



**MICHAEL BUKRINSKY**

**CANDIDATE STATEMENT**

I am Professor of Microbiology, Immunology and Tropical Medicine at the George Washington University School of Medicine and Health Sciences. After immigrating to US from Russia in 1990, I was lucky to get outstanding mentors, Dr. Mario Stevenson and then Dr. Anthony Cerami, who became my dear friends and helped me throughout my career. My research interests lie in the field of virus-host interactions, with a focus on HIV. During my long academic career, I published over 170 peer-reviewed articles, mentored over 30 undergraduate, graduate and post-doctoral students, served on Editorial Boards of multiple journals, and served on many NIH Study Sections, including as a Chair. I also chaired the Department of Microbiology and Immunology, and directed the Developmental Core at the DC CFAR. I would like to apply my extensive expertise to ASM COMS as an At-Large Councilor. I believe my experience qualifies me as a person capable of defining the most promising scientific directions requiring ASM support, as well as advising ASM on other scientific and mentoring issues.

I have not had any formal position at ASM before, due to multiple other commitments, so I was getting the benefits of membership without giving back. Lately, my administrative responsibilities at GWU have been reduced and I have more time for activities I really enjoy – science and interaction with collaborators. I believe serving at ASM Committee would allow me to pay back my debt to ASM, while engaging in science-related activities I love.

## **CURRICULUM VITAE**

**MICHAEL I. BUKRINSKY, M.D., Ph.D., FAHA**

**Professor of Microbiology, Immunology and Tropical Medicine**

**Professor of Biochemistry and Molecular Medicine**

**CITIZENSHIP**                      USA

**ADDRESS:**                      Department of Microbiology & Tropical Medicine  
The George Washington University  
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2300 I St., N.W.  
Washington, DC 20037  
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### **EDUCATION:**

1972 -1978                      2nd Moscow Medical Institute, Moscow, USSR  
Graduate student in Biochemistry  
M.D. granted July, 1978

1980-1984                      Laboratory of Nucleic Acids Biosynthesis  
Institute of Molecular Biology, USSR Academy of Sciences  
Ph.D. granted in December, 1984  
Ph.D. thesis: DNA sequences of the mouse genome homologous to long double-stranded RNA: Structure and transcription.

**PROFESSIONAL EXPERIENCE:**

Sept. 1978-        Laboratory of Molecular Microbiology, Institute of Microbiology and  
Nov. 1980        Epidemiology, USSR Academy of Medical Sciences.  
Research Assistant

Jan. 1984-        Laboratory of Virus Physiology, D. I. Ivanovski Institute of Virology, USSR  
April 1986        Academy of Medical Sciences.  
Postdoctoral Research Associate

May 1989-        Laboratory of Virus Physiology, D. I. Ivanovski Institute of Virology, USSR  
April 1986        Academy of Medical Sciences.  
Assistant Professor

Feb. 1990-        Department of Pathology and Microbiology, University of Nebraska  
June 1991        Medical Center.  
Postdoctoral Research Associate

July 1991-        Department of Pathology and Microbiology, University of Nebraska  
July 1992        Medical Center.  
Instructor

July 1992-        Department of Pathology and Microbiology, University of Nebraska  
Oct. 1992        Medical Center.  
Assistant Professor

Nov. 1992-        The Picower Institute for Medical Research  
Aug. 1997        Associate Professor

Aug. 1997-        The Picower Institute for Medical Research  
Sep. 2001        Professor

Sep. 2001-        The George Washington University School of Medicine and Health Sciences  
present        Professor, Department of Microbiology, Immunology & Tropical Medicine

Sep. 2005-        The George Washington University School of Medicine and Health Sciences  
present        Professor of Biochemistry and Molecular Medicine

July 2011 -        Interim Chair, Department of Microbiology, Immunology and Tropical  
Oct 2013        Medicine, George Washington University School of Medicine and Health  
Sciences

July 2018 – Interim Chair, Department of Microbiology, Immunology and Tropical  
July 2019 Medicine, George Washington University School of Medicine and Health  
Sciences

**MEMBERSHIP IN SCIENTIFIC SOCIETIES:**

1993-Present American Society for Microbiology  
2005-Present American Heart Association  
1994-2008 American Association for the Advancement of Science  
1995-Present New York Academy of Sciences  
1997-2010 American Society for Biochemistry and Molecular Biology  
2001-Present International AIDS Society

