

Curriculum Vitae

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CONTACT INFORMATION

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PROFESSIONAL EXPERIENCE:

July, 2002 - Present Research Assistant Professor, EPR Center for the Study of Viable Systems, Dartmouth Medical School, Hanover, NH, UAS

November, 1998 - July, 2002 Research Associate, EPR Center for the Study of Viable Systems, Dartmouth Medical School, Hanover, NH, USA

March - November, 1998 Visiting Researcher, Department of Molecular Medicine, Clinical Genetics Unit, Karolinska Hospital, Stockholm, Sweden

September, 1995 - March, 1998 Associate Professor, Department of Physiology and CardioVascular Research Institute, Baotou Medical College, Baotou, China

August, 1992 - September, 1995 M.S. Division of Neuro-Pharmacology, Department of Pharmacology, Beijing Medical University, Beijing, China

September, 1984 - July, 1992 Teaching Assistant. Department of Physiology and Cardiovascular Research Institute, Baotou Medical College, Baotou, China

September, 1979 - July, 1984 M.D. Baotou Medical College, Baotou, China

PROFESSIONAL SOCIETIES

Member of the International Society on Oxygen Transport to Tissue (ISOTT)
Member of the Radiation Research Society

HONORS

Sepecial grade outstanding graduate-student candidate of Beijing Medical University in 1993.
Young investigator award for the outstanding research on “Effect of oxygen therapy on brain oxygenation and brain damage in a rat stroke” at the joint conference of “11th in vivo EPR spectroscopy & imaging” and “8th international EPR spin trapping “ held on September 4-8, 2005 in Columbus, Ohio,USA

PEER REVIEWED PUBLICATIONS

Hou H, Khan N, Grinberg Y, Yu H, Grinberg SA, Lu S, Demidenko E, Steffen RP, Swartz HM. The Effects of EFAPROXYNTM (efaproxiral) on Subcutaneous RIF-1 Tumor Oxygenation and Enhancement of Radiotherapy Mediated Tumor Growth Inhibition in Mice. *Radiation Res* 168(2): 218-25 (2007).

Hou H, Grinberg O, Williams B, Grinberg S, Yu H, Alvarenga DL, Wallach H, Buckey J and Swartz HM. Effect of oxygen therapy on brain damage and cerebral pO₂ in transient focal cerebral ischemia in the rat. *Physiological Measurement* 28(8):963-76 (2007).

Williams, BB, **Hou, HG.**, Grinberg, OY., Demidenko, E., Swartz, HM.. High Spatial Resolution Multi-site EPR Oximetry of Transient Focal Cerebral Ischemia in the Rat. *Antioxidants & redox signaling* 9 (10):1691-8 (2007)

Khan, N., Williams, BB., **Hou, HG.**, Li, HB and Swartz, HM. Repetitive tissue pO₂ measurements by Electron Paramagnetic Resonance oximetry: Current status and future potential for experimental and clinical studies. *Antioxidants & redox signaling* 9 (8):1169-82.

