

XIULU RUAN, M.D.

Fellowship Trained in Interventional Pain Medicine
Diplomate, American Board of Pain Medicine (DABPM)
Diplomate, American Board of Addiction Medicine (DABAM)
Diplomate, American Board of Electrodiagnostic Medicine (DABEM)
Diplomate, American Board of Interventional Pain Physicians (DABIPP)
Diplomate, American Board of Physical Medicine & Rehabilitation (DABPMR)
Diplomate, Subspecialty Board Certification of Pain Medicine, American Board of
Physical Medicine & Rehabilitation AND American Board of Anesthesiology
Diplomate, Subspecialty Board Certification of Neuromuscular Medicine, American Board of
Physical Medicine & Rehabilitation AND American Board of Psychiatry and Neurology
Fellow, Interventional Pain Practice (FIPP), World Institute of Pain

Physicians' Pain Specialists of Alabama, P.C.

2001 Springhill Avenue

Mobile, AL 36607

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Education:

M.D., Shandong Medical University, Jinan, Shandong Province, P.R. China, 9/1982-7/1988

MS., Natural Sciences, Louisiana State University, Baton Rouge, LA, USA, 9/1990-8/1993

Cardiology Fellowship: Shandong Academy of Medical Sciences, Jinan, China, 8/1988-8/1990

Medical Internship: Dept of Medicine, Worcester Medical Center, Worcester, MASS, USA, 7/1998-6/1999

PM&R Residency: Dept of PM&R, Medical College of Wisconsin Affiliated Hospitals, Milwaukee, WI, USA 7/1999-6/2002

Pain Management Fellowship: Center for Interventional Pain Management, Dept. of Anesthesiology, Univ. of Michigan Health System

Health System, Ann Arbor, MI, 7/2002-7/2003

Clinical Experience in USA:

8/2003-Now: Pain Management Specialist at the Physicians' Pain Specialists of Alabama, PC, 2001 Springhill Ave. Mobile, AL36607 USA Tel:251-478-4900

7/2002-7/2003: Clinical Pain Management Fellow in Center for Interventional Pain Management, Dept. of Anesthesiology, Univ. of Michigan Health System, Ann Arbor, MI48104, USA

7/1999-6/2002: Resident Physician at Dept. of Physical Medicine & Rehabilitation, Medical College of Wisconsin Affiliated Hospitals, Milwaukee, WI53226, USA

7/1998-6/1999: Medical Internship at Dept. of Medicine, St. Vincent Hospital (currently, Worcester Medical Center), Worcester, MASS 01608, USA

Current Position:

Co- Medical Director and Co-Owner of Physicians' Pain Specialists of Alabama
Director, Clinical Research, Physicians' Pain Specialists of Alabama
Director, Fellowship Program of Interventional Pain Medicine, Physicians' Pain Specialists of Alabama

Board Certification:

1. American Board of Physical Medicine & Rehabilitation
 2. American Board of Pain Medicine
 3. American Board of Electrodiagnostic Medicine
 4. American Board of Interventional Pain Physicians
 5. American Board of Addiction Medicine
 6. Subspecialty of Pain Medicine, American Board of Physical Medicine & Rehabilitation AND American Board of Anesthesiology
 7. Subspecialty of Neuromuscular Medicine, American Board of Physical Medicine & Rehabilitation AND American Board of Psychiatry and Neurology
- Fellow, Interventional Pain Practice (FIPP), World Institute of Pain

Special Training:

Certified Metronic Spinal Cord Stimulation Systems Implantation
Certified Metronic Intraspinal Drug Delivery Systems
Intradiscal Electrothermal Annuloplasty(IDET)
Radiofrequency Neuroablation
Percutaneous Nucleoplasty
Percutaneous Discectomy
Electrodiagnostic Medicine(EMG/NCS)
Advanced Spasticity Management(EMG guided Botox Chemodenervation & Intrathecal Baclofen Pump)

Licensure:

Alabama: Current
Michigan: Current
Florida: Current
Mississippi: Current

Hospital Staff Privileges:

University of South Alabama Hospitals
Mobile Infirmery Medical Center

Organizational/leadership roles:

Founder and Executive Director, International Institute of Pain & Rehabilitation (IIPR)

Director -at-Large, American Society of Interventional Pain Physicians (ASIPP)

Vice President, Alabama Society of Addiction Medicine

Academic/Advisory Appointments

Clinical Associate Professor

Department of Anesthesiology

LSUHSC School of Medicine

Date of Appointment: Aug. 1, 2012 to present

Clinical Assistant Professor

Department of Neurology

School of Medicine

University of South Alabama

Date of Appointment: Aug. 1, 2007 to present

Editor in Chief, Journal of Pain & Relief

Date of Appointment: May 2012 to present

Associate Editor, Pain Physician (Official Journal of the American Society of Interventional Pain Physicians)

