

KEY WORD INDEX

- acetylcholine, 735
- acetylcholine receptors, 817
- ACh, 809
- activity patterning, 105
- Akt, 549
- alcoholism, 869
- allodynia, 891
- Alzheimer's disease, 501, 725
- 4-aminopyridine, 269
- Ammon's horn sclerosis, 841
- amygdala, 269, 507
- animal model, 523
- anxiety, 963
- apoptosis, 719, 831
- area dentata, 857
- area Te1, 655
- aromatic l-amino acid decarboxylase, 629
- arousal, 963
- aspartate, 395
- astrocytes, 429, 725
- auditory, 535
- autonomic functions, 53
- autonomic neurons, 327
- autoradiography, 901
- autotomy, 945
- aversion, 241
- axonal tracing, 573

- Barnes circular maze, 341
- basal K⁺-evoked glutamate levels, 367
- BDNF, 985
- binocular vision, 121
- biocytin, 655
- blood flow, 709
- brain, 831
- brain plasticity, 53
- brain regions, 725
- brainstem, 405
- bromodeoxyuridine, 605
- α -bungarotoxin, 405, 647

- calcium, 377, 869
- calcium imaging, 147
- calcium-binding proteins, 573
- callosal crossing, 113
- callosal pathway, 231
- CaMKII, 549
- capillary electrophoresis, 395
- capsaicin, 919
- carbonyl cyanide *m*-chlorophenylhydrazone (CCCP), 327
- caudate-putamen, 23
- cell adhesion molecules, 841
- cell characterization, 549
- cell volume regulation, 89
- cellular osmoregulation, 89
- cerebellum, 305, 647
- C-fibers, 919
- c-Fos, 247, 695
- ChAT, 809
- choline acetyltransferase, 743
- choline transport, 809
- cholinergic amacrine cells, 147
- chromaffin cells, 781
- circadian rhythm, 789
- Cl⁻ channel, 195
- clock gene, 789
- coding, 305
- conditional place preference, 23
- conditioning, 183
- consolidation, 735

- corpus callosum, 481
- cortex, 405
- corticofugal projection, 655
- corticosterone, 985
- corticotectal, 535
- corticotropin-releasing factor, 459
- corticotropin-releasing factor receptor, 459
- cross-modal, 535
- cross-sectional design, 523
- 5-CT, 901
- cytokines, 319

- d*-amphetamine, 33
- dark rearing, 161
- DARPP-32, 261
- decerebrate preparation, 207, 467
- dendritic inhibitory cells, 797
- dendritic spines, 549
- dentate gyrus, 719
- dentate hilus, 797
- detoxification, 869
- development, 629, 831
- diencephalon, 669
- dihydro- β -erythroidine, 647
- dihydropyridine, 195
- Disc1, 3
- disinhibition, 953
- dissociation, 507
- distribution, 3
- Dlx, 605
- dopamine, 283, 449, 619, 637, 757
- dopamine D₁ receptor, 33
- dopamine D1 receptor, 449
- dopamine D2 receptor, 449
- dopamine receptor, 241
- dopamine release, 147
- dopamine transporter, 449
- dopamine- β -hydroxylase promoter, 719
- dopaminergic amacrine cells, 147
- dopaminergic neuron, 173
- dorsal horn, 879
- dorsal striatum, 507
- drug abuse, 241
- dye coupling, 973
- dynamic clamping, 305
- dynorphin, 105

- Egr-1, 247
- elevated plus maze, 283
- endocytosis, 11
- endothelin B receptor, 719
- enkephalin, 449
- epibatidine, 405
- epilepsy, 953
- epileptiform activity, 269
- epileptiform discharge, 953
- estradiol, 459, 809
- excitotoxins, 535
- extracellular, 269

- fear conditioning, 247
- fear-sensitized startle, 283
- female, 879
- FGF receptor type 1, 561
- FGF-2, 561
- FK506 derivatives, 351
- FKBP52, 351
- fluorescence immunolabeling, 573
- forkhead transcription factor, 261
- Fos, 11, 43

