

J.N. Crawford, M.D. F.A.C.R.

D. Bajpai, M.D. F.A.C.R.O.

R. Mantravadi, M.D.  
F.A.C.R., F.A.C.R.O.

D. Trenkner, M.D.



M. Apple, M.D.

T. Lee, M.D.

X. Lin, M.D. Ph.D.

B. Chang, M.D.

7900 W. Jefferson Boulevard, Suite 110  
Fort Wayne, IN 46804  
December 18, 2009

U.S. Nuclear Regulatory Commission  
Region III  
Materials Licensing Branch  
2443 Warrenville Road – Suite 210  
Lisle, IL 60532-4352

Re: License 13-32551-01

Please amend our license to change our Radiation Safety Officer to Carmen R. Kmety-Stevenson, Ph.D. She would be replacing John F. Agnew, Ph.D. as RSO. No other changes to the license are requested.

Dr. Cmety-Stevenson was certified by the American Board of Radiology in Therapeutic Radiologic Physics on June 2, 2008.

She is listed as an Authorized Medical Physicist on our NRC license (amendment 07, dated February 13, 2008), arising from our amendment request of November 14, 2008 which was accompanied by three Forms 313A (AMP) in her behalf.

Dr. Cmety-Stevenson has been employed at Radiation Oncology Associates since September, 2007, and, as Chief Physicist, has been heavily involved in our Radiation Safety program.

Thank you for your kind attention to this request.

Sincerely yours,

A handwritten signature in cursive script that reads "John F. Agnew, MD".

John F. Agnew, Ph.D.  
Radiation Safety Officer  
Radiation Oncology Associates

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# The American Board of Radiology

Organized through the cooperation of the  
American College of Radiology, the American Roentgen Ray Society,  
the American Radium Society, the Radiological Society of North America,  
the Section on Radiology of the American Medical Association,  
the American Society for Therapeutic Radiology and Oncology, the Association of  
University Radiologists, and American Association of Physicists in Medicine

Hereby certifies that

**Carmen Ramona Kmetz-Stevenson, PhD**

Has pursued an accepted course of graduate study  
and clinical work, has met certain standards and qualifications and  
has passed the examinations conducted under the authority of

The American Board of Radiology

On this second day of June, 2008

Thereby demonstrating to the satisfaction of the Board  
that she is qualified to practice the specialty of

**Therapeutic Radiologic Physics**

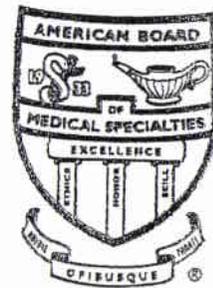
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President

*Richard T. Morin*  
Secretary-Treasurer

*Harry Robinson*  
Executive Director



Certificate No. P4540

Valid through 2018

## CURRICULUM VITAE

Carmen R. Kmety-Stevenson, Ph.D, D.A.B.R.  
Phone: 260-616-0124 (H); 260-579-6945 (C)  
E-mail: crkmety@yahoo.com

10504 Indian Ridge Drive  
Fort Wayne, IN 46814  
Citizenship: USA

### EDUCATION

B.S./M.S.	University of Bucharest (Romania), Physics, June 1987
M.S.	Purdue University, Mathematics, 1994
Ph.D.	The Ohio State University, Physics, May, 2000 Thesis Advisor - Arthur J. Epstein Topic: Phase Transitions in Molecule-Based Magnets: Neutron Diffraction, Magnetic and Specific Heat Studies
CAMPEP residency	Mayo Clinic, Radiation Oncology, June 2006
Diplomate	American Board of Radiology, June, 2008

### PROFESSIONAL EMPLOYMENT

**9/2008 to Present:** Chief Physicist, Radiation Oncology Associates, Fort Wayne, IN. Commissioned Varian Trilogy linac, enhanced dynamic wedges, GE 16-slice CT scanner, LAP lasers, RPM respiratory gating, upgrade to Advanced Imaging for OBI and CBCT, HDR CT-based Tandem and Ovoids, HDR Contura Multi-Lumen Balloon, video acquisition of ultrasound images for PSI. Performed numerous HDR cases such as cylinders, Tandem and Ovoids, MammoSites, Conturas as Authorized Medical Physicist (AMP), HDR source exchanges. Performed IMRT head phantom experiment for qualification of enrolling patients in IMRT RTOG clinical trials. Supervisor: Glynda Harris, Practice Manager

**9/2007 to 9/2008:** Medical Physicist, Radiation Oncology Associates, Fort Wayne, IN. Supervisor: Glynda Harris, Practice Manager

**7/2006 to 8/2007:** Clinical Medical Physicist, NCH Cancer Center, Naples, FL. Performed about 100 CyberKnife treatment plans, daily, monthly, and annual QA, research on the use of Sicel mosfets for prostate patients, in addition to routine Varian linac work. Supervisor: Mary Ellen Masterson-McGary

**6/2004 to 6/2006:** Clinical Medical Physics Resident, Radiation Oncology, Mayo Clinic, Rochester, MN. Received extensive clinical training in CAMPEP -approved residency as outline below. Supervisor: Dr. Michael G. Herman.

