

VIRGIL MURESAN, PhD, CURRICULUM VITAE

DATE: February 13, 2022

PRESENT TITLE: Associate Professor

OFFICE/LAB ADDRESS: New Jersey Medical School
Department of Pharmacology, Physiology and Neuroscience
185 South Orange Avenue, MSB I-683/685
Newark, NJ 07103

TELEPHONE NUMBER/E-MAIL ADDRESS: Phone: 973-972-0573/2392
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CITIZENSHIP: U.S.A.

EDUCATION:

- A. Undergraduate Graduate and Professional
University of Bucharest
Bucharest, Romania
M.S. (Biophysics) June 1975

- B. Graduate and Professional
University of Kansas
Kansas City, Kansas
Ph.D. (Anatomy and Cell Biology) August 1993

POSTGRADUATE TRAINING:

- A. Internship and Residencies
Not applicable

- B. Research Fellowships
Yale University School of Medicine, New Haven, CT
Cell Biology (Fulbright Fellowship)
April 1979-May 1980

- C. Postdoctoral Appointments
Harvard Medical School, Boston, MA
Cell Biology
September 1993-August 2001

MILITARY: – Yes, in Romania, my country of origin

ACADEMIC APPOINTMENTS:

Department of Pharmacology, Physiology and Neuroscience
New Jersey Medical School
Rutgers, The State University of New Jersey
Associate Professor
July 2013-present

Pharmacology & Physiology
New Jersey Medical School
University of Medicine and Dentistry of New Jersey

Associate Professor
April 2007-June 2013

Physiology and Biophysics
Case Western Reserve University (Case Medical School)
Assistant Professor
January 2002-April 2007

Cell and Developmental Biology
Oregon Health Sciences University
Research Assistant Professor
August 2001-December 2001

HOSPITAL APPOINTMENTS: None

OTHER EMPLOYMENT OR MAJOR VISITING APPOINTMENTS:

Institute of Cellular Biology and Pathology, Bucharest, Romania
Biophysicist
September 1978-August 1989

Center of Hematology, Bucharest, Romania
Biophysicist
September 1975-September 1978

PRIVATE PRACTICE Not applicable

LICENSURE: Not applicable

DRUG LICENSURE: Not applicable

CERTIFICATION: Not applicable

MEMBERSHIPS, OFFICES AND COMMITTEE ASSIGNMENTS IN PROFESSIONAL SOCIETIES:

Ohio Physiological Society
Member
2003-2005

Biophysical Society
Member
2009-2011

American Association for the Advancement of Science
Member
1995-2001 and 2007-

American Society for Cell Biology
Member
1979, 1991-

Society for Neuroscience
Member
2005-

Alzheimer's Association International Society to Advance Alzheimer's Research and Treatment
Member
2013-

HONORS AND AWARDS:

Hypothesis Hero Award (Conferred for the hypothesis that Alzheimer's disease begins in the locus coeruleus, not the entorhinal cortex, as the dogma at that time maintained. This is a prestigious National Award, conferred at the Society for Neuroscience 2009 Annual Meeting in Chicago).
Alzheimer's Research Forum
November 2009

Mt. Sinai Health Care Foundation Scholar at Case Western Reserve University
Mt. Sinai Health Care Foundation
January 2002-April 2007

Neuromuscular Disease Research Fellow
Muscular Dystrophy Association
1994-1996

Homer T. Latimer Graduate research Award for dissertation at KU Medical Center (my name is engraved in a plaque in the Department of Anatomy and Cell Biology). This award signifies meritorious work in research, and the submission of a dissertation of outstanding quality.
August 1994

Fulbright Fellow at Yale University School of Medicine
U.S.A. Government
April 1979-May 1980

BOARDS OF DIRECTORS/TRUSTEES POSITIONS: None**SERVICE ON NATIONAL GRANT REVIEW PANELS, STUDY SECTIONS, COMMITTEES:**

Alzheimer's Association
National Science Foundation
NIH, ZRG1 MDCN-F (03) (ad hoc reviewer)
Veterans Administration
Ohio Cancer Research Associates

INTERNATIONAL GRANT REVIEW PANELS:

Alzheimer's Research Trust, UK
Italian Association for Cancer Research (AIRC)
French Research Association on Amyotrophic Lateral Sclerosis (ARSLA - Association pour la recherche sur la SLA) (2021-)

SERVICE ON MAJOR COMMITTEES:

- A. International
Expert Referee Panel, Alzheimer's Research Trust, UK (2009-present)
- B. National None
- C. Medical School/Dental School/University
At Case Western Reserve University Medical School
 - Member of the Case Western Reserve University Radiation Safety Committee (2005-2007)
At New Jersey Medical School
 - Member of the Faculty Investigators Committee (2015-2016)
At Rutgers School of Dental Medicine
 - Member of the Curriculum Committee (2020-2024)
At Rutgers University
 - Member of the Education Sub-Committee of the RBHS Strategic Plan (2020-present)

D. Hospital None

E. Department

- Member of Common Equipment Committee (2008-present)
- Member of the Graduate Committee (2007-)

At Case Western Reserve University

- Radiation Safety Officer of the Department (2004-2007)
- I have organized the “First Research Day of the Department of Physiology & Biophysics” (Symposium, September 17, 2004)
- Judge at the Eighth and Ninth Richard O. Recknagel Symposium and Competition (September 2003 and 2004)
- Judge for the Graduate Student/Postdoctoral Fellow Competition at the Departmental Retreat (October 2003)
- Director of the Departmental Seminar Committee (August 2002-August 2003)

F. Editorial Boards

Archives of Biochemistry and Biophysics (2005-present)

Journal of Cell Identity (invited to become Editorial Board member)

G. *AdHoc* Reviewer

Archives of Biochemistry and Biophysics

ASN NEURO

Biophysical Journal

Cell Communication and Signaling

Cellular and Molecular Life Sciences

Cerebral Cortex

Current Opinion in Genetics and Development

Cytoskeleton (formerly Cell Motility and the Cytoskeleton)

Experimental Eye Research

International Journal of Biochemistry and Cell Biology

Investigative Ophthalmology and Visual Sciences

Journal of Alzheimer’s Disease

Journal of Biological Chemistry

Journal of Cell Biology

Journal of Cellular and Molecular Medicine

Journal of Histochemistry and Cytochemistry

Journal of Visual Experiments (JoVE)

Journal of Neuroinflammation

Journal of Neuroscience (frequent reviewer)

Molecular Biology of the Cell

Molecular Neurodegeneration

Nature Neuroscience Reviews

Neurobiology of Aging

Neuroscience

Physiological Genomics

PLoS ONE

Proceedings of the National Academy of Sciences USA

Traffic

PLoS Computational Biology

SERVICE ON GRADUATE SCHOOL COMMITTEES:

- Judge at numerous GSA Symposia
- Judge at the First Annual Brain Health Institute Symposium on October 26, 2015
- Interviewer of applicants for the GSBS Ph.D. Programs

At Case Western Reserve University

- Member of the Case Western Reserve University Committee on Graduate Education (2006-2007)
- Member of Student Recruiting Committees (Ph.D. & MSTP) (2002-2007).
- Judge at the Irwin H. Leplow Student Research Day (May 2004 and March 2005).
- Judge at the CWRU Graduate Student Symposium at (May 2003)

SERVICE ON HOSPITAL COMMITTEES: None

SERVICE TO THE COMMUNITY: None

SPONSORSHIP OF CANDIDATES FOR POSTGRADUATE DEGREE:

SPONSORSHIP OF POSTDOCTORAL FELLOWS:

TEACHING RESPONSIBILITIES:

A. Lectures or Course Directorships

<u>Teaching at Rutgers</u>			
<u>Course Title</u>	<u>Number of Students</u>	<u># of Contact Hours/Year</u>	<u>Year Taught</u>
Molecular Physiology of Cell Communication		2.0 hour lecture 2.0 hour student paper presentation	2013
Disease Processes, Prevention and Therapeutics		3.0 hours	2013
Alternative Learning Presentations (Evaluation of Student Presentations)	Six groups	2.0 hours	2013
Molecular Physiology of Cell Communication		2.0 hour lecture 2.0 hour student paper presentation	2014
Dental Pharmacology		2.0 hours	2014
Disease Processes, Prevention and Therapeutics		3.0 hours	2014
Molecular Physiology of Cell Communication		2.0 hour lecture	2015
Dental Pharmacology		2.0 hours	2015
Disease Processes, Prevention and Therapeutics / Foundations		3.0 hours	2015
Professional Skills 2 (student proposal review)		2.0 hours	2016
Molecular Physiology of Cell Communication		2.0 hour lecture 2.0 hour student paper presentation	2016

