

NAME MICHAEL C. VERONESI, M.D., PH.D.

EDUCATION

<i>Institution</i>	<i>Degree</i>	<i>Date Awarded</i>
IU School of Medicine	M.D. Medicine	2010
IU School of Medicine	Ph.D. Medical Neuroscience	2008
IU School of Medicine	M.S. Physiology and Biophysics	2003
IUPUI	M.S. Biology	2001
Princeton University	B.S. Evolutionary Biology	1999

FURTHER EDUCATION

<i>Institution</i>	<i>Credential</i>	<i>Date Awarded</i>
University of Chicago	Fellowship in Neuroradiology	2017
University of Chicago	Residency in Radiology	2016
UVA School of Medicine	Internship in Neurosurgery	2011

APPOINTMENTS

ACADEMIC

<i>Institution</i>	<i>Rank/Title</i>	<i>Inclusive Dates</i>
IU School of Medicine	Assistant Professor of Radiology	2017-Present
IUPUI	Adjunct Assistant Professor of BME	2017-Present
Center for Neuroscience	Affiliate Faculty	2017-Present

ADMINISTRATIVE

<i>Institution</i>	<i>Rank/Title</i>	<i>Inclusive Dates</i>
IUSM Dept of Radiology	Medical Director, In Vivo Imaging Core	2019-Present
IU Simon Cancer Center	Associate Member	2019-Present
IUSCC IVT Advisory Comm.	Member	2018-Present

LICENSURE, CERTIFICATION, SPECIALTY BOARD STATUE

<i>Credential</i>	<i>Number</i>	<i>Inclusive Dates</i>
Indiana Physician License	01078694A	2017-Present
ABR Diagnostic Radiology	69208	2017-Present
ABR Diagnostic Neuroradiology	69208	2019-Present

PROFESSIONAL ORGANIZATIONS

<i>Organization</i>	<i>Inclusive Dates</i>
American Medical Association	2007-Present
Radiologic Society of North America	2011-Present
American College of Radiology	2012-Present
American Roentgen Ray Society	2012-Present
Association of University Radiologists	2013-Present
American Society of Neuroradiology	2014-Present

PROFESSIONAL DEVELOPMENT

1. IUSM Leadership in Academic Medicine Program 2018-2019
2. AUR Research Scholar Program 2015

3. RSNA/ARRS Introduction to Academic Radiology Program 2014

PROFESSIONAL HONORS AND AWARDS

1. University of Chicago Neuroradiology Award – 2016
Presented to the resident who demonstrated outstanding performance in Neuroradiology.
2. RSNA Roentgen Resident/Fellow Research Award – 2015
Awarded by residency program directors and department chairs to recognize outstanding residents and fellows who have advanced radiologic research.
3. RSNA/ARRS Introduction to Academic Radiology Program Scholarship Award - 2014
Awarded \$1,000 to attend 2014 ARRS meeting and introduction to academic radiology course.
4. Dean's Award in Recognition of Superior Service - 2010
Awarded to the member of the graduating class most helpful to the Dean in matters pertaining to administration and service to the IU School of Medicine.
5. Alpha Omega Alpha Medical Honor Society - 2009
Recognizes and advocates for excellence in scholarship and the highest ideals in the profession of medicine. Student President of the Indiana Chapter, 2009-2010.
6. Gold Humanism Medical Honor Society - 2009
Honors medical students, residents and physicians recognized for demonstrated excellence in clinical care, leadership, compassion and dedication to service.
7. Indiana University School of Medicine Leadership Award - 2008
Awarded for service as a member of the IU School of Medicine Student Council over 4 years.
8. Indiana University School of Medicine Fred E. Gifford Scholarship Award - 2008
Established in 1990 thru the estate of Dr. Fred E. Gifford for IU School of Medicine medical students.