**5/2001 to 9/2002:** Postdoctoral Appointee, Advanced Photon Source, Argonne National

Laboratory. Research involved imaging of magnetic domains in buried layers of multilayer systems by x-ray magnetic circular dichroism. Supervisor: George Sreier

**7/2000 to 4/2001:** Postdoctoral Appointee, Materials Science Division, Argonne National Laboratory. Research involved crystal growth by the floating zone technique of the manganite systems. Supervisor: John F. Mitchell

**7/1997 to 6/2000:** Graduate Research Assistant, Department of Physics, The Ohio State University. Research involved the application of neutron powder diffraction, magnetization and specific heat techniques to molecule-based magnets. Supervisor: Professor Arthur J. Epstein

**9/1996 to 6/1997:** Graduate Lab Supervisor, Department of Physics, The Ohio State University. Duties involved leading training sessions for graduate teaching assistants and improving the lab manuals. Supervisors: Profs. Michele Rallis and Robert Perry

**9/1994 to 6/1996:** Graduate Teaching Assistant, Department of Physics, The Ohio State University. Duties involved leading recitations and laboratory sessions for introductory physics courses. Supervisors: Professors Michele Rallis, Richard Seyler, and Robert Perry

## **CLINICAL MEDICAL PHYSICS EXPERIENCE**

Linear accelerator, Varian Clinac 21 EX equipped with multileaf collimation (MLC-120) and electronic portal imaging system (EPID)

- responsible for monthly quality assurance (QA), performed annual and daily QA according to TG-40
- participated in acceptance and commissioning testing, and survey of new treatment machine;
- participated in treatment machine calibration based on application of TG-51

Treatment planning systems, Theraplan Plus (TPP), Eclipse, and Brain SCAN.

- generated 3D conformal treatment plans for clinical use employing TPP;
- familiar with 3D conformal treatment planning using Eclipse and BrainSCAN.

Intensity Modulated Radiation Therapy (IMRT)

- participated in acceptance testing and commissioning of IMRT module for BrainSCAN;
- self-trained in generating best IMRT treatment plans using BrainSCAN;
- generated BrainSCAN IMRT treatment plans for clinical use;
- familiar with Eclipse IMRT treatment planning;
- participated in collection of high-resolution beam data using a Pinpoint ionization chamber for input in Eclipse treatment planning system;

- performed patient IMRT QA for plans generated using BrainSCAN and Eclipse TPS by comparison with measured dose distributions.

Brachytherapy, Low Dose Rate (LDR), High Dose Rate (HDR), Prostate Seed Implant (PSI), Eye plaques.

- participated in radioactive seeds assay, pre- and post-implant treatment planning, implant administration, treatment plans checking, pre- and post-implant patient and room survey for LDR, PSI and Eye plaques;
- participated in HDR treatments and source exchange using Nucletron HDR unit, and treatment planning using Plato TPS;
- learned radiation safety rules and regulations applicable to brachytherapy.

Shielding calculations and radiation safety.

- responsible for calculating shielding adequacy for an existent Mayo regional facility by applying TG-57 due to replacement of the treatment machine with a high-energy accelerator, and starting IMRT treatment delivery;
- learned radiation safety regulations applicable to shielding design.

Treatment verification and simulation, GE LightSpeed RT, and Varian Ximatron.

- responsible for monthly QA;
- participated in patient positioning and treatment simulation.

Stereotactic Radiosurgery (SRS), Leksell Gamma Knife.

- participated in daily, monthly, and annual QA;
- participated in treatment delivery and planning;
- learned safety rules and regulations applicable to gamma knife.

Responsible for plan check, weekly chart checks, and answering machine calls as POD (Physicist of the Day).

Responsible for providing outreach physics support to a Mayo regional facility.

Special procedures.

- familiar with Total Body Irradiation (TBI), Total Skin Electron (TSE), Intra-Operative Radiation Therapy (IORT), treatment of pregnant women.

Required class work.

- cross-sectional anatomy, radiobiology, clinical medical physics, radiation oncology, physics of medical imaging;
- participated in morning case conferences, weekly chart rounds, and core curriculum.

