

SHORT CURRICULUM VITAE

Fabrizio Benedetti

Education

- 1981 M.D. degree, University of Turin Medical School
1984-85 Silbert Scholarship, Psychiatry and Biobehavioral Sciences, University of California, Los Angeles

Positions and Employments

- 1983 Research Associate, Neurophysiology, University of Turin Medical School
1986-90 Assistant Professor of Physiology, University of Turin Medical School
1991-1992 Assistant Professor of Pharmacology, University of Texas, Dallas
1992-99 Associate Professor of Neurophysiology and Human Physiology, University of Turin Medical School
1999-today: Professor of Neurophysiology and Human Physiology, University of Turin Medical School

Consultant activity at the National Institute of Health (NIH), Bethesda, MD, USA

- 2000-2002 Co-chair of the Breakout Group of the NIH for the development of “Recommendations for research to further elucidate the nature of the placebo effect”.
2003 Member of the Working Group of NIDA for planning a research agenda on the “Recovery of brain structure and function through behavioral treatments”.
2004 Member of the Task Force of NIMH on “Brain mechanisms in the placebo response”.
2004-2009 Member of the Brain-Body-Behavior Research Group of NCCAM for developing a strategic planning process for 2005-2009.

Consultant activity at Harvard University, Cambridge, MA, USA

- 2010-today Consultant and Advisory Board of PIPS School, Harvard Medical School.

Invited Professional Memberships

- 2001-2007 Member of the Placebo Working Group of the “Mind-Brain-Behavior” Initiative at Harvard University, Cambridge, MA, USA
2002-today Member of the European Working Group on Pain and Impaired Cognition
2006-2010 Member of the Board of the Placebo Group of the International Association for the Study of Pain
2010-today Member of the European Dana Alliance for the Brain

Awards

- 1984 Silbert International Award at the University of California Los Angeles
1985 Italian Angelo Costa Prize for Physiology
1997 Novartis Prize of the Italian Society for Neuroscience
2009 Medical Books Award of the British Medical Association
2012 Seymour Solomon Award of the American Headache Society
2012 Helitzka Prize for Physiology, Academy of Sciences, Turin
2015 William S Kroger Award of the American Society of Clinical Hypnosis

Academy membership

- 2010-today Member of the Academy of Europe (Medicine & Physiology section)

Editorial Boards

- Seminars in Pain Medicine (2001-2003)
Open Anesthesiology Journal (2005-2006)
Pain (2009-today)
Current Neuropharmacology (2009-today)

Organization of International conferences

- 2007 Co-organizer (together with Manfred Schedlowski, Germany and Paul Enck, Germany) of the international meeting “Mechanisms of Placebo/Nocebo Responses”, Nov. 28-30, 2007, Tutzing, Germany
- 2008 Co-organizer (together with Damien Finniss, Australia, Donald Price, USA, and Ron Kupers, Denmark) of the 12th World Congress on Pain Satellite Meeting “The placebo effect – Advances in research and implications for clinical trials and clinical practice”, Aug. 14-15, 2008, Copenhagen, Denmark.
- 2011 Organizing Committee of the 8th IBRO World Congress of Neuroscience, July 2011, Florence, Italy.
- 2013 Co-organizer (together with Manfred Schedlowski, Germany and Paul Enck, Germany) of the International Meeting on Placebo, 23-25 Jan 2013, Tuebingen, Germany

