

CURRICULUM VITAE

Janko Nikolich-Žugich, M.D., Ph.D.
Preferred name: Janko Nikolich

Name: born Janko Nikolić; changed name to Nikolić-Žugić upon marrying in 1985; phoneticized to Nikolich-Žugich in 2000.)

Education:

Ph.D. 1993 Belgrade University Medical School - Immunology
Thesis: "Phenotypic correlates of T cell development in the thymus"(Mentor: Prof. M.L. Lukić)
M.Sc. 1989 Belgrade University Medical School - Immunology
Thesis: "Immunostimulatory properties of the Herpes Simplex Virus glycoproteins"(Mentor : Prof. M.L. Lukić)

[Masters thesis was submitted and approved in 1987, and Ph.D. thesis in 1990. Both defenses were substantially delayed, owing to wars in former Yugoslavia].

1984-1985 Medical Internship, Belgrade University Medical School

M.D. 1984 Belgrade University Medical School (G.P.A. 9.53/10.00)

Predoctoral and postdoctoral training:

Postdoctoral 1987-1990 Immunology, Laboratory of Dr M.J. Bevan, F.R.S., NAS, HHMI, Department of Immunology, Research Institute of Scripps Clinic

1984-1986 and 1987 Immunology, Institute for Microbiology and Immunology, Laboratory of Dr M.L. Lukić, Belgrade University Medical School [Discontinued between 3/1986-2/87 for one year obligatory military service.]

Predoctoral 1981-1984 Immunology, Laboratory of Dr. M.L. Lukić, Institute for Microbiology and Immunology, and Laboratory of Dr. Marija Mostarica-Stojković
Institute for Biological Research
Belgrade University Medical School

1982 & 1983 Immunology, Laboratory of Dr. Henry H. Wortis

Department of Pathology, Tufts University School of
Medicine, Boston, MA

Positions and Appointments:

2020-present	Director, the Aegis Consortium for Pandemic-Free Future, University of Arizona Health Sciences, UArizona, Tucson
2008-present	Head and Professor (Tenured), Department of Immunobiology, College of Medicine-Tucson, University of Arizona
	Co-Director, Arizona Center on Aging, University of Arizona (directs basic and translational science parts of the Center's mission),
	Elizabeth Bowman Professor in Medical Research,
	Professor of Medicine, College of Medicine,
	Professor of Nutritional Sciences, College of Agriculture and Life Sciences
	Professor, Graduate Interdisciplinary Program in Genetics, Graduate College
	Professor, Graduate Interdisciplinary Program in Neuroscience, Graduate College
	Member, BIO5 Institute
	Member, Arizona Cancer Center
	Member, Arizona Arthritis Center
	(All of the above affiliations are for the University of Arizona, Tucson, AZ)
	Affiliate Scientist, Oregon National Primate Research Center, Beaverton, OR
2001-2008	Professor (Tenured), Department of Molecular Microbiology and Immunology, School of Medicine, Oregon Health Sciences University (OHSU), Portland, OR
	Senior Scientist, OHSU Vaccine and Gene Therapy Institute
	Senior Scientist, Division of Pathobiology, Oregon National Primate Research Center
1996-2001	Associate Member, Immunology Program; Head, Laboratory of T Cell Development , Memorial Sloan-Kettering Cancer Center, New

York, NY

Associate Professor
The Weill Graduate School of Medical Sciences of the Cornell
University, New York, NY

- 1994-1996 Assistant Professor
Division of Molecular Medicine
Cornell University School of Medicine, New York, NY
- 1990-2000 Head, Flow Cytometry Core Facility
Memorial Sloan-Kettering Cancer Center, New York, NY.
- 1990-1996 Assistant Member, Immunology Program
Head, Laboratory of T Cell Development
Memorial Sloan-Kettering Cancer Center, New York, NY
- Assistant Professor
Cornell University Graduate School of Medical Sciences,
New York, NY
- 1987-1990 Research Associate
Department of Immunology
Research Institute of Scripps Clinic, La Jolla, CA.
- 1984-1986
and 1987 Postdoctoral Fellow
Institute for Microbiology and Immunology
Belgrade University Medical School, Belgrade, Yugoslavia.
[Discontinued training March 1986-February 1987 for one year
obligatory military service.]
- 1982-1983 Teaching Fellow
Institute for Microbiology and Immunology
Belgrade University Medical School, Belgrade, Yugoslavia.

