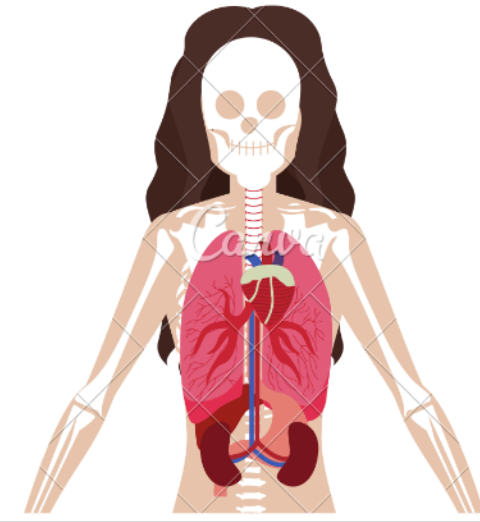




Anatomy

The study of bodily structure.



Histology

The study of how cells groups into **tissues**.

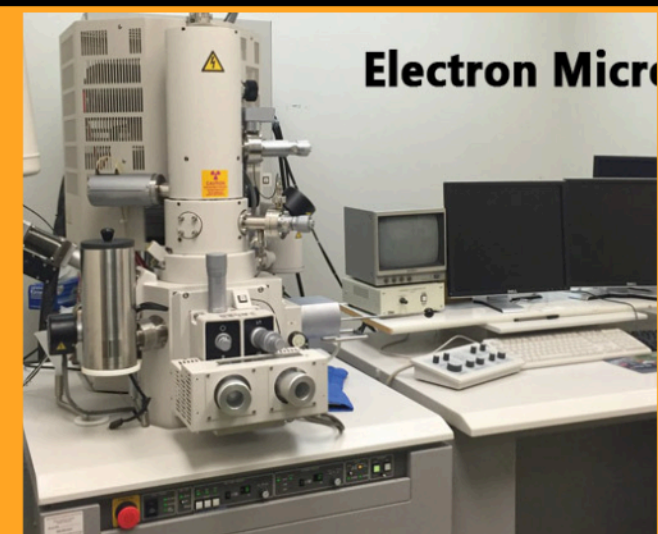


Acetylcholine

The most common **neurotransmitter**.

Electron Microscopy

A type of microscope that uses a beam of **electrons** to magnify slim pieces of **tissue** up to 1,000 times more!



Magnetic Resonance Imaging

A type of brain scan that uses heavy duty magnets and radio frequencies to image the brain on the basis of water within it's tissues.



White Matter

Is mainly constructed of **axons** coated in **mylin** that causes it's white hue.

Grey Matter

Tissue constructed of the **cell bodies** or **soma** of neurons, **dendrites**, and **synapses**.

Electrophysiology

A research method that uses a glass **electrode** placed on a single **neuron** to measure **voltage**. Often used to learn more about **synaptic plasticity**.

Synaptic Plasticity

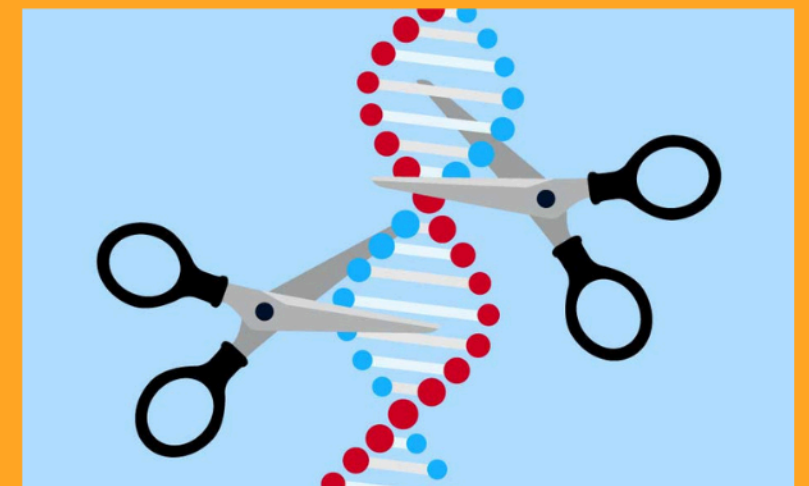
The ability of a neuronal connection to get stronger and faster as it's used more.

