

# References

## Chapter 1. A Brief History of Psychiatry

Samuel H Barondes, *Better than Prozac*, Oxford Univ Press, New York, NY, 2003.

Coppen A (1967) The biochemistry of affective disorders. *Br J Psychiatry* 113:1237-1264.

Janowsky DS, El-Yousef MK, Davis JM, Sekerke HJ (1972) A cholinergic-adrenergic hypothesis of mania and depression. *Lancet* 2:632-635.

Michael J Norden, *Beyond Prozac*, ReganBooks, New York, NY, 1995.

Schildkraut JJ (1965) The catecholamine hypothesis of affective disorders: a review of supporting evidence. *Am J Psychiatry* 122:509-522.

Siever LJ, Risch SC, Murphy DL (1981) Central cholinergic-adrenergic balance in the regulation of affective state. *Psychiatry Res* 5:108-109.

[www.wikipedia.com](http://www.wikipedia.com)

## Chapter 2. My Case Study

Andy Behrman, *Electroboy*, Random House, New York, NY, 2002.

## Chapter 3. General Characteristics of Brain Function

### Sensory Systems

Bruce Alberts, Dennis Bray, Julian Lewis, Martin Raff, Keith Roberts, James D Watson, *Molecular Biology of the Cell, 3<sup>rd</sup> Edition*, Garland Publishing, New York, NY, 1994.

Felleman DJ, Van Essen DC (1991) Distributed hierarchical processing in the primate cerebral cortex. *Cereb Cortex* 1:1-47.

### Information Processing

Eriksson PS, Perfilieva E, Bjork-Eriksson T, Alborn AM, Nordborg C, Peterson DA, Gage FH (1998) Neurogenesis in the adult human hippocampus. *Nature Medicine* 11:1313-1317.

Gage FH (2002) Neurogenesis in the adult brain (review paper). *J Neurosci* 22:612-613.

Steinmetz PN, Roy A, Fitzgerald PJ, Hsiao SS, Johnson KO, Niebur E (2000) Attention modulates synchronized neuronal firing in primate somatosensory cortex. *Nature* 404: 187-190.

## **Chapter 4. Enter the Big Three**

### **Saturation of Ser and Nore, with a Safety Factor**

Bjorvatn B, Gronli J, Hamre F, Sorensen E, Fiske E, Bjorkum AA, Portas CM, Ursin R (2002) Effects of sleep deprivation on extracellular serotonin in hippocampus and frontal cortex of the rat. *Neuroscience* 113:323-330.

Florin SM, Kuczenski R, Segal DS (1994) Regional extracellular norepinephrine responses to amphetamine and cocaine and effects of clonidine pretreatment. *Brain Res* 654:53-62.

Lena I, Parrot S, Deschaux O, Muffat-Joly S, Sauvinet V, Renaud B, Suaud-Chagny MF, Gottesmann C (2005) Variations in extracellular levels of dopamine, noradrenaline, glutamate, and aspartate across the sleep-wake cycle in the medial prefrontal cortex and nucleus accumbens of freely moving rats. *J Neurosci Res* 81:891-899.

Lopez-Rodriguez F, Wilson CL, Maidment NT, Poland RE, Engel J (2003) Total sleep deprivation increases extracellular serotonin in the rat hippocampus. *Neuroscience* 121:523-530.

Maisonneuve IM, Keller RW, Glick SD (1990) Similar effects of D-amphetamine and cocaine on extracellular dopamine levels in medial prefrontal cortex of rats. *Brain Res* 535:221-226.

Moghaddam B, Bunney BS (1989) Differential effect of cocaine on extracellular dopamine levels in rat medial prefrontal cortex and nucleus accumbens: comparison to amphetamine. *Synapse* 4:156-161.

Monti JM, Jantos H, Monti D, Alvarino F (2000) Dorsal raphe nucleus administration of 5-HT<sub>1A</sub> receptor agonist and antagonists: effect on rapid eye movement sleep in the rat. *Sleep Res Online* 3:29-34.

Nicolaidis S, Gerozissis K, Orosco M (2001) Variations of hypothalamic and cortical prostaglandins and monoamines reveal transitions in arousal states: microdialysis study in the rat. *Rev Neurol (Paris)* 157:S26-33.

Pan WH, Lai YJ, Chen NH (1995) Differential effects of chloral hydrate and pentobarbital sodium on a cocaine level and its catecholamine response in the medial prefrontal cortex: a comparison with conscious rats. *J Neurochem* 64:2653-2659.

Park SP (2002) In vivo microdialysis measures of extracellular norepinephrine in the rat amygdala during sleep-wakefulness. *J Korean Med Sci* 17:395-399.

Penalva RG, Lancel M, Flachskamm C, Reul JM, Holsboer F, Linthorst AC (2003) Effect of sleep and sleep deprivation on serotonergic neurotransmission in the hippocampus: a combined in vivo microdialysis/EEG study in rats. *Eur J Neurosci* 17:1896-1906.

Portas CM, Bjorvatn B, Ursin R (2000) Serotonin and the sleep/wake cycle: special emphasis on microdialysis studies. *Prog Neurobiol* 60:13-35.

Python A, Steimer T, de Saint Hilaire Z, Mikolajewski R, Nicolaidis S (2001) Extracellular serotonin variations during vigilance states in the preoptic area of rats: a microdialysis study. *Brain Res* 910:49-54.

Sakai K, Crochet S (2001) Differentiation of presumed serotonergic dorsal raphe neurons in relation to behavior and wake-sleep states. *Neuroscience* 104:1141-1155.

Shouse MN, Staba RJ, Saquib SF, Farber PR (2000) Monoamines and sleep: microdialysis findings in pons and amygdala. *Brain Res* 860:181-189.

Stecker RE, Thakkar MM, Porkka-Heiskanen T, Dauphin LJ, Bjorkum AA, McCarley RW (1999) Behavioral state-related changes of extracellular serotonin concentration in the pedunculopontine tegmental nucleus: a microdialysis study in freely moving animals. *Sleep Res Online* 2:21-27.

Zeitler JM, Maidment NT, Behnke EJ, Ackerson LC, Fried I, Engel J Jr, Wilson CL (2002) Ultradian sleep-cycle variation of serotonin in the human lateral ventricle. *Neurology* 59:1272-1274.

### **Dysfunction and Stress**

Aston-Jones G, Rajkowski J, Kubiak P, Alexinsky T (1994) Locus coeruleus neurons in monkey are selectively activated by attended cues in a vigilance task. *J Neurosci* 14:4467-4480.

Clayton EC, Rajkowski J, Cohen JD, Aston-Jones G (2004) Phasic activation of monkey locus coeruleus neurons by simple decisions in a forced-choice task. *J Neurosci* 24:9914-9920.

Dazzi L, Seu E, Cherchi G, Biggio G (2005) Chronic administration of the SSRI fluvoxamine markedly and selectively reduces the sensitivity of cortical serotonergic neurons to footshock stress. *Eur Neuropsychopharmacol* 15:283-290.

