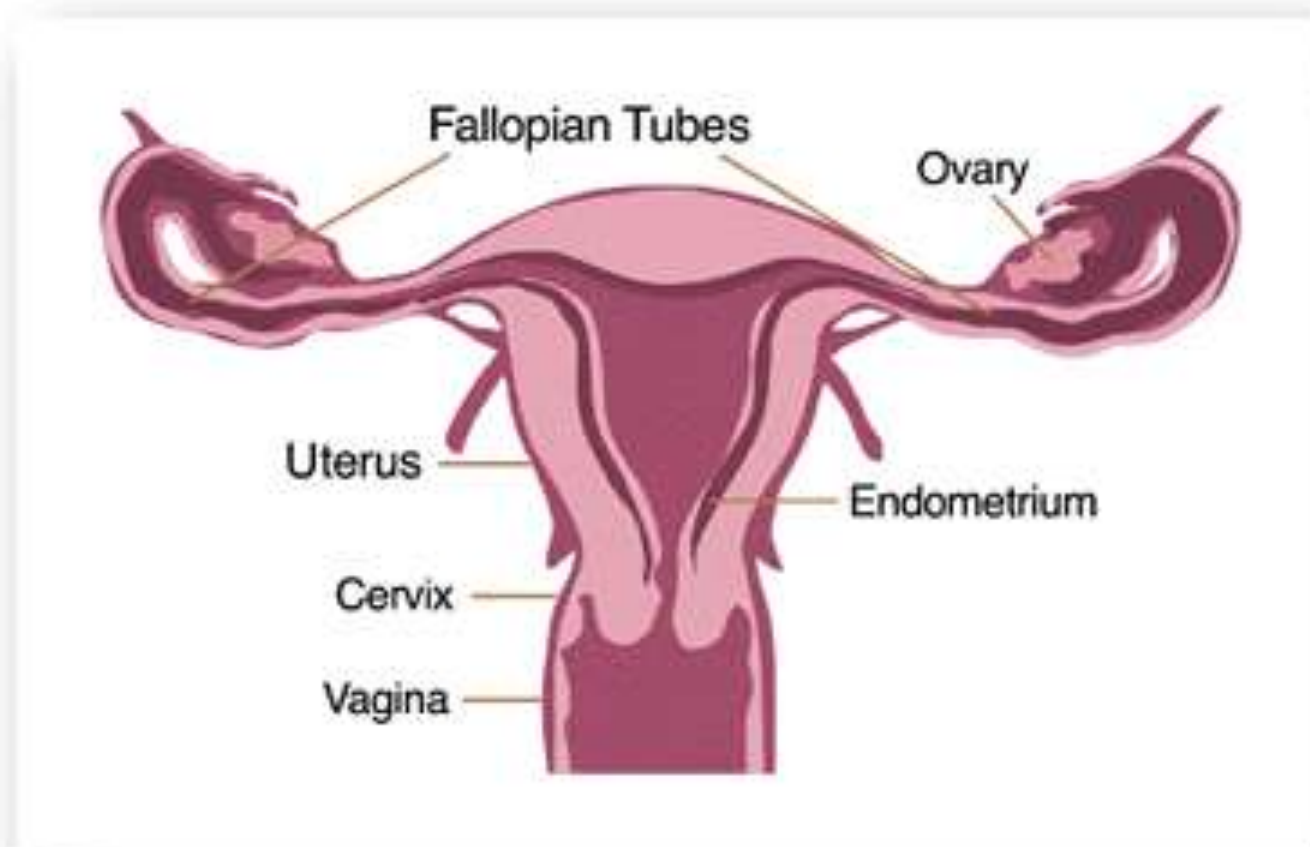


MY, THEY
KNOW HOW TO
FIND AN EXCUSE
FOR A PARTY!

