

GLOSSARY

Accommodation The change in the shape of the lens of the eye that allows focusing on near objects. Accommodation depends on changes in the activation of a smooth muscle, known as the ciliary muscle, within the anterior eye.

Acetylcholine A neurotransmitter used by cholinergic pathways in the brain and at the neuromuscular junction. It is often abbreviated as ACh and is formed from the esterification of choline and acetyl coenzyme A.

Acetylcholinesterase An enzyme that cleaves the neurotransmitter acetylcholine into acetate and choline. It is often used as a chemoarchitectural marker, to distinguish functionally significant brain regions.

Adrenaline Also called epinephrine. A catecholamine neurotransmitter and hormone produced by the modified neurons of the adrenal medulla and by some central nervous system neurons.

Afferent A type of axon or pathway that carries information into the central nervous system, implying a sensory or input function.

Allocortex The type of cerebral cortex that has between three and five layers. Allocortex includes both the hippocampus (archicortex) and olfactory cortex (paleocortex).

Altricial Literally meaning 'requiring nourishment' –describes young requiring extensive care after birth or hatching.

Amygdala An almond-shaped group of neurons (named from the Latin for 'almond') located mainly in the temporal region of the brain. The amygdala is part of the limbic system and is concerned with assigning emotional significance during learning.

Anterior commissure A large fibre bundle in the monotreme forebrain that connects the two cerebral hemispheres. It develops in the rostral end of the third ventricle.

Antidiuretic hormone (ADH) Also called vasopressin. A hormone released into the circulation from axon terminals of the posterior pituitary (neurohypophysis). It controls reabsorption of water by the kidneys and can increase peripheral vascular resistance to maintain arterial blood pressure.

Apomorphy A derived characteristic or trait of a clade.

Areola Also called milk patches. The region of pigmented belly skin of a female monotreme where milk is secreted to the skin surface.

Australasian ecozone One of the eight large biogeographic divisions of the Earth's land surface. It comprises Australia, Tasmania, New Guinea, New Zealand and neighbouring islands.

Autapomorphy A derived characteristic or trait that is unique to a particular clade.

Axon The long output process of a neuron that carries the nerve impulse (action potential) away from the cell body. It may be coated with myelin to increase the velocity of transmission of the action potentials.

BMR Basal metabolic rate. The amount of energy expended by an animal at rest in a thermally neutral environment and while in a post-absorptive state. Usually measured as oxygen consumption, may be expressed in watts or kJoules.

Branchiomic Referring to either: (1) skeletal muscle derived from the mesoderm of the embryonic pharyngeal arches 1 to 4; or (2) the groups of motor neurons in the brainstem that supply those muscles.

Calbindin A calcium-binding protein found within some neurons in the central nervous system. Calbindin acts as a calcium-stabilising protein and intracellular messenger in many neurons (e.g. Purkinje cells of the cerebellum and dopaminergic neurons of the substantia nigra).