

**BIOGRAPHICAL SKETCH**

NAME Bruehl, Stephen	POSITION TITLE Associate Professor		
eRA COMMONS USER NAME Bruehlsp			
EDUCATION/TRAINING ( <i>Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.</i> )			
INSTITUTION AND LOCATION	DEGREE (if applicable)	YEAR(s)	FIELD OF STUDY
Belmont University, Nashville, TN	BS	1985	Psychology
University of Kentucky, Lexington, KY	MA	1991	Clinical Psychology
University of Kentucky, Lexington, KY	PhD	1994	Clinical Psychology
University of Mississippi Medical Center, Jackson, MS	Internship	1994	Psychology

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

- 1990 – 1991 Fellow, Department of Behavioral Science, College of Medicine, University of Kentucky
- 1991 – 1993 NIMH Predoctoral Research Training Fellow, Department of Behavioral Science, College of Medicine, University of Kentucky
- 1993 – 1994 Clinical Psychology Resident, University of Mississippi Medical Center, Jackson, MS
- 1994 – 1996 Assistant Professor, Departments of Psychology and Anesthesiology, Rush Medical College, Chicago, IL
- 1996 – 2000 Assistant Professor, Department of Physical Medicine and Rehabilitation, Northwestern University Medical School
- 1997 – 1998 Falk Trust Research Scholar, Rehabilitation Institute of Chicago, Chicago, IL.
- 2001 – 2005 Assistant Professor, Department of Anesthesiology, Vanderbilt University School of Medicine, Nashville, TN
- 2005 – pres Associate Professor, Department of Anesthesiology, Vanderbilt University School of Medicine, Nashville, TN

**Honors**

- 1992 American Psychological Association Dissertation Research Award

**B. Selected peer-reviewed publications (in chronological order)**

- Bruehl, S., Carlson, C.R., & McCubbin, J.A. (1992) The relationship between pain sensitivity and blood pressure in normotensives. *Pain*, 48, 463-467.
- Bruehl, S., Carlson, C.R., & McCubbin, J.A. (1993) Two brief interventions for acute pain. *Pain*, 54, 29-36.
- Bruehl, S., McCubbin, J.A., Wilson, J.F., Montgomery, T., Ibarra, P., & Carlson, C.R. (1994). Coping styles, endogenous opioids, and cardiovascular response to stress. *Journal of Behavioral Medicine*, 17, 25-40.
- Bruehl, S., Carlson, C.R., Wilson, J.F., Norton, J.A., Colclough, G., Brady, M.J., et al. (1996) Coping with acute pain: An examination of the role of endogenous opioid and nonopioid mechanisms. *Journal of Behavioral Medicine*, 19, 129-142.
- Bruehl, S., McCubbin, J.A., Carlson, C.R., Wilson, J.F., Norton, J.A., Colclough, G., et al. (1996). The psychobiology of hostility: Possible endogenous opioid mechanisms. *International Journal of Behavioral Medicine*, 3, 163-176.
- Bruehl, S., Husfeldt, B., Lubenow, T., Nath, H., & Ivankovich, A.D. (1996) Psychological differences between Reflex Sympathetic Dystrophy and non-RSD chronic pain patients. *Pain*, 67, 107-114.