Dazzi L, Vignone V, Seu E, Ladu S, Vacca G, Biggio G (2002) Inhibition by venlafaxine of the increase in norepinephrine output in rat prefrontal cortex elicited by acute stress or by the anxiogenic drug FG 7142. *J Psychopharmacol* 16:125-131.

Hajos-Korcsok E, Robinson DD, Yu JH, Fitch CS, Walker E, Merchant KM (2003) Rapid habituation of hippocampal serotonin and norepinephrine release and anxiety-related behaviors, but not plasma corticosterone levels, to repeated footshock stress in rats. *Pharmacol Biochem Behav* 74:609-616.

Jordan S, Kramer GL, Zukas PK, Petty F (1994) Previous stress increases in vivo biogenic amine response to swim stress. *Neurochem Res* 19:1521-1525.

Maier SF, Watkins LR (2005) Stressor controllability and learned helplessness: the roles of the dorsal raphe nucleus, serotonin, and corticotropin-releasing factor. *Neurosci Biobehav Rev* 29:829-841.

Nakane H, Shimizu N, Hori T (1994) Stress-induced norepinephrine release in the rat prefrontal cortex measured by microdialysis. *Am J Physiol* 267:R1559-1566.

Petty F, Jordan S, Kramer GL, Zukas PK, Wu J (1997) Benzodiazepine prevention of swim stress-induced sensitization of cortical biogenic amines: an in vivo microdialysis study. *Neurochem Res* 22:1101-1104.

Usher M, Cohen JD, Servan-Schreiber D, Rajkowski J, Aston-Jones G (1999) The role of locus coeruleus in the regulation of cognitive performance. *Science* 283:549-554.

Walletschek H, Raab A (1982) Spontaneous activity of dorsal raphe neurons during defensive and offensive encounters in the tree-shrew. *Physiol Behav* 28:697-705.

Waterhouse BD, Devilbiss D, Seiple S, Markowitz R (2004) Sensorimotor-related discharge of simultaneously recorded, single neurons in the dorsal raphe nucleus of the awake, unrestrained rat. *Brain Res* 1000:183-191.

Zhang X, Kindel GH, Wulfert E, Hanin I (1995) Effects of immobilization stress on hippocampal monoamine release: modification by mivazerol, a new alpha 2-adrenoceptor agonist. *Neuropharmacology* 34:1661-1672.

### **Continua Versus Thresholds**

Rapoport JL, Buchsbaum MS, Weingartner H, Zahn TP, Ludlow C, Mikkelsen EJ (1980) Dextroamphetamine. Its cognitive and behavioral effects in normal and hyperactive boys and normal men. *Arch Gen Psychiatry* 37:933-943.

## **Chapter 5. Big Three Strength Interactions: The Triangle**

Amargos-Bosch M, Artigas F, Adell A (2005) Effects of acute olanzapine after sustained fluoxetine on extracellular monoamine levels in the rat medial prefrontal cortex. *Eur J Pharmacol* 516:235-238.

Devoto P, Flore G, Longu G, Pira L, Gessa GL (2003) Origin of extracellular dopamine from dopamine and noradrenaline neurons in the medial prefrontal and occipital cortex. *Synapse* 50:200-205.

Devoto P, Flore G, Vacca G, Pira L, Arca A, Casu MA, Pani L, Gessa GL (2003) Co-release of noradrenaline and dopamine from noradrenergic neurons in the cerebral cortex induced by clozapine, the prototype atypical antipsychotic. *Psychopharmacol (Berl)* 167:79-84.

Gobert A, Rivet JM, Audinot V, Newman-Tancredi A, Cistarelli L, Millan MJ (1998) Simultaneous quantification of serotonin, dopamine and noradrenaline levels in single frontal cortex dialysates of freely-moving rats reveals a complex pattern of reciprocal auto- and heteroreceptor-mediated control of release. *Neurosci* 84:413-429.

Page ME, Lucki I (2002) Effects of acute and chronic reboxetine treatment on stress-induced monoamine efflux in the rat frontal cortex. *Neuropsychopharmacology* 27:237-247.

Pan WH, Yang SY, Lin SK (2004) Neurochemical interaction between dopaminergic and noradrenergic neurons in the medial prefrontal cortex. *Synapse* 53:44-52.

Pudovkina OL, Cremers TI, Westerink BH (2003) Regulation of the release of serotonin in the dorsal raphe nucleus by alpha1 and alpha2 adrenoceptors. *Synapse* 50:77-82.

Sodero AO, Valdomero A, Cuadra GR, Ramirez OA, Orsingher OA (2004) Locus coeruleus activity in perinatally protein-deprived rats: effects of fluoxetine administration. *Eur J Pharmacol* 503:35-42.

Tanda G, Carboni E, Frau R, Di Chiara G (1994) Increase of extracellular dopamine in the prefrontal cortex: a trait of drugs with antidepressant potential? *Psychopharmacology (Berl)* 115:285-288.

Yoshino T, Nisijima K, Katoh S, Yui K, Nakamura M (2002) Tansospirone potentiates the fluoxetine-induced increases in extracellular dopamine via 5-HT(1A) receptors in the rat medial frontal cortex. *Neurochem Int* 40:355-360.

## **Chapter 6. Big Three Circuits**

Castren E (2005) Is mood chemistry? (review) *Nat Rev Neurosci* 6:241-246.

### **Levels of Scale**

Haynes J-D, Rees G (2006) Neuroimaging: Decoding mental states from brain activity in humans. *Nat Rev Neurosci* 7:523-534.

Stefansson et al. (2002) Neuregulin I and susceptibility to schizophrenia. *Am J Hum Genet* 71:877-892.

Straub et al. (2002) Genetic variation in the 6p22.3 gene DTNBPI, the human ortholog of the mouse dysbindin gene, is associated with schizophrenia. *Am J Hum Genet* 71:337-348.

### **Effects of Drugs**

Baron BM, Ogden AM, Siegel BW, Stegeman J, Ursillo RC, Dudley MW (1988) Rapid down regulation of beta-adrenoceptors by co-administration of desipramine and fluoxetine. *Eur J Pharmacol* 154:125-134.

### **Circuit Modulation**

Cryan JF, O'Leary OF, Jin SH, Friedland JC, Ouyang M, Hirsch BR, Page ME, Dalvi A, Thomas SA, Lucki I (2004) Norepinephrine-deficient mice lack responses to antidepressant drugs, including selective serotonin reuptake inhibitors. *Proc Natl Acad Sci USA* 101:8186-8191.

### **Mood Circuits**

Liotti M, Mayberg HS (2001) The role of functional neuroimaging in the neuropsychology of depression. *J Clin Exp Neuropsychol* 23:121-136.

## **Chapter 7. Big Three Functions**

### **Sensation**

Segal NL, Topolski TD, Wilson SM, Brown KW, Araki L (1995) Twin analysis of odor identification and perception. *Physiol Behav* 57: 605-609.

### **Emotion**

Harmer CJ, Perrett DI, Cowen PJ, Goodwin GM (2001) Administration of the beta-adrenoceptor blocker propranolol impairs the processing of facial expressions of sadness. *Psychopharmacol (Berl)* 154:383-389.