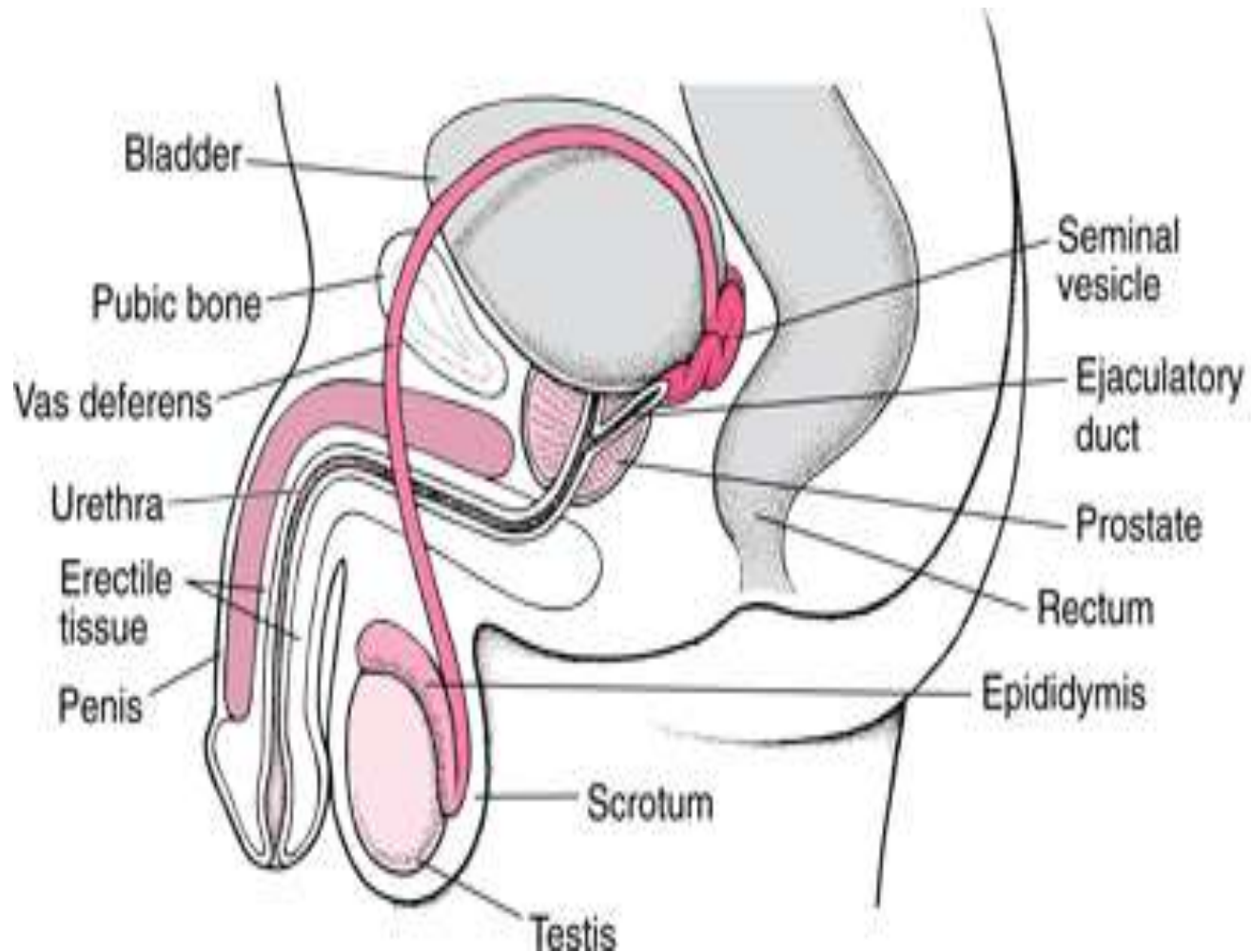


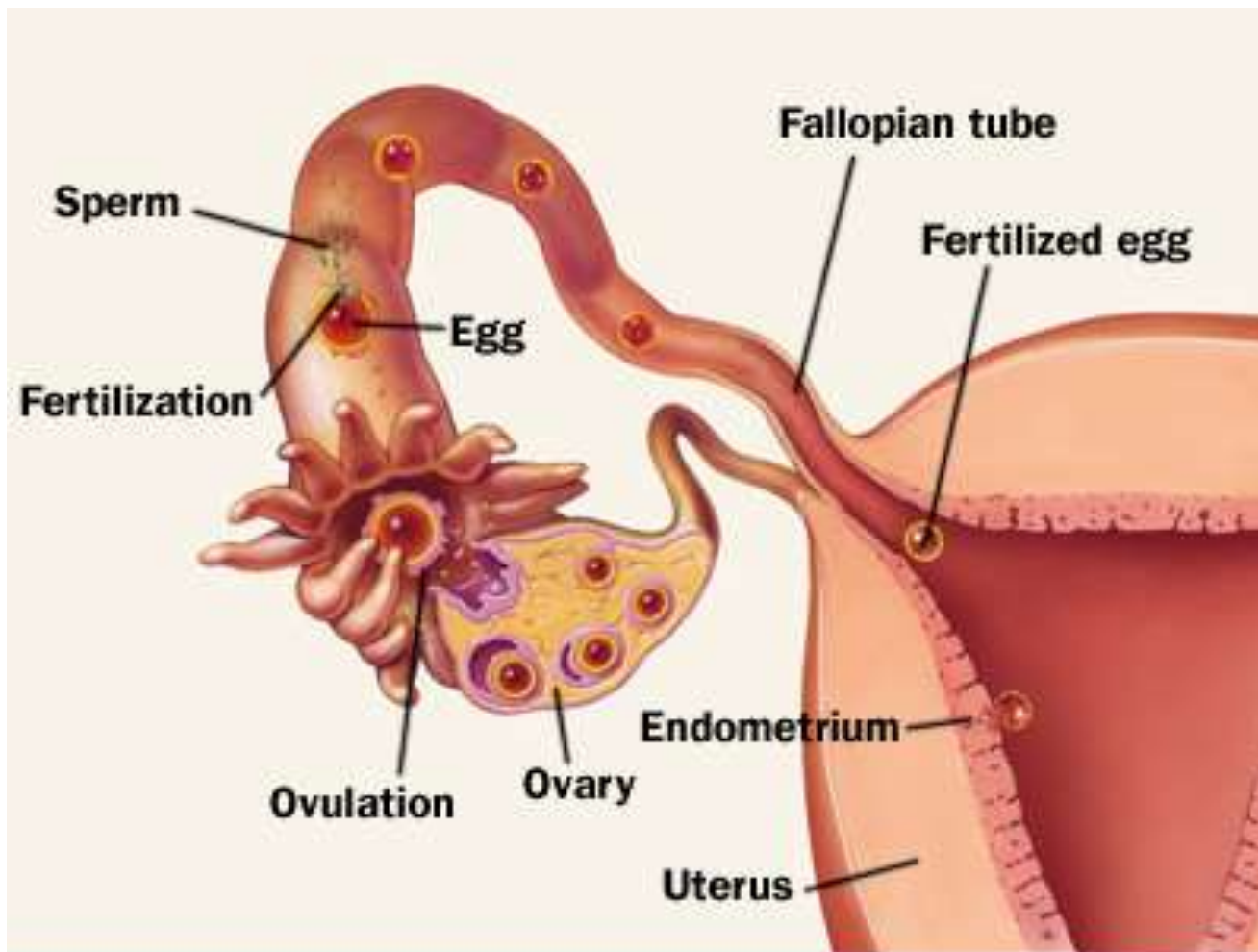