- Harden, R.N., Bruehl, S., Siegler, J., & Cole, P.A. (1997) Pain, psychological status, and functional recovery in chronic pain patients on daily opioids: A case comparison. *Journal of Back and Musculoskeletal Rehabilitation*, 9, 101-108.
- McCubbin, J.A., Bruehl, S., Wilson, J.F., Sherman, J.J., & Montgomery, T. (1998) Endogenous opioids inhibit ambulatory blood pressure during naturally occurring stress. *Psychosomatic Medicine*, 60, 227-231.
- Bruehl, S., Lofland, K.R., Sherman, J.J., & Carlson, C.R. (1998) The Variable Responding Scale for detection of response bias on the Multidimensional Pain Inventory. *Psychological Assessment*, 10, 3-9.
- Bruehl, S., Burns, J.W., & McCubbin, J.A. (1998) Altered cardiovascular/pain regulatory relationships in chronic pain. *International Journal of Behavioral Medicine*, 5, 64-76.
- Bruehl, S., McCubbin, J.A., & Harden, R.N. (1999) Theoretical review: Altered pain regulatory systems in chronic pain. *Neuroscience and Biobehavioral Reviews*, 23, 877-890.
- Bruehl, S., Lofland, K.R., Semenchuk, E., Rokicki, L.A., & Penzien, D. (1999) Use of cluster analysis to validate IHS diagnostic criteria for Migraine and Tension-Type headache. *Headache*, 39, 181-189.
- Bruehl, S. Do psychological factors play a role in the onset and maintenance of CRPS? (2001). In: R.N. Harden, R. Baron, & W. Janig (Eds.), *Complex Regional Pain Syndrome*. Seattle, WA: IASP Press.
- Bruehl, S, Harden, R.N., Galer, B.S. Saltz, S. Backonja, M., Stanton-Hicks, M. (2002) Complex Regional Pain Syndrome: Are there distinct subtypes and sequential stages of the syndrome? *Pain*, 95,119-124.
- Bruehl, S., Burns, J.W., Chung, O.Y., Ward, P., & Johnson, B. (2002) Anger and pain sensitivity in chronic low back pain patients and pain-free controls: The role of endogenous opioids. *Pain*, 99, 223-233.
- Bruehl, S., Chung, O.Y., Ward, P., Johnson, B., McCubbin, J.A. (2002) The relationship between resting blood pressure and acute pain sensitivity in healthy normotensives and chronic back pain sufferers: the effects of opioid blockade. *Pain*, 100,191-201.
- Burns, J.W., Kubilus, A., Bruehl, S., Harden, R.N., Lofland, K. (2003) Do changes in cognitive factors influence outcome following multidisciplinary treatment for chronic pain? A cross-lagged panel analysis. *Journal of Consulting and Clinical Psychology*, 71, 81-91.
- Burns JW, Kubilus A, & Bruehl S. (2003) Emotion-induction moderates effects of anger management style on acute pain sensitivity. *Pain*, 106, 109-18.
- Harden, R.N., Bruehl, S., Brander, V., Stanos, S., Chung, O., Saltz, S., et al. (2003) Prospective examination of pain-related and psychological predictors of CRPS-like phenomena following total knee arthroplasty: a preliminary study. *Pain*, 106, 393-400.
- Bruehl, S., Chung, O.Y., Burns, J.W., & Biridepalli, S. (2003) The association between anger expression and chronic pain intensity: evidence for partial mediation by endogenous opioid dysfunction. *Pain*, 106, 317-324.
- Bruehl, S., Chung, O.Y., & Burns, J.W. (2003) Differential effects of expressive anger regulation on chronic pain in CRPS and non-CRPS limb pain patients. *Pain*, 104, 647-654.
- Burns, J.W., Glenn, B., Bruehl, S., Harden, R.N., & Lofland, K. (2003) Cognitive factors influence outcome following multidisciplinary chronic pain treatment: a replication and extension of a cross-lagged panel analysis. *Behaviour Research and Therapy*, 41, 1163-1182.
- Bruehl, S., Chung, O.Y., Ward, P., & Johnson, B. (2004) Endogenous opioids and chronic pain intensity: Interactions with level of disability. *Clinical Journal of Pain*, 20, 283-292.
- Bruehl, S. & Chung, O.Y. (2004) Interactions between the cardiovascular and pain regulatory systems: an updated review of mechanisms and possible alterations in chronic pain. *Neuroscience and Biobehavioral Reviews*, 28, 395-414.
- Burns, J.W., Bruehl, S., & Caceres, C. (2004) Anger management style, blood pressure reactivity and acute pain sensitivity: Evidence for a Trait x Situation model. *Annals of Behavioral Medicine*, 27, 195-204.
- Harden, R.N., Rudin, N.J., Bruehl, S, Kee, W., Parikh, D.K., Kooch, J., et al. (2004) Elevated systemic catecholamines in Complex Regional Pain Syndrome and relationship to psychological factors: a pilot study. *Anesthesia and Analgesia*, 99, 1478-1485.
- Bruehl, S., Chung, O.Y., & Burns, J.W. (in press) Trait anger and blood pressure recovery following acute pain: evidence for opioid-mediated effects. *International Journal of Behavioral Medicine*.
- Bruehl, S., Chung, O.Y., Jirjis, J.N., & Biridepalli, S. (2005) Prevalence of clinical hypertension in chronic pain patients compared to non-pain general medical patients. *Clinical Journal of Pain*, 21, 147-153.

- Burns, J.W. & Bruehl, S. (in press) Anger management style, opioid analgesic use, and chronic pain severity: a test of the opioid-deficit hypothesis. *Journal of Behavioral Medicine*.
- Bruehl, S. France, C.R., France, J., Harju, A., al'Absi, M. (in press) How accurate are parental chronic pain histories provided by offspring? *Pain*.
- Bruehl, S., Chung, O.Y., Donahue, B.S., Burns, J.W. (in press) Anger regulation style, postoperative pain, and relationship to the A118G mu opioid receptor gene polymorphism: a preliminary study. *Journal of Behavioral Medicine*.

### **C. Research Support**

#### **Ongoing Research Support**

R01-NS046694 Bruehl (PI) 09/15/04-06/30/08  
NIH/NINDS

##### *Pain Regulatory Dysfunction in Chronic Pain*

The major goal of this project is to evaluate the contribution of alpha-2 adrenergic dysfunction, baroreceptor alterations, and central sensitization to changes in the blood pressure/pain sensitivity relationship that are associated with chronic pain.

Role: PI

R01-MH071260 Burns (PI) 09/01/05-05/31/09  
NIH/NIMH

##### *Anger Expression, Endogenous Opioids, and Acute Pain*

The goals of this project are to evaluate endogenous opioid dysfunction as a mediator of the hyperalgesic effects of trait anger expression, and to examine the impact of situational anger arousal on expression of this anger-related opioid dysfunction.

Role: Co-Investigator

#### **Completed Research Support**

R01-NS38145 Bruehl (PI) 01/15/99-06/30/04  
NIH/NINDS

##### *Pain Regulatory System Dysfunction in Chronic Pain*

The major goal of this project was to explore endogenous opioid pain regulatory system dysfunction associated with chronic pain. This work is focused in part on identifying alterations in opioid-mediated relationships between the cardiovascular and pain regulatory systems among chronic pain patients, and whether opioid dysfunction in chronic pain is progressive.

Role: PI