- Patel, M., Liang, LP., **Hou, HG.**, Williams, BB., Kmiec, M., Swartz, HM., Roberts, LJ. Seizure-Induced Formation of Isofurans: Novel Lipid Peroxidation Products Favored by Changes in Oxygen Tension. *Journal of Neurochemistry* 104: 264-270 (2008)
- Ibragimova, MI., Petukhov, V., Zheglov, EP., Khan, N., **Hou, HG.**, Swartz, HM., Konjukhov, GV., Nizamov, RN. "EPR Investigation of Metabolic Changes in Living Animals under Quinoid Radiotoxin (QRT)," *Nitric Oxide* (Accepted for publication, 2007).
- Abramović, Z., Šentjurc, M., Kristl, J., Khan, N., **Hou, HG.**, Swartz, HM. The influence of isoflurane and ketamine/xylazine anesthesia on skin oxygenation observed by EPR oximetry *in vivo*. *Skin Pharmacology and Physiology* 20:77-84 (2007).
- Dinguizli, M., Jeumont, S. Beghein, N., He, J., Walczak, TM., Lesniewski, PN., **Hou, HG.**, Grinberg, OY., Sucheta, A., Swartz, HM. and Gallez B. "Development and evaluation of biocompatible films of polytetrafluoroethylene polymers holding lithium phthalocyanine for their use in EPR oximetry" *Biosensors & Bioelectronics* 21(7):1015-22.(2006)
- Hou, HG.**, Khan, N., O'Hara JA., Grinberg, O.Y., Dunn, J.F., Abajian, M.A., Wilmot C.M., Demidenko, E., Lu, SY., Steffen, R.P. and Swartz, H.M. "Increased oxygenation of intracranial tumors by RSR13, an allosteric hemoglobin modifier: *in vivo* EPR oximetry study". *International Journal of Radiation Oncology Biology and Physics* 61:1503-9 (2005).
- Hou, HG.**, Grinberg, O.Y., Grinberg, S., Demidenko, E. and Swartz, H.M. "Cerebral tissue oxygenation in reversible focal ischemia in rats: multi-site EPR oximetry measurements" *Physiological Measurement* 26:131-141 (2005).
- O'Hara, JA., **Hou, HG.**, Wilmot, CM., Demidenko, E., Springett, RJ., Khan, N., Swartz, HM. "Simultaneous Measurement of Rat Brain Cortex PtO₂ Using OxyLite and EPR Assessments Under Normoxia and During Hyperoxia," *Physiological Measurement* 26:203-13 (2005)
- Hou, HG.**, Khan, N., O'hara JA., Grinberg, O.Y., Dunn, J.F., Abajian, M.A., Wilmot C.M., Makki, M., Demidenko, E., Lu, SY., Steffen, R.P. and Swartz, H.M. Effect of RSR13, an allosteric hemoglobin modifier, on oxygenation in murine tumors: an *in vivo* EPR oximetry and BOLD MRI study. *International Journal of Radiation Oncology Biology and Physics*. 59:834-843 (2004).
- Swartz, H.M., Buckley, J., Comi, R., Could, L., Grinberg, O.Y., Hartford, A., Hopf, H., **Hou, HG.**, Hug, E., Iwasaki, A., Khan, N., Lesniewski, P., Salikhov, I and Walczak, T."Clinical application of EPR: overview & perspectives. *NMR Biomed*. 17: 335-351 (2004).
- O'Hara, JA., Khan, N., **Hou, HG.**, Wilmot, CM., Demidenko, E., Springett, RJ., Dunn, JF., Swartz, HM. Comparison of EPR Oximetry and Eppendorf Polarographic Electrode Assessments of Rat Brain PtO₂. *Physiological Measurements*. 25: 1413-1423 (2004).
- Grinberg, O.Y., **Hou, HG.** Grinberg, S.A., Moodie, K.L., Demideko, E., Friedman B.J., Post, M.J. and Swartz, H.M. pO₂ and regional blood flow in a rabbit model of limb ischemia. *Physiological Measurement* 25:659-670 (2004)
- Hou, HG.**, Grinberg, O.Y., Taie, S., Leichtweis, S., Miyake, M., Grinberg, S., Xie, HY., El-Kadi, H and Swartz, H.M. Electron paramagnetic resonance assessment of brain tissue oxygen tension in anesthetized rats. *Anesth Analg*; 96:1467-72 (2003)
- Towner, R.A., Sturgeon, S.A., Khan, N., **Hou, HG.** and Swartz, H.M. *In vivo* assessment of nodularin-induced hepatotoxicity in the rat using magnetic resonance techniques (MRI, MRS and EPR oximetry). *Chemico-Biological Interactions*; 139: 231-250 (2002)
- Dunn, J.F., O'hara JA., Zhu, HQ., Lei, H., Meyerand, E.M., Grinberg, O.Y., **Hou, HG.**, Hoopes, J., Demidenko, E and Swartz, H.M. Changes in oxygenation of intracranial tumors with carbogen: an BOLD MRI and EPR oximetry study. *J Magn Reson Imaging*; 16:511-521 (2002).
- Salahshor, S., **Hou, HG.**, Diep, CB., Luokolo., A., Zhang, H., Liu, T., Chen, J., Iselius, L., Rubio, C., Lothe, RA., Aalotronen, L., Sun, XF., Lindmark, G and Lindblom, A. A germline E-cadherin mutation in a family with gastric and colon cancer. *Int J Mol Med*; 8: 439-443 (2001).
- Lei, H., Grinberg, Oleg., Nwaigwe, C.I., **Hou, HG.**, Williams, C., Swartz, H.M and Dunn, J.F. The effects of ketamine/xylazine anesthesia on cerebral blood flow and oxygenation observed using magnetic resonance perfusion imaging and electron paramagnetic resonance oximetry. *Brain Res*; 913: 174-179 (2001)