Dental Pharmacology	3.0 hours	2016
Foundations	5.0 hours	2016
Molecular Physiology of Cell Communication	2.0 hour lecture 2.0 hour student paper presentation	2017
Dental Pharmacology	13.0 hours (lectures, reviews, exam)	2017
Basic Histology – Spring Semester (course Director and sole Lecturer)	45.0 hours (lectures, labs, exams) 40.0 hours or more (student consultations)	2017
Foundations/Dental Pharmacology/Dental Physiology	12.0 hours (proctoring)	2016/2017
Basic Histology – Fall Semester (course Director and sole Lecturer)	45.0 hours (lectures, labs, exams) 50.0 hours or more (student consultations, rescheduled exams)	2017
Histology – Dental School (DSCI 7106) (Alternative number: DENT 7106Q)	10.0 hours (lectures) 3.0 hours (exam preparations)	2017
Foundations (Hematology/Oncology and Infectious Diseases modules)	5.0 hours (lectures)	2017
Basic Histology – Spring Semester (course Director and sole Lecturer)	45.0 hours (lectures, labs, exams) 50.0 hours or more (student consultations, rescheduled exams)	2018
Molecular Physiology of Cell Communication	2.0 hour lecture 2.0 hour student paper presentation	2018
Dental Pharmacology	4.0 hours (lectures)	2018
Dental Pharmacology	8.0 hours (proctoring)	2018
Histology – Dental School (DSCI 7106) (Alternative number: DENT 7106Q) (course Director and main Lecturer)	40.0 hours (lectures) > 50 hours (exam preparations and post-exam reviews)	2018
Foundations (Hematology/Oncology and Infectious Diseases modules)	5.0 hours (lectures)	2018
Basic Histology – Fall Semester (course Director and sole Lecturer)	45.0 hours (lectures, labs, exams) > 50.0 hours (student consultations, rescheduled exams)	2018
Molecular Physiology of Cell Communication	2.0 hour (lecture) 2.0 hour (review and student consultations) 2.0 hours (exams preparation)	2019

Basic Histology – Spring Semester (course Director and sole Lecturer)	45.0 hours (lectures, labs, exams) > 50.0 hours (anticipated) (student consultations, rescheduled exams)	2019
Professional Skills 2 (student proposal review)	4.0 hours	2019
Responsible Conduct of Research	1.0 hour (small group)	2019
Dental Pharmacology	4.0 hours (lectures)	2019
Dental Pharmacology	8.0 hours (proctoring)	2019
Histology – Dental School (DSCI 7106) (Alternative number: DENT 7106Q) (course Director and main Lecturer)	40.0 hours (lectures) > 50 hours (exam preparations and post-exam reviews)	2019
Foundations (Hematology/Oncology and Infectious Diseases modules)	5.0 hours (lectures) 1.0 hour (post-exam review) 5.0 hours (writing new pre-exam and exam clinical questions)	2019
Basic Histology – Fall Semester (course Director and sole Lecturer)	45.0 hours (lectures, labs, exams) > 50.0 hours (student consultations, rescheduled exams)	2019
Molecular Physiology of Cell Communication	2.0 hour (lecture) 2.0 hour (review and student consultations) 4.0 hours (exams preparation)	2020
Basic Histology – Spring Semester (course Director and sole Lecturer)	45.0 hours (lectures, VM labs, exams) > 50.0 hours (student consultations, rescheduled exams, exam preparation for remote administration)	2020
Dental Pharmacology	4.0 hours (lectures) 4.0 hours (proctoring) 4.0 hours (writing new exam questions)	2020
Topics in Pharmacology (PHPY-N5030)	9.0 hours (lectures) 3.0 hours (exam preparation)	2020
Histology – Dental School (DSCI 7106) (Alternative number: DENT 7106Q) (course Director and main Lecturer) (this is a RSDM and SGS course)	55.0 hours (lectures) > 50 hours (exam preparations, exams and post-exam reviews) ~8 hours (Basic Sciences/Clinical Sciences Integration meetings and work at the Comprehensive Exam for D2 students)	2020
Foundations (Hematology/Oncology and Infectious Diseases modules)	5.0 hours (lectures) 5.0 hours (writing new clinical exam questions)	2020
Basic Histology – Fall Semester	45.0 hours	2020

(course Director and sole Lecturer)	(live lectures via Zoom, live VM labs, exams) > 50.0 hours (student consultations - in person and via Zoom, rescheduled exams)	
Dental Neuroscience	2.0 hours (proctoring)	2020
Fundamentals of Neuroscience	3.0 hours (proctoring)	2020
Dental Physiology	2.0 hours (proctoring)	2021
Fundamentals Human Physiology	4.0 hours (proctoring)	2021
Molecular Physiology of Cell Communication	2.0 hour (lecture) 1.0 hour (review) 4.0 hours (exams preparation)	2021
Basic Histology – Spring Semester (course Director and sole Lecturer)	45.0 hours (live lectures and VM labs, exams) > 50.0 hours (student consultations, rescheduled exams, exam preparation for remote administration)	2021
Dental Pharmacology	4.0 hours (lectures) 2.0 hours (Q&A session - Pre-exam review) 4.0 hours (new exam questions) 8.0 hours (proctoring)	2021
Topics in Pharmacology (PHPY-N5030)	9.0 hours (lectures)	2021
Histology – Dental School (DSCI 7106) (Alternative number: DENT 7106Q) (course Director and main Lecturer) (this is a RSDM and SGS course)	57.0 hours (lectures) > 50 hours (exam preparations, exams and post-exam reviews)	2021
Foundations (Hematology/Oncology and Infectious Diseases modules)	5.0 hours (lectures) 5.0 hours (writing new clinical exam questions)	2021
Basic Histology – Fall Semester (course Director and sole Lecturer)	45.0 hours (live lectures and VM labs given in-person and via Zoom; remote exams) > 50.0 hours (student consultations - in person and via Zoom, rescheduled exams)	2021
Dental Neuroscience	2.0 hours (proctoring)	2021
Dental Physiology	2.0 hours (proctoring)	2021
Dental Physiology	4.0 hours (proctoring) (anticipated)	2022

Molecular Physiology of Cell Communication	2.0 hour (lecture) 1.0 hour (review) 4.0 hours (exams preparation)	2022
Basic Histology – Spring Semester (course Director and sole Lecturer)	45.0 hours (live lectures and VM labs given in-person and via Zoom; remote exams) > 50.0 hours (student consultations, rescheduled exams, exam preparation for remote administration) (ongoing)	2022
Dental Pharmacology	4.0 hours (lectures) 2.0 hours (Q&A session - Pre-exam review) 4.0 hours (new exam questions) 8.0 hours (proctoring) (anticipated)	2022
Topics in Pharmacology (PHPY-N5030)	9.0 hours (lectures) (anticipated)	2022

Teaching at UMDNJ

<u>Course Title</u>	<u>Number of Students</u>	<u># of Contact Hours/Year</u>	<u>Year Taught</u>
Reading the Literature in Signaling	12	2.0 hours	2008
ISF Course / TBS Applications (Endocrinology)	n.a.	2.0 hours	2009
Foundations of Neuroscience I	10	1.5 hours	2010
Molecular Physiology of Cell Communication		1.0 hour lecture 1.0 hour student paper presentation	2012
Dental Pharmacology		1.0 hour	2012
Disease Processes, Prevention and Therapeutics		3.0 hours	2012
Molecular Physiology of Cell Communication		2.0 hour lecture 2.0 hour student paper presentation	2012

Teaching at CWRU

<u>Course Number</u>	<u>Number of Students</u>	<u># of Contact Hours/Year</u>	<u>Year Taught</u>
PHOL432	18	3.0 hours	2002
PHOL398	29	*	2002-2003
PHOL432	15	3.0 hours	2003
PHOL432	11	3.0 hours	2004
PHOL457	10	1.5 hours	2004
PHOL432	13	3.0 hours	2005

PHOL457	13	1.5 hours	2005
CBIO453/455	55	9.0 hours	2005
PHOL466	13	4.5 hours	2006
PHOL432	13	3.0 hours	2006
PHOL457	8	1.5 hours	2006
CBIO453/455	36	9.0 hours	2006

PHOL432, Cell Structure and Function
 PHOL457, Proteins and Nucleic Acids
 CBIO453/455, Cell and Molecular Biology
 PHOL466, Cell Signaling
 *PHOL398 is a seminar course.