### **Sleep**

Kayama Y, Koyama Y (2003) Control of sleep and wakefulness by brainstem monoaminergic and cholinergic neurons. *Acta Neurochir Suppl* 87:3-6.

Morgane PJ, Stern WC (1975) The role of serotonin and norepinephrine in sleep-waking activity. *Natl Inst Drug Abuse Res Monogr Ser* 3:37-61.

Reynolds CF (1987) Sleep and affective disorders. A minireview. *Psychiatr Clin North Am* 10:583-591.

### **Movement**

Juhlin-Dannfelt A (1983) beta-Adrenoceptor blockade and exercise: effects on endurance and physical training. *Acta Med Scand Suppl* 672:49-54.

Leibowitz SF, Brown O, Tretter JR, Kirschgessner A (1985) Norepinephrine, clonidine, and tricyclic antidepressants selectively stimulate carbohydrate ingestion through noradrenergic system of the paraventricular nucleus. *Pharmacol Biochem Behav* 23:541-550.

Seznec JC, Lepine JP, Pelissolo A (2003) Dimensional personality assessment of the members of the French junior national team of road cycling. *Encephale* 29:29-33.

### **Disease**

Palm D, Lang K, Niggemann B, Drell TL, Masur K, Zaenker KS, Entschladen F (2006) The norepinephrine-driven metastasis development of PC-3 human prostate cancer cells in BALB/c nude mice is inhibited by beta-blockers. *Int J Cancer* 118:2744-2749.

John J Ratey, Catherine Johnson, *Shadow Syndromes*, Bantam Books, New York, NY, 1998, p.20.

Vazquez SM, Mladovan AG, Perez C, Bruzzone A, Baldi A, Luthy IA (2006) Human breast cell lines exhibit functional alpha(2)-adrenoceptors. *Cancer Chemother Pharmacol* 58:50-61.

### **Gender Differences and Sexual Preference**

Nishizawa S, Benkelfat C, Young SN, Leyton M, Mzengeza S, de Montigny C, Blier P, Diksic M (1997) Differences between males and females in rates of serotonin synthesis in human brain. *Proc Natl Acad Sci USA* 94:5308-5313.

### **Miscellaneous Traits**

Brown GL, Linnoila MI (1990) CSF serotonin metabolite (5-HIAA) studies in depression, impulsivity, and violence. *J Clin Psychiatry* 51:31-43.

Ozawa H, Chen CS, Watanabe H, Uematsu T (1977) Effect of clonidine on blood pressure, heart rate and body temperature in conscious rats. *Jpn J Pharmacol* 27:47-54.

## **Chapter 8. The Adjustment**

Skrebuhhova-Malmros T, Allikmets L, Matto V (2001) Additive effect of clonidine and fluoxetine on apomorphine-induced aggressive behavior in adult male Wistar rats. *Arch Med Res* 32:193-196.

## **Chapter 9. Effects of Drugs**

Lane RM (1998) SRI-induced extrapyramidal side-effects and akathisia: implications for treatment. *J Psychopharmacol* 12:192-214.

Tse WS, Bond AJ (2002) Serotonergic intervention affects both social dominance and affiliative behaviour. *Psychopharmacology (Berl)* 161:324-330.

### **Ser Strengtheners**

Samuel H Barondes, *Better than Prozac*, Oxford Univ Press, New York, NY, 2003, p.16.

### **Ser Weakeners**

Akhondzadeh S, Mohammadi MR, Amini-Nooshabadi H, Davari-Ashtiani R (1999) Cyproheptadine in treatment of chronic schizophrenia: a double-blind, placebo-controlled study. *J Clin Pharm Ther* 24:49-52.

Balsara JJ, Jadhav SA, Gaonkar RK, Gaikwad RV, Jadhav JH (2005) Effects of the antidepressant trazodone, a 5-HT<sub>2A/2C</sub> receptor antagonist, on dopamine-dependent behaviors in rats. *Psychopharmacol (Berl)* 179:597-605.

Blackshear MA, Martin LL, Sanders-Bush E (1986) Adaptive changes in the 5-HT<sub>2</sub> binding site after chronic administration of agonists and antagonists. *Neuropharmacol* 25:1267-1271.

Davis R, Whittington R, Bryson HM (1997) Nefazodone. A review of its pharmacology and clinical efficacy in the management of major depression. *Drugs* 53:608-636.

Feder R (1991) Reversal of antidepressant activity of fluoxetine by cyproheptadine in three patients. *J Clin Psychiatry* 52:163-164.

Greenway SE, Pack AT, Greenway FL (1995) Treatment of depression with cyproheptadine. *Pharmacotherapy* 15:357-360.

McCormick S, Olin J, Brotman AW (1990) Reversal of fluoxetine-induced anorgasmia by cyproheptadine in two patients. *J Clin Psychiatry* 51:383-384.

Offord SJ, Warwick RO (1984) Ketanserin alters [<sup>3</sup>H]serotonin uptake and release in rat hypothalamus. *Eur J Pharmacol* 104:379-382.

Pazzagli M, Giovannini MG, Pepeu G (1999) Trazodone increases extracellular serotonin levels in the frontal cortex of rats. *Eur J Pharmacol* 383:249-257.

Wagstaff AJ, Ormrod D, Spencer CM (2001) Tianeptine: a review of its use in depressive disorders. *CNS Drugs* 15:231-259.

### **Nore Weakeners**

Alary P, Andersson JC (1988) Clonidine: prophylactic action in rapid cycling manic-depressive psychosis. *Encephale* 14:119-126.

Blum I, Atsmon A (1976) The possible role of beta-adrenergic and alpha-adrenergic antagonist sensitive systems in the brain in the mechanism of psychosis. *Med Hypotheses* 2:104-106.

Chou JC (1991) Recent advances in treatment of acute mania. *J Clin Psychopharmacol* 11:3-21.

Coulin K, Simon O, Emrich HM, von Zerssen D (1982) The EEG of patients with acute manic psychoses before, during and after treatment with high doses of d-propranolol and dl-propranolol (author's transl). *Arch Psychiatr Nervenkr* 231:323-331.

Diacicov S, Tudorache B (1990) Clonidine treatment in manic episodes. *Rev Med Interna Neurol Psihiatr Neurochir Dermatovenerol Neurol Psihiatr Neurochir* 35:29-32.

Flemenbaum A (1981) The use and abuse of clonidine as a psychopharmacological tool. *Prog Clin Biol Res* 68:209-215.

Giannini AJ, Pascarzi GA, Loiselle RH, Price WA, Giannini MC (1986) Comparison of clonidine and lithium in the treatment of mania. *Am J Psychiatry* 143:1608-1609.

Gowing LR, Farrell M, Ali RL, White JM (2002) Alpha2-adrenergic agonists in opioid withdrawal. *Addiction* 97:49-58.

Gresch PJ, Sved AF, Zigmond MJ, Finlay JM (1995) Local influence of endogenous norepinephrine on extracellular dopamine in rat medial prefrontal cortex. *J Neurochem* 65:111-116.

Hardy MC, Lecrubier Y, Widlocher D (1986) Efficacy of clonidine in 24 patients with acute mania. *Am J Psychiatry* 143:1450-1453.