- Salahshor, S., Lei, Haixin., **Hou, HG.**, Kristensen, VN., Loman, N., Sioberg-Margolin, S., Borg, A., Borresen-dale, AL., Vorechovsky, I. And Lindblom, A. Low frequency of E-cadherin alterations in familial breast cancer. *Breast Cancer Res*; 3:199-207 (2001)
- Lei, H., O'Hara, JA., **Hou, HG**, Wilmot, CM., Swartz HM., Dunn, JF. Characterization of Intracranial 9L Glioma in Rat Using MR Perfusion and BOLD Imaging at 7T with Carbogen Breathing. *Proc. Intl.Soc.Mag.Reson.Med.* 9:2281 (2001)
- Dunn, J.F., Grinberg, O.Y., Roche, M., Nwaigwe, C.I., **Hou, HG** and Swartz, H.M. Noninvasion Assessment of cerebral Oxygenation During Acclimation to Hypobaric Hypoxia. *Journal of Cerebral Blood Flow and Metabolism.* 20:1632-1635 (2000).

BOOK CHAPTERS

- Hou, HG**, Khan, N., Swartz, HM. Applications of EPR (ESR or EMR) in medicine and biology. In: *Applied electron magnetic resonance - elementary principle & practical applications* (Editor: Yuanzhi Xu). (In press, 2007).
- Hou, HG.**, Grinberg, O.Y., Grinberg, S.A., Khan, N., Dunn, J.F. and Swartz, H.M. "Cerebral PtO₂, Acute Hypoxic Hypoxia, and Volatile Anesthetics in the Rat Brain," *Adv Exp Med Biol.* 566:179-185 (2005).
- Grinberg, O.Y., **Hou, HG.**, Roche, M.A., Merlis, J., Grinberg, S.A., Khan, N., Swartz, H.M. and Dunn, J.F. Modeling of the Response of p_tO₂ in Rat Brain to Changes in Physiological Parameters. *Adv Exp Med Biol.* 566:111-118 (2005).
- Khan, N., **Hou, HG.**, Hein P., Comi, R.J., Buckley J.C., Grinberg, O.Y., Salikhov, I., Lu, SY., Wallach, H. and Swartz, H.M. Black Magic and EPR Oximetry": From Lab to Initial Clinical Trials. *Adv Exp Med Biol* 566:119-125 (2005).
- Grinberg, O.Y., Miyake, M., **Hou, HG.**, Steffen, R., and Swartz, H.M. The dose-dependent effect of RSR13, a synthetic allosteric modifier of hemoglobin, on physiological parameters and brain tissue oxygenation in rats. *Adv Exp Med Biol.* 530:287-296 (2003).
- Miyake, M., Grinberg, O.Y., **Hou, HG.**, Steffen, R., El-kadi, H and Swartz, H. M. The effect of RSR13, a synthetic allosteric modifier of hemoglobin, on brain tissue pO₂ (measured by EPR oximetry) following severe hemorrhagic shock in rats. *Adv Exp Med Biol.* 530:319-329 (2003).
- Swartz, H.M., Taie, S., Miyake, M., Grinberg, O.Y., **Hou, HG.**, El-Kadi, H., and Dunn, J.F. The effects of anesthesia on cerebral tissue oxygen tension: use of EPR oximetry to make repeated measurements. *Adv Exp Med Biol.* 530:569-575 (2003).
- Grinberg, O. Y., **Hou, HG** and Swartz, H.M. Direct repeated measurements of pO₂ in the brain during ischemia and reperfusion. In " *Ischemic Blood Flow in the Brain*" Fukuuchi Y, Tomita M, and Koto A (Des), Keio University Symposia for Life Science and Medicine; 6:381-389 (2000)