RESEARCH

RESEARCH PUBLICATIONS

REFEREED

1. Smiley SB, Yun Y, Ayyagari P, Shannon HE, Pollok KE, Vannier MW, Das SK, **Veronesi MC**. Development of CD133 Targeting Multi-Drug Polymer Micellar Nanoparticles for Glioblastoma - In Vitro Evaluation in Glioblastoma Stem Cells. *Pharm Res*. 2021 Jun;38(6):1067-1079. PMID: 34100216.
2. **Veronesi MC**, Graner BD, Cheng SH, Zamora M, Zarrinmayeh H, Chen CT, Das SK, Vannier MW. Aerosolized In Vivo 3D Localization of Nose-to-Brain Nanocarrier Delivery Using Multimodality Neuroimaging in a Rat Model-Protocol Development. *Pharmaceutics*. 2021 Mar 15;13(3):391. doi: 10.3390/pharmaceutics13030391. PMID: 33804222; PMCID: PMC8001876.
3. Overcaset WB, Davis KM, Ho CY, Hutchins GD, Green MA, Graner BD, **Veronesi MC**. Advanced imaging techniques for neuro-oncologic tumor diagnosis, with an emphasis on PET MRI imaging of malignant brain tumors. *Current Oncology Reports*. 2021 Feb 18;23(3):34. PMID: 33599882

4. **Veronesi MC**, Alhamami M, Miedema SB, Yun Y, Ruiz-Cardozo M, Vannier MW. Imaging of intranasal drug delivery to the brain. *Am J Nucl Med Mol Imaging*. 2020 Feb 25;10(1):1-31. PMID: 32211216.
5. Mo Y, Huang L, Chen L, **Veronesi MC**, Shi Y, Chen S, Peng L, Zhou L, Pu Y, Wang J. An experimental rabbit model of symptomatic cerebral vasospasm with in vivo neuroimaging assessment and ex vivo histological validation. *Exp Ther Med*. 2018 Mar;15(3):2411–2417.
6. **Veronesi MC**, Kubek DJ and Kubek MJ. Intranasal delivery of neuropeptides. *Methods Mol Biol*. 2011;789:303-12. PMID: 21922417.
7. **Veronesi MC**, Aldouby Y, Domb AJ and Kubek MJ. Thyrotropin-releasing hormone d,l polylactide nanoparticles (TRH-NPs) protect against glutamate toxicity in vitro and kindling development in vivo. *Brain Res*. 2009 Dec;15(1303):151-60. PMID: 19766611.
8. Kubek MJ, Domb AJ and **Veronesi MC**. Attenuation of kindled seizures by intranasal delivery of neuropeptide-loaded nanoparticles. *Neurotherapeutics*. 2009 Apr;6(2):359-71. PMID: 19332331.
9. **Veronesi MC**, Kubek DJ and Kubek MJ. Isoflurane exacerbates electrically evoked seizures in amygdala-kindled rats during recovery. *Epilepsy Res*. 2008 Nov;82(1):15-20. PMID: 18674885.
10. **Veronesi MC**, Kubek DJ and Kubek MJ. Intranasal delivery of a thyrotropin-releasing hormone analog attenuates seizures in the amygdala-kindled rat. *Epilepsia*. 2007 Dec;48(12):2280-6. PMID: 17651414.
11. **Veronesi MC**, Yard M, Jackson J, Lahiri DK and Kubek MJ. An analog of thyrotropin-releasing hormone (TRH) is neuroprotective against glutamate-induced toxicity in fetal rat hippocampal neurons in vitro. *Brain Res*. 2007 Jan 12;1128(1):79-85. PMID: 17125753.

NON-REFEREED

1. Kubek MJ, Domb AJ, Kubek DJ and **Veronesi MC**. Intranasal Delivery of Neuropeptide-Loaded Nanoparticles and Their Application to Nervous System Therapeutics. In *Focal Controlled Drug Delivery*. 2014. Boston, MA: Springer. pp. 195–213.
2. **Veronesi MC**. Neuropeptide treatments in epilepsy: an intranasal approach. PhD Dissertation, Medical Neuroscience. 2008. Indiana University, IN: Proquest. pp 1-216.

PRE-PRINT PUBLICATIONS

1. Smiley SB, Yun Y, Ayyagari P, Shannon HE, Pollok KE, Vannier MW, Zarrinmayeh H, Das SK, **Veronesi MC**. Targetable Multi-drug Nanoparticles for Glioblastoma Therapy. *BiorXIV*. Oct 2020.
2. Wang J, Xue Y, Toregrosa-Allen S, Elzey BD, Utturkar S, NA, Bernal-Crespo V, Behymer MM, Knipp GT, Yun Y, **Veronesi MC**, Sinn AL, Pollok KE, Brutkiewicz RR, Nevel KS, Matosevic S. Tumor-responsive, multifunctional CAR-NK cells cooperate with impaired autophagy to infiltrate and target glioblastoma. *BiorXIV*. Dec 2020.