**AWARDS:**

1983 Institute of Molecular Biology Award for Young Scientists  
1985 Institute of Virology Award for Young Scientists  
1987 USSR State Award for Young Scientists  
2007 GWU Distinguished Scientist Award  
2011 Oscar and Shoshana Trachtenberg Prize for GW Scholarship  
2011 Fellow of the American Heart Association

**FUNDING (direct costs per year):**

1988 - 1989 Principal Investigator, USSR Academy of Medical Sciences. "Analysis of HIV-1 gene expression," #10-15/126; \$9,000.  
1992 - 1993 Principal Investigator, Nebraska Cancer & Smoking Disease Research Program, "Early Steps in HTLV-1 Infection: New Targets for Therapy," #LB506-93-08; \$80,000.  
1992 - 1994 Principal Investigator, AmFAR, "HIV-1 Replication in Mononuclear Phagocytes *in vivo*," #001829-13-RGT; \$120,000.  
1996 - 1999 Principal Investigator, NIH, NIAID, "Mechanisms of HIV-induced dysregulation of monocytes," R01 AI 38245; \$700,000.

- 1993 - 2007 Principal Investigator, NIH, NIAID, "Role of Vpr in HIV-1 Nuclear Translocation," R01 AI 33776, \$1,250,000.
- 2001 - 2005 Principal Investigator, NIH, NIAID, "Nuclear translocation of HIV-1 genome as a drug target," R01 AI 46586, \$1,250,000.
- 2002 - 2004 Principal Investigator, NIH, NIAID, "Imaging Technology for HIV Nuclear Import Inhibitors," R21 AI 53806, \$300,000.
- 2003 - 2005 Principal Investigator, NIH, NIAID, "HIV Infection and Reverse Cholesterol Transport," R03 TW 06238, \$100,000.
- 2003 - 2005 Principal Investigator, NIH, NIAID, "CD4+ Memory T Cell Recruitment by Cyclophilin", R03 AI 057018, \$100,000.
- 2004 - 2006 Principal Investigator, NIH, NIAID, "Leukocyte recruitment by cyclophilin-CD147 interaction," R21 AI 060720, \$300,000
- 2005 - 2007 Principal Investigator, AHA, "Impairment of reverse cholesterol transport by HIV: a possible mechanism of atherosclerosis in HIV patients", 05554222U, \$120,000.
- 2005 - 2007 Principal Investigator, NIH, NIDDK, "HIV impairs reverse cholesterol transport", R21 DK072926, \$275,000.
- 2007-2009 Principal Investigator, NIH, NIAID, "Oxadaizols: Rationally designed compounds targeting HIV nuclear importation", R21 AI071837, \$275,000
- 2007-2009 Principal Investigator, AHA, "Cholesterol efflux and HIV infectivity: potent anti-viral effect of ABCA1-stimulating compounds", 0755357U, \$120,000.
- 2006-2011 Co-Investigator, NIH, NIAID, "Contribution of cyclophilins to leukocyte recruitment in lung inflammation", R01 AI067254, \$1,250,000 (PI: S. Constant).
- 2009-2011 Principal Investigator, NIH, NIAID, "Targeting HIV infectivity by stimulating cholesterol efflux", R21 AI078743, \$275,000.
- 2009-2014 Principal Investigator, NIH, NIHLB, "Mechanisms of virus-induced impairment of reverse cholesterol transport", R01 HL093818, \$1,250,000.
- 2009-2011 Principal Investigator, NIH, NIAID, "Cyclophilin-CD147 interaction in autoimmune arthritis", R56 AI081152, \$500,000.
- 2009-2011 Principal Investigator, CRDF, "Design of chimerical expression cassettes producing biologically active siRNAs targeting both the conserved regions in HIV-1 transcripts and regions in CCR5 mRNA", RUB2-2960-MO-09, \$80,000.