## **ACADEMIC HONORS**

The Ohio State University (1994-2000)

Two-time recipient of Hazel Brown Outstanding Teaching Assistant Award  
(1996 and 1997)

Listed in Strathmore's Who's Who, 1999/2000 Edition

Listed in Marquis Who's Who in America, beginning with 2001 Edition

Purdue University (1001-1994)

Honorary Membership in Associate of Women Mathematicians (1993-4)

## PUBLICATIONS

1. D. Haskel, Z. Islam, J. Lang, C. Kmety, G. Srajer, K. I. Pokhodnya, A. J. Epstein, and J. S. Miller, "Local Structural Order in the Disordered Vanadium Tetracyanoethylene Room-Temperature Molecule-Based Magnet," *Phys. Rev. B* **70**, 054422 (2004)
2. X. Y. Qiu, S. J. L. Billinge, C. R. Kmety, and J. F. Mitchell, "Evidence for nano-scale inhomogeneities in bilayer manganites in the  $Mn^{4+}$  rich region:  $0.54 \leq x \leq 0.80$ ," *J. Phys. Chem. Solids* **65**, 1423 (2004)
3. D. O. Demchenko, A. Y. Kiu, E. Z. Kurmaev, L. D. Finkelstein, V. R. Galakhov, A. Moewes, S. G. Ciuzbăian, M. Neumann, C. R. Kmety, and K. L. Stevenson, "Electronic Structure of the Transition-Metal Dicyanamides  $M[N(CN)_2]_2$  ( $M = Mn, Fe, Co, Ni, Cu$ )," *Phys. Rev. B* **69**, 205105 (2004)
4. C. R. Kmety, J. L. Manson, S. McCall, J. E. Crow, K. L. Stevenson, and A. J. Epstein, "Low-temperature specific heat of the molecule-based magnet  $M[N(CN)_2]_2$  ( $M = Co, Ni, Cu, Zn$ ) series," *J. Magn. Magn. Mater.* **248**, 52 (2002)
5. M. R. Pederson, A. Y. Liu, E. Z. Kurmaev, A. Moewes, S. Ciuzbăian, M. Neumann, C. R. Kmety, K. L. Stevenson, and D. Ederer, "Electronic structure of the molecule-based magnet  $Mn[N(CN)_2]_2$  from theory and experiment," *Phys. Rev. B* **66**, 014446 (2002)
6. J. L. Manson, C. R. Kmety, F. Palacio, A. J. Epstein, and J. S. Miller, "Low-field remanent magnetization in the weak ferromagnet  $Mn[N(CN)_2]_2$ . Evidence for spin-flop behavior," *Chem. Mater.* **13**, 1068 (2001)
7. C. R. Kmety, Q. Huang, J. W. Lynn, R. W. Ervin, J. L. Manson, S. McCall, J. E. Crow, K. L. Stevenson, A. J. Epstein, and J. S. Miller, "Noncollinear antiferromagnetic structure of the molecule-based magnet  $Mn[N(CN)_2]_2$ ," *Phys. Rev. B* **62**, 5576 (2000)
8. C. R. Kmety, J. L. Manson, Q. Huang, J. W. Lynn, R. W. Erwin, A. J. Epstein, and J. S. Miller, "Collinear ferromagnetism and spin orientation in the molecule-based magnets  $M[N(CN)_2]_2$  ( $M = Co, Ni$ )," *Phys. Rev. B* **60**, 60 (1999)
9. C. R. Kmety, J. L. Manson, Q. Huang, J. W. Lynn, R. W. Erwin, J. S. Miller, and A. J. Epstein, "Magnetic phase transitions in  $M^I[N(CN)_2]_2$ ," in *Proceedings on the 6<sup>th</sup> International Conference on Molecule-Based Magnets*, edited by O. Kahn, *Molec. Cryst. Liq. Cryst.* **334/335**, 631 (1999)
10. M. A. Girtu, C. M. Wynn, C. R. Kmety, J. Zhang, J. S. Miller, and A. J. Epstein,