Two-Photon Microscopy

A technique in which an animal is genetically modified so that some **neurons** glow. Often used to understand the mechanics of brain processes (Ex. Learning)

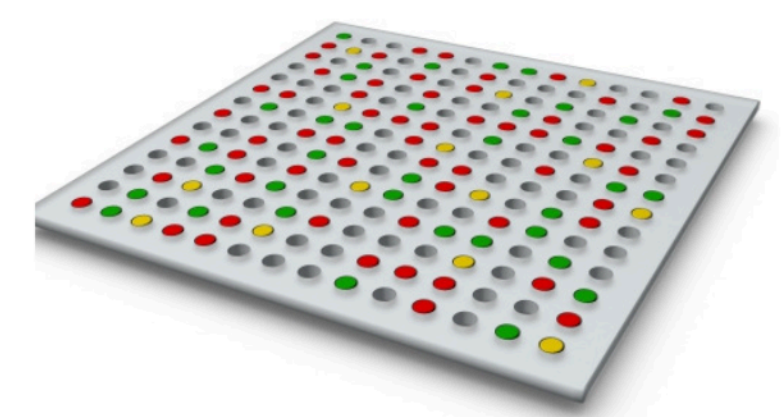
CRISPR

Stands for Clustered Regularly Interspaced Short Palindromic Repeats. A technique that uses special cutting and "glueing" enzyme to insert and remove parts of DNA



Micro-Arrays

Rows of microscopic **DNA** spots adhered to a solid surface. Can be used to measure the frequencies of different **genes**.



Mass Spectrometry

Technique in which a sample often collected by **microdialysis** is charged and then passed through an electrical field. Its behavior within that conduit determines its mass. Applications in identification.

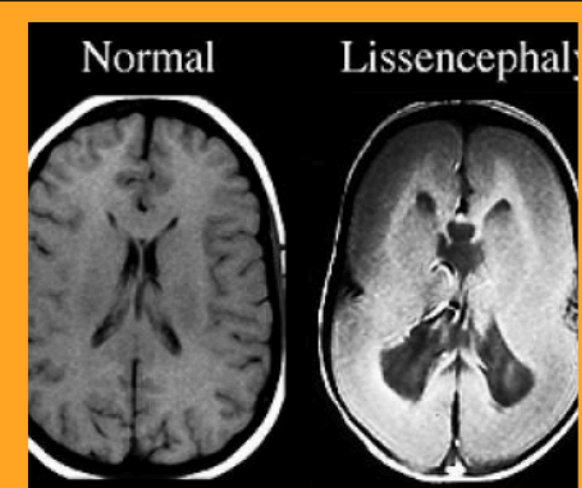
Epigenetic

Relating to **gene expression**.



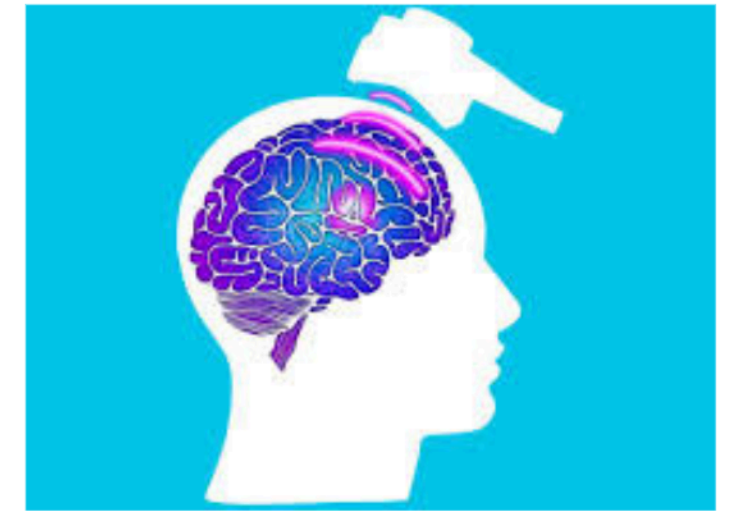
Lissencephaly

A condition in which the brain has no **gyri** and **sulci** and is completely smooth caused by a **mutation** in the **LIS1 gene**,