Licensed Physician: Yugoslavia/ Serbia **Year:** 1985. **Place of Issue :** Belgrade, Yugoslavia.

Societies:

American Association of Immunologists (1990-present);

American Aging Association (AGE; 2002-present; Education committee 2004-2007; Board Member, 2007-2020; President 2009-10; Chairman of the Board 2014-2020);

The Henry Kunkel Society (2003-present);

American Society of Microbiology and Immunology Chairs (AMSMIC; 2008-present; Chair, Public Relations Committee, 2014-17);

Gerontological Society of America (GSA; 2009-present, Chair, Biological Section, 2016-17)

Past Societies memberships:

The Harvey Society, (1991-2001);

The New York Academy of Sciences, 1993;

American-Yugoslav Medical Society, 1995-2000 (Chairman, Scientific Committee, 1997);

Honors and Awards:

Dean's list, 1980, 1983.

Editorial Board Awards for the best scientific paper, the student journal "Medicinski Podmladak", Belgrade, 1983, 1984.

Diploma for the best foreign presentation at the 11th International Student Scientific Conference, Debrecen, Hungary, 1984.

Postdoctoral Fellowship, Scientific Council of the Republic of Serbia, 1984-1986.

American Association of Immunologists Travel Assistance Award to attend the 7th International Congress of Immunologists Berlin, 1989.

Pew Scholar in the Biomedical Sciences, 1991-1995.

Louise and Allston Boyer Young Scientist Award, MSKCC, 1998.

Who's Who in Medicine and Healthcare, 2002-present.

Visiting Professor, Belgrade University Medical School, Belgrade, Serbia, 2003-present

Elizabeth Bowman Professor in Medical Research, University of Arizona, 2008-present
President, American Aging Association (2009-10)

Member, American Federation for Aging Research (AFAR)'s National Scientific Advisory Council (NSAC), 2008-present

Distinguished Lecturer, Radiation Effects Research Foundation, Hiroshima, Japan, June 19, 2009.

Visiting Professor, Austral-Asian Society for Immunology, 2009-10

Honorary Member, Serbian Immunological Society, 2009-present (Acceptance Lecture given June 2010)

Visiting Professor, University of Kragujevac, Serbia, 2012-present

Fellow, Gerontological Society of America, 2015-present

Lingenfelter Lecturer – Arizona Geriatric Society, Oct. 30, 2015

Fellow, American Aging Association, 2016-present

Jury Member, Oskar Fisher Prize, UT San Antonio, 2021

Arizona Bioscience Researcher of the Year, 2021

Arizona Geriatric Society Gerontologist of the Year, 2021

Founder's Day Lecture, College of Medicine-Tucson, 2021

Professional activities :

Conferences (speaker, chair or organizer roles are indicated):

1989

Speaker, 7th International Congress of Immunologists, W. Berlin, Germany,
July 31-August 5, 1989

1990

Speaker, Gordon Research Conference on Immunobiology and
Immunochemistry, Oxnard, CA, March 5-9, 1990
Speaker, Joint AAI and ASMB Meeting, New Orleans, June 3-6, 1990
Invited Speaker, Arden House Conference : "Immunological self-recognition", Harriman,
NY, July 5-8, 1990

1992

Speaker, FASEB Meeting, Annaheim, CA, April 5-9, 1992
Invited Speaker, "Myasthenia gravis and related disorders : Experimental and Clinical
aspects", Washington, DC, April 11-13, 1992.

1994

Chairman, Immunology session, The 9th PEW Scholars Annual Meeting, Cozumel,
Mexico, March 16-21, 1994

1995

Chairman and Speaker, Immunology session, The 10th PEW Scholars Annual Meeting,
Puerto Rico, March 11-15, 1995
Speaker, 9th International Congress of Immunologists, San Francisco, CA, July 23-29,
1995
Invited Speaker, 1st International conference on the thymus "ThymOz", Heron Island,
Australia, October 11-16, 1995
Invited Speaker, 1st Balkan Immunology Conference, Belgrade, Yugoslavia,
November 29-December 2, 1995

1998

Chair, session on T cell Selection, and Invited Speaker, 2nd International T cell
conference "ThymOz", Heron Island, Australia, March 25-29, 1998

1999

Invited Speaker, Experimental Biology >99 FASEB meeting, Washington, D.C. April 17-
21, 1999