- “Ne high- $T_c$  molecule-based magnets - magnetic behavior of  $M(\text{TCNE})_2 \cdot x(\text{CH}_2\text{Cl}_2)$  ( $M = \text{Mn}, \text{Fe}$ ),” in *Proceedings on the 6<sup>th</sup> International Conference on Molecule-Based Magnets*, edited by O. Kahn, *Molec. Cryst. Liq. Cryst.* **334/335**, 539 (1999)
11. J. L. Manson, C. R. Kmetz, A. J. Epstein, and J. S. Miller, “Spontaneous magnetization in the  $M^I[\text{N}(\text{CN})_2]_2$  ( $M = \text{Cr}, \text{Mn}$ ) weak ferromagnets,” *Inorg. Chem.* **38**, 2552, (1999)
  12. J. L. Manson, C. R. Kmetz, Q. Huang, J. W. Lynn, G. M. Bendele, S. Pagola, P. W. Stephens, L. M. Liable-Sands, A. L. Rheingold, A. J. Epstein, and J. S. Miller, “Structure and magnetic ordering of  $M^I[\text{N}(\text{CN})_2]_2$  ( $M = \text{Co}, \text{Ni}$ ),” *Chem. Mater.* **10**, 2552 (1998)

### PUBLICATIONS IN PREPARATION

13. C. R. Kmetz-Stevenson, D. H. Brinkmann, K. Kisrow, M. G. Herman, S. L. Stafford, P. D. Brown and K. P. McCollough, “A Clinical Comparison of Two IMRT Planning Systems for Small Field Conformal Therapy of Intracranial Lesions,” in preparation.

### TALKS AT CONFERENCES

“A Clinical Comparison of Two IMRT Planning Systems for Small Field Conformal Therapy of Intracranial Lesions,” 2005 American Association of Physicists in Medicine 47<sup>th</sup> Annual Meeting, Seattle, Washington, July 24-28, 2005 (*Poster*).

“Field-Induced Magnetic Phenomena in Molecule-Based Magnets,” 2002 (First) American Conference in Neutron Scattering of the National Neutron Centers, the Neutron Scattering Society of America, the Spallation Neutron Source, and the High Flux Isotope Reactor User Group, Knoxville, Tennessee, June 23-27, 2002 (*Invited talk*).

“Visualization of magnetization reversal in the buried layer of an exchange-spring magnet by hard X-ray spectro-microscopy,” 2002 March Meeting of the American Physical Society, Indianapolis, Indiana, March 18-22, 2002.

“Field-Induced Magnetic Phenomena in Molecule-Based Magnets,” 2001 March Meeting of the American Physical Society, Seattle, Washington, March 12-16, 2001 (*Invited talk*).

“Field-Induced Magnetic Phenomena in  $M^I[\text{N}(\text{CN})_2]_2$  ( $M = \text{Mn}, \text{Fe}$ ),” 7<sup>th</sup> International Conference on Molecule-Based Magnets, San Antonio, Texas, September 16-21, 2000 (*Invited talk*).

“Canted Antiferromagnetic Structure of  $M^I[\text{N}(\text{CN})_2]_2$  ( $M = \text{Mn}, \text{Fe}$ ),” 2000 March Meeting of the American Physical Society, Minneapolis, Minnesota, March 20-24, 2000.

“Collinear Ferromagnetism in the Molecule-Based Magnets  $M[N(CN)_2]_2$  ( $M = Co$  and  $Ni$ ),” Centennial Meeting of the American Physical Society, Atlanta, Georgia, March 20-26, 1999.

“Noncollinear Antiferromagnetism and Spin Rotation in the Molecule-Based Magnet  $Mn[N(CN)_2]_2$ ,” Centennial Meeting of the American Physical Society, Atlanta, Georgia, March 20-26, 1999.

“Magnetic Phase Transitions in  $M[N(CN)_2]_2$ ,” 6<sup>th</sup> International Conference on Molecule-Based Magnets, Seignosse, France, September 12-17, 1998 (*Invited talk*).

“Static, Dynamic, and Nonlinear Magnetic Response of Quasi-1D Manganeseporphyrin-Based Magnets,” 1997 March Meeting of the American Physical Society, Kansas City, Missouri, March 17-21.

## OTHER PRESENTATIONS

“Unusual Charge Transfers between In-plane Orbitals in Layered  $La_{0.92}Sr_{2.06}Mn_2O_7$ ,” co-authored poster at 2002 Annual Meeting of the American Crystallographic Association, San Antonio, Texas, May 25-30, 2002.

“Direct observation of surface-driven twisted state in an Fe-terminated  $[Gd(50 \text{ \AA})/Fe(35 \text{ \AA})]$  multi-layer,” co-authored poster at 2002 March Meeting of the American Physical Society, Indianapolis, Indiana, March 18-22, 2002.

“Local structure of amorphous  $V[TCNE]_x$  molecule-based magnet,” co-authored talk at 2002 March Meeting of the American Physical Society, Indianapolis, Indiana, March 18-22, 2002.

“Unusual orbital occupancy transitions in bi-layered  $La_{2-2x}Sr_{1+2x}Mn_2O_7$  at  $x = 0.54$ ,” co-authored talk at 2002 March Meeting of the American Physical Society, Indianapolis, Indiana, March 18-22, 2002.