Selection of Keynote and Plenary Lectures in 2011-2014

- 2011 March, International Tinnitus Seminar, Florianopolis, Brasil
- 2011 March, EMBL Forum on Science & Society, Heidelberg, Germany
- 2011 June, 15th Congress of the International Headache Society, Berlin, Germany
- 2011 September, International Society for the Study of Vulvovaginal Disease, Paris
- 2011 September, Biological Psychiatry Congress, Cape Town, South Africa
- 2011 November, Symposium on Placebo, Royal Society of Medicine, London, UK
- 2012 March, Mexican Psychoneuroendocrinology Society, Mexico City
- 2012 March, Stress Conference at the Library of Congress, Washington DC, USA
- 2012 June, S. Solomon Lecture, American Headache Society, Los Angeles, CA, USA
- 2012 June, World Society of Pain Clinicians, Granada, Spain
- 2012 July, International Cough Symposium, London, UK
- 2012 September, Intracerebral Recording Symposium, Geneva, Switzerland
- 2012 October, Royal College of Psychiatrists, London, UK
- 2012 November, German Psychiatry and Psychotherapy Society, Berlin, Germany
- 2013 January, Conference on Psychology and Health, Enschede, The Netherlands
- 2013 March, Neuropathic Pain Masterclass, Noordwijk, The Netherlands
- 2013 April, European Congress of Psychiatry, Nice, France
- 2013 May, Australian Anesthesiology Society Congress, Melbourne, Australia
- 2013 June, Inaugural Lecture at PIPS School, Harvard University, Cambridge, MA, USA
- 2013 June, Society of Psychoneuroimmunology Congress, Stockholm, Sweden
- 2013 September, World Congress of Neurology, Vienna, Austria
- 2013 September, Sinapsa Congress, Ljubljana, Slovenia
- 2013 October, Society for Psychophysiological Research, Firenze, Italy
- 2013 October, European Society for Clinical Pharmacy, Prague, Czech Republic
- 2013 October, Neuropathic Pain Masterclass, Monte Carlo, Monaco
- 2014 January, Finnish Anesthesiology Society, Helsinki, Finland
- 2014 May, World Institute of Pain Annual Congress, Maastricht, The Netherlands
- 2014 May, American College of Sport Medicine Annual Meeting, Orlando, FL, USA
- 2014 May, Klaus Grawe Lecture, German Society of Psychology, Braunschweig, Germany
- 2014 June, Keystone Symposium on Chronic Pain, Keystone, CO, USA
- 2014 June, Brocher Foundation, Geneva, Switzerland
- 2014 June, Royal College of Psychiatrists, London, UK
- 2014 July, Value of Suffering Symposium, Glasgow, Scotland
- 2014 September, Neurotherapeutics World Congress, Basel, Switzerland

Selection of the main publications

- Benedetti F, Amanzio M, Maggi G (1995) Potentiation of placebo analgesia by proglumide. **Lancet** 346: 1231.
- Benedetti F (1996) The opposite effects of the opiate antagonist naloxone and the cholecystokinin antagonist proglumide on placebo analgesia. **Pain** 64: 535-543.
- Benedetti F, Amanzio M, Casadio C, Oliaro A, Maggi G (1997) Blockade of nocebo hyperalgesia by the cholecystokinin antagonist proglumide. **Pain** 71: 135-140.
- Benedetti F, Amanzio M (1997) The neurobiology of placebo analgesia: from endogenous opioids to cholecystokinin. **Prog Neurobiol** 52: 109-125.
- Benedetti F (1997) Cholecystokinin type-A and type-B receptors and their modulation of opioid analgesia. **News Physiol Sci** 12: 263-268.
- Benedetti F, Vighetti S, Amanzio M, Casadio C, Oliaro A, Bergamasco B, Maggi G (1998) Dose-response relationship of opioids in nociceptive and neuropathic postoperative pain. **Pain** 74: 205-211.
- Benedetti F, Amanzio M, Baldi S, Casadio C, Cavallo A, Mancuso M, Ruffini E, Oliaro A, Maggi G (1998) The specific effects of prior opioid exposure on placebo analgesia and placebo respiratory depression. **Pain** 75: 313-319.
- Benedetti F, Vighetti S, Ricco C, Lagna E, Bergamasco B, Pinessi L, Rainero I (1999) Pain threshold and tolerance in Alzheimer's disease. **Pain**, 80: 377-382.
- Amanzio M, Benedetti F (1999) Neuropharmacological dissection of placebo analgesia: expectation-activated opioid systems versus conditioning-activated specific sub-systems. **J Neurosci** 19: 484-494.
- Benedetti F, Arduino C, Amanzio M (1999) Somatotopic activation of opioid systems by target-directed expectations of analgesia. **J Neurosci** 19: 3639-3648.
- Amanzio M, Pollo A, Maggi G, Benedetti F (2001) Response variability to analgesics: a role for non-specific activation of endogenous opioids. **Pain** 90: 205-215.
- Pollo A, Amanzio M, Arslanian A, Casadio C, Maggi G, Benedetti F (2001) Response expectancies in placebo analgesia and their clinical relevance. **Pain**, 93: 77-84.
- Pollo A, Torre E, Lopiano L, Rizzone M, Lanotte M, Cavanna A, Bergamasco B, Benedetti F (2002) Expectation modulates the response to subthalamic nucleus stimulation in Parkinsonian patients. **NeuroReport**, 13: 1383-1386.
- Pollo A, Vighetti S, Rainero I, Benedetti F (2003) Placebo analgesia and the heart. **Pain**, 102: 125-133.
- Benedetti F, Pollo A, Lopiano L, Lanotte M, Vighetti S, Rainero I (2003) Conscious expectation and unconscious conditioning in analgesic, motor and hormonal placebo/nocebo responses. **J Neurosci**, 23: 4315-4323.
- Benedetti F, Rainero I, Pollo A (2003) New insights into placebo analgesia. **Curr Opin Anaesthesiol**, 16: 515-519.
- Benedetti F, Colloca L., Torre E, Lanotte M, Melcarne A, Pesare M, Bergamasco B, Lopiano L (2004) Placebo-responsive Parkinson patients show decreased activity in single neurons of subthalamic nucleus. **Nature Neurosci**, 7: 587-588.
- Benedetti F, Arduino C, Vighetti S, Asteggiano G, Tarenzi L, Rainero I (2004) Pain reactivity in Alzheimer patients with different degrees of cognitive impairment and brain electrical activity deterioration. **Pain** 111: 22-29.
- Colloca L, Lopiano L, Lanotte M, Benedetti F (2004) Overt versus covert treatment for pain, anxiety and Parkinson's disease. **Lancet Neurol** 3: 679-684.
- Finniss DG, Benedetti F (2005) Mechanisms of the placebo response and their impact on clinical trials and clinical practice. **Pain** 114: 3-6.
- Scherder EJ, Oosterman J, Swaab D, Herr K, Ooms M, Ribbe M, Sergeant J, Pickering G, Benedetti F (2005) Recent developments in pain in dementia. **Br Med J** 330: 461-464.