- 2009-2012 Principal Investigator, Department of Education, “Training leaders for 21st century biotechnology: Joint GWU-MSU Educational Program”, P116S090023, \$450,000.
- 2010-2015 Principal Investigator, NIH, NIHLB, “HIV Disease and Impairment of High Density Lipoprotein Metabolism”, R01 HL101274, \$2,500,000.
- 2010-2015 Developmental and Basic Science Core Director, NIH Program Project “The District of Columbia Developmental Center for AIDS Research”, P30 AI055019, \$3,750,000 (PI: A. Greenberg).
- 2014-2016 Principal Investigator, NIH, NIAID, “HIV-1 Nef regulates activity of the ER chaperone calnexin”, R21 AI108533, \$275,000.
- 2015-2017 Principal Investigator, NIH, NIAID, “Structural characterization of the Nef-calnexin complex”, R21 AI114471, \$275,000.
- 2016-2020 Principal Investigator, NIH, NHLBI, “Metabolic complications of HIV disease caused by Nef released from HIV-infected cells”, R01 HL131473, \$1,200,000.
- 2017-2019 Principal Investigator, AHA, “Epigenetic reprogramming in HIV-associated atherosclerosis”, 17GRNT33630163, \$154,000.
- 2017-2020 Principal Investigator, NIH, NINDS, “Nef and neuroAIDS: role of cholesterol metabolism impairment and inflammation”, R01 NS102163, \$450,000.
- 2018-2020 PD/PI (contact PI – Dr. G. Enikolopov), NIH, NIMH, “Alterations in neuronal networks induced by cART and HIV”, R21 MH118991, \$275,000.
- 2018-2022 Principal Investigator, NIH, NHLBI, “Epigenetic reprogramming in HIV-associated cardio-vascular disease”, R01 HL140977, \$2,000,000.
- 2015-2025 Director of Developmental Core (PI – Dr. Alan Greenberg). NIH, NIAID, “DC CFAR”, P30 AI117970, \$7,500,000.
- 2021-2025 Principal Investigator, NIH, NHLBI, “Lipid raft therapy – a novel therapeutic approach for HIV-associated cardiometabolic co-morbidities”, R01 HL158305, \$2,000,000.
- 2021-2026 Principal Investigator, NIH, NINDS, “Novel pathogenic mechanism of HIV-associated CNS neurological disorders”, R01 NS124477, \$2,500,000.

**ACADEMIC EXPERIENCE:**

Organizer of the courses in molecular biology of HIV and molecular virology for graduate students and post-doctoral researchers at The Picower Graduate School for Molecular Medicine, 1998-2001

Member of the Admission Committee for the Picower Institute Graduate School for Molecular Medicine (1999-2001)

Member of the GWU Institute for Biomedical Sciences (2002-present)

Adjunct Professor of Immunology and Molecular Biology, Moscow State University, Russia (2006-present)

**EDUCATIONAL EXPERIENCE:**

*Undergraduate Students*

Sareena Brown – summer 2005, R03 grant minority supplement

Trina Quabili – summer 2010, R21 grant supplement

Spiridon Vonortas – 2013 – 2014, Luther Rice Undergraduate Research Fellow 2014

Kiera Williams – summer 2015, STEP UP fellowship program

Jaden White – summer 2016, STEP UP fellowship program

Thomas Crow – 2018.

*Master of Science Students*

Mandeep Gill (GWU) – MS Degree Thesis, 2009-2010

Ruth Hunegnaw (Heidelberg University, Germany) – part of MS Degree Thesis, 2010

Yanjun Feng (GWU) - MS Degree Thesis, 2010-2011; First Prize for students' presentations (2011)

Yue Zheng (GWU) – MS Degree Thesis, 2014-2015

*PhD Students*

*Mentor*

Evgeniy Barsov (1985-1989). Ph.D. degree granted in 1989

Sergey Popov (1985-1989). Ph.D. degree granted in 1989

Zahedi Mujawar (2003-2007). First Prize for oral presentation from ASM on Washington DC Branch Student Day, 2004; Graduate Student Research Award of the Columbian College of Arts and Sciences of GWU, 2006; ASM Raymond W. Sarber Award, 2007. Ph.D. degree granted in 2007

Patrick Morrow (2003-2007). Ph.D. degree granted in 2007

Angela Grant (2007-2010). Ph.D. degree granted in 2010

Lucas Jennelle (2007-2013). First Prize for oral presentation on GW Research Day (2011). Ph.D. degree granted in 2013

Steven Santos (2011-2015). Ph.D. degree granted in 2015

Ruth Hunegnaw (2012-2016). Ph.D. degree granted in 2016

Jessica Schenck (2018 - ).

*Dissertation Committee Member*

Cynthia de la Fuente, 2005; Elena Gustchina, 2005; William M. Gwinn, 2006; Maryam Alrashid, 2007; Javier Guenaga, 2010; Ian Toma, 2011; Andrew Wilson, 2021; Indra Sarabia, 2021.