MANUSCRIPTS IN SUBMITTING OR PREPARATION

- Hou, HG.**, Abramovic, Z., Šentjerc, M., Lariviere, P., Li, HB., Demidenko, E., David J. Gladstone, DJ., Swartz, HM., Khan, N. Effects of topical vasodilator (benzyl nicotinate) on subcutaneous RIF-1 tumor oxygenation in mice. In preparation (2007).
- Hou, HG.**, Lariviere, P., Li, HB., Demidenko, E., David J. Gladstone, DJ., Swartz, HM., Khan, N. Hypofractionated x-ray irradiation increased subcutaneous RIF-1 tumor oxygenation and enhanced radiotherapy mediated tumor growth inhibition in mice. In preparation (2007).
- Lu, CY., Rollins, M., **Hou, HG.**, Swartz, HM., Hopf. H., Miclau, T., Marcucio, RS. Tibial fracture decreases tissue oxygen levels at the fracture site. (Submitted 2007).
- Dunn, JF., Merlis, MA., Abajian, M., Grinberg, SA., **Hou, HG.**, Grinberg, OY. The regulation of brain tissue oxygenation (PtO₂) - an in vivo EPR study. In preparation (2007).

SELECTED PUBLISHED ABSTRACTS AND PRESENTATIONS

- Hou, HG.**, Abramovic, Z., Šentjerc, M., Lariviere, P., Li, HB., Lu, SY., Demidenko, E., David J. Gladstone, DJ., Swartz, HM., Khan, N. Modulation of peripheral tumor hypoxia by topical vasodilator (benzyl

