

BIOGRAPHICAL SKETCH

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NAME Emeran A. Mayer	POSITION TITLE Professor of Medicine/Physiology		
eRA COMMONS USER NAME mayer2			
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY
Ludwig-Maximilians University, Munich, Germany	M.D.	1976	Medicine
Stiftsklink Augustinum, Munich, Germany	Internship	1976	Medicine
University Hospital, Grosshadern, Munich, Germany	Residency	1977-1979	Medicine
Vancouver General Hospital, Vancouver, B.C.	Residency	1979-1980	Medicine
VA Wadsworth-UCLA, Los Angeles, CA	Fellowship	1980-1982	Gastroenterology

A. Positions and Honors.**Positions and Employment**

- 1985 – 1996 Assistant, Associate Professor of Medicine and Physiology, UCLA School of Medicine
 1996 – present Professor of Medicine and Physiology, UCLA School of Medicine
 2000 – present Professor of Medicine, Physiology, Psychiatry and Biobehavioral Sciences, UCLA School of Medicine
 2001 – 2004 Founding Chair, UCLA Collaborative Centers for Integrative Medicine
 2002 – present Executive Director, C.N.S. Center for Neurovisceral Sciences and Women's Health
 2003 – present Member, Steering Committee of National Consortium for Academic Centers for Integrative Medicine
 2004 – present Co-Director, CURE: Digestive Diseases Research Center

Awards

- 1976 Dissertation Thesis on Sympathetic Regulation of Coronary Blood Flow, Summa cum laude award
 Department of Physiology, Munich, West Germany
 1987 Physician Scientist Award, UCLA Harbor Inflammatory Bowel Disease Center
 1993 AGA/SKB Clinical Research Award
 2001 Janssen Award for Outstanding Achievements in Gastroenterology

B. Selected peer-reviewed publications (in chronological order).**Chapters and Reviews (selected from a total of 80):**

- Mayer EA**, Naliboff B, Munakata J. The evolving neurobiology of gut feelings. In: **Mayer EA**, Saper CB (Eds.), *The Biological Basis for Mind Body Interactions*. Amsterdam: Elsevier, 2000, pp 195-206.
- Mayer EA**. Neurobiology of stress and gastrointestinal disease. *Gut* 2000;47:861-869.
- Naliboff BD, Heitkemper MM, Chang L, **Mayer EA**. Sex and gender in irritable bowel syndrome. In: Fillingim RB (Ed.), *Sex, Gender and Pain*, Seattle: IASP Press, 2000, pp 327-354.
- Mayer EA**, Naliboff BD, Chang L, Coutinho SV. Stress and irritable bowel syndrome. *Am J Physiol Gastrointest Liver Physiol* 2001;280:G519-524.
- Mayer EA**, Collins S. Evolving pathophysiologic models of functional gastrointestinal disorders. *Gastroenterology* 2002;122:2032-2048.
- Drossman D, Camilleri M, **Mayer EA**, Whitehead W. AGA Technical Review on Irritable Bowel Syndrome. *Gastroenterology* 2002;123:2108-2131.
- Wong HY, **Mayer EA**. Gastrointestinal Pain. In S McMahon, M Koltzenburg (Eds.), Wall and Melzack Textbook of Pain, 5th edition, Elsevier, 2004, in press.

Original peer- reviewed manuscripts (selected from a total of 130)