TMS

Transcranial magnetic stimulation.. A research tool that uses a magnetic field to excite or repress parts of the brain. Has applications in stress disorders, and drug resistant pain. decrementation.



Fragile X Syndrome

The most common permutation of **congenital intellectual disability** (in males), that is caused by too many **cytosine, guanine, guanine** repeats within the **FMR1** gene.

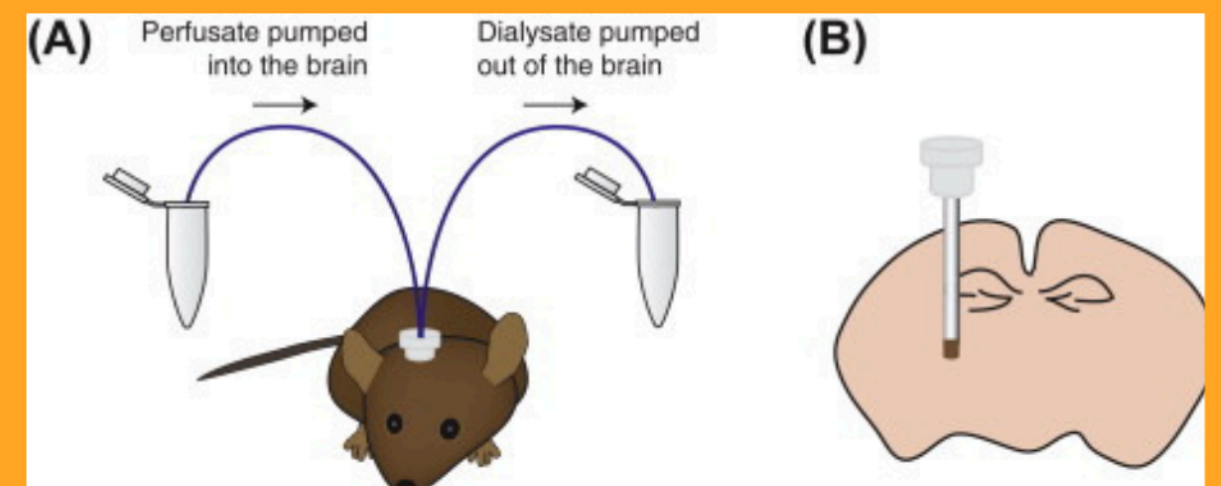
EEG

Electroencephalogram. A device that uses a series of electrodes to record electrical frequencies in the brain. Useful in seizure **locusing** and mental state recognition.



Microdialysis

A technique in which tubes are injected into the brain to collect the liquid around neurons. This liquid can then be analyzed for certain **neurotransmitters** and other molecules.



Pharmacology

The branch of science studying the effect of drugs on the body.



Functional MRI

A type of **MRI** that compares the volumes of oxygen-rich and oxygen-poor blood to conjecture on which brain regions are most active.

MEG

Stands for Magnetoencephalogram. A type of helmet that measures electrical currents in the brain and approximates their magnetic fields. Can be used **anatomically** when combined with **fMRI**.



