

John C. Gore, Ph.D.

PRESENT POSITION

Chancellor's University Professor, Vanderbilt University
Professor of Radiology and Radiological Sciences, Biomedical Engineering,
Molecular Physiology and Biophysics, and Physics
Director, Vanderbilt University Institute of Imaging Science

EDUCATION

University of Manchester, 1969-1972, B.Sc. (Physics),
1st class honours

University of London, 1972-1975, Ph.D. (Physics), 1976

Ealing College, London, 1978-1983 (part-time)
B.A. (Law), 1st class honours

PREVIOUS APPOINTMENTS

<u>Appointment</u>	<u>Institution</u>	<u>Dates</u>
Research Student	Royal Postgraduate Medical School, University of London	1972-1975
Postdoctoral Fellow	Royal Postgraduate Medical School, University of London	1975-1976
Physicist	Department of Medical Physics, Hammersmith Hospital and Royal Postgraduate Medical School, London	1976-78
Senior Physicist	Department of Medical Physics, Hammersmith Hospital and Royal Postgraduate Medical School, London	1978-81
Principal Physicist	Department of Medical Physics, Hammersmith Hospital and Royal Postgraduate Medical School, London	1981
Technical Director	TEM Instruments, Ltd., Crawley, U.K.	1981-1982
Honorary Senior Research Officer	Royal Postgraduate Medical School, London	1981-1982
Associate Professor Diagnostic Radiology	Yale University School of Medicine	1982-1987
Director of NMR Imaging	Yale University School of Medicine	1982-1986
Director of NMR Research	Yale University School of Medicine	1986-2002
Associate Professor, without term	Yale University School of Medicine	1987-1990
Professor of Diagnostic Radiology, without term	Yale University School of Medicine	1990-2002
Professor of Applied Physics	Yale University	1991-2002
Chairman, Biomedical Engineering Program	Yale University	1997-2001
Professor of Psychology	Yale University	2001-2002

PROFESSIONAL ACTIVITIES**Committees**

Diagnostic Radiology Topic Group, Hospital Physicists Assn.	1977-1980
NMR Steering Committee, Dept. of Health and Social Security (UK)	1979-1981
ACR Commission of NMR, Nomenclature and Phantom Development subcommittee	1983-1987
ACR Commission on NMR, Development on Architectural Sites subcommittee	1983-1987
American College of Radiology Commission of Nuclear Magnetic Resonance, Committee on Education and Training	1982-1988
American Assn. of Physicists in Medicine, Task Force on NMR	1982-1988
IEC Technical Comm. on Electrical Equipment in Medical Practice	1982-1984
Society of Magnetic Resonance Imaging Board of Directors (elected)	1983-1991
Society of Magnetic Resonance Education Committee (Chairman)	1983-1986
Society of Magnetic Resonance in Medicine Board of Trustees (elected)	1984-1987
Chairman, Centers for Radiological Physics Task Force on NMR	1985-1986
Assoc. University Radiologists Committee for Basic Science	1985-1992
NMR Council Society for Nuclear Medicine Board of Directors	1989-1992
International Society of Mag. Res. in Med. Board of Trustees (elected)	1996-1999
Meetings Coordination Committee, ISMRM	1996-1999.
Finance Committee, ISMRM	1996-1999.
Chairman, Workshop Committee, ISMRM	1997-1999.
Audit Committee, ISMRM	1997-1999.
Diagnostic Radiology Study Section, NIH	1989-1993
Diagnostic Radiology Study Section, NIH	2001- pres