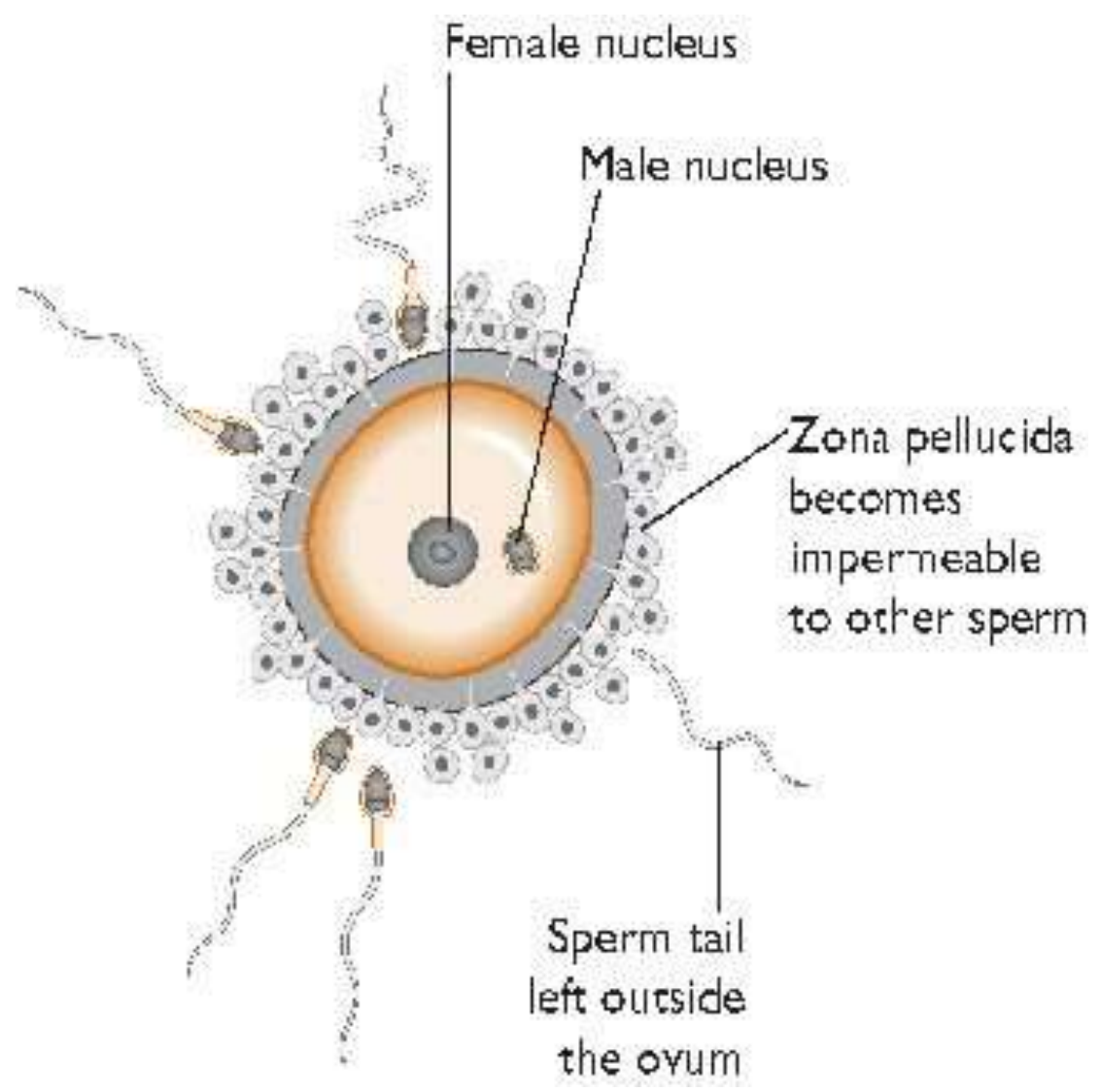
Female reproductive system



Male reproductive system







From ovulation to implantation