- nicotinate): an EPR oximetry study. 13th international congress of Radiation Research. (San Francisco, CA, Aug 8-12, 2007)
- Khan, N., Li, HB., **Hou, HG.**, Lariviere, P., Lu, SY., Demidenko, E., Gladstone, DJ., O'Hara, JA., Swartz, HM. Tumor pO₂ of orthotopic gliomas and their response to irradiation and hyperoxygenation: how this information could be potentially used to individualize and optimize radiotherapy. 13th international congress of Radiation Research. (San Francisco, CA, Aug 8-12, 2007)
- Khan, N., Li, HB., Lariviere, JP., **Hou, HG.**, Williams, BB., Demidenko, E., Swartz, HM. Repeated Tissue pO₂ Measurements of Orthotopic Gliomas in Experimental Models: Methodology and Results. 35th Annual Meeting of the International Society on Oxygen Transport to Tissue (ISOTT, Uppsala, Sweden, Aug 26-30, 2007)
- Williams, BB., **Hou, HG.**, Abajian, M., Demidenko, E., Burke, G., Lu, SY., Swartz, HM. EPR measurements of brain tissue pO₂ during hyperbaric oxygen therapy following stroke. 35th Annual Meeting of the International Society on Oxygen Transport to Tissue (ISOTT, Uppsala, Sweden, Aug 26-30, 2007)
- Hou, HG.**, Khan, N., Grinberg, Y., Yu, HS., Grinberg, SA., Lu, S., Demidenko, E., Steffen, RP., Swartz, HM. The Effects of EFAPROXYNTM (efaproxiral) on Subcutaneous RIF-1 Tumor Oxygenation and Enhancement of Radiotherapy Mediated Tumor Growth Inhibition in Mice. A Joint Conference of 12th *In Vivo* EPR Spectroscopy and Imaging 9th International EPR Spin Trapping/Spin Labeling (Chicago, IL. Apr 30 - May 4, 2007).
- Khan, N., **Hou, HG.**, Li, HB., Williams, BB., Lariviere, JP., Lu, SY., Demidenko, E., O'Hara, JA., Swartz, HM. Response of orthotopic 9L Gliomas to irradiation and hyperoxygenation: a HSR-MS EPR oximetry study. A Joint Conference of 12th *In Vivo* EPR Spectroscopy and Imaging 9th International EPR Spin Trapping/Spin Labeling (Chicago, IL. Apr 30 - May 4th, 2007).
- Li, HB., Sakata, Y., **Hou, HG.**, Gubaydullin, FF., Williams, BB., Dinguizli, M., Khan, N., Lu, SY., Sucheta, A., Lariviere, JP., Lesniewski, PN., Gallez, B., Swartz, HM. Measurement of deep tissue pO₂ using implantable resonators. A Joint Conference of 12th *In Vivo* EPR Spectroscopy and Imaging 9th International EPR Spin Trapping/Spin Labeling (Chicago, IL. Apr 30 - May 4, 2007).
- Hou, HG.**, Khan, N., Yu, HS., Demidenko, E., O'Hara, JA., Swartz, HM. Time course of oxygenation in experimental murine tumors after x-ray irradiation. 53ND Annual Meeting of the Radiation Research Society. (Philadelphia, Pennsylvania, Nov 5-8, 2006)
- Khan, N., **Hou, HG.**, Williams, B., Lariviere, JP., O'Hara, JA., Swartz, HM. Oxygen guided radiotherapy for gliomas to enhance therapeutic efficacy. 53ND Annual Meeting of the Radiation Research Society. (Philadelphia, Pennsylvania, Nov 5-8, 2006)
- Hou, HG.**, Khan, N., Yu, HS., Demidenko, E., O'Hara, JA., Swartz, HM. Time course of oxygenation in experimental murine tumors after x-ray irradiation. 52ND Annual Meeting of the Radiation Research Society. (Denver, Colorado, Oct 16-19, 2005)
- Hou, HG.**, Grinberg, OY., Williams B., Swartz, HM and Buckey JC. Effect of Oxygen Therapy on Brain Oxygenation and Brain Damage in a Rat Stroke Model. 11th *in vivo* EPR spectroscopy and imaging & 8th international EPR spin trapping. (Columbus, OH. Sep 4-8, 2005)
- Rollins, MD., **Hou, HG.**, Swartz, HM and Hopf HW. Measurement of organ tissue oxygen levels during hyperoxia using electron paramagnetic resonance spectroscopy. 11th *in vivo* EPR spectroscopy and imaging & 8th international EPR spin trapping. (Columbus, OH. Sep 4-8, 2005)
- Williams, BB., Grinberg, OY., Khan N., **Hou, HG.**, Swartz, HM. Quantitative comparison of high spatial resolution multi-site spectroscopy and spectroscopic EPR imaging for *in vivo* EPR oximetry. 11th *in vivo* EPR spectroscopy and imaging & 8th international EPR spin trapping. (Columbus, OH. Sep 4-8, 2005)
- Zrinka Abramović, Marjeta Šentjurc, Julijana Kristl, Nadeem Khan, **HG Hou**, Yu, HS., Demidenko, E Harold M. Swartz. Skin tumor oxygenation after topical application of Benzyl Nicotinate in different delivery systems. 11th *in vivo* EPR spectroscopy and imaging & 8th international EPR spin trapping. (Columbus, OH. Sep 4-8, 2005)
- Swartz, HM., Buckey, JC., Comi, RJ., Demidenko, E., Gallez, B., Gould, LJ., Grinberg, OY., Hopf, HW., **Hou, HG.**, Iwasaki, A., Khan, N., Lesniewski, PN., O'Hara, JA., Pogue, B., Salikhov, I., Walczak, TM.,