I also participated in Small Group Teaching of medical students:

Homeostasis: GI tract,	8 students, 2.0 hours	2006
Endocrinology block,	9 students, 2.0 hours	2006

B. Research Training

Post Doctoral Fellows:

- Nicholas Quintyne, Ph. D. 2002
 Nick is currently an Assistant Professor of Biology at the Wilkes Honors College of Florida Atlantic University.

- Alexandra Sihleanu, M. D. 2003
 Alexandra has returned to medical practice.

Pre Doctoral Students:

Undergraduate Student (SURP Program):

Aleksandra Rachitskaya 2002
 Aleksandra was admitted to Case Medical School. Based on her research work in my laboratory, Aleksandra received a prestigious, one-year HHMI-NIH fellowship award.

Graduate Students (Ph.D.):

Jordan Beach	2004-2005
Yi-Hsin (Frances) Cheng	2006-2007
At UMDNJ:	
Adetola Shodeinde	2008 (summer rotation)
Hatouf Sukkarieh	2008 (summer rotation)
Brianna Marie Lutz	2012 (fall rotation)

Graduate Students (M.S.):

Christine Villegas	2012 (spring rotation)
Tammy Bui	2017 (fall rotation)
Jessica Marconi	2017 (fall rotation)
Nora Yosri	2018 (spring rotation)
Laith Al-Najar	2019 (spring rotation)
Shi Cheng	2019 (summer rotation)
Aanchal Parmar	2020 (spring rotation)
Lyanne Damra	2020 (spring rotation)
Saloni Shah	2020 (spring rotation)
Kyle Christianson	2020 (spring rotation)
Nija Lomax	2020 (fall rotation)
Merin Stephen	2020 (fall rotation)

Mounica Neravetla	2020 (fall rotation)
Tamilyn Chu	2021 (winter-spring rotation)
Jipsa Shah	2021 (winter-spring rotation)
Shivam Patel	2021 (winter-summer rotation)
Saba Pilehvar	2021 & 2022 (trained as TA for the Basic Histology course)
Victoria Nachevnik	2021 (summer-fall rotation)
Anje Thompson	2021-2022 (spring rotation)
Chandni Shah	2021-2022 (spring rotation)
Harmeet Kaur	2021-2022 (spring rotation)
Lauren Bowden	2021-2022 (fall-summer rotation)
Leonardo Gonzales	2021-2022 (spring rotation)
Maitri Kothari	2021-2022 (spring rotation)
Marisol Colin Guerrero	2021-2022 (spring rotation)
Priya Vaid	2021-2022 (spring rotation)

High school Students:

Valentina Victoria (Union City High School)	2014 (summer internship)
Kushani Vithanage (Union City High School)	2014 (summer internship)

Member of Theses Graduate Committees (Ph.D, M.D./Ph.D., and M.S.):

Linda Kusner (advisor Dr. Cathy Carlin)
Xiaofeng Yu (advisor Dr. Corey Smith)
Kiattawee Choowongkomon (advisor Dr. Frank Soenichsen)
Nick Cianciola (advisor Dr. Cathy Carlin)
Cortrell Kinney (advisor Dr. Paul DiCorleto)
Guosheng Huang (advisor Dr. Richard Eckert)
Carl Venezia (advisor Dr. Mary Barkley)
Jennifer Nalepka (advisor Dr. Ed Greenfield)
Marie Zafropulos (advisor Dr. Richard Eckert)
Mark Breckenridge (advisor Dr. Tom Egelhoff)
Chepchumba Yego (advisor Dr. Suzanne Mohr)
Bridgette Christopher (advisor Dr. Faramarz Ismail-Beigi)
Jordan Beach (advisor Dr. Tom Egelhoff)
Ann He (advisor Dr. Witold Surewicz)
Ling Zhu (advisor Dr. Richard Eckert)

At UMDNJ/Rutgers:

Claudine Bitel (advisor Dr. Peter Frederikse)
Lihong Hao (advisor Dr. Vanessa Routh)
Weiwei Wang (advisor Dr. Ellen Townes-Anderson)
Aminat Saliu (advisor Dr. Terri Wood)

Hoa Pham (M.D./Ph.D.; advisor Luciano D'Adamio)

Member of Qualifying/Candidacy Exam Committee (Ph.D. and M.D./Ph.D.):

Corttrell Kinney
Carl Venezia
Nicole Baitz
Marie Zafiropulos
Chepchumba Yego
Ling Zhu
Nikolas Balanis
Sarah J. Zilka

At UMDNJ/Rutgers:

Lihong Hao
Jingzhen Li
Samantha Cote
Kokila Kota
Swamini Sinha (M.D./Ph.D.)
Ersilia Mirabelli
Hoa Pham (M.D./Ph.D.; advisor Dr. Luciano D'Adamio)
Tao Yin (Ph.D.; advisor Dr. Luciano D'Adamio)
Rachel Fasiczka (Ph.D.; advisor Dr. Sabine Hilfiker)

Member of Thesis Defense Committee (Ph.D. and M.D./Ph.D.):

At UMDNJ/Rutgers:

Claudine Bitel (advisor Dr. Peter Frederikse)
Carmen Garcia (advisor Dr. Joseph McArdle)
Victor Lukacs (advisor Dr. Tibor Rohacs)
Samantha Cote (advisor Dr. Eldo Kuzhikandathil)
Anne Oh (Masters student) (advisor Dr. Joseph McArdle)
(thesis evaluation)
Lihong Hao (advisor Dr. Vanessa Routh)
Kokila Kota (advisor Dr. Eldo Kuzhikandathil)
Weiwei Wang (advisor Dr. Ellen Townes-Anderson)
Axay Patel (Masters student) (advisor Dr. Joseph McArdle)
(thesis evaluation)
Michael Morano (Masters student) (advisor Dr. Joseph McArdle)
(thesis advisory committee)
Beatrice Trias (Masters student) (advisor Dr. Vanessa Routh) (thesis advisory
committee)
Hoa Pham (M.D./Ph.D.; advisor Dr. Luciano D'Adamio)

CLINICAL RESPONSIBILITIES: Not applicable

GRANT SUPPORT:

- A. Principal Investigator
- | | |
|---|-----------------------|
| 1) Connecticut Science Fund/Vanguard Charitable | 07.01.2020-06.30.2021 |
| Title: "A Neuronal Cell Culture Model for Alzheimer's Disease" | |
| Total Cost: \$35,000 | |
| 2) Connecticut Science Fund/Vanguard Charitable | 07.01.2018-06.30.2019 |
| Title: "Axonal Transport of Disease-relevant Cargo Proteins by the Endoplasmic Reticulum" | |
| Total Cost: \$25,000 | |

- 3) Connecticut Science Fund/Vanguard Charitable 07.01.2017-06.30.2018
 Title: "Abnormal Axonal Transport of RNA/DNA Binding Proteins in Amyotrophic Lateral Sclerosis"
 Total Cost: \$41,512
- 4) NSF IOS-1347090 09.15.2013-08.31.2017
 Title: "EAGER: A Novel Form of Intraneuronal Membrane Transport"
 Direct Cost: \$ 225,000
- 5) New Jersey Health Foundation 02.01.2013-01.31.2016
 Title: "Kinesin-1 Mediated Phosphorylation of Disease-Relevant Cargo Proteins"
 Direct Cost: \$25,000
- 6) Dean's Biomedical Research Support 01.01.2012-06.30.2012
 Title: "Kinesin-1 Mediated Phosphorylation of Disease-Relevant Cargo Proteins"
 Direct Cost: \$3,000
- 7) Foundation of UMDNJ 07.10.2010-12.30.2012
 Title: "Animal Models for In Vivo Imaging of APP Processing and Transport"
 Direct Cost: \$ 25,000
- 8) Dean's Biomedical Research Support 01.01.2010-12.31.2011
 Title: "Animal Models for In Vivo Imaging of APP Processing and Transport"
 Total Cost: \$3,000
- 9) NIH 3R01GM068596-05S1 (ARRA Award) 09.30.2009-08.31.2011
 Title: "Molecular Motors in Transport and Signaling by APP"
 Direct Cost: \$210,600
- 10) March of Dimes Birth Defects Foundation 1-FY04-122 06.01.2004-05.31.2011
 Title: "Role of the Lissencephaly Gene Product, Lis1, in the Regulation of Dynein-driven Axonal Transport"
 Direct Cost: \$269,610
- 11) NIH 1R01GM068596 04.01.2004-01.31.2011
 Title: "Molecular Motors in Transport and Signaling by APP"
 Direct Cost: \$875,000
- 12) NIH AG08012 06.01.2003-05.31.2004
 Title: "Role of Amyloid precursor Protein in Pre-mRNA Splicing"
 Direct Cost: \$20,000

- B. Co-Investigator: None
- C. Pending: Several grant proposals are in preparation.