Memberships

American Institute of Medical and Biological Engineers (elected Fellow, 1998)	
International Society of Magnetic Resonance in Medicine (elected Fellow 1988)	
Fellow of the Institute of Physics (UK) (F. Inst. P 1985)	
Institute of Acoustics (UK) M.I.O.A. (1976)	
British Institute of Radiology (until 1982)	
Hospital Physicists Association (UK) (until 1982)	
American Association of Physicists in Medicine	
Society for Magnetic Resonance Imaging (elected Fellow 1988)	
American Association for Advancement of Science	
Sigma Xi	
New York Academy of Sciences	
Radiological Society of North America	
American Institute of Ultrasound in Medicine	
Comprehensive Cancer Center, Yale University School of Medicine	1987-2002
Liver Center, Yale University School of Medicine	1985-2002
Interdepartmental Neuroscience Program, Yale University	1994-2002
Society for Neuroscience	

Other activities:

External Ph.D. Examiner for Dept of Medical Biophysics, University of Toronto (Canada): King's College, University of London (UK): Dept of Electrical Engineering, University of Sydney (Australia): McGill University (Canada): Dept. of Electrical Engineering, University of Cape Town (South Africa).

Member, Diagnostic Radiology Study Section, 1989-1993, 2001 - 2005

Ad hoc member Diagnostic Radiology SBIR Study Sections (since 1984), Biotechnology Resources Special Study Sections (since 1985), NINCDS Special Study Section (1985), Metallobiochemistry Study Section (1985), PO1 and R41 Site Visit teams (since 1984)
 NCI (Canada) Special Review Groups 1985, 1990, 1993
 External reviewer for Australian National Research Council, Medical Research Council (UK), Medical Research Council (Canada), Natural Sciences and Engineering Research Council (Canada)
 Reviewer for Executive Council, The Whitaker Foundation
 Reviewer for Wellcome Trust, UK

EDITORIAL ACTIVITIES

Editor-in-chief, "MAGNETIC RESONANCE IMAGING"	1984-pres.
Editor-in-chief, "Reviews of Magnetic Resonance in Medicine"	1985-1992.
Associate Editor, "Yearbook of Nuclear Medicine"	1983-1993.
Member, Editorial Board, "Investigative Radiology"	1995- 2001

AWARDS AND HONOURS

H.M. the Queen Gold Medal	1969
Alice and Edith Hamer Major Open Scholarship, University of Manchester	1969-1972
Hulme Hall Exhibition Scholarship, University of Manchester	1971
Governors Prize (Law), Ealing College	1982
Fellow, International Society of Magnetic Resonance in Medicine	1988
M.A. (Hons), Yale University	1990
Farrington Daniels Award (Best paper in Medical Physics)	1997
Fellow, AIMBE	1998

OTHER ACTIVITIES

Visiting Lecturer, North East London Polytechnic	1981-1982
Radiation Protection Advisor, Ealing Hospital (HPA certified 9/1/81)	1978-1981
Lecturer, Quinnipiac College, New Haven, CT	1982-1990.
Director, TEM Instruments Ltd.	1981-1982
Director, Chromatech International	1982-1984
Fellow, Jonathan Edwardes College, Yale University	1990-pres.
Director, M.G.S. Research Inc.	1992-1996
Author and presenter of commercial video and tape-slide programs teaching principles of NMR	1983-1990

THESES

"An evaluation of quantitative aspects of ultrasonic pulse echo techniques in medicine".
 J.C. Gore
 Ph.D. Thesis, University of London, 1976.
 "Legal Aspects of Radiation"
 J.C. Gore
 B.A. (Law) Thesis, Ealing College, London, 1982

PATENTS

J.C Gore, M.J. Maryanski, and R.J. Schulz
 "Three dimensional detection, dosimetry and imaging of an energy field by formation of a polymer in a gel" U.S. Patent 5,321,357 (June 1994)

J.C Gore, M.J. Maryanski, and R.J. Schulz

"Three dimensional detection, dosimetry and imaging of an energy field by formation of a polymer in a gel" U.S. Patent 5,633,584 (May 1997)

J.C Gore, M.J. Maryanski, and R.J. Schulz

"Optical Scanning Tomography for Three-Dimensional Dosimetry and Imaging of Energy Fields"
U.S. Patent 6218673B1 (April 17, 2001)

INDUSTRIAL REPORTS

Report on a feasibility study of computed tomography of the heart.