- Williams, B. EPR measurements of tissue oxygen-clinical applications. 11th in vivo EPR spectroscopy and imaging & 8th international EPR spin trapping. (Columbus, OH. Sep 4-8, 2005)
- Hou, HG.**, Grinberg, O.Y., Williams B., Swartz, HM and Buckey JC. Effect of Oxygen Therapy on Brain Oxygenation and Brain Damage in a Rat Stroke Model. 19th annual neuroscience day at Dartmouth (Hanover, NH. February 11, 2005)
- Hou, HG.**, Khan, N., O'Hara JA., Grinberg, O.Y., Dunn, J.F., Abajian, M.A., Wilmot C.M., Makki, M., Demidenko, E., Lu, SY., Steffen, R.P. and Swartz, H.M. Effect of RSR13 (an allosteric hemoglobin modifier) and irradiation on oxygenation in murine tumors: in vivo EPR oximetry study. International Workshop on *in vivo* EPR. (Hanover, NH. September 19-23, 2004).
- Khan, N., **Hou, HG.**, Comi, R.J., Buckey, J.C., Grinberg, O.Y., Salikhov, I., Lu, SY., Wallach, H., Gallez, B., Swartz, HM. India ink and clinical EPR oximetry: present status and future. International Workshop on *in vivo* EPR. (Hanover, NH. September 19-23, 2004).
- Yu, HS., **Hou, HG.**, Grinberg, O.Y., Lu, SY., Lesniewski, P.N., Sucheta, A., Gallez, B., Grinberg, S.A., Khan, N., Swartz, HM. Implantable microresonator for measuring pO₂ at greater depth in tissues. International Workshop on *in vivo* EPR. (Hanover, NH. September 19-23, 2004).
- Buckey, J.C., Grinberg, O.Y., **Hou, HG.**, Hoopes, P.J., Swartz, HM. In vivo EPR and hyperbaric oxygen: overall clinical plans and initial experimental studies on ischemic stroke in a rat model. International Workshop on *in vivo* EPR. (Hanover, NH. September 19-23, 2004).
- Gould, L.J., Mushkudiani, J., **Hou, HG.**, Grinberg, O.Y., Grinberg, S., Swartz, HM. Use of EPR spectroscopy to measure tissue oxygen in an ischemic flap model. International Workshop on *in vivo* EPR. (Hanover, NH. September 19-23, 2004).
- Lu, SY., Khan, N., **Hou, HG.**, Yu, HS., Gallez, B., Swartz, HM. Histopathological examination of response to injection of synthetic ink in intramuscular and subcutaneous tissue of rats. International Workshop on *in vivo* EPR. (Hanover, NH. September 19-23, 2004).
- Abramovic, Z., Sentiurc, M., Kristl, J., Khan, N., **Hou, HG.**, Swartz, HM. Influence of anesthesia on skin oxygenation and the effect of topically applied vasodilator. International Workshop on *in vivo* EPR. (Hanover, NH. September 19-23, 2004).
- Gould, L.J., Mushkudiani, J., **Hou, HG.**, Grinberg, O.Y., Grinberg, S., Swartz, HM. Use of EPR spectroscopy to measure tissue oxygen in an ischemic flap model. *Wound Repair and Regeneration*. 2004; 12: A29.
- Helish, A., Khan, N., Brandt, U., **Hou, HG.**, Swartz, HM. Hypoxia in regions of collateral artery growth only in BALB/c but not C57BL/6 mice after femoral artery ligation. The American Heart Association Scientific Sessions (New Orleans, Louisiana, Nov. 7-10, 2004).
- Hou, HG.**, Khan, N., O'Hara JA., Grinberg, O.Y., Dunn, J.F., Abajian, M.A., Demidenko, E., Steffen, R.P. and Swartz, H.M. Measurements by EPR and BOLD of the effectiveness of an allosteric hemoglobin effector, RSR13, to repetitively enhance tumor oxygenation. 11th annual meeting of the International Society for Magnetic Resonance in Medicine (ISMRM, Toronto, ON, July, 2003)
- Hou, HG.**, Khan, N., O'Hara JA., Grinberg, O.Y., Dunn, J.F., Albanian, M.A., Wilmot C.M., Make, M., Damien, E., Lu, SY., Steffen, R.P. and Swartz, H.M. Effect of RSR13, an allosteric hemoglobin modifier, on oxygenation in murine tumors: an in vivo EPR oximetry and BOLD MRI study. 31st Annual Meeting of the International Society on Oxygen Transport to Tissue (ISOTT, Rochester, NY, August, 2003)
- Hou, HG.** Grinberg, O.Y., Khan, N., Dunn, J.F. and Swartz, H.M. Cerebral pO₂, acute hypoxic hypoxia, and volatile anesthetics in the rat. 31st Annual Meeting of the International Society on Oxygen Transport to Tissue (ISOTT, Rochester, NY, August, 2003).
- Khan, N., **Hou, HG.**, Hein P., Comic, R.J., Buckey J.C., Grinberg, O.Y., Silicon, I., Lu, SY., Wallace, H. and Swartz, H.M. Black Magic and EPR Goniometry: From Lab to Initial Clinical Trials. 31st Annual Meeting of the International Society on Oxygen Transport to Tissue (ISOTT, Rochester, NY, August, 2003).
- Grinberg, O.Y., **Hou, HG.**, Roche, M.A., Merles, J., Grinberg, S.A., Khan, N., Swartz, H.M. and Dunn, J.F. Modeling of the Response of p_tO₂ in Rat Brain to Changes in Physiological Parameters. 31st Annual