PUBLICATIONS:

- A. Refereed Original Article in Journal

1. Jamieson, J.D., Ingber, D.E., **Muresan, V.**, Hull, B.E., Sarras, M.P., Jr., Maylie-Pfenninger, M.-F., and Iwanij, V. Cell Surface Properties of Normal, Differentiating, and Neoplastic Acinar Cells. *Cancer*, 47: 1516-1525, 1981.
2. **Muresan, V.**, Iwanij, V., Smith, Z.D.J., and Jamieson, J.D. Purification and Use of Limulin: A Sialic Acid-specific Lectin. *Journal of Histochemistry and Cytochemistry*, 30: 938-946, 1982
3. **Muresan, V.**, Sarras, M.P., Jr., and Jamieson, J.D. Distribution of Sialoglycoconjugates on the Acinar Cells of the Mammalian Pancreas. *Journal of Histochemistry and Cytochemistry*, 30: 947-955, 1982
4. **Muresan, V.**, and Constantinescu, M.C. Use of Ferritin Hydrazide for the Detection of Sialoglycoconjugates. I. Methodological Aspects. *Revue Roumaine de Biochimie*, 21: 189-197, 1984
5. **Muresan, V.**, and Constantinescu, M.C. Distribution of Sialoglycoconjugates on the Luminal Surface of the Endothelial Cell in the Fenestrated Capillaries of the Pancreas. *Journal of Histochemistry and Cytochemistry*, 33: 474-476, 1985
6. **Muresan, V.**, and Constantinescu, M.C. A Mixed Hemagglutination Test for Binding of Glycosylated Cytochemical Markers. *Analytical Biochemistry*, 148: 503-509, 1985
7. Muresan, Z., Tugulea, L., Gheorghe, V., and **Muresan, V.** Tissue-fixative Interactions: Charge Transfer Complexes of Lecithin with Nitrophenols. *Revue Roumaine de Biochimie*, 22: 47-56, 1985
8. **Muresan, V.** A Hemagglutination Test for Binding of Hydrazide-Derived Cytochemical Markers. *Acta Histochemica*, 79: 193-198, 1986
9. Muresan, Z., **Muresan, V.**, Iwanij, V., and J.D. Jamieson. Sialoglycoconjugates of a Pancreatic Tumor: Markers for Cell Polarity, Membrane Fluidity and Possible Role in Exocytosis. *Journal of Histochemistry and Cytochemistry*, 34: 1257-1264, 1986
10. **Muresan, V.** Pathways of Transcytosis in the Fenestrated Endothelium of Pancreatic Capillaries. *Journal of Submicroscopic Cytology*, 18: 691-700, 1986
11. **Muresan, V.**, and Simionescu, N. High and Low Molecular Weight Tracers for the Electron Microscopical Detection of Sialoglycoconjugates. *Histochemical Journal*, 19: 193-208, 1987
12. Muresan, Z., and **Muresan, V.** Differential Distribution of Sialic Acid in Exocrine Pancreas and Parotid Gland. *Acta Histochemica*, 81: 109-115, 1987
13. Leabu, M., Ghinea, N., **Muresan, V.**, Colceag, J., Hasu, M., and Simionescu, N. Prelesional Events in Atherogenesis. I. Cell Surface Chemistry of Arterial Endothelium and Blood Monocyte in the Normolipidemic Rabbit. *Journal of Submicroscopic Cytology*, 19: 193-208, 1987
14. Ghinea, N., Leabu, M., Hasu, M., **Muresan, V.**, Colceag, J., and Simionescu, N. Prelesional Events in Atherogenesis. II. Changes Induced in the Cell Surface Chemistry of Arterial Endothelium and Blood Monocytes, in Rabbit. *Journal of Submicroscopic Cytology*, 19: 209-227, 1987
15. **Muresan, V.** Intracellular Fate of a Multivalent Ligand Covalently Bound to Cell Surface Components. An Electron Microscopic Study. *Journal of Submicroscopic Cytology*, 19: 375-385, 1987
16. **Muresan, V.** Use of Hydrazide-modified Beads for Large-scale Production of Plasmalemmal Components from Cultured or Dissociated Animal Cells. Proc. 4th European Congress on Biotechnology 1987. Vol. 3, O.M.Neijsel, R.R. van der Meer,

- K.Ch.A.M. Luyben, eds., Elsevier Science Publishers B.V., Amsterdam, pp. 572-575, 1987
17. **Muresan, V.** Differential Affinity Competition: A New Technique for In Situ Characterization of Glycoconjugates. In: Lectins. Biology, Biochemistry, Clinical Biochemistry, Vol. 6., Sigma Chemical Co., St. Louis, Missouri, pp. 529-534, 1988
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33. Muresan, Z., and **Muresan, V.** Brainstem Neurons Are Initiators of Neuritic Plaques. *SWAN Alzheimer Knowledge Base*. Alzheimer Research Forum. December 16, 2008
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38. Villegas, C., **Muresan, V.**, and Ladescu Muresan, Z. Dual-tagged Amyloid- β Precursor Protein Reveals Distinct Transport Pathways of its N- and C-terminal Fragments. *Human Molecular Genetics* 23: 1631-1643, 2014
39. **Muresan, V.**, and Ladescu Muresan, Z. Shared Molecular Mechanisms in Alzheimer's Disease and Amyotrophic Lateral Sclerosis: Neurofilament-dependent Transport of sAPP, FUS, TDP-43, and SOD1, with Endoplasmic Reticulum-like Tubules. *Neurodegenerative Diseases* 16: 55-61, 2016. PMID: PMC4681536.

Books, Monographs and Chapters

1. Jamieson J.D., **Muresan V.**, Ingber D.E., Iwanij V., Sarras M.P. Jr., Maylie-Pfenninger M-F. Differentiation of Plasmalemmal Saccharides in Embryonic Pancreatic Cells. In: Ribet A, Pradayrol L, Susini C, eds. *Biology of Normal and Cancerous Exocrine Pancreatic Cells*. Amsterdam: Elsevier/North Holland; 199-206, 1980
 2. Muresan, Z., Dutu, R., Voiculescu, N., and **Muresan, V.** Hydrazidated Histochemical Markers - Alternatives to Lectins for the Detection of Sialic Acid in Neoplastic Tissues. In: *Lectins, Biology, Biochemistry, Clinical Biochemistry*, Vol. 5, T.C. Bog-Hansen, E, van Driessche eds., Walter de Gruyter & Co., Berlin, New York, pp. 659-665, 1986
- B. Patents Held
None
- C. Other Articles (Reviews, Editorials, etc.) In Journals; Chapters; Books; other Professional Communications

Review Articles (references 2-5 are invited articles)

1. **Muresan, V.** Interaction of Cytochemical Probes with the Cell Surface. *Studia Biophysica*, 130: 113-116, 1989
2. **Muresan, V.** One axon, many kinesins: What's the logic? *Journal of Neurocytology* 29: 799-818, 2000
3. **Muresan, V.,** and Muresan, Z. Is Abnormal Axonal Transport a Cause, a Contributing Factor, or a Consequence of the Neuronal Pathology in Alzheimer's Disease? *Future Neurology*, 4: 761-773, 2009
4. **Muresan, V.,** and Muresan, Z. Unconventional functions of microtubule motors. *Archives of Biochemistry and Biophysics*, 520: 17-29, 2012
5. **Muresan, V.,** and Ladescu Muresan, Z. Amyloid- β Precursor Protein: Multiple Fragments, Numerous Transport Routes and Mechanisms. *Experimental Cell Research*, 334: 45-53, 2015

Commentaries

Comments at Alzheimer Research Forum (<http://www.alzforum.org/pap/comsearch.asp>)