*Rotation Students*

Zack Klase, 2004; Shannon Heine, 2005; Mariel Figueroa, 2007; Laura Marxreiter, 2007; Steven Santos, 2011; Ruth Hugenaw, 2011; Andrew Wilson, 2016; Jessica Schenck, 2017; Tony James, 2018; Joshua Ghofrani, 2019.

*Medical Students*

Alisha Laborico (2003), 2003 National Medical Fellowship from Bristol-Myers Squibb; Anita McElroy (2006).

*Post-Doctoral Trainees*

Name	Dates in the lab	Current position
May-Ann Lee	1993-1995	Senior Research Scientist, Singapore Army Institute, Singapore
Helena Schmidtmayerova	1994-2000	Associate Professor, University of Miami,



		Miami, FL
Vyacheslav Yurchenko	1996-2001	Professor, University of Ostrava, Ostrava, Czech Republic
Sergey Popov	1995-2000	Associate Professor, University of Massachusetts, Worcester, MA
Gabriele Zybarth	1995-1999	Senior Scientist, Pfizer, Mystic, CT
Norbert Reiling	1997-1998	Professor, Research Center Borstel, Division of Microbial Interface Biology, Borstel, Germany
Massimo Alfano	1997-2001	Senior Scientist, DIBIT, Scientific Institute San Raffaele, Milan, Italy
Isabelle Agostini	1998-2001	Scientist, European Cancer Institute, Milan, Italy
Paola DiMarzio	1999-2002	Senior Scientist, NS-LIJ Research Institute
Christophe Vanpouille	2004-2006	Staff Scientist, NIH, NICHD
Sergey Iordanskiy	2000-2007	Assistant Professor, USUHS

### **ADVISORY COMMITTEES**

Member of the Scientific Advisory Board of the International Therapeutics Inc., Seattle, WA  
– 2002 – 2010

Principal Reviewer for the HIV project on the Site Visit of The Laboratory of Cellular and Molecular Biophysics, NICHD, NIH – 1999, 2003, 2008

Ad Hoc Reviewer for NIH Study Section AMCB – 2001-2011

Ad Hoc Reviewer for NIH Study Section AARR2 – 2003

Ad Hoc Reviewer for Welcome Trust – 2000, 2004–present

Ad Hoc Reviewer for The Singapore Agency for Science, Technology and Research – 2006

Ad Hoc Reviewer for NHRMC (Australia) – 2005-2006

Ad Hoc Member of the amfAR Scientific Advisory Committee - 2003

Reviewer of the George Mason University Ph.D. Program in Biodefense – 2003

Chairman of the NIH Study Section Meeting ZRG1-AARR-E(05) (S) – 2004

Member of the MARCE Ad Hoc Review Committee – 2005-present

Co-Chair of the AHA Immunology/Virology Review Panel – 2008

Reviewer for the Health Research Board (Ireland) – 2009

Permanent member of the AMCB Study Section – 2011 – 2015

Reviewer for the HIV project on the Site Visit of NICHD, NIH – 2018

Chairman of the NIH Study Section Meeting ZAI1-LK-W (J2) – 2020

Ad hoc reviewer for Czech Science Foundation - 2021

Reviewer for Russian Science Foundation - current

Ad hoc reviewer for NIH Study Sections - current

**PEER REVIEW AND EDITORIAL BOARDS:**

Ad hoc reviewer for *Nature*, *Nature Medicine*, *Nature Reviews*, *Journal of Experimental Medicine*, *Journal of Virology*, *Journal of Infectious Diseases*, *AIDS Research and Human Retroviruses*, *Journal of Immunology*, *Journal of Immunological Methods*, *Antiviral Research*, *European Journal of Immunology*, *PLoS Pathogens*

Associate Editor, *Frontiers in Bioscience*, 1997 - 1999

Member of the Editorial Board, *Virology*, 2006 – present

Member of the Editorial Board, *Retrovirology*, 2006 – present

Member of the Editorial Board, *The Open Medicine Journal*, 2006 – present

Member of the Editorial Board, *The Open Virology Journal*, 2006 – present

Member of the Editorial Board, *Cholesterol*, 2006 – present

Member of the Editorial Board, *Virology: Research and Treatment*, 2011 - present