- Meeting of the International Society on Oxygen Transport to Tissue (ISOTT, Rochester, NY. August, 2003).
- O'Hara, J.A., **Hou, HG.**, Wilmot C.M., Demidenko, E., Roger, J.S., Khan, N. and Swartz, H.M. Simultaneous Measurement of Rat Brain Cortex PO₂ Using Oxylite and EPR Assessments under normoxia and during Hyperoxia. 31st Annual Meeting of the International Society on Oxygen Transport to Tissue (ISOTT, Rochester, NY. August, 2003).
- O'Hara, J.A., Khan, N., **Hou, HG.**, Wilmot C.M., Demidenko, E., Dunn, J.F. and Swartz, H.M. Comparison of Eppendorf and EPR assessments of rat brain pO₂. 31st Annual Meeting International Society on Oxygen Transport to Tissue (ISOTT, Rochester, NY. August, 2003).
- Lu, SY., Grinberg, O.Y.; Grinberg, S.A.; **Hou, HG.**, Khan, N and Swartz, H.M. Histological examination of responses to implantation of EPR probes (wood chars, India Ink) into rat skeletal muscle. 31st Annual Meeting International Society on Oxygen Transport to Tissue (ISOTT, Rochester, NY. August, 2003).
- Moodie, K.L., Grinberg, O.Y., **Hou, HG.**, Tomaszewski, J., Grinberg, S.A., Demidenko, E., Friedman, B.J., Swartz, H.M. and Post, M.J. In vivo measurement of oxygen tension in a rabbit model of hindlimb ischemia using a novel electron paramagnetic resonance method. 4th Annual Conference on Arteriosclerosis, Thrombosis and Vascular Biology (Washington, DC, May, 2003)
- Swartz, H.M., Hou, HG., Rosen, N., Hopf, H. Demonstration of the feasibility of using EPR oximetry to make repeated measurements of pO₂ in a well established model wound healing. International Conference on Wound Healing, Oxygen, and Emerging Therapeutics (Columbus, Ohio. 2002)
- Hou, HG.**, Grinberg, O.Y., Grinberg, S.A.; Khan, N and Swartz, H.M. Monitoring cerebral pO₂ and intracranial pressure during ischemia and intracranial hemorrhage (abstract). 9th international meeting on EPR studies of viable systems (Hanover, NH. September, 2001).
- Hou, HG.**, Grinberg, O.Y., Grinberg, S.A.; Dunn J.F and Swartz, H.M. Repeated measurements of the pO₂ of the brain by EPR oximetry: applications to the effects of ischemia, anesthesia, and hemoglobin shifters (abstract). 15th annual neuroscience day at Dartmouth (Hanover, NH. January, 2001)
- Grinberg, O.Y., **Hou, HG.**, Grinberg, S.A.; Kozliouk, V and Swartz, H.M. Cerebral pO₂ by EPR oximetry in the MCAo rat model (abstract). The 9th international meeting on EPR studies of viable systems (Hanover, NH. September, 2001).
