BIOGRAPHICAL SKETCH

Provide the following information for the key personnel and other significant contributors in the order listed on Form Page 2.
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NAME	POSITION TITLE
Daniel Fiat	Professor
eRA COMMONS USER NAME	
danielfiat	

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	YEAR(s)	FIELD OF STUDY
Technion, Israel Insititue of	B.Sc.	1954	Chem. Eng
Technion, Israel Insititue of Technology	Chem. Eng	1955	Chem Eng
Technion, Israel Insititue of Technology	D.Sc.	1960	Phys Chem

A. Positions and Honors. List in chronological order previous positions, concluding with your present position. List any honors. Include present membership on any Federal Government public advisory committee.

1961-1962 Princeton University, Princeton, NJ; Research Associate
1962-1964 University of California, Berkeley, CA; Research Associate
1964-1967 The Weizmann Inst. of Science, Rehovot, Israel; Research Associate
1967-1975 The Weizmann Inst. of Science, Rehovot, Israel; Sr. Scientist, tenure appt.
1975- University of Illinois at Chicago, IL; Prof., Physiology/Biophysics

Visiting Positions

1968 Max Planck Institute, Heidelberg, Germany
1969 Max Planck Institute, Gotingen, Germany
1971-1973 Argonne National Laboratory, Argonne, IL, USA
2004-2006 Professor, Stanford University, Stanford CA, USA

Activities in International Scientific Bodies

- Chairman, International Society of Magnetic Resonance, 1969-1983
- President, International Union of Magnetic Resonance, 1980-1983
- Founding Chairman, International Society of Magnetic Resonance, 1983-
- Member, IUPAC Council, 1971-1986
- Member, Ampere Council, 1971-
- Member Council, Magnetic Resonance in Biology and Medicine, 1973
- Member, Board of Directors, International Society of Magnetic Resonance Imaging, 1982

Honors

- Honorary Member, XVIIth Congress Ampere, Finland, 1972
- Founder, Int. Society of Magnetic Resonance (ISMAR), 1983
-Fellow International Society of Magnetic Resonance (ISMAR) May 11 2009.

Member Scientific Advisory Committees

International Society of Magnetic Resonance Symposia (ISMAR): 1971-Rehovot, Israel; 1974-Bombay, India; 1977-Banff, Canada; 1980-Delft, The Netherlands; 1983-Chicago, USA; 1986-Rio de Janeiro, Brazil; 1989-Grenoble, France; 1992-Vancouver, Canada; 1995-Sydney, Australia, 1998 Berlin, Germany, 2001-Jerusalem, Israel

Congress Ampere: 1972-Turku, Finland; 1974-Nottingham, England, 1976-Heidelberg, Germany; 1980-Delft, The Netherlands, 1985-Bucharest, Rumania; 1986-Rome, Italy; 1988-Poznan, Poland, 1990 - Stuttgart, Germany, 1994 - Kazan, Russian Federations; 1996 - Kent, England, 1998-Berlin, Gemany, 2000-Lisbon, Portugal

- Summer Institutes and Schools: Waterloo, Canada - 1979,1981,1983,1985

- ISMAR GDRM, Rende-Cozenza, Italy - 1982
- Ramis, Poznan, Poland - 1985

Chairman of Meetings and Sessions

Chaired 2 major int. symposia:

8th meeting of the International Society of Magnetic Resonance, Chicago, USA, 1983;
4th meeting of the International Society of Magnetic Resonance, Rehovot, Israel (to mark 25th anniversary), 1971

Chaired 30 sessions at various scientific meetings

Invited Talks Presented 30 plenary and main talks on O-17 MRI/MRS *in vivo* determination of $rCMRO_2$ and rCBF and on conformation studies of peptides.