1. Martinez V, Thakur S, Mogil JS, Tache Y, Coutinho S, **Mayer EA**. Differential effects of chemical and mechanical colonic irritation on behavioral pain response to acetic acid in mice. **Pain** 1999;84:179-186.
2. Berman S, Munakata J, Naliboff BD, Chang L, Silverman D, Kovalik E, **Mayer EA**. Gender differences in regional brain response to visceral pressure in IBS patients. **Eur J Pain** 2000;4:157-172.
3. Chang L, **Mayer EA**, FitzGerald L, Naliboff B. Differences in somatic perception in female IBS patients with and without fibromyalgia. **Pain** 2000;84:297-307.
4. Gralnek IM, Hays RD, Kilbourne A, Naliboff B, **Mayer EA**. The impact of irritable bowel syndrome on health-related quality of life. **Gastroenterology** 2000;119:654-660.
5. Lembo A, Naliboff B, Matin K, Munakata J, Parker R, Gracely R, **Mayer EA**. Irritable bowel syndrome patients show altered sensitivity to exogenous opioids. **Pain** 2000;87:137-147.
6. Steinhoff M, Vergnolle N, Young S, Ennes H, Hollenberg MD, Wallace JL, Caughey GH, Williams LM, Geppetti P, **Mayer EA**, Bunnett NW. Agonists of proteinase-activated receptor 2 induce inflammation by a neurogenic mechanism. **Nat Med** 2000;6:1-8.
7. Naliboff B, Derbyshire SWG, Munakata J, Berman S, Mandelkern M, Chang L, **Mayer EA**. Cerebral activation in irritable bowel syndrome patients and control subjects during rectosigmoid stimulation. **Psychosom Med** 2001;63:365-375.
8. Marvizon JC, McRoberts JA, Ennes HS, Song B, Wang X, Jinton L, Corneliussen B, **Mayer EA**. Two N-methyl-D-aspartate receptors in rat dorsal root ganglia with different subunit composition and localization. **J Comp Neurol** 2002;446:325-341.
9. Berman S, Chang L, Suyenobu B, Derbyshire SGW, Fitzgerald L, Mandelkern M, Hamm L, Vogt B Naliboff BD, **Mayer EA**. Condition-specific deactivation of emotional motor system in IBS patients. **Gastroenterology** 2002;123:969-977.
10. Naliboff BD, Berman S, Chang L, Derbyshire SWG, Suyenobu B, Vogt BA, Mandelkern M, **Mayer EA**. Sex-related differences in IBS patients: Central processing of visceral stimuli. **Gastroenterology** 2003;124:1738-1747.
11. Amadesi S, Nie J, Vergnolle N, Cottrell GS, Grady EF, Trevisani M, Manni C, Geppetti P, McRoberts JA, Ennes H, Davis JB, **Mayer EA**, Bunnett NW. Protease-activated receptor 2 sensitizes the capsaicin receptor transient receptor potential vanilloid receptor 1 to induce hyperalgesia. **J Neurosci** 24:4300-4312, 2004.
12. Schwetz I, Bradesi S, McRoberts JA, Sablad M, Miller JC, Zhou H, Ohning G, **Mayer EA**. Delayed stress-induced colonic hypersensitivity in male Wistar rats: Role of neurokinin-1 and corticotropin-releasing factor-1 receptors. **Am J Physiol Gastrointest Liver Physiol** 286:G683-689, 2004
13. Lieberman MD, Jarcho JM, Berman S, Naliboff BD, Suyenobu BY, Mandelkern M, **Mayer EA**. The neural correlates of placebo effects: a disruption account. **Neuroimage** 22:447-455, 2004
14. Naliboff BD, Mayer, M, Fass, R, Fitzgerald L, Chang, L, Bolus R, **Mayer EA**. The effect of life stress on symptoms of heartburn. **Psychosom Med** 66:426-434, 2004
15. Li J, McRoberts JA, Nie J, Ennes HS, **Mayer EA**. Functional characteristics of N-methyl-D-aspartate receptors in rat dorsal root ganglia neurons. **Pain** 109:443-452, 2004
16. Chaban V, Li J, **Mayer EA**, Ennes H, McRoberts J. NMDA receptor modulation of mechanically induced calcium transients in rat DRG neurons. **Neuroscience** 128:347-57,2004
17. Spiegel B, Gralnek I, Bolus R, Chang L, Dulai G, **Mayer EA**, Naliboff B. Clinical determinants of health related quality of life in irritable bowel syndrome. **Arch Intern Med** 164:1773-80,2004
18. **Mayer EA**, Berman S, Suyenobu B, Labus J, Mandelkern MA, Naliboff BD, Chang L. Differences in brain responses to visceral pain between patients with irritable bowel syndrome and ulcerative colitis. **Pain** 115: 398-409, 2005
19. Schwetz I, McRoberts JA, Coutinho SV, Bradesi S, Gale G, Fanselow M, Mulugeta M, Ohning G, Plotsky PM, Tache Y, **Mayer EA**. Corticotropin releasing factor receptor 1 mediates acute and sustained stress-induced visceral hyperalgesia in maternally separated Long Evans Rats. **Am J Physiol Gastrointest Liver Physiol** 2005, in press
20. Bradesi S, Schwetz I, Ennes HE, Lamy CMR, Ohning G, Fanselow M, McRoberts JA, **Mayer EA**. Repeated exposure to water avoidance stress in rats: a new model for sustained visceral hyperalgesia. **Am. J. Physiol, Gastrointestinal and Liver Physiol**. 2005, in press

C. Research Support

Ongoing Research Support

R01 DK48351 Mayer (PI)

09/30/96 – 05/31/06

NIH/NIDDK

Perception and Modulation of Visceral Sensations

The major goals of this project are: 1) Compare rectal sensitivity in patients with IBS, inflammatory bowel disease and controls; 2) Compare rectal and esophageal sensitivity in IBS patients; 3) Using PET imaging, examine the brain regions associated with rectal and esophageal stimulation in patients with IBS, inflammatory bowel disease, and controls; 4) Examine opioid mechanisms of visceral sensitivity using naloxone challenge.

Role: PI

R01 DK58173 Mayer (PI)

05/01/01 – 05/31/06

NIH/NIDDK

Peripheral NMDA Receptors in Visceral Nociception

The goals of this project are: Identification of NMDA receptor on visceral afferent nerve terminals in the colon. Characterization of subunit composition of these receptors. Characterization of peripheral NMDA receptors in visceral nociception in vivo and in vitro. Electrophysiologic characterization of NMDA receptor/channel properties on isolated DRG neurons.

Role: PI

P50 DK64539 Mayer (PI)

09/30/02 – 08/31/07

Women's Center for Functional Visceral Disorders

The goals of this project are: 1) To identify factors which underlie the greater vulnerability of women to develop a range of stress-related chronic pain disorders. 2) To determine sex-related differences in the responsiveness of central stress circuits in terms of HPA axis, autonomic output and pain modulation in healthy control subjects, patients with IBS and patients with interstitial cystitis. 3) To characterize potential mechanisms underlying sex related differences in central stress circuit output in healthy rats, in a rat model of visceral hyperalgesia, and in a cat model of interstitial cystitis.

Role: PI

R24 DK067672 Mayer (PI)

09/15/04 – 07/31/09

Mind/Brain/Body Interactions in Stress-Related Disorders (NIH Center Infrastructure)

The goals of this project are: 1) To establish 4 research support cores (animal models, brain imaging, psychophysiology, health outcomes) aimed at fostering campus wide interdisciplinary research in the area of stress biology. 2) To develop infrastructure for training

Role: PI

Completed Research Support

None