Date of Appointment: January 2007 to present

Editorial Board Member, Current Drug Abuse Reviews

Date of Appointment: April 2012 to present

Editorial Board Member, Analgesia & Resuscitation: Current Research

Date of Appointment: Aug. 2012 to present

Peer Reviewer, **Pain Medicine** (Official Journal of American Academy of Pain Medicine)

Peer Reviewer, **Expert Opinion on Pharmacotherapy**

Peer Reviewer, **Postgraduate Medicine**

Peer Reviewer, **Archives of Physical Medicine & Rehabilitation**

Peer Reviewer, **Postgraduate Medicine**

Peer Reviewer, **Current Drug Discovery Technologies**

Peer Reviewer, **Journal of Cancer Research & Experimental Oncology**

Peer Reviewer, **Journal of Pharmacy & Pharmacology**

Publications:

Anti-inflammatory Properties of Cytochrome P450 Epoxygenase-Derived Eicosanoids K. Node, Y.Huo, **X. Ruan**, B. Yang, M. Spiecker, K. Ley, D.C. Zeldin, J.K. Liao; **Science**; Vol. 285, Aug. 20, 1999 pp.1276-1279

Activation of Guanine Nucleotide-binding Proteins and Induction of Endothelial Tissue-type Plasminogen Activator Gene Transcription by Alcohol
A. Miyamoto, SX Yang, U Laufs, **X. Ruan** and JK Liao
The Journal of Biological Chemistry; Vol. 274, No. 17, April 1999;
pp. 12055-12060

Activation of G_{αs} Mediates Induction of Tissue-Type Plasminogen Activator Gene Transcription by Epoxyeicosatrienoic Acids
K. Node, **X. Ruan**, J.W. Dai, S.X. Yang, D.C. Zeldin, J.K. Liao
The Journal of Biological Chemistry; Vol. 276, No. 19, May 2001;
pp.15983-15989

Edema Associated with Intrathecal Opioid Usage
X. Ruan, MD
Workers Comp Rx Press. Newsletter. Vol. 2, Issue 4, Oct. 1, 2006, pp. 2

Drug-related Side Effects of Long-Term Intrathecal Morphine Therapy: A Focused Review
X. Ruan, MD
Pain Physician; Vol. 10, No. 2, March 2007; pp. 357-366

Opioid-induced Hyperalgesia
X. Ruan, MD
Workers Comp Rx Press. Newsletter. April 1, 2007. pp. 1-2

Priapism---A Rare Complication Following Continuous Epidural Morphine and Bupivacaine Infusion
X. Ruan, MD, J.P. Couch, MD, R. Shah, MD, H. Liu, MS, F. Wang, MD, S. Chiravuri, MD
Pain Physician; Vol. 10, Nov. 5, September 2007; pp. 707-711

Combinational Pharmacotherapy in Acute Pain Management
X. Ruan, MD
Workers Comp Rx Press Newsletter
Vol. 3, Issue 4, Oct. 1, 2007; pp 3

Acute Pain Management in Patient on Intrathecal Opioid Infusion for Chronic Pain
X. Ruan, MD
Pain Physician; Vol. 10, No. 6, November 2007; pp.780-781

Case Report: Persistent Hiccup Associated With Intrathecal Morphine Infusion Pump Therapy

X. Ruan, MD, J.P. Couch, MD, R. Shah, MD, F. Wang, MD and H.Liu, MS
American Journal of Physical Medicine & Rehabilitation; December 2007
86(12):1019-1022

Severe Peripheral Edema During Continuous Epidural Morphine Infusion Trial
in a Opioid Tolerant Patient with Failed Back Surgery Syndrome
Xiulu Ruan, MD, Riaz Tadia, MD, J. Patrick Couch, MD, &
Srinivas Chiravuri, MD
Pain Physician; Vol. 11, No. 3, May/June 2008 pp 363-67

Edema Caused by Continuous Epidural Hydromorphone Infusion: A Case Report
And the Review of the Literature
X. Ruan, MD, R.Tadia, MD, H. Liu, MS, J.P.Couch, MD and J.K. Lee, MD, PhD
Journal of Opioid Management; Vol. 4, No. 4, July/August 2008 pp 255-59

A Paradoxical, Novel Approach: Combining Minute Naloxone with Morphine
Intrathecal Infusion
X. Ruan, MD
Journal of Opioid Management; Vol. 4, No. 5, September/October 2008 pp 267

Recurrent Cellulitis Associated with long-term Intrathecal opioid
Infusion Therapy—Case Report
X. Ruan, MD, H. Liu, MS, J.P. Couch, MD, F. Wang, MD and
S. Chiravuri, MD
Pain Medicine 2010 Jun;11(6):972-76