BOOK CHAPTER PUBLICATIONS

1. **Veronesi MC** and Ginat DT. Alcohol. Ginat DT, Small J, Schaefer PW (Eds). *Neuroimaging Pharmacopeia*. 2015. New York, NY: Springer. pp 15-34.
2. **Veronesi MC** and Ginat DT. Tobacco Smoking. Ginat DT, Small J, Schaefer PW (Eds). *Neuroimaging Pharmacopeia*. 2015. New York, NY: Springer. pp 1-14.

INVITED RESEARCH PRESENTATIONS

1. *Optimizing nanotechnology, imaging & engineering for CNS therapeutics.* Department of Biomedical Engineering 402 seminar class, Indiana University-Purdue University at Indianapolis, IN Sep 21st, 2018
2. *Nanotechnology & image guided drug delivery in preclinical CNS disease models.* IU School of Medicine Department of Radiology, Suds and Science Seminar, Indianapolis, IN May 18th, 2018.
3. *Translational Research in Radiology Residency.* University of Chicago Department of Radiology Residency Applicant Noon Conference. University of Chicago, Chicago, IL Oct 2015.
4. *Preclinical neuroimaging of intranasal drug delivery to the brain.* Mallinckrodt Institute of Radiology Morning Neuroradiology Seminar. Washington University, St. Louis, MO Jan 13th, 2016.
5. *Neuroimaging of intranasal drug delivery to the brain.* Johns Hopkins University Department of Radiology and Radiological Sciences. Noon Seminar. Johns Hopkins University, Baltimore, MD Oct 14, 2016.
6. *Performing research in radiology residency and update on neuroimaging of intranasal drug delivery to the brain.* University of Wisconsin Department of Radiology Noon Seminar. University of Wisconsin, Madison, WI Oct 3 2016.
7. *Nanoparticle fate after intranasal delivery using advanced imaging.* University of Illinois at Chicago Department of Chemical Engineering Noon Research Seminar. University of Illinois, Chicago, IL Sep 29, 2015.
8. *Progress on imaging of drugs in the brain following intranasal delivery.* Mallinckrodt Institute, Division of Radiological Sciences Afternoon Research Seminar. Washington University, Saint Louis, MO. Sep 8, 2014.

PEER REVIEWED RESEARCH PRESENTATIONS

1. W Scales, Territo W, Sims J, Tann M, Aaron V, Agarwal A, Gray B, Kamer AA, Green MA, Hutchins GE Graner BG, **Veronesi MC**. Imaging of malignant brain tumors using hybrid 18F-Fluoro-Ethy-Tyrosine PET MRI, integration into standard clinical care at a single US institution. 59th Annual ASNR Meeting. May 22-26, 2021.
2. Yun Y, Pollok KE, Snyder SE, Green MA, Hutchins GD, Das SK, **Veronesi MC**. Antibody Targeted Multifunctional Lipid-Polymer Nanoparticles Loaded with Temozolomide and 89Zr Labeled for Theranostic Treatment of Glioblastoma. American Association of Pharmaceutical Sciences Annual Meeting. Oct 26-Nov 5, 2020.
3. Wang J, Yun Y, Pollok KE, Sinn T, Brutkiewicz RR, **Veronesi MC**, Matosevic S. Genetically engineered multifunctional NK cells for immunotherapy of glioblastoma. Society for Immunotherapy of Cancer Annual Meeting. Nov 9-14, 2020.
4. Smiley SB, Yun Y, Alhamami M, Ayagari P, Pollok KE, Das S, Vannier MW, **Veronesi MC**. CD133+ Stem Cell Targeted Dual Drug Nanocarriers for Treatment of Glioblastoma. The Controlled Release Society Annual Meeting. June 29-July 2, 2020.
5. **Veronesi MC**, Cheng SH, Zamora M, Yang CS, Lapi SE, Chen CT, Vannier MW. Quantitative temporal and spatial localization of nanoparticles in the brain following intranasal delivery using multimodality imaging: Validation study. RSNA 102nd meeting in late Nov 2016 (Oral Scientific Presentation)
6. **Veronesi MC**, Cheng SH, Zamora M, Tsai HM, Lo LW, Yang CS, Lapi SE, Chen CT, Vannier MW. In Vivo PET/CT neuroimaging of radiolabeled nanocarriers following intranasal drug delivery: Validation using Ex Vivo PET/CT, gamma counting and autoradiography. SNMMI Annual meeting in San Diego June 13th, 2016. (Poster Presentation)