1. **Muresan V.** on LIVE DISCUSSION: APP Family: Clues to Function in Health and AD. 11 Oct 2007.
2. Muresan Z, **Muresan V.** on NEWS: San Diego: Oligomers Live Up to Bad Reputation, Part 1. 20 Dec 2007.
3. Muresan Z, **Muresan V.** on NEWS: New Role for p25/Cdk5 in Regulation of BACE Expression. 1 Apr 2008.
4. Muresan Z, **Muresan V.** on NEWS: Neuron Loss in AD Mouse—Yes, But Not the Cholinergic Kind. 29 Dec 2008.
5. Muresan Z, **Muresan V.** on NEWS: Divorce Protein Style—APP Fragments Go Their Own Way in Cells. 9 Apr 2009.
6. Muresan Z, **Muresan V.** on NEWS: Huntingtin—Putting the Boot on Axonal Transport. 14 Jul 2009.
7. Muresan Z, **Muresan V.** on NEWS: A β the Bad Apple? Seeding and Propagating Amyloidosis. 5 Aug 2009.
8. Muresan Z, **Muresan V.** on PAPER: Perlson E. et al., 2009. 25 Aug 2009.
9. Muresan Z, **Muresan V.** on NEWS: Reelin, A β , α 7 Play Yin and Yang Around NMDA Receptors. 11 Sep 2009.
10. Muresan Z, **Muresan V.** on PAPER: Szodorai A. et al., 2009. 20 Nov 2009.
11. Muresan Z, **Muresan V.** on PAPER: Rohe M. et al., 2009. 23 Dec 2009.
12. Muresan Z, **Muresan V.** on NEWS: APP in Pieces: β CTF implicated in Endosome Dysfunction. 26 Jan 2010.
13. Muresan Z, **Muresan V.** on NEWS: Inside Out—Plaques May Have Intracellular Origin. 28 Jan 2010.
14. Muresan Z, **Muresan V.** on PAPER: Decker H. et al., 2010. 25 Jul 2010.
15. Muresan Z, **Muresan V.** on NEWS: Lilly Halts IDENTITY Trials as Patients Worsen on Secretase Inhibitor. 22 Sep 2010.
16. Muresan Z, **Muresan V.** on PAPER: Li H. et al., 2010. 27 Sep 2010.
17. Muresan Z, **Muresan V.** on NEWS: Insidious Spread of A β : More Support for Synaptic Transmission. 10 Nov 2010.
18. Muresan Z, **Muresan V.** on PAPER: Herrup K. et al., 2010. 14 Jan 2011.

19. Muresan Z, **Muresan V.** on PAPER: Tampellini D. et al., 2010. 26 Jan 2011.
20. Muresan Z, **Muresan V.** on PAPER: Encalada SE. et al., 2011. 2 Mar 2011.
21. Muresan Z, **Muresan V.** on PAPER: Cheng SB. et al., 2011. 21 Apr 2011.
22. Muresan Z, **Muresan V.** on PAPER: Braak H. et al., 2011. 4 May 2011.
23. Muresan Z, **Muresan V.** on PAPER: Bero AW. et al., 2011. 12 May 2011.
24. Muresan Z, **Muresan V.** on PAPER: Winton MJ. et al., 2011. 13 Jun 2011.
25. Muresan Z, **Muresan V.** on PAPER: Ranganathan S. et al., 2011. 3 Aug 2011.
26. Muresan Z, **Muresan V.** on PAPER: Matrone C. et al., 2011. 3 Oct 2011.
27. Muresan Z, **Muresan V.** on PAPER: Tampellini D. et al., 2011. 23 Dec 2011.
28. Muresan Z, **Muresan V.** on PAPER: Marinkovic P. et al., 2012. 2 Mar 2012.
29. Muresan Z, **Muresan V.**, Villegas C. on NEWS: Coming Into Vogue? Retromer in APP Processing, AD Pathogenesis. 12 Jul 2012.
30. Muresan Z, **Muresan V.** on PAPER: Yoon SO. et al., 2012. 14 Sep 2012.
31. Muresan Z, **Muresan V.** on PAPER: Kondo, T. et al., 2013. 07 Mar 2013.
32. Muresan Z, **Muresan V.** on PAPER: Bai, B. et al., 2013. 26 Sep 2013.
33. Muresan Z, **Muresan V.** on PAPER: Das, U. et al., 2013. 10 Oct 2013.
34. Muresan Z, **Muresan V.** on PAPER: Vagnoni, A. et al., 2013. 20 Nov 2013.
35. Ladescu Muresan Z, **Muresan V.** on PAPER: Braak & Del Tredici, 2013. 02 Feb 2015.
36. **Muresan V.**, Ladescu Muresan Z. on Mistakes Prompt Retraction of Controversial Paper, and Publication Ban. 11 Mar 2015.
37. **Muresan V.**, Ladescu Muresan Z. on PAPER: Xu et al., 2015. 08 Feb 2016
38. **Muresan V.**, Ladescu Muresan Z. on NEWS: Close Encounters: A New Look at Where APP and BACE1 Meet. 16 Feb 2016.
39. **Muresan V.**, Ladescu Muresan Z. on Paper: Sharoar et al., 2015. 01 Apr 2016.
40. **Muresan V.** on Paper: Zhang et al., 2020. 24 Jan 2020. My comments have also been included in the following News Story at the AlzForum: "With a Shot of Adrenaline, Amyloid- β Sparks Tau Cascade".

- D. Abstracts
See Presentations (all Abstracts were presented at various meetings as talks or posters)
- E. Reports None

PRESENTATIONS:

- A. Scientific (*Basic Science*)
Meeting Presentations (Posters and Talks)

Between 1980 and 2001, I have presented over 80 posters/talks at various scientific meetings.

Local Meeting Talks (2002-present)

1. Cleveland Clinic Foundation-Case Western Reserve University Joint Cell Biology Retreat, Sawmill Creek Resort, April 29-30, 2002
Title: "APP, Microtubule Motors, and Signaling to the Nucleus"
2. Program in Cell Biology Seminar, Case Western Reserve University, May 2, 2002
Title: "Interaction of Microtubule Motors with Vesicular Cargo"
3. Data on the Table Seminar, Case Western Reserve University, September 10, 2002
Title: "Traveling with APP on a Small Axonal Vesicle"
4. Program in Cell Biology Seminar, Case Western Reserve University, May 1, 2003
Title: "Axonal Transport of Amyloid Precursor Protein: Complications Down the Road"
5. Fourth Retreat of the Department of Physiology and Biophysics, Case Western Reserve University, Salt Fork Resort and Conference Center, October 9-11, 2003
Title: "Presentation of Laboratory Projects"
6. Data on the Table Seminar, Case Western Reserve University, November 4, 2003
Title: "Amyloid Precursor Protein and Pre-mRNA Splicing (or What APP Has in Common with the SMN protein)"
7. Data on the Table Seminar, Case Western Reserve University, May 4, 2004
Title: "Presenilin Function"
8. Program in Cell Biology Seminar, Case Western Reserve University, May 13, 2004
Title: "The mysterious life of intracellular amyloid-beta"
9. Cleveland Clinic Foundation-Case Western Reserve University Joint Cell Biology Retreat, Sawmill Creek Resort, Huron, Ohio, May 17-18, 2004
Title: "Why we still don't know what APP does..."
10. Nanoscience Exchange Meeting, Case School of Medicine, June 21, 2004
Title: "Molecular Mechanisms of Intracellular Traffic along Microtubules"
11. Fifth Retreat of the Department of Physiology and Biophysics, Case Western Reserve University, Salt Fork Resort and Conference Center, October 6-9, 2005
Title: "Molecular Mechanisms of Neurodegenerative Diseases"
12. UMDNJ – New Jersey Medical School, Department of Pharmacology and Physiology, Newark, March 14, 2008. Science in Digestion series.
Title: "Vesicle Transport without Vesicle Motility: It Does Occur, but Can We Prove It?"
13. UMDNJ – New Jersey Medical School, Department of Pharmacology and Physiology, Newark, November 5, 2010. Science in Digestion series.
Title: "Transport of APP, a Disease (Ir)relevant Protein"
14. UMDNJ – New Jersey Medical School, Department of Pharmacology and Physiology, Newark, June 07, 2013. Science in Digestion series.
Title: "A Persistent Stress Response to Impeded Axonal Transport Is Probable Cause of Late Onset Alzheimer's Disease"
15. Rutgers – New Jersey Medical School, Department of Pharmacology and Physiology, Newark, December 12, 2014. Science in Digestion series.
Title: "Membrane Transport in Neurons Revisited"
16. 2nd Annual Newark NeuroTalks 2014-2015, Rutgers University, Newark
Title: Seeding Neuritic Plaques from the Distance: Could Locus Coeruleus Neurons Initiate the Pathology in Alzheimer's Disease?
17. Student/Post-doc-Faculty Q&A Forum at the First Annual Brain Health Institute Symposium on October 26, 2015.
Title: Neuronal Polarity and mechanisms of targeted intraneuronal transport.