Respiratory Failure-----Following Delayed Intrathecal Morphine
Pump Refill, A Valuable, but Costly Lesson
X. Ruan, MD, J.P. Couch, MD, R. Shah, MD, H. Liu, MS, F. Wang, MD and
S. Chiravuri, MD
Pain Physician 2010 Jul;13(4):337-41

Acute Opioid Withdrawal Following Consumption of Crushed Embeda (Morphine
Extended-Release with Sequestered Naltrexone)--Case report and the focused
Review of the literature.
X. Ruan, MD, T. Chen, MD, Ph.D, J.P. Couch, MD, and S. Chiravuri, MD
Journal of Opioid Management 2010 Jul-Aug;6(4):300-303

Truly a critical review: root cause analysis of paraplegia following transforaminal
Epidural steroid injections: “unsafe” triangle
X. Ruan, MD & S. Chiravuri, MD
Pain Physician 2011 Jan.;14(1):E82-3

Methylnaltrexone: Treatment for opioid-induced constipation: not convinced yet.
H. Liu & **X. Ruan**

American Journal of Hospice and Palliative Care 2011 March 30. (Epub Ahead of print)

Urine drug testing in chronic pain.

PJ. Christo, L. Manchikanti, **X. Ruan**, M. Bottros, H. Hansen, DR. Solanki, AE. Jordan, J. Colson

Pain Physician. 2011 Mar-Apr;14(2):123-43

Editorial: Sustained-release morphine sulfate with sequestered naltrexone for moderate to severe pain: a novel opioid analgesic formulation & beyond

X. Ruan, MD

Expert Opinion on Pharmacotherapy 2011 May;12(7):999-1001Epub 2011Apr 7

Current concepts in the management of opioid-induced constipation: A perfect review with an imperfect concept.

X. Ruan, MD

Journal of Opioid Management 2011 May/June Vol. 7, No. 3 pp 167

Unique low-dose intrathecal opioid trial, still in need of a feasibility check.

X. Ruan, MD & J.P. Couch, MD

Pain Physician. 2011 Sept-Oct.;14(5):E462-3

Feasibility study of rapid opioid rotation and titration: Is it truly feasible or Paradoxical?

X. Ruan, MD

Pain Physician. 2011 Nov;14(6):571

Editorial: Opioid equianalgesic conversion: How equally analgesic are they?

X. Ruan, MD

Forum of Pain & Rehabilitation. 2012. No. 1:1

Electronic Medical Records: Are we going forwards or backwards?---A perspective from a private pain practice.

X. Ruan, MD

Pain Physician. 2012 Jan.-Feb.;15(1):99-100

Editorial: Postoperative pain control in patients already on intraspinal drug delivery for chronic pain : A revisit of the still ignored dilemma.

X. Ruan, MD

Journal of Pain & Relief 2012, Vol. 1, Issue 1;1:1

Successful treatment of intractable low back and pelvic pain caused by advanced Prostate cancer with intrathecal clonidine and baclofen infusion

H. Liu, MS, H. Chen, MS, **X. Ruan, MD**

Journal of Pain & Relief 2012, Vol. 1, Issue 3, 1:105

Applaud the novel intrathecal baclofen trialing method: Time to raise the bar!
X. Ruan, MD, & T. Chen, MD, PhD.
Pain Physician 2012 Mar;15(2):E151-E152

Effectiveness of therapeutic lumbar transforaminal epidural steroid injections in managing lumbar spinal pain.
Maqnchikanti L, RM Buenaventura, KN Manchikanti KN, **X. Ruan**, S. Gupta, HS Smith, PJ Christo, SP Ward
Pain Physician. 2012 May-Jun;15(3):E199-245.

Letter to the editor: Reexamine the study on abuse potential of Remoxy^R : What was missing?
X. Ruan, MD
Pain Medicine 2012. Nov. 21 [Epub ahead of print]

Book Chapters:

Contributing Co-Author:

1. Foundations of Interventional Pain Management and Pain Medicine: A Comprehensive Review 2011
2. Interventional Pain Management and Pain Medicine: Board Review and Self-Assessment 2011

Membership:

The American Society of Interventional Pain Physician (ASIPP)
American Academy of Pain Medicine (AAPM)
American Pain Society (APS)
American Academy of Physical Medicine & Rehabilitation (AAPMR)
American Association of Neuromuscular & Electrodiagnostic Medicine (AANEM)
American Society of Addiction Medicine (ASAM)
Medical Association of the State of Alabama (MASA)
Medical Society of Mobile County (MSMC)
International Institute of Pain & Rehabilitation