- Benedetti F (Editor) (2005) Neurobiological mechanisms of the placebo response. **Sem Pain Med**, Vol 3, March.
- Colloca L, Benedetti F (2005) Placebos and painkillers: is mind as real as matter? **Nature Rev Neurosci** 6: 545-552.
- Benedetti F, Mayberg HS, Wager TD, Stohler CS, Zubieta JK (2005) Neurobiological mechanisms of the placebo effect. **J Neurosci** 25: 10390-10402.
- Benedetti F, Arduino C, Costa S, Vighetti S, Tarenzi L, Rainero I, Asteggiano G (2006) Loss of expectation-related mechanisms in Alzheimer's disease makes analgesic therapies less effective. **Pain** 121: 133-144.
- Colloca L, Benedetti F (2006) How prior experience shapes placebo analgesia. **Pain** 124: 126-133.
- Benedetti F, Amanzio M, Vighetti S, Asteggiano G (2006) The biochemical and neuroendocrine bases of the hyperalgesic nocebo effect. **J Neurosci** 26: 12014-12022.
- Benedetti F (2007) Placebo and endogenous mechanisms of analgesia. **Handb Exp Pharmacol** 177: 393-413.
- Benedetti F (2007) What do you expect from this treatment? Changing our mind about clinical trials. **Pain** 128: 193-194.
- Benedetti F, Lanotte M, Lopiano L, Colloca L (2007) When words are painful – Unraveling the mechanisms of the nocebo effect. **Neuroscience** 147: 260-261.
- Colloca L, Benedetti F (2007) Nocebo hyperalgesia: how anxiety is turned into pain. **Curr Opin Anaesthesiol**, 20: 435-439..
- Benedetti F, Pollo A, Colloca L (2007) Opioid-mediated placebo responses boost pain endurance and physical performance – Is it doping in sport competitions? **J Neurosci** 27: 11934-11939.
- Colloca L, Sigauo M, Benedetti F (2008) The role of learning in nocebo and placebo effects. **Pain** 136: 211-218.
- Pollo A, Carlino E, Benedetti F (2008) The top-down influence of ergogenic placebos on muscle work and fatigue. **Eur J Neurosci** 28: 379-388.
- Price DD, Finniss DG, Benedetti F (2008) A comprehensive review of the placebo effect: recent advances and current thought. **Annu Rev Psychol**, 59: 565-590.
- Benedetti F (2008) Mechanisms of placebo and placebo-related effects across diseases and treatments. **Annu Rev Pharmacol Toxicol**, 48: 33-60.
- Enck P, Benedetti F, Schedlowski M (2008) New insights into the placebo and nocebo responses. **Neuron** 59: 195-206.
- Colloca L, Tinazzi M, Recchia S, Le Pera D, Fiaschi A, Benedetti F, Valeriani M (2008) Learning potentiates neurophysiological and behavioral placebo analgesic responses. **Pain** 139: 306-314.
- Colloca L, Benedetti F (2009) Placebo analgesia induced by social observational learning. **Pain** 144: 28-34.
- Benedetti F, Lanotte M, Colloca L, Ducati A, Zibetti M, Lopiano L (2009) Electrophysiological properties of thalamic, subthalamic and nigral neurons during the anti-parkinsonian placebo response. **J Physiol**, 587: 3869-3883.
- Pollo A, Benedetti F (2009) The placebo response: neurobiological and clinical issues of neurological relevance. **Prog Brain Res** 175: 283-294.
- Scherder E, Herr K, Pickering G, Gibson S, Benedetti F, Lautenbacher S (2009) Pain in dementia. **Pain** 145: 276-278.
- Amanzio M, Latini Corazzini L, Vase L, Benedetti F (2009) A systematic review of adverse events in placebo groups of anti-migraine clinical trials. **Pain**, 146: 261-269.
- Finniss DG, Miller F, Kaptchuk T, Benedetti F (2010) Biological, clinical, and ethical advances of placebo effects. **Lancet**, 375: 686-695.
- Benedetti F (2010) No prefrontal control, no placebo response. **Pain**, 148: 357-358.
- Colloca L, Petrovic P, Wager TD, Ingvar M, Benedetti F (2010) How the number of learning trials affects placebo and nocebo responses. **Pain**, 151: 430-439.