- Lei, H., O'Hara JA., **Hou, HG.**, Wilmot, CM., Swartz, H.M and Dunn, J.F. Characterization of intracranial 9L Glioma in rat using MR perfusion and BOLD imaging at 7T with carbogen breathing (abstract). Proc Intl Soc Mag Reson Med (Glasgow, U.K., March, 2001)
- Dunn, J.F., Grinberg O.Y., Roche, M., Nwaigwe, C.I., **Hou, HG.** and Swartz, H.M. The effect of high altitude adaptation on brain oxygenation: Implications for the regulation of tissue pO₂ (abstract). FASEB JOURNAL, 14: A82-A82 (2000).
- Miyake, M., Grinberg, O.Y., **Hou, HG.**, Steffen, R., El-kadi, H and Swartz, H. M. The effects of RSR13, a synthetic allosteric modifier of hemoglobin, on brain tissue pO₂ (measured by EPR oximetry) following severe hemorrhagic shock in rats. 27th Annual Meeting International Society on Oxygen Transport to Tissue (ISOTT, Hanover, NH. August, 1999)
- Grinberg, O.Y., Miyake, M., **Hou, HG.**, Steffen, R. and Swartz, H.M. The dose-dependent effect of RSR13, a synthetic allosteric modifier of hemoglobin, on physiological parameters and brain tissue oxygenation in rats. 27th Annual Meeting International Society on Oxygen Transport to Tissue (ISOTT, Hanover, NH. August, 1999)
- Swartz, H.M., Taie, S., Miyake, M., Grinberg, O.Y., **Hou, HG.**, El-Kadi, H. and Dunn, J.F. The effects of anesthesia on cerebral tissue oxygen tension: use of EPR oximetry to make repeated measurements. 27th Annual Meeting International Society on Oxygen Transport to Tissue (ISOTT, Hanover, NH. August, 1999)
- Dunn, J.F., Grinberg O.Y., Roche, M., Nwaigwe, C.I., **Hou, HG.** and Swartz, H.M. The effect of high altitude adaptation on brain oxygenation in rats. 27th Annual Meeting International Society on Oxygen Transport to Tissue (ISOTT, Hanover, NH. August, 1999)

CURRENT RESEARCH SUPPORT

Program Project Grant- Measurement of pO₂ In Vivo and In Vitro

Principal Investigator: H.M. Swartz

Agency: National Center for Research, NIH (P01 EB2180, 07/01/02 – 06/30/08)

Monitoring Oxygen Repeatedly for Hypoxic Tumor Therapy

Principal Investigator: Nadeem Khan

Agency: National Institutes of Health (R21 CA118069, 07/01/06-06/30/08)

Determination of Clinical Feasibility of EPR Oximetry of Tumors

Principal Investigator: Harold Swartz

Agency: National Institutes of Health-NCI (R21 CA121593, 04/01/06-03/31/08)

Oxygen Guided Hypofractionated Radiotherapy for Gliomas

Principal Investigator: Nadeem Khan

Agency: National Institutes of Health (RO1CA120919, 07/01/06-06/30/11)