2000

Invited Lecturer, Specialist Teaching Symposium "Lymphocyte Development and
Function", Monash Medical School, Melbourne, Australia, April 8, 2000.
Scientific Committee Member and Speaker, 3rd. International T cell conference
"ThymOz", Heron Island, Australia, April 11-16, 2000
Jury Member, Student/Postdoctoral Research Day Competition, Clinical Research
Institute of Montreal, Montreal, Canada, April 28, 2000
Speaker, AAI 2000 meeting, Seattle, WA, May 12-16, 2000

2001

Speaker, Experimental Biology '01 FASEB meeting, Orlando, FL, 3/31- 4/4, 2001
Organizer & Speaker, 1st International T-cell conference "ThymUS", San Juan, PR, 11/2-
11/7/2001

2002

Speaker, 31st Annual Meeting, American Aging Association, San Diego, CA, June 7-10, 2002

2003

Scientific Committee Member, Session Chair and Speaker, 4th International T cell conference "ThymOz", Heron Island, Australia, April 1-6, 2003

Invited Speaker, NIA Workshop "Immunology and Aging", Bethesda, MD, May 2003.

Speaker, 32st Annual Meeting, American Aging Association, Baltimore, MD, June 6-9, 2003

2004

Invited Speaker, Dubai International Genetic Conference, Dubai, UAE, March 19-21, 2004 Dubai, UAE

Invited speaker, 12th Annual Henry Kunkel Society Meeting, New York, NY, May 3-5 2004

Invited speaker, NIAID Workshop "Immunity and Biodefense in Special populations", Bethesda, MD, May 7-8, 2004.

Speaker, 33st Annual Meeting, American Aging Association, St. Petersburg, FL, June 4-7, 2004

Selected speaker, 12th International Congress of Immunology, Montreal, Canada, July 18-23, 2004

Session Chair and Invited Speaker, 4th Balkan Immunology Congress, Istanbul, Turkey, September 5-8, 2004

Session Chair and Invited Speaker, "Immunology and Aging" NIA Workshop, Saranac Lake, NY, October 2-5, 2004

Organizer & Speaker, 2nd International T-cell Conference "ThymUS 04", San Juan, PR, 11/5-10/2004

2005

Invited Speaker, 4th International Kyoto T-cell Conference, Kyoto, Japan, 4/6-10/2005

Invited Participant, Kirin IDEASHOP workshop on T-cell repertoire in health & disease, FOCIS meeting, Boston, MA, May 2005

Invited Speaker, International Workshop on Differentiation and Immunosenescence, Edward Jenner Institute, Compton, UK, October 2005

Invited Speaker, 58th Annual meeting of the Gerontological Society of America, Orlando, FL, November 2005

2006

Invited Speaker, Keystone Symposium "Viral immunity: from basic mechanisms to vaccines", Steamboat Springs, March 28-April 2, 2006

Invited Speaker and Scientific Committee Member, 5th International T cell conference "ThymOz", Heron Island, Australia, April 5-12, 2006

Invited Speaker and Discussant, NCCR Workshop "Genetic tools for optimizing the use of rhesus macaques in translational research" Bethesda, MD, April 19-20, 2006

Invited Speaker, Immunology 2006 - American Association of Immunologists Annual Meeting, NIA –sponsored Symposium "How aging impacts Immunity", Boston, MA, May 12-16, 2006

Invited Speaker, 35th Annual Meeting, American Aging Association, Boston, MA, June 3-6, 2006

Scientific Organizing Board Member and Invited Speaker, International Meeting "Aging Research in Immunology: Impact of Genomics", Paris, France, September 4-5,

2006

2007

Invited Speaker, 35th Autumn Immunology Conference, Chicago, IL, Nov. 17-20, 2006

Invited Speaker, Edmonton Aging Symposium, Edmonton, Canada, Mar. 30-31, 2007

Selected Speaker, The Henry Kunkel Society 15th Annual Meeting, New York, NY April 24-26, 2007

Ad hoc Speaker, 12 International Association of Biomedical Gerontology "Caloric restriction and immune senescence in primates:", Spetses Island, Greece, May 20-24, 2007

Selected Speaker, 36th Annual Meeting, American Aging Association, San Antonio, TX, June 2-4, 2007

Co-organizer, Speaker and Session Chair, Pennington Symposium "Neuro-immune modulation and inflammation in aging", Baton Rouge, LA, Dec. 2-5, 2007

2008

Selected Speaker, Keystone Symposium "Viral Immunity", Keystone, CO, Jan. 20-25, 2008

Third International Conference on Primate Genomics: Primate Genomics and Human Diseases; Seattle, WA, Apr. 13-16, 2008

