Supplementary File 1: Brain region abbreviations, full names, and colors

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| **Abbreviation** | **Full name** | **Color** |
| A | anterior thalamic nucleus |   |
| AC | anterior cerebellar tract |   |
| ALLN | anterior lateral line nerves |   |
| AON | anterior octaval nucleus |   |
| APN | accessory pretectal nucleus |   |
| ATN | anterior tuberal nucleus |   |
| BSTa | bed nucleus of the stria terminalis, anterior division |   |
| BSTm | bed nucleus of the stria terminalis, medial division |   |
| BSTpd | bed nucleus of the stria terminalis, posterior division |   |
| C | central canal |   |
| Cans | ansulate commissure |   |
| Cantd | anterior commissure, dorsal part |   |
| Cantv | anterior commissure, ventral part |   |
| CC | cerebellar crest |   |
| CCe-g | cerebellar corpus, granular layer |   |
| CCe-m | cerebellar corpus, molecular layer |   |
| Ccer | cerebellar commissure |   |
| Cgus | commissure of the secondary gustatory nuclei |   |
| Chab | habenular commissure |   |
| Chor | horizontal commissure |   |
| CIL | central nucleus of the inferior lobe |   |
| Cinf | commissura infima of Haller |   |
| CM | mammillary body |   |
| CO/OT | optic chiasm / optic tract |   |
| CON | caudal octavolateralis nucleus |   |
| CP | central posterior thalamic nucleus |   |
| CPN | central pretectal nucleus |   |
| CPop | supraoptic commissure |   |
| Cpost | posterior commissure |   |
| Ctec | tectal commissure |   |
| Ctub | commissure of the posterior tuberculum |   |
| Cven | ventral rhombencephalic commissure |   |
| DAO | dorsal accessory optic nucleus |   |
| Dc | central zone of dorsal telencephalon area |   |
| DH | dorsal horn |   |
| DIL | diffuse nucleus of the inferior lobe |   |
| DiV | diencephalic ventricle |   |
| DIV | trochlear decussation |   |
| Dl | lateral zone of the dorsal telencephalon |   |
| Dm | medial zone of dorsal telencephalon |   |
| DON | descending octaval nucleus |   |
| DOT | dorsomedial optic tract |   |
| Dp | posterior zone of dorsal telencephalon area |   |
| DP | dorsal posterior thalamic nucleus |   |
| DR | dorsal root |   |
| DTN | dorsal tegmental nucleus |   |
| DV | descending trigeminal root |   |
| E | epiphysis |   |
| ECL | external cellular layer of olfactory bulb |   |
| EG | granular eminence |   |
| EmTl | lateral thalamic eminence |   |
| EmTm | medial thalamic eminence |   |
| EmTr | rostral thalamic eminence |   |
| ENd | entopeduncular nucleus, dorsal part |   |
| ENv | entopeduncular nucleus, ventral part |   |
| EW | Edinger-Westphal nucleus |   |
| Flv | ventral part of lateral funiculus |   |
| FR | habenulo-interpeduncular tract |   |
| Fv | ventral funiculus |   |
| GC | central gray |   |
| GL | glomerular layer of olfactory bulb |   |
| Had | dorsal habenular nucleus |   |
| Hav | ventral habenular nucleus |   |
| Hc | caudal zone of periventricular hypothalamus |   |
| Hd | dorsal zone of periventricular hypothalamus |   |
| Hv | ventral zone of periventricular hypothalamus |   |
| I (thalamus) | Intermediate thalamic nucleus |   |
| IAF | inner arcuate fibers |   |
| ICL | internal cellular layer of olfactory bulb |   |
| IMRF | intermediate reticular formation |   |
| IN | Intermediate nucleus |   |
| IO | inferior olive |   |
| IR | inferior raphe |   |
| IRF | inferior reticular formation |   |
| LC | locus coeruleus |   |
| LCa | caudal lobe of cerebellum |   |
| LFB | lateral forebrain bundle |   |
| LH | lateral hypothalamic nucleus |   |
| LLF | lateral longitudinal fascicle |   |
| LOT | lateral olfactory tract |   |
| LR | lateral recess of diencephalic ventricle |   |
| LRN | lateral reticular nucleus |   |
| MAC | Mauthner cell |   |
| MaON | magnocellular octaval nucleus |   |
| MFB | medial forebrain bundle |   |
| MFN | medial funicular nucleus |   |
| MLF | medial longitudinal fascicle |   |
| MON | medial octavolateralis nucleus |   |
| MOT | medial olfactory tract |   |
| NC | commissural nucleus of Cajal |   |
| NDV | nucleus of the descending trigeminal root |   |
| NI | isthmic nucleus |   |
| NIn | interpeduncular nucleus |   |
| NLL | nucleus of the lateral lemniscus |   |
| nLOT-a | nucleus of the lateral olfactory tract, anterior part |   |
| nLOT-i | nucleus of the lateral olfactory tract, intermediate part |   |
| nLOT-p | nucleus of the lateral olfactory tract, posterior part |   |
| NLV | nucleus lateralis valvulae |   |
| NMLF | nucleus of the medial longitudinal fascicle |   |
| NR | red nucleus |   |
| OENc | octavolateralis efferent neurons, caudal part |   |