- Carlino E, Benedetti F, Rainero I, Asteggiano G, Cappa G, Tarenzi L, Vighetti S, Pollo A (2010) Pain perception and tolerance in patients with frontotemporal dementia. **Pain**, 151: 783-789.
- Lui F, Colloca L, Duzzi D, Anchisi D, Benedetti F, Porro CA (2010) Neural bases of conditioned placebo analgesia. **Pain**, 151: 816-824.
- Benedetti F, Carlino E, Pollo A (2011) How placebos change the patient's brain. **Neuropsychopharmacology Rev**, 36: 339-354.
- Benedetti F, Amanzio M, Thoen W (2011) Disruption of opioid-induced placebo responses by activation of cholecystokinin type-2 receptors. **Psychopharmacology**, 213: 791-797.
- Pollo A, Carlino E, Benedetti F (2011) Placebo mechanisms across different conditions: from the clinical setting to physical performance. **Phil Trans R Soc B**, 366: 1790-1798.
- Carlino E, Pollo A, Benedetti F (2011) Placebo analgesia and beyond: a melting pot of concepts and ideas for neuroscience. **Curr Opin Anesthesiol**, 24: 540-544.
- Benedetti F, Amanzio M, Rosato R, Blanchard C (2011) Non-opioid placebo analgesia is mediated by CB1 cannabinoid receptors. **Nature Med**, 17: 1228-1230.
- Benedetti F, Carlino E, Pollo A (2011) Hidden administration of drugs. **Clin Pharmacol Ther**, 90: 651-661.
- Petersen GL, Finnerup NB, Nørskov KN, Grosen K, Benedetti F, Price DD, Jensen TS, Vase L (2012) Placebo manipulations reduce hyperalgesia in neuropathic pain. **Pain**, 153: 1292-1300.
- Benedetti F (2012) The placebo response: science versus ethics and the vulnerability of the patient. **World Psychiatry**, 11: 70-72.
- Benedetti F (2012) Placebo responses in animals. **Pain**, 153: 1983-1984.
- Pollo A, Carlino E, Vase L, Benedetti F (2012) Preventing motor training through nocebo suggestions. **Eur J Appl Physiol**, 112: 3893-3903.
- Alphs L, Benedetti F, Fleischhacker WW, Kane JM (2012) Placebo-related effects in clinical trials in schizophrenia: what is driving this phenomenon and what can be done to minimize it? **Int J Neuropsychopharmacol**, 15: 1003-1014.
- Amanzio M, Benedetti F, Porro CA, Palermo S, Cauda F (2013) Activation likelihood estimation meta-analysis of brain correlates of placebo analgesia in human experimental pain. **Hum Brain Mapp**, 34:738-752.
- Benedetti F, Thoen W, Blanchard C, Vighetti S, Arduino C (2013) Pain as a reward: changing the meaning of pain from negative to positive co-activates the opioid and cannabinoid systems. **Pain**, 154: 361-367.
- Benedetti F (2013) Placebo and the new physiology of the doctor-patient relationship. **Physiol Rev**, 93: 1207-1246.
- Benedetti F (2013) Responding to nocebos through observation: social contagion of negative emotions. **Pain**, 154: 1165.
- Benedetti F (2014) Drugs and placebos: what's the difference? **EMBO Reports**, 15:329-332.
- Benedetti F, Durando J, Vighetti S (2014) Nocebo and placebo modulation of hypobaric hypoxia headache involves the cyclooxygenase-prostaglandins pathway. **Pain**, 155: 921-928.
- Carlino E, Frisaldi E, Benedetti F (2014) Pain and the context. **Nature Rev Rheum**, 10: 348-355.
- Benedetti F, Frisaldi E (2014) Creating placebo responders and nonresponders in the laboratory: boons and banes. **Pain Manag** 4: 165-167.
- Kong J, Benedetti F (2014) Placebo and nocebo effects: an introduction to psychological and biological mechanisms. **Handb Exp Pharmacol** 225: 3-16.
- Frisaldi E, Carlino E, Lopiano L, Lanotte M, Benedetti F (2014) Characterization of the thalamic-subthalamic circuit involved in the placebo response through single-neuron recording in Parkinson patients. **Cortex** 60: 3-9.
- Benedetti F (2014) Placebo effects: from the neurobiological paradigm to translational implications. **Neuron** 84: 623-637.