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

1. S. Kang, M. Naboodiri and D. Fiat
   Comparison of models for parameter estimation in broad line NMR spectra
   J. Magn. Reson., **93,** 1-11 (1991)
2. S. Kang, K. Kim and D. Fiat
   Accuracy enehncement of parameter estimation for noisy NMR spectra
   Applied Magnetic Resonance **2,** 695-714 (1991)
3. D. Fiat, L. Ligeti, R. Lyon, Z. Ruttner, J. Pekar, C.T.W. Moonen and A.M. McLaughlin,
   In vivo ^{17}O NMR study during $^{17}O_2$ inhalation
   Magn. Reson. in Medicine, **24,** 370-374 (1992) (submitted Dec 13, 1990)
4. J. Pekar, L. Ligeti, Z. Ruttner, R.C. Lyon, T.M.Sinwell, P.Van Gelderen, D. Fiat, C.T.Monnen and A.C. McLaughliin
   In vivo measurement of cerebral oxygen consumption and blood flow using ^{17}O magnetic resonance imaging
   Magnetic Resonance in Medicine **21,** 313-319 (1991) (submitted June 26,1991)
5. D. Fiat and S. Kang
   Determination of the rate of cerebral oxygen consumption and regional cerebral blood flow by non-invasive ^{17}O *in vivo* NMR spectroscopy and magnetic resonance imaging.
   Part 1: Theory and data analysis methods
   Neurological research **14,** 303-311 (1992)
6. D. Fiat and S. Kang
   Determination of the rate of cerebral oxygen consumption and regional cerebral blood flow by non-invasive ^{17}O *in vivo* NMR spectroscopy and magnetic resonance imaging.
   Part 2. Determination of $CMRO_2$ for the rat by ^{17}O NMR and $CMRO_2$, rCBF and the partition coefficient for the cat by ^{17}O MRI
   Neurological research **15,** 7-22 (1993)
7. D. Fiat, J. Dolinsek, J. Hankiewicz, M. Dujovny and J. Ausman
   Determination of regional cerebral oxygen consumption in the human: ^{17}O natural abundance cerebral Magnetic Resonace Imaging and spectroscopy in a whole body system
   Neurological research **15,** 237-248 (1993)
8. M. Dujovny, N. Dujovny, D. Fiat, N. R. Gundamraj, M. Misra, M. S. Alp and Y. J. Zhao
   Magnetic field gradients in the MRI suite and their effects on aneurism clips
   Neurological Research 18, 483-486 (1996)
9. D. Fiat, J. Hankiewicz and X. Song. $^{17}O/^{1}H$ MRI/MRS Determination of Regional Metabolic Rate of Oxygen ($rCMR(O_2)$) and Regional Cerebral Blood Flow (rCBF) in the Man
   Proc of the European Experimental NMR Conference (EENC), 2000, Univ of Leipzig Germany. Published on the web and copy kept at the Library of the Univ. of Leipzig, Library.
10. J.H. Hankiewicz, M. Kempka and D. Fiat.
    ^{17}O Magnetic Resonance Imaging Using Whole Body Scanners
    Appl. Magn. Reson., Appl. Magn. Reson., **24**, 393-400 (2003)
11. M. Kempka, J. Hankiewicz and D. Fiat.
    Combined $^{17}O/^{1}H$ MRI Study in a Whole Body Scanner.
    Appl. Magn. Reson., Appl. Magn. Reson., **24**, 409-415 (2003)

12. J. Hankiewicz, S.U.Brint, A. Guidotti, E. Costa and D. Fiat.
In Vivo Natural Abundance $^{17}O/^{1}H$ MRI of Rhesus Monkey in a Whole Body Scanner.
Appl. Magn. Reson., **24**, 423-427 (2003)
13. D. Fiat, J. Hankiewicz, S. Liu, S. Trbovic and S. Brint
^{17}O magnetic resonance imaging of the human brain.
Neurological Research 26, 803-808 (2004)
14. E. Carmi, S. Liu, N. Alon, A. Fiat and D. Fiat
Resolution enhancement in MRI
Magn. Reson. Imag. **24**, 133-154 (2006)

Patents

1. Daniel Fiat
Oxygen-17 NMR spectroscopy and imaging in the human.
US patent number 5,433,196,
Date of Patent: July 18, 1995
Filed: June 2, 1993
2. Daniel Fiat and Janez Dolinsek
Double resonance MRI coil
US patent number 5,675,254,
Date of Patent: Oct 7, 1997
Filed Mar. 28, 1996
3. Daniel Fiat
Oxygen-17 NMR method of determining the quantitative rate of blood flow and metabolic oxygen consumption in a human
US patent number 5,682,833, Nov 4, 1997
Filed may 5, 1995
4. Daniel Fiat and Janez Dolinsek
Double resonance MRI coil
US Patent number 6,313,631 B1
Date of Patent: Nov 6, 2001,
Filed Mar 4, 1997
5. Daniel Fiat
Method of enhancing MRI signal (intensity and resolution)
United States Patent. Patent No US 6,294,914 B1
Date of Patent: Sept 25, 2001
Filed Sep. 3, 1997
6. Daniel Fiat
Method and Apparatus of Enhancing MRI Signal (Spatial Resolution)
Appl. No.: 09/906,334
Filed July 16, 2001
Allowed: Jan. 16, 2004.

C. Research Support

RO1 NS37804, Role - P.I. 7/01/98 – 6/30/04
Oxygen Metabolism and Rate of Blood Flow in Primates
Overall goals: Determination of $CMRO_2$ and CBF in primates. Development of the technology.