J.C. Gore

Technical Report 8101, Varian-TEM Ltd., 1981.

Image formation by a back-projection - a practical realization using narrow angle tomography.

J.C. Gore, G.R. Hooker and J.S. Orr

Technical Report 8102, Varian-TEM Ltd., 1981

Computed x-ray tomography using image intensifiers and a radiotherapy simulator.

J.C. Gore, R. Catlett and R.W. Mark (abstract, Brit. J. Radiology)

Technical Report 8107, Varian-TEM Ltd., 1981

BIBLIOGRAPHY

(a) Original Articles (Journals)

- 1) J.C. Gore and S. Leeman. Ultrasonic back-scattering from human tissues; a realistic model. *Phys. Med. Biol.*, 22, pp 317-326, 1977.
- 2) J.C. Gore and S. Leeman. Echo structure in medical pulse-echo ultrasonic scanning. *Phys. Med. Biol.*, 22, pp 431-443, 1977.
- 3) J.C. Gore and P.S. Tofts. Statistical limitations in computed tomography. *Med. Biol.*, 23, pp 1176-1182, 1978.
- 4) J.C. Gore and S. Leeman. Transfer functions for describing ultrasound system performance. *Phys. Med. Biol.*, 24, pp 146-156, 1979.
- 5) J.C. Gore and J.S. Orr. Image formation by back-projection: a reappraisal. *Phys. Med. Biol.*, 24, pp 793-801, 1979.
- 6) J.C. Gore and P.S. Tofts. Absolute values of attenuation coefficient in computed tomography. *Phys. Med. Biol.*, 24, pp 828-830, 1979.
- 7) J.C. Gore and E.C. McCullough. Signal variance in computed tomography; the \sqrt{N} syndrome. *Phys. Med. Biol.*, 25, pp 153-155, 1980.
- 8) J.C. Gore and S. Leeman. The reconstruction of objects from incomplete projections. *Phys. Med. Biol.*, 25, pp 129-136, 1980.
- 9) P.S. Tofts and J.C. Gore. Some sources of artefact in computed tomography. *Phys. Med. Biol.*, 25, pp 117-127, 1980.
- 10) J.C. Gore and G.R. Hooker. A method of measuring the radio-opacity of catheters. *Brit. J. Radiol.*, 54, pp 289-295, 1981.
- 11) J.C. Gore, E.W. Emery, J.S. Orr and F.H. Doyle. NMR Imaging. I. Physical Principles. *Investigative Radiology*, 16, pp 269-274, 1981.
- 12) F.H. Doyle, J.C. Gore, J.M. Pennock, G.M. Bydder, J.S. Orr, R.E. Steiner, I.R. Young, M. Burl, H. Clow, D.J. Gilderdale, D.R. Bailes and P.E. Walters. Imaging of the brain by nuclear magnetic resonance. *The Lancet*, July 11th, 1981, pp 53-57.
- 13) A.E. James, C.L. Partain, G.N. Holland, J.C. Gore, F.D. Rollo, S.E. Harms and R.R. Price. Nuclear Magnetic Resonance Imaging: the current state. *Am. J. Rad.* 138, 201-210, 1982.