- Petersen GL, Finnerup NB, Grosen K, Pilegaard HK, Tracey I, Benedetti F, Price DD, Jensen TS, Vase L (2014) Expectations and positive emotional feelings accompany reductions in ongoing and evoked neuropathic pain following placebo interventions. **Pain**, 155: 2687-2698.
- Carlino E, Torta DME, Piedimonte A, Frisaldi E, Vighetti S, Benedetti F (2015) The role of explicit verbal information in conditioned analgesia. **Eur J Pain**, 19: 546-553.
- Piedimonte A, Benedetti F, Carlino E (2015) Placebo-induced decrease of fatigue: evidence for a central action on the preparatory phase of movement. **Eur J Neurosci**, 41: 492-497.
- Palermo S, Benedetti F, Costa T, Amanzio M (2015) Pain anticipation: an activation likelihood meta-analysis of brain imaging studies. **Hum Brain Mapp**, 36: 1648-1661.
- Benedetti F, Carlino E, Piedimonte A (2015) Placebo, nocebo, Hawthorne effects and the increasing uncertainty in clinical trials. **Lancet Neurol**, in press.
- Benedetti F, Durando J, Giudetti L, Pampallona A, Vighetti S (2015) High altitude headache: the effects of real versus sham oxygen administration. **Pain**, in press.

Book Chapters

- Benedetti F, Czajkowski SM, Kitt CA, Stefanek M, Sternberg EM (2002) Recommendations for research to further elucidate the nature of the placebo effect. In: HA Guess, A Kleinman, JW Kusek, LW Engel (Eds), *The science of the placebo: Towards an interdisciplinary research agenda*. BMJ Books, pp 286-292..
- Benedetti F, Pollo A, Maggi G, Vighetti S, Rainero I (2003) Placebo analgesia: from physiological mechanisms to clinical implications. In: JO Dostrovsky, DB Carr, M Koltzenburg (Eds), *Proceedings of the 10th World Congress on Pain*, Seattle, WA: IASP Press, pp 315-323.
- Benedetti F (2003) Toward a neurobiological understanding of the therapist-patient interaction. In: E Kalso, AM Estlander (Eds), *Psyche, soma and pain. Acta Gyllenbergiana II*, Helsinki: Helsinki University Press.
- Pollo A, Benedetti F, (2004) Neural mechanisms of placebo-induced analgesia. In: DD Price, MC Bushnell (Eds), *Psychological methods of pain control: Basic science and clinical perspectives*, Seattle, WA: IASP Press, pp 171-186.
- Colloca L, Benedetti F (2004) The placebo in clinical studies and medical practice. In: DD Price, MC Bushnell (Eds), *Psychological methods of pain control: Basic science and clinical perspectives*, Seattle, WA: IASP Press, pp 187-205.
- Benedetti F (2008) The placebo effect. In: Basbaum AI, Kaneko A, Shepherd GM, Westheimer G, eds, *The Senses: A Comprehensive Reference*, pp. 1003-1008, San Diego, Academic press.
- Colloca L, Finniss DG, Benedetti F (2008) Placebo and nocebo. In: *Clinical Pain Management*, Hodder Arnold.
- Pollo A, Benedetti F (2009) Pain and the placebo effect. In Moore R *Biobehavioral Approaches to pain*. Heidelberg: Springer
- Finniss DG, Benedetti F (2009). The placebo response: implications for neural blockade. In: MJ Cousins, DB Carr, TT Horlocker, PO Bridenbaugh, eds. *Neural blockade in clinical anesthesia and pain medicine*, pp. 794-800, Philadelphia, PA: Lippincott Williams & Wilkins.
- Colloca L, Benedetti F (2010) Imaging placebo responses in the brain. In: Borsook D, Beccera L; Bullmore E, Hargreaves R (Eds), *Imaging in CNS drug discovery and development*, pp. 163-176. Heidelberg: Springer.