Editor, *Advances in Virology*, 2010 - present

Contributing Editor, *Molecular Medicine*, 2006 – present

Member of the Editorial Advisory Board, *Recent patents on Anti-Infective Drug Discovery*, 2006

Editor-in-Chief, *Open AIDS Journal*, 2010 – present

Editor-in-Chief of the HIV vaccines section, *Vaccine*, 2020 - present

## PATENTS:

1. **Bukrinsky M.I.**, Barsov E.V., Bukrinskaya A.G., Zhdanov V.M. Recombinant plasmid DNA pUC env2 encoding HTLV-III envelope polypeptide and *Escherichia coli* strain producing *env*-specific polypeptides. USSR Patent #1,400,072 (1986).
2. **Bukrinsky M.I.**, Popov S.A., Barsov E.V., Bukrinskaya A.G., Zhdanov V.M., Slepushkin V.A. Recombinant plasmid DNA pGS tat 3 encoding HIV antigen and vaccinia virus strain expressing HIV antigen. USSR patent #1,471,563 (1987).
3. **Bukrinsky M.I.**, Cerami A., Ulrich P. Pyrimidine compounds and methods of use to derivatize neighboring lysine residues in proteins under physiologic conditions. US patents #5,574,040 (1996), #5,620,983 (1997), #5,703,086 (1997), #5,733,932 (1998).
4. **Bukrinsky M.I.**, Cerami A., Ulrich P. Compounds for treating infectious diseases. US patent #5,840,893 (1998).
5. **Bukrinsky M.I.**, Sherry B.A., Ulrich P.C., Cerami A. Treatment of HIV-infection by interfering with host cell cyclophilin receptor activity. US patent #5,840,305 (1998).
6. Pan S., **Bukrinsky M.I.**, Haffar O.K. HIV nuclear localization inhibitors. US patent #5,808,068 (1998).
7. Pan S., **Bukrinsky M.I.**, Haffar O.K. HIV matrix protein tyrosine position 29 pocket binders. US patent #5,849,793 (1998).
8. **Bukrinsky M.I.**, Alfano M. Anti-viral treatment with pertussis toxin B-oligomer. US patent #6,019,979 (2000).
9. Tracey K.J., Cohen P., **Bukrinsky M.I.**, Schmidtmayerova H. Guanylylhydrazones useful for treating diseases associated with T cell activation. US patent #6,143,728 (2000).
10. **Bukrinsky M.I.**, Sviridov D. Method of suppressing human immunodeficiency virus (HIV) replication in a subject by administering a liver X receptor (LXR) agonist. US patent 8,470,526 (2006).
11. Fischer G., Malesevic M. Erdmann F., Kühling J., **Bukrinsky M.I.**, Constant S. Cyclosporin derivatives. US 8,618,065 (2009).
12. Miller Y., Sviridov D., **Bukrinsky M.** Compositions and methods to treat viral infection and co-morbidities. 0321.139319US (2022).

## RESEARCH ARTICLES:

1. Sabelnikov A.G., **Bukrinsky M.I.**, Ilyashenko B.N. (1981). Entry of double and single-stranded linear DNA into Ca<sup>2+</sup>-treated *E. coli* cells. *Mol. Biol.* (Russian) 15:403-407.
2. **Bukrinsky M.I.**, Sabelnikov A.G. (1981). Quantity of exogenous linear DNA absorbed by *E. coli* cells treated with Ca<sup>2+</sup> cations. *Bull. Eksp. Biol. Med.* (Russian) 5:594-596.