Invited Speaker, U.S.-Japan Cooperative Medical Science Program: Workshop on Aging & Immunosenescence, San Francisco, CA, Jun. 18-21/2008

Invited Speaker, 2nd European Federation of Immunological Societies/EJI Belgrade Symposium /Postgraduate Course: Inflammation at the Interface of Innate and Acquired Immunity, Belgrade, Serbia, Sept. 7-10/2008

Organizer & Session chair, 3rd International Conference on Lymphopoiesis, T cell differentiation and Immune Reconstitution "ThymUS 08", San Juan, PR, Nov. 9-14/2008

Invited Speaker, ASP-IDSA Workshop on Immunization of Older Adults, Washington, DC, Dec. 15-16, 2008

2009

Invited Speaker, CDC/NIA-sponsored meeting "Immune senescence and vaccination in older adults" Atlanta, GA, Feb. 2-5, 2009.

Invited Speaker, Gordon Research Conference – Biology of Aging, Ventura, CA, Feb. 15-20, 2009

Invited Speaker and Session co-chair, NIA Symposium "How Aging Impacts Vaccine Efficacy", 96th Annual Meeting of the American Association of Immunologists, Seattle, WA, May 8-12, 2009

Session Chair, 38th Annual Meeting of the American Aging Association, Scottsdale, AZ, May 30-June 1, 2009

Invited Speaker and Session Chair, 5th International Kyoto T-cell Conference, Kyoto, Japan, June 1-4, 2009.

Invited Speaker and Session Chair, 4th SENS (Strategies to Engineer Negligible Senescence) Conference, Cambridge, UK, Sept 3-7, 2009

Invited Speaker and Session Chair, Fondation Merieux Conference "Aging and Immunity", Siena, Italy, Sept. 21-23, 2009

2010

Session Chair and Speaker, 6th National Research Centers of Excellence in Biodefense and Emerging Infections, Las Vegas, NV, April 11-13, 2010

Session Chair and co-organizer, Pre-Conference of the American Aging Association, joint with the American Federation for Aging Research and the Gerontological Society of America: Biology of Aging: A meeting of minds to celebrate award-winning science”, Portland, OR, June 4, 2010.

Organizer, 39th Annual Meeting of the American Aging Association (AGE) – “Aging and Inflammation: causes and consequences”, Portland, OR June 4-7, 2010.

Session co-Chair and Speaker, “Immunity and Aging” Workshop, 14th International Congress of Immunologist, Kobe, Japan, August 22-27, 2010.

Session Chair and Speaker, Adaptive Immunity session, 2nd Meeting of the Pacific Northwest Regional Center of Excellence in Biodefense and Emerging Infections, Portland, OR, Sept. 22-23, 2010

Session Chair and Speaker, 7th European Congress of Biogerontology, Palermo, Italy, Oct. 13-17, 2010

Invited Speaker, 2nd International Conference on Cytomegalovirus and Immune Aging, Cambridge, UK, December 2-4, 2010.

2011

Invited Speaker, 7th National NIAID Research Centers of Excellence in Biodefense and Emerging Diseases, Denver, CO April 3-5, 2011.

Invited Speaker and Organizer of the US participant contingent of 4 PIs and 8 trainees (obtained a R13 NIA award in support), 14th International Association of Biomedical Gerontology, Brighton, UK, Jul. 11-14, 2011

Invited Speaker and Session Chair, 5th SENS (Strategies to Engineer Negligible Senescence) Conference, Cambridge, UK, Aug. 31- Sept. 4, 2011

Invited Speaker, British Society of Immunology Annual Meeting, Liverpool, UK, Dec 5-9th, 2011

2012

Invited Speaker and Discussion Moderator, 3rd International Conference on Cytomegalovirus and Immune Aging, Cordoba, Spain, March 15-16, 2012

Invited Speaker and Session Chair, Fondation Merieux Conference “Aging and Immunity”, Siena, Italy, April 22-24, 2012

Invited Speaker and Session Chair, 41st Annual Meeting of the American Aging Association, Ft. Worth, TX June 1-4, 2012

Organizer & Session chair, 4th International Conference on Lymphopoiesis, T cell differentiation and Immune Reconstitution “ThymUS 12”, Miami, FL, Nov. 04-09/2012

2013

Invited Speaker and Discussion Moderator, 4th International Conference on Cytomegalovirus and Immune Aging, Parma, Italy, March 25-27, 2013

Session Chair, Block Symposium, 100th Annual Meeting of the American Association of Immunologists, Honolulu, HI, May 3-7, 2013.