- 14) J.C. Gore, M.J. McDonnell, J.M. Pennock and H.S. Stanbrook. An assessment of the safety of rapidly changing magnetic fields in the rabbit: implications for nmr imaging. *Magnetic Resonance Imaging* 1, 191-195, 1982.
- 15) Y.S. Kang, J.C. Gore and I.M. Armitage. Studies of factors affecting the design of nmr contrast agents: manganese in blood as a model system. *Mag. Res. Med.*, 1, 396-409, 1984.
- 16) V. Caride, H. Sostman, R. Winchell and J.C. Gore. Relaxation enhancement using liposomes as carriers of paramagnetic species. *Mag. Res. Imag.*, 2, 107-112, 1984.
- 17) J.C. Gore, Y.S. Kang and R.J. Schulz. Measurement of radiation dose distributions by nmr imaging. *Phys. Med. Biol.*, 29, 1189-1197, 1984.
- 18) Y.S. Kang and J.C. Gore. Studies of tissue nmr relaxation enhancement by manganese: dose and time dependences. *Investigative Radiology*, 19, 399-407, 1984.
- 19) H.D. Sostman, J.C. Gore and M.W. Flye. Time course and mechanisms of alterations in proton relaxation during liver regeneration in the rat. *Hepatology*, 5, 538-543, 1985.
- 20) H.D. Sostman, D.D. Spencer, J.C. Gore et al Preliminary observations on nmr imaging in refractory epilepsy. *Mag. Res. Imag.*, 1984, 2, 301-306, 1984.
- 21) A.E. James, A.L. Bundy, A.C. Fleischer, J.C. Gore, R.C. Sanders and J.C. Hobbins. Legal aspects of diagnostic sonography. *Seminars in Ultrasound, CT and MR*, 6, 207-216, 1985.
- 22) J.C. Gore. *Magnetic Resonance Imaging. Medical Letter*, 1085, 27, 43-44.
- 23) W.G. Holcomb and J.C. Gore. An improved network for impedance matching and simultaneous unbalanced to balanced transformation. *Mag. Res. Imag.*, 3, 295-296, 1985.
- 24) J.C. Gore. Physical factors in the design of contrast agents for MRI. *IEEE Eng. in Med. and Biol.* 4, No. 3, 39-42, 1985.
- 25) McCarthy, C. Tauber, J. Gore. Female pelvic anatomy: MR assessment of variations during the menstrual cycle and with use of oral contraceptives. *Radiology*, 160, 119-123, 1986.
- 26) M. O'Donnell, J.C. Gore and W.J. Adams. Toward an automated analysis system for Nmr imaging. I. Efficient pulse sequences for simultaneous T₁-T₂ imaging. *Medical Physics*, 13, 182-190, 1986.
- 27) M.O'Donnell, J.C. Gore and W.J. Adams. Toward an automated analysis system for Nmr imaging. II. Initial Segmentation Algorithm. *Medical Physics*, 13, 293-297, 1986
- 28) J.C. Gore, C.F. Pope, and H.D. Sostman. Errors in the assessment of the efficacy of MRI pulse sequences. *Mag. Res. Imag.*, 4, 251-256, 1986.
- 29) J.C. Gore and K. Wilkens. A low cost personal monitor for the detection of stray magnetic fields. *Mag. Res. Imag.*, 4, 73-75, 1986
- 30) J.C. Gore, M.S. Brown, C.T. Mizumoto and I.M. Armitage. Influence of glycogen on water proton relaxation times. *Mag. Res. Med.*, 3, 463-466, 1986.
- 31) K. Weeks and J.C. Gore. Improvements in selective NMR excitation using nonlinear gradients. *Medical Physics*, 13, 435-440, 1986.
- 32) S. Majumdar, S. Orphanoudakis, A. Gmitro, M. O'Donnell and J.C. Gore. Errors in the measurements of T₂ using multiple echo MRI techniques. I. Effects of RF imperfections. *Mag. Res. Med.*, 3, 397-417, 1986.
- 33) S. Majumdar, S. Orphanoudakis, A. Gmitro and J.C. Gore. Errors in the measurements of T₂ using multiple echo MRI techniques. II. Effects of static field inhomogeneity. *Mag. Res. Med.*, 3, 562-574, 1986.
- 34) C. Pope, J.C. Gore, H.D. Sostman, R. Lange and C. Riely. Diffuse fatty infiltration of the liver by magnetic resonance. *Mag. Res. Imag.*, 4, 267-270, 1986
- 35) Y.S. Kang, C.F. Pope and J.C. Gore. Alterations in MR relaxation or normal canine gallbladder bile during fasting. *Mag. Res. Imaging*, 4, 399-407, 1986
- 36) H.D. Sostman, S. Zoghbi, and J.C. Gore. Temporal fluctuations in proton relaxation times *Mag. Res. Imaging*, 4, 479-485, 1986