7. Finkle JH, **Veronesi MC**, Ferguson MK, Zhu X, Liu HY, Pu, Y Down-staging and up-staging non-small cell lung cancer using PET whole-body metabolic tumor volume. SNMMI Annual Meeting on June 13th, 2016. (Oral Presentation)
8. **Veronesi MC**, Wroblewski K, Penney BC, Ferguson MK, Jahangir K, Liu Haiyan, Finkle JH, Pu Y. Prognostic value of the PET/CT volumetric prognostic (PVP) index/stage and survival advantage of surgical patients over nonsurgical patients in NSCLC. SNMMI Annual meeting in San Diego June 13th, 2016. (Oral Presentation)
9. **Veronesi MC**, Cheng SH, Tsai HM, Zamora M, Vosicky J, Lo LW, Lapi SE, Chen CT, Vannier MW. Quantitative radio-nanoparticle imaging of intranasal drug delivery using micro-PET/CT. 63rd Annual Meeting of the Association of University Radiologists. April 14-17, 2015, New Orleans, LA. (Oral Presentation)
10. **Veronesi MC**, Cheng SH, Lo LW, Tsai HM, Mustafi D, Leoni L, Zamora M, Roman BB, Karszmar G, Chen CT, Vannier MW. Imaging of Drugs in the Brain Following Intranasal Delivery. 100th Annual Meeting of the Radiologic Society of North America. Nov 30-Dec 5, 2014, Chicago, IL. (Oral Scientific Presentation)
11. **Veronesi MC**, Kim MJ, Hyokwon M, Kubek MJ and Koh S. Altered hippocampal gene expression two weeks after seizure in fully kindled animals. 61st Annual Meeting of the American Epilepsy Society. Nov 30-Dec 4, 2007, Philadelphia, PA. (Poster Presentation)
12. **Veronesi MC**, Kubek DJ, Domb AJ and Kubek MJ. Intranasal delivery of a thyrotropin-releasing hormone (TRH) analog attenuates seizures in the amygdala-kindled rat. 37th Annual Meeting of the Society for Neuroscience. Nov 3-7, 2007, San Diego, CA. (Poster Presentation)
13. **Veronesi MC**, Domb AJ and Kubek MJ. Uptake, subregional distribution and time-course of intranasally delivered Nile red sustained-release nanoparticles in the rat brain. 37th Annual Meeting of the Society for Neuroscience. Nov 3-7, 2007, San Diego, CA. (Poster Presentation)

RESEARCH GRANTS

FUNDED – IN PROGRESS

<i>Award Name</i>	<i>Granted By</i>	<i>Inclusive Dates</i>
1. American Cancer Society – IRG (\$40,000)	IU School of Medicine	7/2020-7/2022
2. Biomedical Research Grant (\$50,000)	IU School of Medicine	7/2019-7/2022
2. Walther Oncology Embedding Program (\$100,000)	IUSCC & Purdue University	9/2018-12/2020

FUNDED – COMPLETED

<i>Award Name</i>	<i>Granted By</i>	<i>Inclusive Dates</i>
1. MURI Research Grant (\$8,000)	IUPUI	8/2018-4/2019
2. Fellow Research Grant Award (\$50,000)	RSNA	7/2014-6/2017
3. Annual Meeting Travel Award (\$500)	RSNA	11/2016
4. ITM Core Subsidy (\$10,000)	NIH/CTSA	7/2014-12/2016
5. Resident Research Grant Award (\$30,000)	RSNA	7/2014-6/2016
6. Research Scholar Award (\$1,000)	AUR-ACR	6/2015
7. Molecular Imaging Travel Award (\$1,000)	RSNA	11/2014
8. Hodges Radiological Society Grant Award (\$4,000)	Univ of Chicago	7/2013-6/2014