Fos-FRA, 53
 freezing behavior, 247
 frog, 669
 fusion, 121

 G protein-coupled receptor, 11
 GABA, 605
 GABA_A receptor, 161
 GABA_A receptors, 929
 GABAergic nonprincipal neurons, 797
 GABAergic projection, 207
 GABAergic system, 593
 gender difference, 459
 gene therapy, 823
 gene-targeted mice, 725
 giant terminal, 655
 glia, 429
 glial cell line-derived neurotrophic factor, 137
 glial cells, 781
 glial-neuronal signalling, 377
 glia-neurone signalling, 387
 glucocorticoids, 429
 GluR2/3, 261
 glutamate, 377, 395, 869
 glycine, 421
 gonadectomy, 695
 granule cells, 305
 gravity, 53
 guinea-pig, 919

 habit, 507
 headache, 919
 hemicholinium-3, 735
 heparin-binding epidermal growth factor-like growth factor (HB-EGF), 757
 hierarchical processing, 113
 hippocampal formation, 137
 hippocampus, 43, 341, 405, 429, 857
 homocysteic acid, 377, 387
 HPA axis, 963
 5-HT₇ receptor, 901
 hyperalgesia, 743, 891
 hyperexcitability, 593
 hypernatremia, 89
 hyperosmolarity, 89
 hyperthermia, 637
 hypophysiotropic, 221
 hypothalamus, 11, 395

 ibotenic acid, 535
 IL-1 β , 619
 immediate early gene, 33
 immediate early genes, 43, 53
 immunohistochemistry, 221, 515
 immunophilin, 351
in situ hybridization, 261
in situ hybridization localization, 3
in vivo release, 387
 incidental learning, 507
 infarct, 583
 inflammation, 945
 inhalation, 593
 inhibition, 305
 innervation, 221
 insulin-regulated aminopeptidase, 341
 interhemispheric EEG synchronisation, 481
 interneurons, 573
 interocular disparity, 121
 intoxication, 593
 intracellular recordings, 231
 intracerebral infusion, 183
 intraparenchymal NGF, 743
 ion channels, 817

 karyokinesis, 561
 knockout mice, 901

 learning, 247, 857
 lesions, 535
 limbic, 183
 limbic system, 405
 lipopolysaccharide, 619
 local sleep, 481
 locomotion, 33
 locus coeruleus, 137
 long-term potentiation, 319, 857
 L-type Ca⁺⁺ channel, 195

 male, 879
 MAPK, 319, 549
 marginal zone, 605
 maternal aggression, 439
 maternal behaviour, 439
 maternal marijuana consumption, 367
 mecamylamine, 647
 mediobasal hypothalamus, 629
 membrane electrical properties, 929
 membrane excitability, 327
 memory, 247, 319, 507, 735
 memory formation, 857
 metabolism, 429
 mice, 735
 microdialysis, 395, 439
 mitral/tufted cells, 929
 MMP-2, 767
 MMP-3, 767
 MMP-9, 767
 morphine, 515
 morphology, 593
 Morris water escape task, 523
 mossy fibers, 305
 α -motoneurons, 467
 mouse, 261, 515
 MPTP, 173
 MRI, 299
 muscular tonus, 467
 myelin protein, 781

 Navon figures, 113
 neocortex, 231
 neural cells, 823
 neural regeneration FKBP12, 351
 neurogenesis, 173
 Neurolab, 53
 neurologic deficits, 583
 neuronal activity, 501
 neuronal interactions, 221
 neuronal progenitor cells, 173
 neuropathology, 869
 neuropeptide receptor, 147
 neuroplasticity, 137
 neuroprotection, 945
 neurosecretory cells, 973
 neurotoxicity, 637
 neurotrophic factor, 757
 neutrophils, 945
 NGF, 809
 nicotinic acetylcholine receptors, 647
 nitric oxide, 299, 421
 NMDA, 377
 NMDA receptors, 387
 non-human primates, 725
 noradrenergic neurons, 137
 norepinephrine, 963
 nucleus, 561
 nucleus basalis magnocellularis, 743
 nucleus raphe magnus, 685