National Meeting Talks (2002-present)

Note: Since the COVID-19 pandemic began we did not participate in virtual meetings. However, research in the lab continued throughout this period. We are prepared to submit Abstracts on our new research, and will resume submission of Abstracts of our work (to be considered for talks or poster presentations at various meetings) once in-person meetings resume.

1. Muresan, Z. and **Muresan, V.** Are Neuritic Plaques Seeded by Oligomeric Amyloid- β that Accumulates in Cortical and Hippocampal Projections of Brainstem Neurons? Annual Meeting of the Society for Neuroscience, Atlanta, GA., October 14-18, 2006.
Session Title: A β Assembly and Deposition
Chairperson: David B. Teplow (USA)
2. **Muresan, V.**, Varvel, N.H., Lamb, B.T., and Muresan, Z. The cleavage products of amyloid- β precursor protein are sorted to distinct carrier vesicles that are independently transported within neurites. Annual Meeting of the Society for Neuroscience, Washington, D.C., November 15-19, 2008.
Session Title: Physiological Function of APP and APP Metabolites I
Chairperson: Hui Zheng (Baylor, Huston, TX)
3. Muresan, Z., and **Muresan, V.** The phosphorylated, carboxy-terminal fragments of amyloid- β precursor protein are targeted to multiple intraneuronal locations by destination-specific molecular motors and adaptor proteins. Annual Meeting of the Society for Neuroscience, Chicago, October 17 - 21, 2009.
Session Title: APP Interactions and Metabolism
Chairperson: Sam Gandy (Mt. Sinai, New York, NY)
4. **Muresan, V.**, Lamb, B.T., and Muresan, Z. DISC1 Is Required for the Formation of Intracellular A β Oligomers, Suggesting a Link Between Schizophrenia and Alzheimer's Disease. Annual Meeting of the Society for Neuroscience, San Diego, November 13 - 17, 2010.
Session Title: Alzheimer's Disease: Abeta Assembly In Vitro and In Vivo
Chairperson: Charles G. Glabe, Univ California Irvine, CA
5. **Muresan, V.**, and Muresan, Z. Alzheimer's Amyloid- β Precursor Protein (APP) Is a Sensor that Detects Variations in Kinesin-1 Levels, and Signals to the Nucleus Abnormalities in Axonal Transport. Annual Meeting of the Society for Neuroscience, San Diego, November 13 - 17, 2010.
Session Title: APP Actions on Nerve Cells Development and Survival
Chairperson: Ottavio A. Arancio, Columbia Univ, New York, NY
6. **Muresan, V.**, and Muresan, Z. Locus Coeruleus Neurons Are Highly Vulnerable to Stress, and Initiate Alzheimer's Disease Pathology in Remote Regions of the Brain. Annual Meeting of the Society for Neuroscience, Washington, D.C., November 12-16, 2011.
Session Title: APP Actions on Nerve Cells Development and Survival
Chairperson: Dora M Kovacs, Massachusetts General Hospital / Harvard Medical School
7. **Muresan, V.**, and Muresan, Z. Kinesin-1-mediated Phosphorylation of Cargo Proteins. Special Interest Subgroup at the 51st Annual Meeting of the American Society for Cell Biology, Denver, December 3-7, 2011.
Session Title: Nonconventional Functions of Molecular Motors
Chairperson: Virgil Muresan, UMDNJ, New Jersey Medical School
8. Villegas, C., **Muresan, V.**, and Muresan, Z. N-terminal Fragments of Amyloid- β Precursor Protein Are Trafficked in Association with Short Segments of Microtubules and Neurofilaments. Annual Meeting of the Society for Neuroscience, New Orleans, October 13-17, 2012.
Session Title: Physiological Functions and Processing of APP and APP Metabolites II
9. **Muresan, V.**, and Ladescu Muresan, Z. Convergent pathogenic mechanisms of Alzheimer's disease and ALS: Peripherin-dependent transport of sAPP, likely with neurofilament-associated endoplasmic reticulum tubules. Annual Meeting of the Society for Neuroscience, Washington, D.C., November 15-19, 2014.
Session Title: APP Functions and Processing Pathways
Chairperson: Stephen Pasternak
10. **Muresan, V.**, and Ladescu Muresan, Z. The neuronal tubular endoplasmic reticulum is an organelle specialized in long-distance cargo transport. Special Interest Subgroup at the 2014 Annual Meeting of the American Society for Cell Biology/International Federation for Cell Biology, Philadelphia, December 6-10, 2014.
Session Title: Nonconventional Functions of Molecular Motors
Chairperson: Virgil Muresan
11. **Muresan, V.**, and Ladescu Muresan, Z. A neuronal cell culture model of Alzheimer's disease with amyloid- β (A β) and Tau pathology, in the absence of FAD mutations. Annual Meeting of the Society for Neuroscience, San Diego, November 12 - 16, 2016.
Session Title: Alzheimer's Disease: Animal Models
Chairpersons: Veronica Galvan, Paul Mouton

12. **Muresan, V.**, and Ladescu Muresan, Z. Inhibition of β -secretase activity prevents accumulation of amyloid- β (A β), but does not block Tau phosphorylation and aggregation in a neuronal cell culture model of sporadic Alzheimer's disease. Annual Meeting of the Society for Neuroscience, Washington, D.C., November 11-15, 2017.
Session Title: Preclinical Therapeutic Strategies for Neurodegenerative Disease
Chairpersons: J. E. Schweig, L. B. Shelton

International Meeting Talks (outside USA) (2002-present)

1. Muresan, Z., and **Muresan, V.** Seeding Neuritic Plaques from the Distance: A Possible Role for Brainstem Neurons in the Development of Alzheimer's Disease Pathology. 8th International Conference on Alzheimer's Disease / Parkinson's Disease, Salzburg, Austria, March 14-18, 2007.
Session Title: Hypotheses in the Etiology of Alzheimer's Disease & Parkinson's Disease
Chairpersons: Luc Buee (France) and Olivier Rascol (France; replacing C. Warren Olanow, USA)
2. **Muresan, V.**, and Muresan, Z. A Persistent Stress Response to Impeded Axonal Transport Leads to Accumulation of Amyloid- β in the Endoplasmic Reticulum, and Is Probable Cause of Sporadic Alzheimer's Disease. 10th International Conference on Alzheimer's Disease / Parkinson's Disease, Barcelona, Spain, March 9-13, 2011.
Session Title: APP Processing
Chairpersons: L. Rajendran (Switzerland) and I. Bezprozvanny (USA; replacing M. Takeda, Japan)
3. **Muresan, V.**, Villegas, C., and Muresan, Z. Functional Interaction Between Amyloid- β Precursor Protein and Peripherin Neurofilaments: A Shared Pathway Leading to Alzheimer's Disease and Amyotrophic Lateral Sclerosis? 11th International Conference on Alzheimer's Disease / Parkinson's Disease, Florence, Italy, March 6-10, 2013.
Symposium Title: Mechanisms of Neurodegeneration 2
Chairpersons: L. Rajendran (Switzerland) and N. Robakis (USA)
4. **Muresan, V.**, and Ladescu Muresan, Z. Shared Molecular Mechanisms in Alzheimer's Disease And ALS: Neurofilament-Dependent Transport of sAPP, FUS, And TDP-43 With Endoplasmic Reticulum Tubules. 12th International Conference on Alzheimer's Disease / Parkinson's Disease, Nice, France, March 18-22, 2015.
Session Title: Disease Mechanisms
Chairpersons: Frank LaFerla (USA) and Christian Haass (Germany)
5. **Muresan, V.**, and Ladescu Muresan, Z. A neuronal culture model for sporadic Alzheimer's disease with Amyloid- β (A β) and Tau pathology, in the absence of FAD mutations. 13th International Conference on Alzheimer's Disease / Parkinson's Disease, Vienna, Austria, March 29-April 2, 2017.
Session Title: Disease Mechanisms in Cellular and Animal Models
Chairpersons: Bart De Strooper (Belgium) and Frank LaFerla (USA)

Meeting Posters (2002-present)