SUBMITTED OR IN REVISION

1. NIH NCI R01 Veronesi
Title: Intranasal Multifunctional Lipid-polymer Hybrid Theranostic Nanoparticles for GBM Therapy

2. NIH NCI R21 Veronesi

Title: GD2 Labeled Pin1 siRNA and Paclitaxel Loaded Lipid-polymer Hybrid Nanoparticles for Glioblastoma Targeting Through a Nose to Brain Delivery Approach

SERVICE

SERVICE ROLES

1. University of Chicago Radiology Medical Student Clerkship (2013 and 2015)
Role: Instructor
Description: One of four Instructors for a week-long medical student radiology clerkship. Activities included Individual case-based problem-solving sessions, Basic radiology session at the reading room work-station, Mentorship of the medical student's end of rotation presentation, and evaluation which included presentation and final exam.
2. University of Chicago, Department of Radiology Program Evaluation Committee (2014-2016)
Role: Resident/ Member
Description: The committee is charged with providing a formal structure for systematic program design, evaluation and improvement.
3. Indiana University School of Medicine Student Promotions Committee (2009-2010)
Role: Dean-Appointed voting member
Description: Decided the course of action for students struggling to fulfill their academic medical requirements necessary to become competent physicians.
4. Indiana University Honor Code Committee (2003-2010)
Role: Member (elected Chair in 2006-07)
Description: Educated the student body about the cultural implications of an Honor Code.
5. Indiana University Medical Student Council (2005-2010)
Role: President (2007-08), Vice President (2005-07), Advisor (2007-10)
Description: Served as a principal liaison between the IUSM Dean's Office and the 1,000 member student body on all issues of student academic life across the nine campuses.

PROFESSIONAL SERVICE

1. CNP520 BACE Inhibitor (Novartis) in treatment of Alzheimer's disease: Clinical trial
Purpose: Perform safety MRI reads for the CNP520 clinical trial, which is a randomized, double-blind, placebo-controlled, parallel group study to evaluate the efficacy and safety of CNP520 in participants at risk for the onset of clinical symptoms of Alzheimer's Disease.
2. ARIA Assessment after Aducanumab treatment of Alzheimer's disease: Clinical trial
Purpose: Determine amyloid related imaging abnormalities (AIRA) by Brain MRI at various times points in Alzheimer's disease patients while on the antibody aducanumab, which is a Phase 2, multicenter, randomized, parallel-group, double-blind study.
3. Effects of AG-881 on residual or recurrent grade 2 glioma with IDH1 or IDH2 mutation: Clinical Trial.
Purpose: Determine target lesion size by brain MRI as part of a Phase 3, Multicenter, Randomized, Double-blind, Placebo-Controlled Study.
4. Azeliragon for mild Alzheimer's disease and impaired glucose tolerance: Clinical Trial.

Purpose: Perform Brain MRI Safety reads for a randomized, double-blind, placebo controlled, multicenter studies to evaluate the safety and efficacy of Azeliragon as a treatment for subjects with mild Alzheimer's disease and impaired glucose tolerance

5. Radiologic Society of North America Professionalism Committee (2014-2017)

Role: Member

Description: To develop activities and resources in professionalism and stay current with professionalism initiatives within radiology as well as other medical specialties.

SERVICE PRESENTATIONS

1. "Moving from nominal recognition to action leadership in the AOA" Indiana Chapter AOA Honor Society Induction Ceremony. Crown Plaza Hotel Grand Hall. Indianapolis, IN. Mar 26, 2010.
2. "IUSM Leadership Day reflections: A decade in the making" Invited Speaker. 12th Annual IUSM Leadership Day Seminar Series, featuring Keynote Speaker Kent Brantley: Ebola survivor, Indianapolis Marriott North, Indianapolis, IN. Nov 4, 2016
3. The newly hired radiologist: noninterpretive skills for success refresher course. 102nd Annual RSNA meeting. Professionalism Committee-sponsored RSNA 2016 Course. McCormick Place, Chicago, IL
4. Lessons for aspiring, new, and experienced radiologists: noninterpretive skills for success refresher course. 103rd Annual RSNA meeting. Professionalism Committee-sponsored RSNA 2017 Course. McCormick Place, Chicago, IL
5. The newly hired radiologist: noninterpretive skills for success refresher course. 104th Annual RSNA meeting. Professionalism Committee-sponsored RSNA 2018 Course. McCormick Place, Chicago, IL
6. Hanneman K, **Veronesi MC**, Deaver PM, Watts GJ, Oancea L, Gunderman RB, Brown SD. Radiology trainees' experiences with professionalism and leadership skills development during residency training. 63rd Annual Meeting of the Association of University Radiologists. April 14-17, 2015, New Orleans, LA. (Oral Presentation)