Hardy-Bayle MC, Lecrubier Y, Lancrenon S, Laine J, Allilaire JF, Des Lauriers A (1989) Clonidine versus a placebo trial in manic disorder. *Encephale* 15:523-526.

Janicak PG, Sharma RP, Easton M, Comaty JE, Davis JM (1989) A double-blind, placebo-controlled trial of clonidine in the treatment of acute mania. *Psychopharmacol Bull* 25:243-245.

Jimerson DC, Post RM, Stoddard FJ, Gillin JC, Bunney WE (1980) Preliminary trial of the noradrenergic agonist clonidine in psychiatric patients. *Biol Psychiatry* 15:45-57.

Johnson JM (1984) Psychiatric uses of antiadrenergic and adrenergic blocking drugs. *J Nerv Ment Dis* 172:123-132.

Jouvent R, Baruch P, Simon P (1986) Manic episode after propranolol withdrawal. *Am J Psychiatry* 143:1633.

Jouvent R, Lecrubier Y, Puech AJ, Simon P, Widlocher D (1980) Antimanic effect of clonidine. *Am J Psychiatry* 137:1275-1276.

Kontaxakis V, Markianos M, Markidis M, Stefanis C (1989) Clonidine in the treatment of mixed bipolar disorder. *Acta Psychiatr Scand* 79:108-110.

Maguire J, Singh AN (1987) Clonidine. An effective anti-manic agent? *Br J Psychiatry* 150:863-864.

Mateo Y, Fernandez-Pastor B, Meana JJ (2001) Acute and chronic effects of desipramine and clorgyline on alpha(2)-adrenoceptors regulating noradrenergic transmission in the rat brain: a dual-probe microdialysis study. *Br J Pharmacol* 133:1362-1370.

Moller HJ, von Zerssen D, Emrich HM, Kissling W, Cording C, Schietsch HJ, Riedel E (1979) Action of d-propranolol in manic psychoses. *Arch Psychiatr Nervenkr* 227:301-317.

Peet M, Yates RA (1981) Beta-blockers in the treatment of neurological and psychiatric disorders. *J Clin Hosp Pharm* 6:155-171.

Pudovkina OL, Kawahara Y, de Vries J, Westerink BH (2001) The release of noradrenaline in the locus coeruleus and prefrontal cortex studied with dual-probe microdialysis. *Brain Res* 906:38-45.

Rackensperger W, Fritsch W, Schwarz D, Stutte KH, Zerssen D (1976) The effect of the beta-adrenergic blocking agent propranolol in mania (author's transl). *Arch Psychiatr Nervenkr* 222:223-243.

Robson RD, Antonaccio MJ, Saelens JK, Liebman J (1978) Antagonism by mianserin and classical alpha-adrenoceptor blocking drugs of some cardiovascular and behavioral effects of clonidine. *Eur J Pharmacol* 47:431-442.

Saper JR, Lake AE, Cantrell DT, Winner PK, White JR (2002) Chronic daily headache prophylaxis with tizanidine: a double-blind, placebo-controlled, multicenter outcome study. *Headache* 42:470-482.

Stoudemire A, Brown JT, Harris RT, Blessing-Feussner C, Roberts JH, Nichols JC, Houpt JL (1984) Propranolol and depression: a reevaluation based on a pilot clinical trial. *Psychiatr Med* 2:211-218.

Szabo B, Fritz T, Wedzony K (2001) Effects of imidazoline antihypertensive drugs on sympathetic tone and noradrenaline release in the prefrontal cortex. *Br J Pharmacol* 134:295-304.

Tudorache B, Diacicov S (1991) The effect of clonidine in the treatment of acute mania. *Rom J Neurol Psychiatry* 29:209-213.

Van Gaalen M, Kawahara H, Kawahara Y, Westerink BH (1997) The locus coeruleus noradrenergic system in the rat brain studied by dual-probe microdialysis. *Brain Res* 763:56-62.

Van Spanning HW, van Zwieten PA (1973) The interference of tricyclic antidepressants with the central hypotensive effect of clonidine. *Eur J Pharmacol* 24:402-404.

Zebrowska-Lupina I (1980) Presynaptic alpha-adrenoceptors and the action of tricyclic antidepressant drugs in behavioural despair in rats. *Psychopharmacology (Berl)* 71:169-172.

Zubenko GS, Cohen BM, Lipinski JF Jr, Jonas JM (1984) Clonidine in the treatment of mania and mixed bipolar disorder. *Am J Psychiatry* 141:1617-1618.

### **Dop Strengtheners**

Li SX, Perry KW, Wong DT (2002) Influence of fluoxetine on the ability of bupropion to modulate extracellular dopamine and norepinephrine concentrations in three mesocorticolimbic areas of rats. *Neuropharmacology* 42:181-190.

Zocchi A, Varnier G, Arban R, Griffante C, Zanetti L, Bettelini L, Marchi M, Gerrard PA, Corsi M (2003) Effects of antidepressant drugs and GR 205171, an neurokinin-1 (NK1) receptor antagonist, on the response in the forced swim test and on monoamine extracellular levels in the frontal cortex of the mouse. *Neurosci Lett* 345:73-76.

### **Mixed Drugs**

#### **Tricyclic Antidepressants**

Brosen K (2004) Some aspects of genetic polymorphism in the biotransformation of antidepressants. *Therapie* 59:5-12.

Jordan S, Kramer GL, Zukas PK, Moeller M, Petty F (1994) In vivo biogenic amine efflux in medial prefrontal cortex with imipramine, fluoxetine, and fluvoxamine. *Synapse* 18:294-297.

Maione S, Palazzo E, Pallotta M, Leyva J, Berrino L, Rossi F (1997) Effects of imipramine on raphe nuclei and prefrontal cortex extracellular serotonin levels in the rat. *Psychopharmacology (Berl)* 134:401-405.

### **Intracellular drugs**

Kovacs P, Hernadi I (2002) Iontophoresis of lithium antagonizes noradrenergic action on prefrontal neurons of the rat. *Brain Res* 947:150-156.

Manji HK, Hsiao JK, Risby ED, Oliver J, Rudorfer MV, Potter WZ (1991) The mechanisms of action of lithium. I. Effects on serotonergic and noradrenergic systems in normal subjects. *Arch Gen Psychiatry* 48:505-512.

## **Chapter 10. Overt Mental Illnesses**

Halliday GM (2001) A review of the neuropathology of schizophrenia. *Clin Exp Pharmacol Physiol* 28:64-65.

### **Depression**

Asnis GM, McGinn LK, Sanderson WC (1995) Atypical depression: clinical aspects and noradrenergic function. *Am J Psychiatry* 152:31-36.

Brody AL, Saxena S, Fairbanks LA, Alborzian S, Demaree HA, Maidment KM, Baxter LR Jr. (2000) Personality changes in adult subjects with major depressive disorder or obsessive-compulsive disorder treated with paroxetine. *J Clin Psychiatry* 61:349-355.

Correa H, Duval F, Claude MM, Bailey P, Tremeau F, Diep TS, Crocq MA, Castro JO, Macher JP (2001) Noradrenergic dysfunction and antidepressant treatment response. *Eur Neuropsychopharmacol* 11:163-168.