- 37) J.C. Gore, H.D. Sostman and V.J. Caride. Liposomes for paramagnetic contrast enhancement in NMR imaging. *J. Microencapsulation*, 3, 251-264, 1986
- 38) S. Rapoport, H.D. Sostman, C. Pope, C. Camputaro, W. Holcomb and J.C. Gore. Venous clots: evaluation with MR imaging. *Radiology*, 162, 527-530, 1987
- 39) H. Yan and J.C. Gore. Improved selective 180° pulses for magnetization inversion and phase reversal. *J. Mag. Res.*, 71, 116-131, 1987
- 40) T. Baer, J.C. Gore, S. Boyce and P.W. Nye. Application of MRI to the analysis of speech production. *Mag. Res. Imag.*, 5, 1-8, 1987
- 41) C.R. Taylor, H.D. Sostman, J.C. Gore and G. Walker Smith. Proton relaxation times in bleomycin induced lung injury. *Investigative Radiology*, 22, 621-626, 1987
- 42) H. Yan and J.C. Gore. A novel analysis of selective excitation and phase reversal. *J. Mag. Res.*, 73, 448-458, 1987
- 43) H. Sostman, C. Pope, G. Smiath, P. Carbo and J.C. Gore. Proton relaxation in experimental clots varies with method of preparation. *Investigative Radiology*, 22, 509-512, 1987
- 44) S. Majumdar and J.C. Gore. Effects of selective pulses on the measurement of T₂ and apparent diffusion in multiecho MRI. *Mag. Res. Med.* 4, 120-128, 1987
- 45) J. Helzberg, M. Brown, D. Smith, J.C. Gore and E. Gordon. Metabolic state of the rat liver with ethanol: comparison of in vivo ³¹P NMR spectroscopy with freeze clamp assessment. *Hepatology*, 7, 83-88, 1987
- 46) S. Majumdar, A. Gmitro, S. Orphanoudakis, D. Reddy and J.C. Gore. An estimation and correction scheme for system imperfections in multiple echo magnetic resonance imaging. *Mag. Res. Med.*, 4, 203-220, 1987
- 47) A.E. James, C.L. Partain, R.J. Hamilton, S. Baum, M. Silbiger, T. Greeson and J.C. Gore. A critique of the concept of MRI centers. *Mag. Res. Imag.*, 5, 71-76, 1987
- 48) H. Yan, B. Chen and J.C. Gore. Approximate solutions of the Bloch equations for selective excitation. *J. Mag. Res.*, 75, 83-95, 1987
- 49) H. Yan and J.C. Gore. The equivalence of spin inversion and phase reversal using symmetric pulses. *J. Mag. Res.*, 75, 427-433, 1987
- 50) S. Majumdar and J.C. Gore. Studies of diffusion in random fields produced by variations in susceptibility. *J. Mag. Res.*, 1988 78, 41-55, 1988
- 51) H.D. Sostman, S. Rockwell, G.J. Smith, J.C. Gore, K. Kennedy, A. Habib, J. Fischer, I.M. Armitage and W.G. Holcomb. Magnetic resonance characterization of the BA112 rhabdomyosarcoma *in vivo*. *Investigative Radiology*, 1988 23, 277-288, 1988
- 52) C.F. Pope, H.D. Sostman, P. Carbo, J.C. Gore, and W.G. Holcomb. The detection of pulmonary emboli by magnetic resonance imaging: evaluation of imaging parameters. *Investigative Radiology*, 22, 937-946, 1987
- 53) H. Yan and J.C. Gore. The relation of HSVD to LPSVD for fitting time domain signals. *J. Mag. Res.* 80, 324-327, 1988
- 54) H. Yan and J.C. Gore. Improved parametric spectral estimation using a peak extraction technique. *J. Mag. Res.* 81, 400-405, 1989
- 55) J.C. Gore, M.S. Brown, J. Zhong, K.F. Mueller and W. Good. NMR relaxation of water in hydrogel polymers: a model for tissue. *Magn. Res. Med.* 9, 325-332, 1989
- 56) J. Gao, S.K. Holland and J.C. Gore. NMR signal from flowing nuclei in rapid imaging using gradient echoes. *Medical Physics*, 15, 809-814, 1988
- 57) (a) S. Majumdar, S.S. Zoghbi, C.F. Pope and J.C. Gore. Quantitation of MR relaxation effects of iron-oxide particles in liver and spleen. *Radiology*, 69, 653-657, 1988 (b) J.C. Gore and S. Majumdar. Superparamagnetic iron oxide particles. *Radiology*, 69, 657-658, 1988
- 58) S. Majumdar, S.S. Zoghbi, C.F. Pope and J.C. Gore. A quantitative study of relaxation rate enhancement produced by iron-oxide particles in polyacrylamide gels and tissue. *Mag. Res. Med.* 9, 185-202, 1989