“Phase Transitions in Molecule-Based Magnets: Neutron Diffraction, Magnetic and Specific Heat Studies,” talk at NIST Center for Neutron Research, Gaithersburg, Maryland, April, 2001.

“Field-Induced Magnetic Phenomena in Molecule-Based Magnets,” talk at the Advanced Photon Source, Argonne National Laboratory, Argonne, Illinois, April, 2001.

“Field-Induced Magnetic Phenomena in Molecule-Based Magnets,” talk at the Department of Physics and Optical Engineering, Rose-Hulman Institute of Technology, Terry Haute, Indiana, April, 2001.

“Field-Induced Magnetic Phenomena in Molecule-Based Magnets,” talk at the

Department of Physics, Indian University - Purdue University at Fort Wayne, Fort Wayne, Indiana, April, 2001.

“Phase Transitions in Molecule-Based Magnets: Neutron Diffraction, Magnetic and Specific Heat Studies,” talk at the Materials Science Division, Argonne National Laboratory, Argonne, Illinois, April, 2000.

“Crystal Structure and Magnetic Ordering in  $M[N(CN)_2]_2$  ( $M = Mn, Fe, Co, Ni$ ),” co-authored poster at 2000 ACA Meeting, St. Paul., Minnesota, July 22-27, 2000.

“New High- $T_c$  Molecule-Based Magnets - Magnetic Behavior of  $M(TCNE)_2 \cdot x(CH_2Cl_2)$  ( $M = Mn, Fe$ ),” co-authored talk at 6<sup>th</sup> International Conference on Molecule-Based Magnets, Seignosse, France, September 12-17, 1998.

“Crystal Structure Solution of  $Co[N(CN)_2]_2$  from High Resolution Synchrotron X-ray Powder Diffraction Data,” co-authored poster at 1998 ACA Meeting, Arlington, Virginia, July 18-23, 1998.

“Coexistence of Spin Glass and Ferrimagnetic Behaviors in the Manganeseporphyrin-Based Magnets,” talk at University of Utah, April, 1997.

## **SERVICE ACTIVITIES**

Chair of the Session L17 - Molecular Based Magnets, 2002 March Meeting of the American Physical Society, Indianapolis, Indiana, March 18-22, 2002.

Chair of the Session Y22 - Magnetic Nanostructures XII: Molecular Magnets, 2001 March Meeting of the American Physical Society, Seattle, Washington, March 12-16, 2001.

Chair of the Session A24 - Magnetic Structure, 2000 March Meeting of the American Physical Society, Minneapolis, Minnesota, March 20-24, 2000.

## **WORKSHOPS ATTENDED**

ASTRO (American Society for Therapeutic Radiology and Oncology), 48TH Annual Meeting, Philadelphia, Pennsylvania, November 5-9, 2006

CyberKnife Technical Training for Physicists, at Accuray, Inc, Sunnyvale, CA, August 28 – September 1, 2006.

CyberKnife Radiosurgery for Prostate\ “State of the Art” Image Guided Radiosurgery, August 25th, 2006.

Radiation Therapy Physics Review Course, American Association of Physicists in Medicine 47<sup>th</sup> Annual Meeting, Seattle, Washington, July 23, 2005.

C

Workshop on Computational Chemistry Software Applications, Ohio Supercomputing Center, Columbus, Ohio, February 27-28, 2001.

Workshop on X-Rays and Nanoscience, Argonne National Laboratory, Argonne, Illinois, December 14-15, 2000.

Workshop on Scanning Probe Microscopy, Argonne National Laboratory, Argonne, Illinois, November 20, 2000.

5<sup>th</sup> Workshop on Powder Diffraction, "Ab initio Structure Determination of Molecular Solids from Powder Diffraction," Laboratory of Crystallography, University of Bayreuth, Bayreuth, Germany, September 25-28, 1997.

#### **RESEARCH VISITS**

NIST Center for Neutron Research, National Institute of Standards and Technology, November, 1997, January and June, 1998, March, May, and August, 1999.

Milli-Kelvin Facility, National High Magnetic kField Laboratory, September, 1999, and August, 2000.

National Synchrotron Light Source, Brookhaven National Laboratory, October, 1997.

#### **MEMBERSHIPS IN PROFESSIONAL ORGANIZATIONS**

American Association of Physicists in Medicine.

#### **PROFESSIONAL REFERENCES AVAILABLE UPON REQUEST**

Radiation Oncology Associates, P.C.  
7900 W. Jefferson Boulevard, Suite 110  
Fort Wayne, IN 46804  
December 18, 2009

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