1. Muresan, Z., Lee, M, Tsai, L., and **Muresan, V.** Independent and Interdependent Transport of β -Amyloid Precursor Protein (APP) and c-Jun NH₂-terminal Kinase (JNK)-Interacting Protein-1 (JIP-1) by Kinesin-I. Meeting of the American Association for Cell Biology, San Francisco, December 14-18, 2002.
2. Muresan, Z. and **Muresan, V.** Increased Deposition of Amyloid β A β in a Subpopulation of Catecholaminergic CAD CNS Neuronal Cells. Meeting of the American Association for Cell Biology, San Francisco, December 14-18, 2002.
3. **Muresan, V.**, Stankewich, M. C., Steffen, W., and Morrow, J. S. Anionic Beads Recruit the Cytoplasmic Dynein Machinery Indistinguishably from Endogenous Transport Vesicles. Meeting of the American Association for Cell Biology, San Francisco, December 14-18, 2002.
4. **Muresan, V.** Cytoplasmic Dynein Induces Formation of Tubules from Small Liposomes Containing Acidic Phospholipids. Meeting of the American Association for Cell Biology, San Francisco, December 14-18, 2002.
5. Muresan, Z. and **Muresan, V.** Coordinated Transport of Phosphorylated β -Amyloid Precursor Protein and JNK Interacting Protein 1 by Kinesin-I. Fourth Retreat of the Department of Physiology and Biophysics, CWRU, Salt Fork Resort and Conference Center, October 9-11, 2003.

6. Muresan, Z. and **Muresan, V.** A Phosphorylated Form of β -Amyloid Precursor Protein Localizes to the Splicing Factor Compartment. 18th Annual Meeting of the Ohio Physiological Society, Cleveland, OH, December 8, 2003.
7. Muresan, Z. and **Muresan, V.** The c-Jun NH₂-terminal Kinase Scaffolding Proteins, JIP1 and JIP3 Participate in β -Amyloid Precursor Protein Phosphorylation and Its Transport by Kinesin-I. Meeting of the American Association for Cell Biology, San Francisco, December 13-17, 2003.
8. Muresan, Z. and **Muresan, V.** A Soluble Polypeptide from the Kinesin-I Binding Region of β -Amyloid Precursor Protein (APP) Becomes Localized to Neurite Terminals. Meeting of the American Association for Cell Biology, San Francisco, December 13-17, 2003.
9. Muresan, Z. and **Muresan, V.** A Phosphorylated, Carboxy-terminal Fragment of β -Amyloid Precursor Protein Localizes to the Splicing Factor Compartment. Second Annual Research ShowCASE, April 2, 2004.
10. Muresan, Z. and **Muresan, V.** Coordinated Transport of Phosphorylated β -Amyloid Precursor Protein and JNK Interacting Protein 1 by Kinesin-I. Second Annual Research ShowCASE, April 2, 2004.
11. Muresan, Z. and **Muresan, V.** A Phosphorylated, Carboxy-terminal Fragment of β -Amyloid Precursor Protein Localizes to the Splicing Factor Compartment. 2004 Cleveland Cell Biology Symposium: "Regulation of Nuclear Function", April 22-23, 2004.
12. Muresan, Z. and **Muresan, V.** β -Amyloid Precursor Protein (APP) and the Scaffolding Protein Fe65 Regulate Each Other's Transport and Localization. Meeting of the American Association for Cell Biology, Washington, D.C., December 4-8, 2004.
13. Muresan, Z. and **Muresan, V.** Phosphorylated, Carboxy-terminal Fragments of β -Amyloid Precursor Protein and Amyloid Precursor-like Protein 2 Localize to the Splicing Factor Compartment. Meeting of the American Association for Cell Biology, Washington, D.C., December 4-8, 2004.
14. Beach, J. and **Muresan, V.** The role of lissencephaly-relevant gene products, Lis1, Nudel and 14-3-3epsilon in dynein-driven vesicular transport. Third Annual Research ShowCASE, April 6-7, 2005.
15. Muresan, Z. and **Muresan, V.** JNK-interacting Protein-3 (JIP-3) and Kinesin-1 Control a Signaling Pathway that Leads to Amyloid- β Precursor Protein (APP) Phosphorylation and Transport, and to Neuronal Differentiation. Meeting of the American Association for Cell Biology, San Francisco, December 10-14, 2005.
16. Muresan, Z. and **Muresan, V.** Kinesin-1 Transports Phosphorylated and Non-phosphorylated Amyloid- β Precursor Protein (APP) by Distinct Pathways. Meeting of the American Association for Cell Biology, San Francisco, December 10-14, 2005.
17. Muresan, Z. and **Muresan, V.** Axonal Transport by Kinesin-1 is Blocked by Stress, but not by Neuritic Deposits of Amyloid- β . Annual Meeting of the American Association for Cell Biology, San Diego, CA., December 9-13, 2006.
18. Muresan, Z. and **Muresan, V.** Seeding of Neuritic Plaques by Oligomeric Amyloid- β that Accumulates in Cortical and Hippocampal Projections of Brainstem Neurons: A Hypothesis. Annual Meeting of the American Association for Cell Biology, San Diego, CA., December 9-13, 2006.
19. Muresan, Z., and **Muresan, V.** Differentiation, Mitosis, Stress, and Degeneration Activate Distinct Phosphorylation Pathways Targeting the Amyloid- β Precursor Protein. Keystone Symposium on Neurodegeneration, Sagebrush Inn and Conference center, Taos, New Mexico, January 16-21, 2007.
20. Muresan, Z., and **Muresan, V.** The Amyloid- β Precursor Protein is Phosphorylated via at Least Six Distinct Pathways during Differentiation, Mitosis, Stress, and Degeneration. Meeting of the American Association for Cell Biology, Washington, D.C., December 1-5, 2007.
21. Muresan, Z., and **Muresan, V.** The Amyloid- β Precursor Protein Is Transported into Axons as Cleaved Polypeptides Rather than Full-Length Protein. Meeting of the American Association for Cell Biology, Washington, D.C., December 1-5, 2007.
22. Muresan, Z., and **Muresan, V.** Reconstitution of Complex, ER-like, Nanotubular Networks, and of Small, Tubulo-Vesicular Transport Entities by Interactions of Cytoplasmic Dynein and Spectrin with Liposomes. Meeting of the American Association for Cell Biology, San Francisco, December 13-17, 2008.
23. Muresan, Z., and **Muresan, V.** Kinesin-1 Is a Signaling Protein that Recruits Active Kinase Complexes and Directly Participates in Substrate Phosphorylation. Meeting of the American Association for Cell Biology, San Francisco, December 13-17, 2008.
24. Muresan, Z., and **Muresan, V.** Transport of Proteolytically Processed Amyloid- β Precursor Protein Uses Kinesin and Myosin Motors and a Plethora of Scaffolding Proteins. Meeting of the American Association for Cell Biology, San Francisco, December 13-17, 2008.