Joyce PR, Mulder RT, McKenzie JM, Luty SE, Cloninger CR (2004) Atypical depression, atypical temperament and a differential antidepressant response to fluoxetine and nortriptyline. *Depress Anxiety* 19:180-186.

John J Ratey, Catherine Johnson, *Shadow Syndromes*, Bantam Books, New York, NY, 1998, p.82 (quote of Dr. Mark George).

Roy A, Pickar D, Linnoila M, Potter WZ (1985) Plasma norepinephrine level in affective disorders. Relationship to melancholia. *Arch Gen Psychiatry* 42:1181-1185.

Salomon RM, Miller HL, Delgado PL, Charney D (1993) The use of tryptophan depletion to evaluate central serotonin function in depression and other neuropsychiatric disorders. *Int Clin Psychopharmacol* Nov;8 Suppl 2:41-6.

Scatton B, Loo H, Dennis T, Benkelfat C, Gay C, Poirier-Littre MF (1986) Decrease in plasma levels of 3,4-dihydroxyphenylethyleneglycol in major depression. *Psychopharmacology (Berl)* 88:220-225.

### **Bipolar Disorder**

Samuel H Barondes, *Molecules and Mental Illness*, Scientific American Library, New York, NY, 1993.

Horrigan JP, Barnhill LJ (1999) Guanfacine and secondary mania in children. *J Affect Disord* 54:309-314.

Jimerson DC, Nurnberger JI Jr, Post RM, Gershon ES, Kopin IJ (1981) Plasma MHPG in rapid cyclers and healthy twins. *Arch Gen Psychiatry* 38:1287-1290.

Joyce PR, Fergusson DM, Woollard G, Abbott RM, Horwood LJ, Upton J (1995) Urinary catecholamines and plasma hormones predict mood state in rapid cycling bipolar affective disorder. *J Affect Disorder* 33:233-243.

Ostrow D, Halaris A, Dysken M, DeMet E, Harrow M, Davis J (1984) State dependence of noradrenergic activity in a rapid cycling bipolar patient. *J Clin Psychiatry* 45:306-309.

Unnerstall JR, Fernandez I, Orensanz LM (1985) The alpha-adrenergic receptor: radiohistochemical analysis of functional characteristics and biochemical differences. *Pharmacol Biochem Behav* 22:859-874.

### **Seasonal Affective Disorder (SAD)**

Avery DH, Eder DN, Bolte MA, Hellekson CJ, Dunner DL, Vitiello MV, Prinz PN (2001) Dawn simulation and bright light in the treatment of SAD: a controlled study. *Biol Psychiatry* 50:205-216.

Goel N, Terman M, Terman JS (2003) Dimensions of temperament and bright light response in seasonal affective disorder. *Psychiatry Res* 119:89-97.

Rudorfer MV, Skwerer RG, Rosenthal NE (1993) Biogenic amines in seasonal affective disorder: effects of light therapy. *Psychiatry Res* 46:19-28.

### **Schizophrenia**

Caroli F, Baldacci-Epinette C, Ribeyre P (1993) Antidepressant treatment of schizophrenic patients. *Encephale* 19 Spec No 2:393-396.

Dina C, Nemanov L, Gritsenko I, Rosolio N, Osher Y, Heresco-Levy U, Sariashvilli E, Bachner-Melman R, Zohar AH, Benjamin J, Belmaker RH, Ebstein RP (2004) Fine mapping of a region on chromosome 8p gives evidence for a QTL contributing to

individual differences in an anxiety-related personality trait: TPQ harm avoidance. *Am J Med Genet B Neuropsychiatr Genet* 132B:104-108.

Eccleston D, Fairbairn AF, Hassanyeh F, McClelland HA, Stephens DA (1985) The effect of propranolol and thioridazine on positive and negative symptoms of schizophrenia. *Br J Psychiatry* 147:623-630.

Freedman R, Kirch D, Bell J, Adler LE, Pecevich M, Pachtman E, Denver P (1982) Clonidine treatment of schizophrenia. Double-blind comparison to placebo and neuroleptic drugs. *Acta Psychiatr Scand* 65:35-45.

Garver DL, Steinberg JL, McDermott BE, Yao JK, Ramberg JE, Lewis S, Kingsbury SJ (1997) Etiologic heterogeneity of the psychoses: is there a dopamine psychosis? *Neuropsychopharmacol* 16:191-201.

Goff DC, Brotman AW, Waites M, McCormick S (1990) Trial of fluoxetine added to neuroleptics for treatment-resistant schizophrenic patients. *Am J Psychiatry* 147:492-494.

Golimbet VE, Alfimova MV, Manandian KK, Abramova LI, Kaleda VG, Mitiushina NG, Oleichik IV, Iurov IuB, Trubnikov VI (2001) Serotonin type 2a (5-HTR2A) receptor gene polymorphism and personality traits in patients with endogenous psychoses. *Genetika* 37:545-548.

Kramer MS, Vogel WH, DiJohnson C, Dewey DA, Sheves P, Cavicchia S, Little P, Schmidt R, Kimes I (1989) Antidepressants in 'depressed' schizophrenic inpatients. A controlled trial. *Arch Gen Psychiatry* 46:922-928.

Lieberman J, Jody D, Geisler S, Alvir J, Loebel A, Szymanski S, Woerner M, Borenstein M (1993) Time course and biologic correlates of treatment response in first-episode schizophrenia. *Arch Gen Psychiatry* 50:369-376.

Maas JW, Miller AL, Tekell JL, Funderburg L, Silva JA, True J, Velligan D, Berman N, Bowden CL (1995) Clonidine plus haloperidol in the treatment of schizophrenia/psychosis. *J Clin Psychopharmacol* 15:361-364.

Poyurovsky M, Hermesh H, Weizman A (1996) Fluvoxamine treatment in clozapine-induced obsessive-compulsive symptoms in schizophrenic patients. *Clin Neuropharmacol* 19:305-313.

Poyurovsky M, Isakov V, Hromnikov S, Modai I, Rauchberger B, Schneidman M, Weizman A (1999) Fluvoxamine treatment of obsessive-compulsive symptoms in schizophrenic patients: an add-on open study. *Int Clin Psychopharmacol* 14:95-100.

Reznik I, Sirota P (2000) Obsessive and compulsive symptoms in schizophrenia: a randomized controlled trial with fluvoxamine and neuroleptics. *J Clin Psychopharmacol* 20:410-416.

Sayed Khan MN, Arshad N, Ullah N (2004) Treatment outcome of schizophrenia comorbid with obsessive-compulsive disorder. *J Coll Physicians Surg Pak* 14:234-236.

Sethi BB, Dube S (1983) Propranolol in schizophrenia. *Prog Neuropsychopharmacol Biol Psychiatry* 7:89-99.

Sievers M, Sato T, Moller HJ, Bottlender R (2005) Obsessive-compulsive disorder (OCD) with psychotic symptoms and response to treatment with SRI. *Pharmacopsychiatry* 38:104-105.

Solomon H Snyder, *Madness and the Brain*, McGraw-Hill, New York, NY, 1975.