3. Sabelnikov A.G., **Bukrinsky M.I.**, Ilyashenko B.N. (1983). Structural changes of exogenous DNAs in the process of homologous transformation of *E. coli*. *Mol. Gen. Mikrobiol. Virusol.* (Russian) 4:29-33.
4. **Bukrinsky M.I.**, Kramerov D.A. (1984). Repetitive sequences of the A2 genome family in mice: size and transcription characteristics. *Dokl. Acad. Nauk SSSR* (Russian) 178:231 - 233.
5. **Bukrinsky M.I.**, Kramerov D.A. (1984). Characteristics of the gene transcription of the intracisternal A-particles. *Vopr. Virusol.* (Russian) 3:345-350.
6. Kramerov D.A., **Bukrinsky M.I.**, Ryskov A.P. (1985). DNA sequences homologous to long double-stranded RNA Transcription of intracisternal A-particle genes and major long repeat of the mouse genome. *Biochim. Biophys. Acta* 826:20-29.
7. **Bukrinsky M.I.**, Kovtunenکو L.V, Ulyashenko B.N. (1986). Rapid method for analyzing the plasmid DNA of Bacillus cereus. *Mol. Gen. Mikrobiol. Virusol.* (Russian) 9:22-24.
8. **Bukrinsky M.I.**, Barsov E.V., Karamov E.V. (1986). Generation of HTLV-III-specific polypeptides in *E. coli* cells. *Vopr. Virusol.* (Russian) 4:489-493.
9. **Bukrinsky M.I.**, Barsov E.V., Zhdanov V.M. (1986). Cloning and expression of HTLV-III env gene fragment in Escherichia coli cells. *Dokl. Akad. Nauk SSSR* (Russian) 289:498-499.
10. Slepushkin V.A., **Bukrinsky M.I.** (1987). Effective method of introducing plasmid DNA into eukaryotic cells by using liposomes for producing vaccinia virus recombinants. *Bull. Eksp. Biol. Med.* (Russian) 10:478-480.
11. Tentsov Y.Y., **Bukrinsky M.I.** (1987). Detection of HTLV-III-specific sequences in T-lymphocyte lines by molecular hybridization. *Vopr. Virusol.* (Russian) 2:219-221.
12. Kovtunenکو L.V., **Bukrinsky M.I.**, Ilyashenko B.N. (1987). Plasmid transformation of Bacillus cereus protoplasts. *Mol. Gen. Mikrobiol. Virusol.* (Russian) 11:27-30.
13. **Bukrinsky M.I.**, Barsov E.V., Karamov E.V. (1988). Use of recombinant proteins carrying antigenic determinants of the envelope proteins of AIDS virus in the diagnosis of acquired immunodeficiency syndrome. *Bull. Eksp. Biol. Med.* (Russian) 5:577-578.
14. **Bukrinsky M.I.**, Zlobin A.Y., Arakelov S.A., Popov S.A., Chaplinskas S.A., Eremin V.F., Korneeva M.N., Nosik D.N., Rudneva I.A., Karamov E.V., Rytik P.G., Stakhanova V.M., Uryvaev L.V. (1988). An analysis of blood sera by the immunoblot method using natural and recombinant antigens of the human immunodeficiency virus. *Vopr. Virusol.* (Russian) 6:700-703.
15. Popov S.A., Barsov E.V., **Bukrinsky M.I.**, Zhdanov V.M. (1988). Expression of gag gene of human immunodeficiency virus in recombinant vaccinia virus. *Mol. Gen. Mikrobiol. Virusol.* (Russian) 9:36-39.