- Carlino E, Pollo A, Benedetti F (2010) Can we create placebo responders and non-responders in the lab? In: Wells CD (Ed), *Proceedings of the 3rd International Congress on Neuropathic Pain*, pp. 5-8. Bologna: Medimond.
- Benedetti F (2010) Conscious and unconscious placebo responses: how the ritual of the therapeutic act changes the patient's brain. In: Perry EK, Collerton D, LeBeau FEN, AshtonH (Eds), *New horizons in the neuroscience of consciousness*. pp. 259-268. John Benjamins Publishing Company.
- Pollo A, Benedetti F (2011) Placebo/nocebo: a two-sided coin in the clinician's hands. In: Lynch ME, Craig KD, Peng PWH (Eds), *Clinical Pain Management: A Practical Guide*, pp. 42-48. Oxford: Blackwell.
- Pollo A, Benedetti F (2012) Pain and the placebo/nocebo effect. In: Moore RJ (Ed), *Handbook of Pain and Palliative Care*, pp. 331-346. Heidelberg: Springer.
- Pollo A, Carlino E, Benedetti F (2012) Culture, placebo and analgesia: clinical and ethical considerations. In: Incayawar M, Todd K (Eds), *Culture, Brain and Analgesia: Understanding and Managing Pain in Diverse Populations*, Oxford: Oxford University Press.
- Benedetti F, Frisaldi E (2013) Neurochemistry of placebo analgesia: opioids, cannabinoids and cholecystokinin. In: Colloca L, Flaten MA, Meissner K (Eds), *Placebo and Pain: from bench to bedside*, pp. 9-14, Academic Press.
- Carlino E, Benedetti F (2014) Placebo and nocebo effects. *Handbook of Behavioral Medicine*. Mostofsky DI, ed. Wiley-Blackwell

Encyclopedia entries

- Benedetti F (2007) Placebo analgesia and descending opioid modulation. In: Schmidt RF, Willis WD (Eds), *Encyclopedia of Pain*. Heidelberg: Springer.
- Benedetti F (2008) Placebo effect. In: Offermanns S, Rosenthal W (Eds), *Encyclopedia of Molecular Pharmacology*. 2nd edition, Heidelberg: Springer.
- Benedetti F (2009) Placebo and nocebo effects. In: Goldstein EB (Ed), *Encyclopedia of Perception*. London: Sage.
- Benedetti F (2014) Placebo effect. In: Aminoff and Daroff (Eds), *Encyclopedia of the Neurological Sciences*, 2nd Edition, Elsevier.
- Benedetti F (2015) Placebo. In: Wright J (Ed), *Encyclopedia of Social and Behavioral Sciences*, 2nd Edition, Elsevier.
- Benedetti F (2015) Placebo effect. In: Stolerman IP, Price LH (Eds), *Encyclopedia of Psychopharmacology*, 2nd Edition, Heidelberg: Springer.

Books

- Benedetti F (2008) *Placebo effects: Understanding the mechanisms in health and disease*. Oxford: Oxford University Press.
- Benedetti F (2010) *The patient's brain: The neuroscience behind the doctor-patient relationship* Oxford: Oxford University Press.
- Benedetti F (2014) *Placebo effects*. 2nd Edition, Oxford: Oxford University Press.
- Benedetti F, Enck P, Frisaldi E, Schedlowski M (2014) *Placebo*. Handbook of Experimental Pharmacology. Vol 225. Springer.