TEACHING

TEACHING ASSIGNMENTS

1. IUSM Behavioral Neurology and Neuropsychiatry Fellowship Program (2018-2020)
Role: faculty member
Description: The goal of the fellowship is to develop clinical expertise in care of patients with brain dysfunction, of which one phase among others includes neuroimaging.
2. Radiology Residency Noon Lecture Series (2017-Present)
Role: Faculty lecturer
1. Radiology Residency and Fellowship Neuroradiology Rotation Morning Lecture Series (2017-present)
Role: Faculty lecturer
3. Neuroradiology Reading Room Daily Teaching of Residents and Fellows
Role: Faculty Instructor

MENTORING

1. IUSM Leadership Track Program for Radiology Residents (2017-2018)
Role: Faculty volunteer

Description: Bi-monthly group discussions on various topics centered on leadership, in and outside of Radiology/Medicine spanning the four years of a residents training.

2. IUSM Radiology Resident Mentoring Program (2017-2019)

Role: Faculty Mentor

Description: The goal of the program is to mentor Radiology residents intending to subspecialize in Neuroradiology.

3. IUSM Academic Research Track Program (2017-2020)

Role: ART Advisory Committee Member

Description: The goal of the program is to educate and engage resident trainees in academic research in Radiology and assist with the success of research projects.

LOCAL TEACHING PRESENTATIONS

1. *Applying the Seven Habits of highly Effective People during the trainee years*. Presentation and workshop for the IUSM Department of Radiology Leadership in Medicine Course. Indianapolis IN, Fall 2017, 2018 and 2019.
2. *Brachial and lumbosacral plexopathies*. Educational presentation for the First Neurosurgical Conference for Advanced Practitioners. IUSM Indianapolis, IN. 9/7/2018.
3. *Overview of preclinical and translational research within the imaging sciences: From bench to bedside*. to the Dept of Radiology Academic Research Track residents. Fessler hall Auditorium. IUSM Indianapolis, IN 11/21/2019

NATIONAL TEACHING PRESENTATIONS

4. Krause D, **Veronesi MC**, Graner BD. Transcranial Doppler, It's More Than Just the Numbers. American Society of Neuroradiology 57th annual meeting. Virtual Meeting. May 30-June 4, 2020. Power Point
5. Ahmad S, Traylor K, Kindler J, Graner B, **Veronesi M**. *The biomarker approach to defeating the neurodegenerative diseases*. Powerpoint Educational Exhibit #2992. 57th American Society of Neuroradiology Annual Meeting, Boston, MA. May 18-23, 2019. Power Point
6. Anderson K, Shakeeb A, Brosch J, Veronesi, MC. *Prionopathies and prion-like protein aberrations in the neurodegenerative diseases*. Powerpoint Educational Exhibit #3100. 57th American Society of Neuroradiology Annual Meeting, Boston, MA. May 18-23, 2019. Power Point

SERVICE

SERVICE PUBLICATIONS

REFEREED

- (1) Anderson K, Overcast W, Brosch J, Graner BD, **Veronesi MC**. Prionopathies and prion-like protein aberrations in neurodegenerative diseases. Neurographics. Accepted. 2020. To be published in Nov 2021 Periodical.
- (2) **Veronesi MC** and Gunderman RB. Perspective: the potential of student organizations for developing leadership: one school's experience. Academic Medicine. 2012 Feb;87(2):226-9. PMID: 22189878.

NON-REFEREED

- (1) **Veronesi MC** and Hanneman K. Medical Training from a Trainees' Perspective. Online RSNA Professionalism Vignette. 2016. Available online at https://www.rsna.org/Vignette_11_Question_1_of_6/