- 59) M. Fabry, V. Rajanayagam, E. Fine, S.K. Holland, J.C. Gore, R. Nagel and D. Kaul. Modelling sickle cell vaso-occlusion in the rat leg: quantification of trapped cells and correlation with P^{31} metabolic and 1H Magnetic Resonance Imaging changes. Proc. Nat. Acad. Sci., 86, 3808-3812, 1989
- 60) R. Young, B. Chen, O. Petroff, J.C. Gore et al. The effect of diazepam on neonatal seizure: *in vivo* ^{31}P and 1H NMR study. Pediatric Research, 25, 27-31, 1989
- 61) L.M. Ment, W.B. Stewart, J.C. Gore and C.C. Duncan. Beagle puppy model of perinatal asphyxia: alterations in cerebral blood flow and metabolism. Pediatric Neurology, 4, 98-104, 1988
- 62) J.C. Gore, M.S. Brown and I.M. Armitage. An analysis of magnetic cross-relaxation between water and methylene protons in a model system. Magn. Reson. Med., 9, 333-342, 1989
- 63) J.C. Gore, M.S. Brown, J. Zhong and I.M. Armitage. Prediction of proton relaxation rates from measurements of deuterium relaxation in aqueous systems. J. Magn. Reson., 83, 246-252, 1989
- 64) S. Majumdar, S.S. Zoghbi and J.C. Gore. Regional differences in rat brain displayed by fast MRI with superparamagnetic contrast agents. Mag. Res. Imag., 6, 611-615, 1988
- 65) C. Chiles, E. Hawrot, J.C. Gore and R. Byck. Magnetic Field Modulation of Receptor Binding. Magn. Res. Med. 10, 241-245, 1989
- 66) S. Majumdar, S.S. Zoghbi and J.C. Gore. The influence of pulse sequence on the relaxation effects of superparamagnetic iron-oxide contrast agents. Mag. Res. Med. 10, 289-301, 1989
- 67) S. McCarthy, G. Scott, S. Majumdar, B. Shapiro, S. Thompson, R.C. Lange and J.C. Gore. Uterine junctional zone: MR Study of water content and relaxation properties. Radiology, 171, 241-243, 1989
- 68) R. Zahler, D. Chelmow, J.C. Gore, K. Wilkens, H. Sostman, F. Wackers and B. Zaret. Heterogeneous signal intensity in magnetic resonance images of hypertrophied left ventricular myocardium in man. Mag. Res. Imag., 7, 517-528, 1989
- 69) J. Zhong, J.C. Gore and I.M. Armitage. Quantitative studies of hydrodynamic effects and cross-relaxation in protein solutions and issues with proton and deuteron longitudinal relaxation times. Magn. Reson. Med., 13, 192-203, 1990
- 70) J. Zhong, J C Gore and I M Armitage. Relative contributions of chemical exchange and other relaxation mechanisms in protein solutions and tissues. Magn Reson. Med., 11, 295-303, 1989
- 71) H. Yan and J.C. Gore. An efficient algorithm for MR image reconstruction without low spatial frequencies. IEEE Trans. Medical Imaging , 9, 184-189, 1990
- 72) H. Yan and J.C. Gore. On the weight adjustment rule of neural networks for computing discrete 2-D Gabor Transforms. IEEE Trans. Acoustics, Speech and Signal Processing 38, 1654-1656, 1990
- 73) S. Majumdar, S. Zoghbi, and J.C. Gore. Pharmacokinetics of superparamagnetic iron-oxide MR contrast agents in the rat. Investigative Radiology 25, 771-777, 1990
- 74) R.S.K. Young, O. Petroff, B. Chen, J.C. Gore, et al Preferential utilization of lactate in neonatal brain: *in vivo* and *in vitro* proton NMR study. Biology of the Neonate 59, 46-53, 1991
- 75) J.C. Gore and S. Majumdar. Measurement of tissue blood flow using intravascular relaxation agents and magnetic resonance imaging. Magn. Reson. Med., 14, 242-248, 1990
- 76) R. Zahler, S. Majumdar, B. Frederick, M. Laughlin, E. Barrett, J.C. Gore. NMR Determination of Myocardial pH *in vivo*: Separation of Tissue Inorganic Phosphate from Blood 2,3-DPG. Magn. Reson. Med. 17, 368-378, 1991
- 77) H. Yan and J.C. Gore. The performance of LP-ZOOM for local spectral analysis of NMR signals. J. Magn. Reson, 88, 354-358, 1990
- 78) R.J Schulz, A. deGuzman, D. Nguyen, and J.C. Gore. Dose response curves for Fricke-infused agarose gels as obtained by nuclear magnetic resonance. Phys. Med. Biol. 35, 1611-1622, 1990