16. **Bukrinsky M.I.**, Barsov E.V., Shilov A.A. (1988). Multicopy expression vector based on temperature-regulated *lac* repressor expression of human immunodeficiency virus *env* gene in *E. coli*. *Gene* 70:415-417.
17. **Bukrinsky M.I.**, Briune I.R., Barteleml L.L. (1989). A study of strains of the human immunodeficiency virus type 1, isolated from 3 patients by a molecular hybridization method. *Vopr. Virusol.* (Russian) 3:342-343.
18. Barsov E.V., **Bukrinsky M.I.** (1989). Construction of a novel vector for thermo-regulated gene expression. Synthesis of a polypeptide carrying HIV antigenic determinants in *E.coli* cells. *Biotechnologia* (Russian) 5:4-8.
19. **Bukrinsky M.I.**, Chaplinskias S.A., Syrtsev V.A., Bravkilene L.A., Philippov Yu.V. (1988). Reactivity to *gag*- and *env*- related proteins in immunoblot assay is not necessarily indicative of HIV infection. *AIDS* 2:405-406.
20. **Bukrinsky M.I.**, Syrtsev V.A., Popov S.A., Barsov E.V., Chaplinskias S.A., Karamov E.V. (1989). False-positive sera do not react with human immunodeficiency virus (HIV) Gag encoded recombinant antigen. *J. Med. Virol.* 27:72-75.
21. Etkin A.F., **Bukrinsky M.I.** (1989). Heterogeneity of the ARV-2 strain and natural isolates of the human immunodeficiency virus. *Arch. Virol.* 108:271-277.
22. **Bukrinsky M.I.**, Etkin A.F. (1990). Plus strand of the HIV provirus DNA is expressed at early stages of infection. *AIDS Res. Human Retroviruses* 6:425-426.
23. **Bukrinsky M.I.**, Vzorov A.N., Bukrinskaya A.G. (1990). Intracellular localization of recombinant vaccinia virus-produced HIV antigens and their use for confirmation of HIV seropositivity. *Acta Virol.* 34:487-492.
24. Vzorov A.N., **Bukrinsky M.I.**, Grygoryev V.B., Tentsov Y.Y., Bukrinskaya A.G. (1991). Highly immunogenic human immunodeficiency virus-like particles are produced by recombinant vaccinia virus infected cells. *AIDS Res. Human Retroviruses* 7:29-36.
25. Haggerty S., Dempsey M.P., **Bukrinsky M.I.**, Guo L., Stevenson M. (1991). Posttranslational modifications within the HIV-1 envelope glycoprotein which restrict virus assembly and CD4-dependent infection. *AIDS Res. Human Retroviruses* 7:429-438.
26. **Bukrinsky M.I.**, Stanwick T.L., Dempsey M.P., Stevenson M. (1991). Quiescent T Lymphocytes as an inducible reservoir in HIV-1 infection. *Science* 254:423-427.
27. **Bukrinsky M.I.**, Sharova N.K., Dempsey M.P., Stanwick M.P., Bukrinskaya A.G., Haggerty S., Stevenson M. (1992). Active nuclear transport of HIV-1 preintegration complexes. *Proc. Natl. Acad. Sci. U.S.A.* 89:6580-6584.
28. **Bukrinsky M.I.**, Sharova N., McDonald T.L., Pushkarskaya T., Tarpley W.G., Stevenson M. (1993). Association of integrase, matrix and reverse transcriptase antigens of human immunodeficiency virus type 1 with viral nucleic acids following acute infection. *Proc. Natl. Acad. Sci. U.S.A.* 90:6125-6129.

29. **Bukrinsky M.I.**, Sharova N.K., Stevenson M. (1993). Human immunodeficiency virus type 1 2-LTR circles reside in a nucleoprotein complex which is different from the preintegration complex. *J. Virol.* 67:6863-6865.
30. **Bukrinsky M.I.**, Haggerty S, Dempsey M.P., Sharova N., Adzhubei A., Spitz L., Lewis P., Goldfarb D., Emerman M., Stevenson M. (1993). A nuclear localization signal within HIV-1 matrix protein that governs infection of non-dividing cells. *Nature* 365:666-669.
31. Gulizia J., Dempsey M.P., Sharova N., **Bukrinsky M.I.**, Spitz L., Goldfarb D., and Stevenson M. (1994). Reduced nuclear import of human immunodeficiency virus type 1 preintegration complexes in the presence of a prototypic nuclear targeting signal. *J. Virol.* 68:2021-2025.
32. Heinzinger N.\*, **Bukrinsky M.I.\***, Haggerty S., Ragland A., Kewalramani V., Lee M-A., Gendelman H., Ratner L., Stevenson M., Emerman M. (1994). The HIV-1 Vpr protein is a component of the viral pre-integration complex which influences nuclear targeting of viral, nucleic acids in non-dividing host cells. *Proc. Natl Acad. Sci. U.S.A.* 91:7311 -7315.
- \*Equal contribution.
33. Emerman M., **Bukrinsky M.**, and Stevenson M. (1994). HIV-1 infection of non-dividing cells. *Nature* 369:107-108.
34. **Bukrinsky M.**, Nottet H.S.L.M., Schmidtayerova H., Dubrovsky L., Flanagan C.R., Mullins M.E., Lipton S.A., and Gendelman H.E. (1995). Regulation of nitric oxide synthase activity in HIV-1 monocytes: Implications for HIV-associated neurological diseases. *J. Exp. Med.* 181:735-745.
35. Dubrovsky L., Ulrich P., Nuovo G.L., Manogue K.R., Cerami A., and **Bukrinsky M.** (1995). Nuclear localization signal of HIV-1 as a novel target for therapeutic intervention. *Mol. Med.* 1:217-230.
36. Bianchi M., Ulrich P., Bloom O., Meistrell M., Zimmerman G.A., Schmidtayerova H., **Bukrinsky M.**, Donnelley T., Bucala R., Sherry B., Manogue K., Tortolani A.J., Cerami A., Tracey K.J. (1995). An inhibitor of macrophage arginine transport and nitric oxide production (CNI-1493) prevents acute inflammation and endotoxin lethality. *Mol. Med.* 1:254-266.
37. **Bukrinsky M.**, Manogue K., and Cerami A. (1995). HIV results in the frame: Other approaches. *Nature* 375:195-196 (Correspondence).
38. Bianchi M., Bloom O., Raabe T., Cohen P.S., Chesney J., Sherry B., Schmidtayerova H., Zhang X., **Bukrinsky M.**, Ulrich P., Cerami A., and Tracey K. (1996). Suppression of proinflammatory cytokines in monocytes by a tetravalent guanylhydrazone. *J. Exp. Med.* 183:927-936.
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#### **CHAPTERS & REVIEWS (PEER-REVIEWED):**