Stockmeier CA, DiCarlo JJ, Zhang Y, Thompson P, Meltzer HY (1993) Characterization of typical and atypical antipsychotic drugs based on in vivo occupancy of serotonin<sub>2</sub> and dopamine<sub>2</sub> receptors. *J Pharmacol Exp Ther* 266:1374-1384.

Thakore JH, Berti C, Dinan TG (1996) An open trial of adjunctive sertraline in the treatment of chronic schizophrenia. *Acta Psychiatr Scand* 94:194-197.

Van Kammen DP, Peter JL, van Kammen WB, Rosen J, Yao JK, McAdam D, Linnoila M (1989) Clonidine treatment of schizophrenia: can we predict treatment response? *Psychiatry Res* 27:297-311.

Yamamoto K, Hornykiewicz O (2004) Proposal for a noradrenaline hypothesis of schizophrenia. *Prog Neuropsychopharmacol Biol Psychiatry* 28:913-922.

### **Attention Deficit Hyperactivity Disorder (ADHD)**

J Raymond DePaulo, Leslie Alan Horvitz, *Understanding Depression*, Wiley, Hoboken, NJ, 2002, pp. 61-63.

Gaffney GR, Perry PJ, Lund BC, Bever-Stille KA, Arndt S, Kuperman S (2002) Risperidone versus clonidine in the treatment of children and adolescents with Tourette's syndrome. *J Am Acad Child Adolesc Psychiatry* 41:330-336.

George Isaac, *Bipolar not ADHD*, Writers Club Press, Lincoln, Nebraska, 2001.

Jimenez-Jimenez FJ, Garcia-Ruiz PJ (2001) Pharmacological options for the treatment of Tourette's disorder. *Drugs* 61:2207-2220.

Robertson M (2006) Attention deficit hyperactivity disorder, tics and Tourette's syndrome: the relationship and treatment implications. A commentary. *Eur Child Adolesc Psychiatry* 15:1-11.

Spencer T, Biederman J, Wilens T, Steingard R, Geist D (1993) Nortriptyline treatment of children with attention-deficit hyperactivity disorder and tic disorder or Tourette's syndrome. *J Am Acad Child Adolesc Psychiatry* 32:205-210.

### **Anxiety**

Kathol RG, Noyes R, Slymen DJ, Crowe RR, Clancy J, Kerber RE (1980) Propranolol in chronic anxiety disorders. A controlled study. *Arch Gen Psychiatry*. 37:1361-1365.

Meibach RC, Dunner D, Wilson LG, Ishiki D, Dager SR (1987) Comparative efficacy of propranolol, chlordiazepoxide, and placebo in the treatment of anxiety: a double-blind trial. *J Clin Psychiatry* 48:355-358.

Peet M, Ali S (1986) Propranolol and atenolol in the treatment of anxiety. *Int Clin Psychopharmacol* 1:314-319.

Rossi S, Singer S, Shearman E, Sershen H, Lajtha A (2005) The effects of cholinergic and dopaminergic antagonists on nicotine-induced cerebral neurotransmitter changes. *Neurochem Res* 30: 541-558.

Sanger DJ (1988) Behavioural effects of the alpha 2-adrenoceptor antagonists idazoxan and yohimbine in rats: comparisons with amphetamine. *Psychopharmacol (Berl)* 96:243-249.

Singer S, Rossi S, Verzosa S, Hashim A, Lonow R, Cooper T, Sershen H, Lajtha A (2004) Nicotine-induced changes in neurotransmitter levels in brain areas associated with cognitive function. *Neurochem Res* 29:1779-1792.

Soderpalm A, Blomqvist O, Soderpalm B (1995) The yohimbine-induced anticonflict effect in the rat, Part I. Involvement of noradrenergic, serotonergic and endozepinergic(?) mechanisms. *J Neural Transm Gen Sect* 100:175-189.

### **Drug and Alcohol Abuse**

Andreas K, Fischer HD, Schimdt J (1983) [Effect of central effective substances on alcohol preference.] *Biomed Biochim Acta* 42:391-398.

Le AD, Harding S, Juzytsch W, Funk D, Shaham Y (2005) Role of alpha-2 adrenoceptors in stress-induced reinstatement of alcohol seeking and alcohol self-administration in rats. *Psychopharmacology (Berl)* 179:366-373.

### **Personality Disorders**

Paris J, Zweig-Frank H, Kin NM, Schwartz G, Steiger H, Nair NP (2004) Neurobiological correlates of diagnosis and underlying traits in patients with borderline personality disorder compared with normal controls. *Psychiatry Res* 121:239-252.

## **Impulse Control Disorders**

Campbell M, Gonzalez NM, Silva RR (1992) The pharmacologic treatment of conduct disorders and rage outbursts. *Psychiatr Clin North Am* 15:69-85.

Mattes JA (1986) Psychopharmacology of temper outbursts. A review. *J Nerv Ment Dis* 174:464-470.

## **Eating Disorders**

Simpson SG, al-Mufti R, Andersen AE, DePaul JR (1992) Bipolar II affective disorder in eating disorder inpatients. *J Nerv Ment Dis* 180:719-722.

## **Chapter 11. Expanded Dysthymia**

Peter D Kramer, *Listening to Prozac*, Viking Penguin, New York, NY, 1993, p.197.

John J Ratey, Catherine Johnson, *Shadow Syndromes*, Bantam Books, New York, NY, 1998, p.11.

## **Chapter 12. Personality**

### **Cloninger's Big Three Model**

Cloninger CR (1986) A unified biosocial theory of personality and its role in the development of anxiety states. *Psychiatr Develop* 3:167-226.

Cloninger CR (1987) A systematic method for clinical description and classification of personality variants: a proposal. *Arch Gen Psych* 44:573-588.

De Saint Hilaire Z, Straub J, Pelissolo A (2005) Temperament and character in primary insomnia. *Eur Psychiatry* 20:188-192.

Gerra G, Zaimovic A, Timpano M, Zambelli U, Delsignore R, Brambilla F (2000) Neuroendocrine correlates of temperamental traits in humans. *Psychoneuroendocrinology* 25:479-496.

Gutierrez-Zotes JA, Bayon C, Montserrat C, Valero J, Labad A, Cloninger CR, Fernandez-Aranda F (2004) Temperament and Character Inventory Revised (TCI-R). Standardization and normative data in a general population sample. *Actas Esp Psiquiatr* 32:8-15.

Hennig J, Toll C, Schonlau P, Rohrman S, Netter P (2000) Endocrine responses after d-fenfluramine and ipsapirone challenge: further support for Cloninger's tridimensional model of personality. *Neuropsychobiology* 41:38-47.

Mitropoulou V, Trestman RL, New AS, Flory JD, Silverman JM, Siever LJ (2003) Neurobiologic function and temperament in subjects with personality disorders. *CNS Spectr* 8:725-730.

Peirson AR, Heuchert JW, Thomala L, Berk M, Plein H, Cloninger CR (1999) Relationship between serotonin and the temperament and character inventory. *Psychiatry Res* 89:29-37.