- 79) T. Baer, J.C. Gore, L.C. Gracco and P.W. Nye. Analysis of vocal tract shape and dimensions using magnetic resonance imaging: vowels. *J. Acoustical Society America*, 90, 799-828, 1991
- 80) C.F. Pope, M.J. Dietz, M.D. Ezekowitz, and J.C. Gore. Technical variables influencing the detection of acute deep vein thrombosis by magnetic resonance imaging. *Magn. Reson. Imaging* 3, 379-388, 1991
- 81) J. Gao and J.C. Gore. A numerical investigation of the dependence of NMR signal from pulsable blood flow in CINE pulse sequences. *Medical Physics* 18, 342-349, 1991
- 82) H. Lim, T. Price, J.C. Marsh, P.M. Rainey, J.C. Gore, and I.M. Armitage. Some factors that influence the plasma lipoprotein ¹H NMR spectra of normal and cancer patients: an oncolipid test? *Yale J. Biol. and Med.*, 64, 63-77, 1991
- 83) J. Zhong, R.P. Kennan, and J.C. Gore. Effects of Susceptibility Variations on NMR Measurements of Diffusion. *J. Magn. Reson.* 95, 267-280, 1991
- 84) J. Zhong and J.C. Gore. Studies of Restricted Diffusion in Heterogeneous Media Containing Variations in Susceptibility. *Magn. Reson. Med.* 19, 276-284, 1991
- 85) R.S.K. Young, O. Petroff, B. Chen, J. Gore and W. Aquila. Brain energy state and lactate metabolism during status epilepticus in the neonatal dog: *in vivo* ³¹P and ¹H nuclear magnetic resonance study. *Pediatric Research* 29, 191-195, 1991
- 86) V. Rajanayagam, M.E. Fabry and J.C. Gore. *In vivo* quantitation of water content in muscle tissues by NMR imaging. *Magn. Reson. Imaging*, 9, 621-626, 1991
- 87) R.T. Constable, R.C. Smith and J.C. Gore. Signal to noise and contrast in fast spin echo (FSE) imaging and inversion recovery FSE. *J. Comp. Asstd. Tomography*, 16, 41-47, 1992
- 88) R.P. Kennan, J. Zhong and J.C. Gore. On the relative importance of paramagnetic relaxation and diffusion mediated susceptibility losses in tissues. *Magn. Reson. Med.*, 22, 197-203, 1991
- 89) J. Gao and J.C. Gore. Turbulent flow effects on NMR Imaging: Measurement of turbulent intensity. *Medical Physics*, 18, 1045-1051, 1991
- 90) R.S.K. Young, O. Petroff, W.J. Aquila, A. Cheung and J.C. Gore. Hyperglycemia and the rate of lactic acid accumulation during cerebral ischemia in developing animals: *in vivo* proton MRS study. *Biology of the Neonate*, 61, 235-242, 1992
- 91) R. Zahler, E. Barrett, S. Majumdar, R. Greene and J.C. Gore. Lactic acidosis: effect of its development and treatment on intracellular pH and energetics in living rat heart. *American J. Physiology*, H1572-1578, 1992