nucleus tractus solitarius, 81

off-cell, 685
 8-OH-DPAT, 901
 olfactory bulb, 173
 olfactory nerve-evoked synaptic responses, 929
 on-cell, 685
 ontogeny, 3
 open field, 283
 operant learning, 23
 opiate, 879
 κ -opioid, 105, 241
 osmolality, 89
 osmolyte, 89
 ovariectomy, 459, 695
 overexpression, 561
 ovine, 789
 oxytocin, 973

p53, 831
 pain, 395, 879
 paired-pulse inhibition, 593
 paraventricular nucleus, 81
 parietal, 43
 Parkinson's disease, 207, 619, 757
 paroxysmal depolarizing shift, 953
 partial nerve injury, 891
 Pavlovian learning, 23
 pedunculo pontine tegmental nucleus, 207, 467
 periglomerular cells, 929
 peripheral nerve, 781
 pharmacology, 817
 phosphatidylinositol kinase cascade, 515
 phosphodiesterase PDE4B3, 857
 photoperiod, 789
 physical activity, 985
 pit organ, 913
 pit vasculature, 913
 place conditioning, 241
 plasma extravasation, 919
 polyamine, 299
 postsynaptic inhibition, 467
 precedence effect, 113
 prenatal, 619
 preoptic area, 695
 presynaptic GABA_B receptors, 929
 primary visual cortex, 121
 principal neurons, 797
 protein levels, 725
 proteinases, 767
 protonophore, 327
 psychostimulants, 637
 PVN-spinal neurones, 421

quantitative PCR, 161
 quinolinic acid, 23
 quisqualic acid, 945

raphe, 709
 raphe nucleus, 573
 rat, 33, 43, 81, 183, 573, 629, 757, 809
 α_2 receptor, 901
 recombinant receptor, 195
 reconsolidation, 735
 recovery of function, 523
 reinnervation, 767
 release, 377
 REM sleep, 207, 467
 renal sympathetic activity, 421
 retroviral vector, 173
 retrovirus, 823
 reward, 241
 RFamide, 81

rofecoxib, 891
 rotenone, 327
 Ruthenium Red, 913

schizophrenia, 183
 Schwann cell, 743
 Schwann cells, 351
 seizures, 231
 sensory transmission, 387
 sex steroids, 695
 sexual behavior, 11
 skin, 709
 sleep deprivation, 481, 695
 sleep regulation, 481
 slice, 269
 slice-culture, 161
 somatosensory, 669
 spatial learning, 523
 spatial memory, 43, 341
 spike-wave complexes, 231
 spinal dorsal horn, 891
 spinophilin, 549
 spontaneous seizures, 269
 SR141716A, 367
 stem cells, 823
 stereology, 283, 797
 strain differences, 963
 stress, 283, 429, 439, 459, 709
 stress vulnerability, 963
 stressor, 985
 striatum, 637
 substantia nigra, 629
 substantia nigra pars reticulata, 207
 superior cervical ganglion, 561
 superplate, 605
 suppression, 121
 supraoptic nucleus, 81, 105
 supraspinal, 515
 synapse, 501
 synapses, 221
 synaptic, 501
 synaptic currents, 161
 synaptic reorganization, 841
 synaptic responsiveness, 231

tachykinin peptide, 147
 teleost, 973
 TGF- β , 351
 thalamic reticular nucleus, 655
 thalamus, 387
 the matrix, 261
 thermoreceptor, 913
 thermoregulation, 709
 TNF α , 619
 tonotopic organization, 655
 transgene expression, 719
 transient focal cerebral ischemia, 583
 transplantation, 137
 treadmill, 583
 trigeminal ganglion neuron, 913
 trigeminus, 669, 919
 TTC staining, 299
 two-electrode voltage-clamp, 817
 tyrosine hydroxylase, 629

ultrastructure, 879
 unpredictable stress, 637

vasopressin, 973
 vestibular, 669

visual, 535
visual cortex, 161

Wallerian degeneration, 767
warm-plate assay, 515

water maze, 743
WIN 55212-2, 685
WOX1, 831

Xenopus oocytes, 817