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#### INVITED PRESENTATIONS:

July            Plenary session presentation at the 7th International Congress on AIDS,  
1991            Florence, Italy. "Factors governing HIV-1 persistence in vivo."

- Dec. 1992 3rd International Symposium on Catalytic RNAs, San Diego, CA. "Retroviral infection of non-dividing cells: molecular mechanisms of HIV-1 nuclear targeting."
- June 1993 IXth International Conference on AIDS, Berlin, Germany. "Retroviral infection of non-dividing cells: molecular mechanisms of HIV-1 nuclear targeting."
- August 1994 Xth International Conference on AIDS, Yokohama, Japan. "HIV infection alters response of macrophages to activating stimuli: implications for AIDS pathogenesis."
- Sept. 1995 Fourth International Meeting 'Biology of Nitric Oxide', Amelia Island, FL. "Nitric oxide primes hyperactivation of HIV-1-infected human monocytes."
- August 1996 Xth International Congress of Virology, Jerusalem, Israel. "Differential regulation of  $\beta$ -chemokine expression by HIV-1 infection in macrophages and lymphocytes," "Nuclear translocation of HIV-1 pre-integration complex as a target for therapeutic intervention."
- Feb. 1997 Medical University of Munich, Munich, Germany. "Differential regulation of  $\beta$ -chemokines in HIV-1 infection."
- June 1997 2<sup>nd</sup> Joint Conference of NIAID's Strategic Program for Innovative Research on AIDS Treatment and NCDDG-HIV, Vienna, VA. "Role of Vpr in HIV-1 Nuclear Import."
- Sept. 1997 Institute of Human Virology 1997 Annual Meeting, Baltimore, MD. "Vpr is the Regulator of HIV-1 Nuclear Import."
- May 1999 Gordon Conference 'Viruses and Cells', Barga, Italy. "HIV-1 Nuclear Import."
- July 2004 XVth International Conference on AIDS, Bangkok, Thailand. "Hsp70 is an innate immunity factor targeting HIV-1 Vpr."
- Sept. 2005 Institute of Human Virology 2005 Annual Meeting, Baltimore, MD. "HIV impairs reverse cholesterol transport: implications for atherosclerosis and HIV life cycle."
- Feb 2009 12<sup>th</sup> CROI, Montreal, Canada. "Nef-mediated suppression of ABCA1 cholesterol efflux activity contributes to primary dyslipidemia in SIV-infected macaques."
- August 2010 AAS 2010, Cairns, Australia. "Mechanisms of HIV-related atherosclerosis."
- April 2012 ISA 2012 Satellite Symposium on *HDL*, Cairns, Australia. "HIV and atherosclerosis: unexpected connection."

- Sept. 2013 Institute of Human Virology 2013 Annual Meeting, Moscow, Russia. “HIV-1 Nef regulates activity of endoplasmic reticulum chaperone calnexin.”
- Sept. 2013 International symposium on cyclophilins and foldases, Halle, Germany. “Treating inflammatory diseases with extracellular cyclosporine.”
- March 2019 Conference ‘Exosomes in Human Infectious Diseases’, Nassau, Bahamas. “Extracellular vesicles carrying HIV Nef are the key players in pathogenesis of HIV-associated co-morbidities.”
- March 2021 1st meeting of American Society of Intercellular Communications (ASIC), Bethesda, MD. “Nef-carrying EVs promote formation of inflammatory monocytes/macrophages”.
- Sept. 2021 Immunology World Forum (IWF), Copenhagen, Denmark (virtual). “Extracellular vehicles carrying HIV-1 Nef induce trained immunity in myeloid cells”.