- 92) R.T. Constable and J.C. Gore. The loss of small objects in variable TE imaging: implications for FSE, RARE and EPI. *Magn. Reson. Med.*, 28, 9-24, 1992
- 93) R.T. Constable, A.W. Anderson, J. Zhong and J.C. Gore. Factors influencing contrast in fast spin echo MR imaging. *Magn. Reson. Imag.*, 10, 497-511, 1992
- 94) J.H. Gao, A.W. Anderson and J.C. Gore. Effects on selective excitation and phase uniformity of concomitant field gradient components. *Phys. Med. Biol.*, 37, 1705-1715, 1992
- 95) J.H. Gao, S.K. Holland and J.C. Gore. Effects of gradient timing and spatial resolution on the signal from flowing blood. *Phys. Med. Biol.*, 37, 1581-1588, 1992
- 96) S.K. Holland, R.P. Kennan, M.M. Schaub, M.J. D'Angelo, and J.C. Gore. Imaging oxygen tension in liver and spleen by ¹⁹F NMR. *Magn. Reson. Med.*, 29, 446-458, 1993
- 97) M.J. Maryanski, J.C. Gore, R.P. Kennan and R.J. Schulz. NMR relaxation enhancement in gels polymerized and cross linked by ionizing radiation: a new approach to 3-D dosimetry by MRI. *Magn. Reson. Imag.*, 11, 253-258, 1993
- 98) J.C. Gatenby, T.R. McCauley and J.C. Gore. Mechanisms of signal loss in MR imaging of stenoses. *Medical Physics*, 20, 1049 - 1057, 1993
- 99) M.E. Fabry, E. Fine, J.C. Gore, V. Rajanayagam, M. Sylla, D.K. Kaul, and R.L. Nagel. Demonstration of endothelial adhesion of sickle cells *in vivo*: a distinct role for deformable discocytes. *Blood*, 79, 1602-1611, 1992

- 100) R.T. Constable, R. Smith and J.C. Gore. Coupled-spin Fast Spin-Echo MR Imaging. *J. Magn Reson Imag.* 3, 547-552, 1993
- 101) R.T. Constable, G. McCarthy, T. Allison, A.W. Anderson, and J.C. Gore. Functional brain imaging at 1.5T using conventional gradient echo MR imaging techniques. *Magn. Reson. Imag.* 11, 451 - 459, 1993
- 102) J. Zhong, O.A. Petroff, J.W. Prichard and J.C. Gore. Changes in water diffusion and relaxation properties of rat cerebrum during status epilepticus. *Magn. Reson. Med.*, 30, 241-246, 1993
- 103) J.C. Gatenby and J.C. Gore. Mapping of turbulent intensity by magnetic resonance imaging. *J. Magn Reson B*, 104, 119-126, 1994
- 104) R.P. Kennan, J.H. Gao, J. Zhong and J.C. Gore. A general model of microcirculatory blood flow effects in gradient sensitized MRI. *Medical Physics*, 21, 539 - 545, 1994
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