Swann AC, Johnson BA, Cloninger CR, Chen YR (1999) Relationships of plasma tryptophan availability to course of illness and clinical features of alcoholism: a preliminary study. *Psychopharmacology (Berl)* 143:380-384.

Weijers HG, Wiesbeck GA, Jakob F, Boning J (2001) Neuroendocrine responses to fenfluramine and its relationship to personality in alcoholism. *J Neural Transm* 108:1093-1105.

### **The Enneagram Model**

Don Richard Riso, Russ Hudson, *Personality Types: Using the Enneagram for Self-Discovery*, Houghton Mifflin, New York, NY, 1996.

## **Chapter 13. Dominance and Leadership**

Baenninger R (1968) Catechol amines and social relations in Siamese fighting fish. *Anim Behav* 16:442-447.

Higley JD, Suomi SJ, Linnoila M (1996) A nonhuman primate model of type II alcoholism? Part 2. Diminished social competence and excessive aggression correlates with low cerebrospinal fluid 5-hydroxyindoleacetic acid concentrations. *Alcohol Clin Exp Res* 20:643-650.

Kaplan JR, Manuck SB, Fontenot MB, Mann JJ (2002) Central nervous system monoamine correlates of social dominance in cynomolgus monkeys (*Macaca fascicularis*). *Neuropsychopharmacol* 26:431-443.

Lawrence CW, Haynes JR (1970) Epinephrine and norepinephrine effects on social dominance behavior. *Psychol Rep* 27:195-198.

Malatynska E, Kostowski W (1984) The effect of antidepressant drugs on dominance behavior in rats competing for food. *Pol J Pharmacol Pharm* 36:531-540.

Redmond DE, Maas JW, Kling A, Dekirmenjian H (1971) Changes in primate social behavior after treatment with alpha-methyl-para-tyrosine. *Psychosom Med* 33:97-113.

## **Chapter 14. Evolution**

J Raymond DePaulo, Leslie Alan Horvitz, *Understanding Depression*, Wiley, Hoboken, NJ, 2002, pp.254-258.

Jared Diamond, *Guns, Germs, and Steel: The Fates of Human Societies*, Norton, New York, NY, 1999.

## **Chapter 15. Genetics**

Bobb et al. (2005) Support for association between ADHD and two candidate genes: NET1 and DRD1. *Am J Med Genet B Neuropsychiatr Genet* 134:67-72.

Fan JB, Sklar P (2005) Meta-analysis reveals association between serotonin transporter gene STin2 VNTR polymorphism and schizophrenia. *Mol Psychiatry* 10:928-938.

Inoue K, Itoh K, Yoshida K, Shimizu T, Suzuki T (2004) Positive association between T-182C polymorphism in the norepinephrine transporter gene and susceptibility to major depressive disorder in a Japanese population. *Neuropsychobiology* 50:301-304.

Lotrich FE, Pollock BG, Ferrell RE (2001) Polymorphism of the serotonin transporter: implications for the use of selective serotonin reuptake inhibitors. *Am J Pharmacogenomics* 1:153-164.

Norton N, Owen MJ (2005) HTR2A: association and expression studies in neuropsychiatric genetics. *Ann Med* 37:121-129.

Ueno S (2003) Genetic polymorphisms of serotonin and dopamine transporters in mental disorders. *J Med Invest* 50:25-31.

## **Chapter 16. The Role of Talk Therapy**

Aaron T. Beck, *Cognitive Therapy and the Emotional Disorders*, Plume, New York, NY, 1979.

Brody et al. (2001) Regional brain metabolic changes in patients with major depression treated with either paroxetine or interpersonal therapy: preliminary findings. *Arch Gen Psychiatry* 58:631-640.

Viktor E Frankl, *Man's Search for Meaning: An Introduction to Logotherapy*, Beacon Press, Boston, MA, 1959.

Furmark T, Tillfors M, Marteinsdottir I, Fischer H, Pissiota A, Langstron B, Fredrikson M (2002) Common changes in cerebral blood flow in patients with social phobia treated with citalopram or cognitive-behavioral therapy. *Arch Gen Psychiatry* 59:425-433.

Goldapple K, Segal Z, Garson C, Lau M, Bieling P, Kennedy S, Mayberg H (2004) Modulation of cortical-limbic pathways in major depression: treatment-specific effects of cognitive behavior therapy. *Arch Gen Psychiatry* 61:34-41.

Martin SD, Martin E, Rai SS, Richardson MA, Royall R (2001) Brain blood flow changes in depressed patients treated with interpersonal psychotherapy or venlafaxine hydrochloride: preliminary findings. *Arch Gen Psychiatry* 58:641-648.

Stephen A Mitchell, Margaret J Black, *Freud and Beyond: A History of Modern Psychoanalytic Thought*, Basic Books, New York, NY, 1995.

Prasko et al. (2004) The change of regional brain metabolism (18FDG PET) in panic disorder during the treatment with cognitive behavioral therapy or antidepressants. *Neuro Endocrinol Lett* 25:340-348.

Roffman JL, Marci CD, Glick DM, Dougherty DD, Rauch SL (2005) Neuroimaging and the functional neuroanatomy of psychotherapy. *Psychol Med* 35:1385-1398.

Carl Rogers, *On Becoming a Person: A Therapist's View of Psychotherapy*, Houghton Mifflin, New York, NY, 1961.

BF Skinner, *About Behaviorism*, Vintage, New York, NY, 1974.

Straube T, Glauer M, Dilger S, Mentzel HJ, Miltner WH (2006) Effects of cognitive-behavioral therapy on brain activation in specific phobia. *Neuroimage* 29:125-135.

Wykes T, Brammer M, Mellers J, Bray P, Reeder C, Williams C, Corner J (2002) Effects on the brain of a psychological treatment: cognitive remediation therapy: functional magnetic resonance imaging in schizophrenia. *Br J Psychiatry* 181:144-152.

## **Chapter 17. New Directions for Improving Psychiatry**

Abiodun OA (2005) Role of radiology in psychiatry: a review. *East Afr Med J* 82:260-266.

Chugani DC, Chugani HT (2000) PET: mapping of serotonin synthesis. *Adv Neurol* 83:165-171.

Chugani DC, Muzik O (2000) Alpha[C-11]methyl-L-tryptophan PET maps brain serotonin synthesis and kynurenine pathway metabolism. *J Cereb Blood Flow Metab* 20:2-9.

Chugani DC, Muzik O, Chakraborty P, Mangner T, Chugani HT (1998) Human brain serotonin synthesis capacity measured in vivo with alpha-[C-11]methyl-L-tryptophan. *Synapse* 28:33-43.

Chugani DC, Niimura K, Chaturvedi S, Muzik O, Fakhouri M, Lee ML, Chugani HT (1999) Increased brain serotonin synthesis in migraine. *Neurology* 53:1473-1479.

Dhaenen H (2001) Imaging the serotonergic system in depression. *Eur Arch Psychiatry Clin Neurosci* 251 Suppl 2:II76-80.

Fu X, Tan PZ, Kula NS, Baldessarini R, Tamagnan G, Innis RB, Baldwin RM (2002) Synthesis, receptor potency, and selectivity of halogenated diphenylpiperidines as serotonin 5-HT<sub>2A</sub> ligands for PET or SPECT brain imaging. *J Med Chem* 45:2319-2324.