| OENr | octavolateralis efferent neurons, rostral part |   |
| P | posterior thalamic nucleus |   |
| PC | posterior cerebellar tract |   |
| PCN | paracommissural nucleus |   |
| PGa | anterior preglomerular nucleus |   |
| PGc | caudal preglomerular nucleus |   |
| PGl | lateral preglomerular nucleus |   |
| PGm | medial preglomerular nucleus |   |
| PGZ | periventricular gray zone of optic tectum |   |
| PL | perilemniscal nucleus |   |
| PLLN | posterior lateral line nerve |   |
| PM | magnocellular preoptic nucleus |   |
| PMg | gigantocellular part of magnocellular preoptic nucleus |   |
| PO | posterior pretectal nucleus |   |
| POF | primary olfactory fiber layer |   |
| PON | posterior octaval nucleus |   |
| PPa | parvocellular preoptic nucleus, anterior part |   |
| PPd | periventricular pretectal nucleus, dorsal part |   |
| PPp | parvocellular preoptic nucleus, posterior part |   |
| PPv | periventricular pretectal nucleus, ventral part |   |
| PR | posterior recess of diencephalic ventricle |   |
| PSm | magnocellular superficial pretectal nucleus |   |
| PSp | parvocellular superficial pretectal nucleus |   |
| PTN | posterior tuberal nucleus |   |
| PVO | paraventricular organ |   |
| R | rostrolateral nucleus |   |
| RT | rostral tegmental nucleus |   |
| RV | rhombencephalic ventricle |   |
| SC | suprachiasmatic nucleus |   |
| SCO | subcommissural organ |   |
| SD | dorsal sac |   |
| SG | subglomerular nucleus |   |
| SGN | secondary gustatory nucleus |   |
| SGT | secondary gustatory tract |   |
| SO | secondary octaval population |   |
| SR | superior raphe |   |
| SRF | superior reticular formation |   |
| SRN | superior reticular nucleus |   |
| T | tangential nucleus |   |
| TBS | bulbo-spinal tract |   |
| TelV | telencephalic ventricles |   |
| TeO | optic tectum |   |
| TeV | tectal ventricle |   |
| TGN | tertiary gustatory nucleus |   |
| TL | longitudinal torus |   |
| TLa | lateral torus |   |
| TMCa | anterior mesencephalo-cerebellar tract |   |
| TMCp | posterior mesencephalo-cerebellar tract |   |
| TPM | pretecto-mammillary tract |   |
| TPp | periventricular nucleus of posterior tuberculum |   |
| TSc | central nucleus of semicircular torus |   |
| TSvl | ventrolateral nucleus of semicircular torus |   |
| TTB | tecto-bulbar tract |   |
| TTBc | crossed tecto-bulbar tract |   |
| TTBr | uncrossed tecto-bulbar tract |   |
| TVS | vestibulo-spinal tract |   |
| Val-g | lateral division of valvula cerebelli, granular layer |   |
| Val-m | lateral division of valvula cerebelli, molecular layer |   |
| Vam-g | medial division of valvula cerebelli, granular layer |   |
| Vam-m | medial division of valvula cerebelli, molecular layer |   |
| VAO | ventral accessory optic nucleus |   |
| Vas | vascular lacuna of area postrema |   |
| Vc | central nucleus of ventral telencephalon area |   |
| Vd-dd | dorsal zone of ventral telencephalon |   |
| Vd-vd | ventral zone of ventral telencephalon |   |
| Vdd | dorsal most zone of ventral telencephalon |   |
| Vl | lateral nucleus of ventral telencephalon area |   |
| VL | ventrolateral thalamic nucleus |   |
| VM | ventromedial thalamic nucleus |   |
| VOT | ventrolateral optic tract |   |
| Vp | postcommissural nucleus of ventral telencephalon area |   |
| Vs | supracommissural nucleus of ventral telencephalon area |   |
| Vv | ventral nucleus of ventral telencephalon area |   |
| ZL | zona limitans |   |
| III | oculomotor nerve |   |
| IIIm | oculomotor nucleus |   |
| IV | trochlear nerve |   |
| IVm | trochlear nucleus |   |
| V | trigeminal nerve |   |
| Vmd | trigeminal motor nucleus, dorsal part |   |
| Vmn | mesencephalic nucleus of the trigeminal nerve |   |
| Vmv | trigeminal motor nucleus, ventral part |   |
| Vmvr | ventral trigeminal motor root |   |
| Vsm | primary sensory trigeminal nucleus |   |
| Vsr | sensory root of the trigeminal nerve |   |
| VImc | caudal abducens nerve motor nucleus |   |
| VImr | rostral abducens nerve motor nucleus |   |
| VIILo | facial lobe |   |
| VIIm | facial motor nucleus |   |
| VIImr | facial motor root |   |
| VIIs | sensory root of the facial nerve |   |
| VIII | octaval nerve |   |
| IXLo | glossopharyngeal lobe |   |
| IXm | glossopharyngeal nerve motor nucleus |   |
| X | vagal nerve |   |
| XLo | vagal lobe |   |
| Xm | vagal motor nucleus |   |
| UnkD | unknown diencephalon |   |
| UnkMS | unknown mesencephalon |   |
| UnkR | unknown rhombencephalon |   |
| UnkSC | unknown spinal cord |   |
| UnkVT | unknown ventral telencephalon |   |