PET Scan

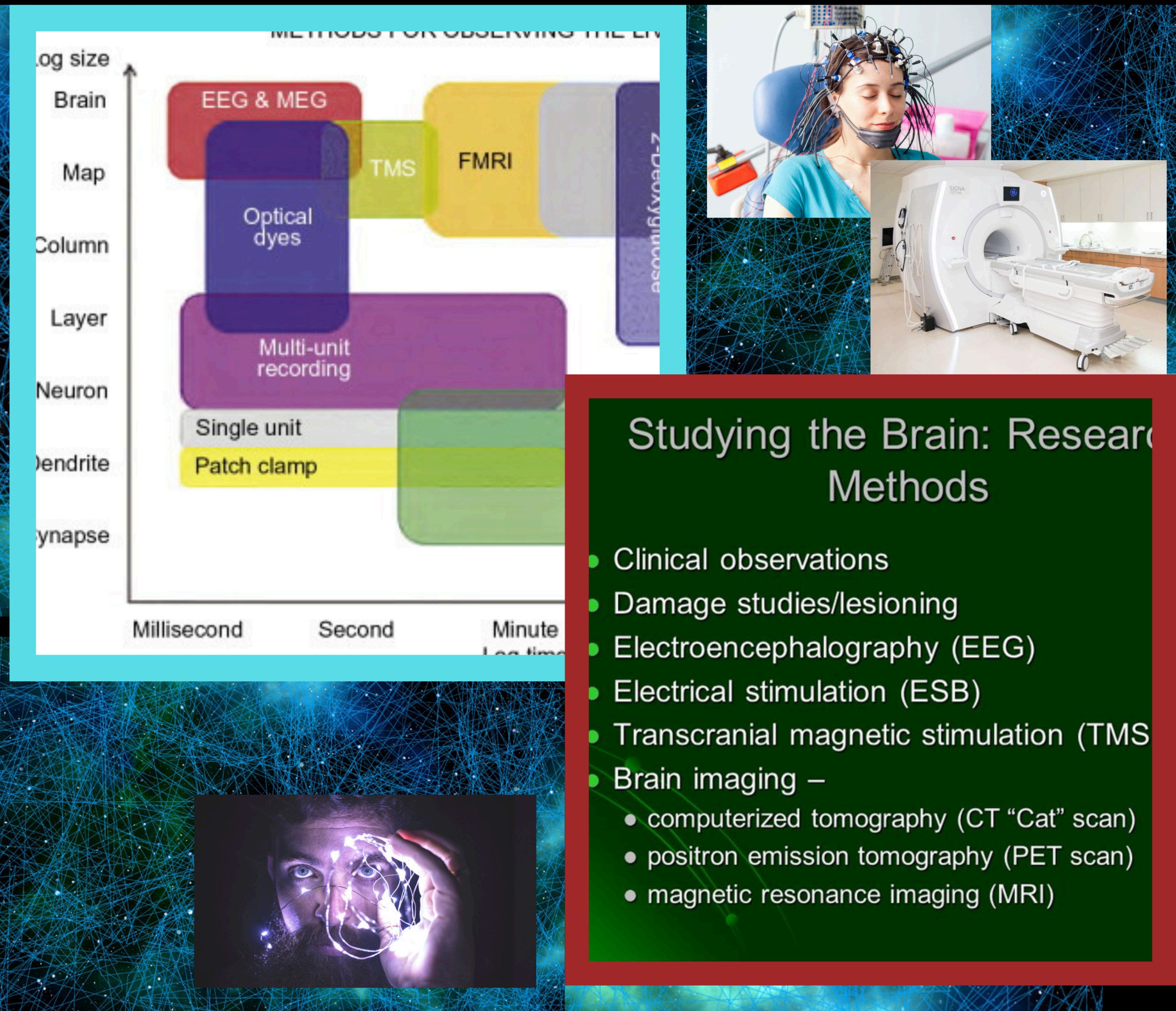
Stands for Positron Emission Tomography. A research measure in which a radioactive substance with a short **half-life** is ingested, revealing the path of blood circulation in the brain. Can be used anatomically but isn't as detailed as **MRI**.

Drosophila Melanogaster

Scientific name for fruit fly. Often used for studying how brains behave especially in the case of different gene expressions.

Computational Neuroscience

The testing of hypotheses about the brain by comparing computer models and databases against normal brain behavior and revealing correlations.



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