Hagberg GE, Torstenson R, Marteinsdottir I, Fredrikson M, Langstrom B, Blomqvist G (2002) Kinetic compartment modeling of [11C]-5-hydroxy-L-tryptophan for positron emission tomography assessment of serotonin synthesis in human brain. *J Cereb Blood Flow Metab* 22:1352-1366.

Laakso A, Hietala J (2000) PET studies of brain monoamine transporters. *Curr Pharm Des* 6:1611-1623.

Lundkvist C, Halldin C, Ginovart N, Nyberg S, Swahn CG, Carr AA, Brunner F, Farde L (1996) [11C]MDL 100907, a radioligand for selective imaging of 5-HT<sub>2A</sub> receptors with positron emission tomography. *Life Sci* 58:PL 187-192.

Nakai A, Diksic M, Kumakura Y, D'Souza D, Kersey K (2005) The effects of the 5-HT<sub>3</sub> antagonist, alosetron, on brain serotonin synthesis in patients with irritable bowel syndrome. *Neurogastroenterol Motil* 17:212-221.

Shoaf SE, Carson R, Hommer D, Williams W, Higley JD, Schmall B, Herscovitch P, Eckelman W, Linnoila M (1998) Brain serotonin synthesis rates in rhesus monkeys determined by [11C]alpha-methyl-L-tryptophan and positron emission tomography compared to CSF 5-hydroxyindole-3-acetic acid concentrations. *Neuropsychopharmacology* 19:345-353.

Smith KA, Morris JS, Friston KJ, Cowen PJ, Dolan RJ (1999) Brain mechanisms associated with depressive relapse and associated cognitive impairment following acute tryptophan depletion. *Br J Psychiatry* 174:525-529.

Sobrio F, Amokhtari M, Gourand F, Dhilly M, Dauphin F, Barre L (2000) Radiosynthesis of [18F]Lu29-024: a potential PET ligand for brain imaging of the serotonergic 5-HT<sub>2</sub> receptor. *Bioorg Med Chem* 8:2511-2518.

Young SN, Leyton M, Benkelfat C (1999) Pet studies of serotonin synthesis in the human brain. *Adv Exp Med Biol* 467:11-18.

### **Improving the Current Theory**

Chez MG, Aimonovitch M, Buchanan T, Mrazek S, Tremb RJ (2004) Treating autistic spectrum disorders in children: utility of the cholinesterase inhibitor rivastigmine tartrate. *J Child Neurol* 19:165-169.

Gross HA, Dunner DL, Lafleur D, Meltzer HL, Muhlbauder HL, Fieve RR (1977) Prostaglandins. A review of neurophysiology and psychiatric implications. *Arch Gen Psychiatry* 34:1189-1196.

Hong CJ, Lai IC, Liou LL, Tsai SJ (2004) Association study of the human partially duplicated alpha7 nicotinic acetylcholine receptor genetic variant with bipolar disorder. *Neurosci Lett* 355:6972.

Leiva DB (1990) The neurochemistry of mania: a hypothesis of etiology and rationale for treatment. *Prog Neuropsychopharmacol Biol Psychiatry* 14:423-429.

Paul IA, Skolnick P (2003) Glutamate and depression: clinical and preclinical studies. *Ann N Y Acad Sci* 1003:250-272.

Petty F, Trivedi MH, Fulton M, Rush AJ (1995) Benzodiazepines as antidepressants: does GABA play a role in depression? *Biol Psychiatry* 38:578-591.

Singh A, Potter A, Newhouse P (2004) Nicotinic acetylcholine receptor system and neuropsychiatric disorders. *IDrugs* 7:1096-1103.

Wang et al. (2004) Evidence of common and specific genetic effects: association of the muscarinic acetylcholine receptor M2 (CHRM2) gene with alcohol dependence and major depressive syndrome. *Hum Mol Genet* 13:1903-1911.

Zarate CA, Payne JL, Quiroz J, Sporn J, Denicoff KK, Luckenbaugh D, Charney DS, Manji HK (2004) An open-label trial of riluzole in patients with treatment-resistant major depression. *Am J Psychiatry* 161:171-174.

Zarate CA, Quiroz JA, Singh JB, Denicoff KD, DeJesus G, Luckenbaugh DA, Charney DS, Manji HK (2005) An open-label trial of the glutamate-modulating agent riluzole in combination with lithium for the treatment of bipolar depression. *Biol Psychiatry* 57:430-432.

### **Using Existing Drugs More Effectively**

Keller S, Frishman WH (2003) Neuropsychiatric effects of cardiovascular drug therapy. *Cardiol Rev* 11:73-93.

## **Creating New Drugs**

Mattson RJ, Catt JD, Sloan CP, Gao Q, Carter RB, Gentile A, Mahle CD, Matos FF, McGovern R, VanderMaelen CP, Yocca FD (2003) Development of a presynaptic 5-HT<sub>1A</sub> antagonist. *Bioorg Med Chem Lett* 13:285-288.

## **The Drug Companies**

Marcia Angell, *The Truth About the Drug Companies: How They Deceive Us and What to Do About It*, Random House, New York, NY, 2004.

Merrill Goozner, *The \$800 Million Pill: The Truth Behind the Cost of New Drugs*, University of California Press, Berkeley, CA, 2004.

## **Chapter 18. Closing Thoughts**

Aldous Huxley, *Brave New World*, Harper & Brothers, New York, NY, 1932.

## **General References**

American Psychiatric Association: *Diagnostic and Statistical Manual of Mental Disorders*, Fourth Edition, Text Revision; American Psychiatric Association, Washington, DC, 2000.

Samuel H Barondes, *Better than Prozac*, Oxford Univ Press, New York, NY, 2003.

Avery Z Conner, *Fevers of the Mind*, PublishAmerica, Frederick, Maryland, 2002.

Avery Z Conner, *100 Questions Psychiatry Should Face*, iUniverse, Lincoln, Nebraska, 2002.

Frederick K Goodwin, Kay R Jamison, *Manic-Depressive Illness*, Oxford Univ Press, New York, NY, 1990.

Kay R Jamison, *An Unquiet Mind*, Knopf, New York, NY, 1995.

Kay R Jamison, *Touched with Fire*, Free Press, New York, NY, 1993.

Eric R Kandel, James H Schwartz, Thomas M Jessell, *Principles of Neural Science*, 4<sup>th</sup> Edition, McGraw-Hill Medical, New York, NY, 2000.

Peter D Kramer, *Against Depression*, Viking Penguin, New York, NY, 2005.

Peter D Kramer, *Listening to Prozac*, Viking Penguin, New York, NY, 1993.

Paul R McHugh, Phillip R Slavney, *The Perspectives of Psychiatry, 2<sup>nd</sup> Edition*, The Johns Hopkins University Press, Baltimore, MD, 1998.

John Nolte, *The Human Brain*, Mosby-Year Book, St. Louis, Missouri, 1993.

Michael J Norden, *Beyond Prozac*, ReganBooks, New York, NY, 1995.