25. Muresan, Z., and **Muresan, V.** In Vitro Reconstitution of Dynamic, ER-like, Nanotubular Networks, and of Small, Tubulo-Vesicular Transport Entities by Interactions of Cytoplasmic Dynein and Spectrin with Liposomes. 53rd Biophysical Society Annual Meeting, Boston, February 28-March 4, 2009.
26. **Muresan, V.**, and Muresan, Z. Transport of Proteolytically Processed Amyloid- β Precursor Protein Uses Kinesin and Myosin Motors and a Plethora of Scaffolding Proteins. 9th International Conference on Alzheimer's Disease / Parkinson's Disease, Prague, Czech Republic, March 11-15, 2009.
27. **Muresan, V.**, and Muresan, Z. The Lissencephaly Gene Product, Lis1 Cooperates with Cytoplasmic Dynein and Spectrin in the Maintenance of the Endoplasmic Reticulum (ER) and the ER-Golgi Intermediate Compartment. Annual Meeting of the Society for Neuroscience, Chicago, October 17 - 21, 2009.
28. Muresan, Z., and **Muresan, V.** Morphogenesis of the Endoplasmic Reticulum (ER) and the ER-Golgi Intermediate Compartment (ERGIC): Requirement for Dynein-Dynactin, Lis1, and Spectrin, but not for Membrane Proteins. 49th Annual Meeting of the American Association for Cell Biology, San Diego, December 5-9, 2009.
29. Muresan Z., and **Muresan V.** Different mechanisms lead to the formation of neuritic and cell body amyloid- β accumulations. Alzheimer's Association International Conference on Alzheimer's Disease 2010, Honolulu, Hawaii, July 10-15, 2010.
30. **Muresan, V.**, and Muresan, Z. Disrupted-in-Schizophrenia 1 (DISC1) Facilitates the Intracellular Generation and Aggregation of Amyloid- β (A β): A Link between Schizophrenia and Alzheimer's Disease. 50th Annual Meeting of the American Association for Cell Biology, Philadelphia, December 11-15, 2010.
31. **Muresan, V.**, and Muresan, Z. Alzheimer's Amyloid- β Precursor Protein (APP) Triggers an Endoplasmic Reticulum (ER) Stress Response to Impeded Axonal Transport, by Sensing Variations in Somatic Levels of Kinesin-1. 50th Annual Meeting of the American Association for Cell Biology, Philadelphia, December 11-15, 2010.
32. **Muresan, V.**, and Muresan, Z. DISC1 Controls Production of Amyloid- β (A β) by Regulating Intracellular Trafficking of the A β Precursor Protein (APP) along the Secretory, Endocytic, and Degradative Route. Annual Meeting of the Society for Neuroscience, Washington, D.C., November 12-16, 2011.
33. **Muresan, V.**, and Muresan, Z. Vesicle Transport without Vesicle Motility: Firmly Attached Vesicles Take a Ride on Moving Microtubules. 51st Annual Meeting of the American Society for Cell Biology, Denver, December 3-7, 2011.
34. **Muresan, V.**, and Muresan, Z. The Schizophrenia-Related Protein, DISC1, Controls Production of Amyloid- β (A β), a Pathogenic Peptide Implicated in Alzheimer's Disease (AD), by Regulating Trafficking of A β Precursor Protein (APP) along Secretory, Endocytic, and Degradative Routes. 51st Annual Meeting of the American Society for Cell Biology, Denver, December 3-7, 2011.
35. **Muresan, V.**, and Muresan, Z. The functional interaction between Lis1, DISC1, and APP suggests a novel pathway leading to Alzheimer's disease. Annual Meeting of the Society for Neuroscience, New Orleans, October 13-17, 2012.
36. Villegas, C., **Muresan, V.**, and Muresan, Z. N-terminal Fragments of Amyloid- β Precursor Protein are Trafficked in Association with Short Peripherin-containing Neurofilaments. Annual Meeting of the American Society for Cell Biology, San Francisco, December 15-19, 2012.
37. **Muresan, V.**, and Muresan, Z. Kinesin-1 mediates phosphorylation and processing of Amyloid- β Precursor Protein independently of transport: Relevance for late onset Alzheimer's disease. Annual Meeting of the Society for Neuroscience, San Diego, November 9-13, 2013.
38. **Muresan, V.**, and Muresan, Z. The tubular endoplasmic reticulum associates with neurofilaments - not microtubules - for translocation into neuronal processes. Annual Meeting of the American Society for Cell Biology, New Orleans, December 14-18, 2013.
39. **Muresan, V.**, and Ladescu Muresan, Z. Defective axonal transport increases A β production downstream from kinesin-1-assisted phosphorylation of amyloid- β precursor protein by JNK. Annual Meeting of the American Society for Cell Biology/International Federation for Cell Biology, Philadelphia, December 6-10, 2014.
40. **Muresan, V.**, and Ladescu Muresan, Z. Inflammation-Induced Phosphorylation and Cleavage of Neuronal APP: A Molecular Mechanism in the Pathogenesis of Late Onset Alzheimer's Disease. Annual Meeting of the Society for Neuroscience, Chicago, October 17-21, 2015.
41. **Muresan, V.**, and Ladescu Muresan, Z. Neurofilament-dependent, long-distance transport of cargo, using the tubular endoplasmic reticulum as vehicle: Relevance for amyotrophic lateral sclerosis (ALS) and Alzheimer's disease. Annual Meeting of the American Society for Cell Biology, San Diego, December 12-16, 2015.

42. **Muresan, V.**, and Ladescu Muresan, Z. The amyloid- β precursor protein, a protein relevant to the pathology of Alzheimer's disease, is a permanent resident of the tubular endoplasmic reticulum. Annual Meeting of the American Society for Cell Biology/EMBO Meeting, Philadelphia, December 2-6, 2017.
43. **Muresan, V.**, and Ladescu Muresan, Z. The Amyloid- β Precursor Protein is a ubiquitous, permanent resident of a specialized tubular endoplasmic reticulum compartment. Annual Meeting of the Society for Neuroscience, San Diego, November 3-7, 2018.
44. **Muresan, V.**, and Ladescu Muresan, Z. Accumulation of oligomeric A β within neurons, and Tau phosphorylation, are part of a homeostatic mechanism aimed at restoring a temporarily impeded axonal transport. Annual Meeting of the Society for Neuroscience, Chicago, October 19-23, 2019.

Invited Seminar Talks (2002-present)

1. Department of Pathology, Case Western Reserve University, November 11, 2002
Title: "Role of Cdk5 and JIP-1 in Regulating Axonal Transport of Amyloid- β Precursor Protein"
2. Department of Cell Biology, Cleveland Clinic Foundation, February 14, 2003
Title: "Molecular Motors in Amyloid- β Precursor Protein Trafficking and Signaling"
3. Department of Cell Biology, Neurobiology, and Anatomy, Medical College of Wisconsin, March 27, 2003
Title: "Regulation of Axonal Transport by Phosphorylation: New Roles for APP, Cdk5, and JNK"
4. Rammelkamp Center for Education and Research at MetroHealth Medical Center, March 30, 2004
Title: "Traveling with the Amyloid- β Precursor Protein In and Out of the Nucleus"
5. The College of Wooster, OH, October 21, 2004
Title: "How Molecular Motors Organize the Intracellular Space"
6. Oklahoma Medical Research Foundation, April 7, 2005
Title: "The Complicated Story of APP Transport. A Tale of Tails"
7. Department of Neuroscience, Case Western Reserve University, January 19, 2006
Title: "The Difficult Task of Transporting the Amyloid- β Precursor Protein into Axons"
8. Baylor College of Medicine, Houston, Biology of Aging Seminars, February 15, 2006
Title: "Novel Signaling Pathways that Regulate Transport and Metabolism of the Amyloid- β Precursor Protein"
9. Rosalind Franklin University – The Chicago Medical School, Department of Cellular and Molecular Pharmacology, Chicago, March 7, 2006
Title: "Novel Signaling Pathways that Regulate Transport and Metabolism of the Amyloid- β Precursor Protein"
10. UMDNJ – New Jersey Medical School, Department of Pharmacology and Physiology, Newark, March 22, 2006
Title: "Novel Signaling Pathways that Regulate Transport and Metabolism of the Amyloid- β Precursor Protein"
11. Rutgers University, Department of Cell Biology and Neuroscience, New Brunswick, NJ, October 10, 2008
Title: "Axonal Transport of the Amyloid- β Precursor Protein, Piece by Piece: Relevance for the Function and Dysfunction of APP"
12. UMDNJ – New Jersey Medical School, Department of Biochemistry & Molecular Biology, Newark, NJ, November 7, 2008
Title: "Axonal Transport of the Amyloid- β Precursor Protein ...Piece by Piece. Relevance for the Function and Dysfunction of APP"
13. Nathan S. Kline Institute for Psychiatric Research, Center for Dementia Research, Orangeburg, NY, September 30, 2010.
Title: "Could a Normal – but Persistent – Stress Response to Impeded Axonal Transport Lead to Alzheimer's Disease?"
14. Simon Fraser University, Canada, Department of Biological Sciences, October 24, 2013
Title: "A Central Role for the Endoplasmic Reticulum in the Pathogenesis of Alzheimer's Disease"
15. Public Health Research Institute Center, Rutgers, New Jersey Medical School, January 13, 2015
Title: "A Beneficial Mechanism of Neuronal Homeostasis Triggers Alzheimer's Disease at Old Age"
16. University of Connecticut - UConn Health, Department of Cell Biology, April 7, 2015
Title: " Long-distance Transport in Neurons Revisited: An Unexplored Function of the Endoplasmic Reticulum"

Workshops (2002-present)

1. High Q Foundation Workshop: Cytoskeleton and Intracellular Trafficking in the Pathogenesis of HD.
New York, February 28-March 1, 2007
2. RUN-RBHS Cross Collaborations-Neuroscience Retreat, Newark, May 26, 2015
 - B. Professional (*Clinical*): None