Invited Speaker and Session Chair, 6th International Kyoto T-cell Conference, Kyoto, Japan, June 3-7, 2013.

Invited Speaker, IBS-AIM International Workshop on T cell Biology and Aging, Pohang, S. Korea, June 09-11, 2013.

Invited Speaker, Satellite Meeting to the International Congress of Immunology SM3
“Immunology of Ageing”, Milan, Italy, August 20-22, 2013
Invited Speaker, British Society for Research on Ageing Annual meeting, Norwich, UK,
Sept. 3-5, 2013.
Invited Speaker and Session Chair, 6th SENS Foundation Meeting, Cambridge, UK, Sept.
4-8, 2013
Invited Speaker, 1st Vaccine and Gene Therapy Institute-Florida Symposium : “Integrative
approaches to the Immunotherapy of Cancer and Infectious Diseases”, Port St.
Lucie, FL, Nov 13-15, 2013
Invited Panelist, “Societal Implications of Delaying Aging” panel, Gerontological Society of
America 2013 Annual meeting, New Orleans, LA, Nov. 20-24, 2013

2014

Invited Speaker and Scientific Committee Member, 5th International T cell conference
“ThymOz”, Heron Island, Australia, April 2-7, 2014.
Organizer and Speaker, UA Miraval Institute Symposium “Preparing for an Aging World :
Living Beyond 100”, Miraval Resort, Catalina, AZ, April 27-29, 2014
Invited speaker, Radboudumc Summer Frontiers Symposium “Age and Immunity”,
Nijmegen, The Netherlands, June 12-13, 2014
Invited speaker, San Antonio Nathan Shock Center Meeting : “The Microbiome in Aging
and Age-related diseases”, October 16-19, 2014, Bandera, Tx
Invited speaker, Gerontological Society of America Annual Meeting, Washington, DC,
November 5-9, 2014
Invited speaker and session chairman, 5th International Conference on Cytomegalovirus
and Immune Aging, Nov. 20-22, 2014, Amsterdam, the Netherlands

2015

Workshop organizer and panelist, “Guiding a career in biomedical research”, University of
Belgrade School of Medicine, December 22-24, 2014
Invited speaker, Venice Thymus Conference, April 9-12, 2015, Venice, Italy
Co-Organizer, session chair and speaker, EFIS Belgrade 2015, May 24-27, Arandjelovac,
Serbia
Organizer, speaker and session chair, Belgrade Workshop on Immunity and
Autoimmunity – a tribute to Profs. Marija Mostarica-Stojkovic and Miodrag L.
Lukic, May 28-29, 2015, Belgrade, Serbia
Invited Speaker, Michael J. Bevan 70th Birthday and Retirement Symposium, University of
Washington, Seattle, Aug. 2-4, 2015
Invited Speaker and Session Chair, “Immunity and Aging” Satellite Meeting to the 4th
European Congress of Immunology ECI2015, Vienna, Austria, September 5-6th,
2015.
Lingenfelter Lecture, Arizona Geriatric Society, Phoenix, AZ, October 5, 2015
Session Chair and Speaker, 2015 Annual Meeting of the Gerontological Society of
America, Orlando, FL, Nov. 18-22, 2015

2016

Invited Speaker and Session Chair, Fondation Merieux Conference “Aging and Immunity”,
Siena, Italy, January 11-14, 2016
Organizer, Multi-Institutional Symposium “Disparities in Aging and Resilience”, Tucson,
AZ, April 4, 2016
Invited Speaker, Ninth Conference of the Caloric Restriction Society, International,

Tucson, AZ, May 18-21, 2016
Invited Speaker, New Fellows Ceremony, 45th Annual meeting of the American Aging Association, Seattle, WA, June 2-5, 2016
Plenary Speaker, ThymUS International Conference 2016, “One very personal fascination with T cell repertoire selection”, Wailea Beach, Maui, HI, June 5-9, 2016
Invited Speaker, FASEB Research Conference “Immunology and Obesity”, Big Sky, MT, Jul. 31-Aug.4, 2016
Session Chairman and Invited Speaker, 16th International Congress of Immunologists, Melbourne, Australia, August 22-27, 2016
Invited Speaker, Aegean Conference on Human and Translational Immunology, Rhodes, Greece, Sept. 16-21, 2016.
Invited Speaker, 56th Meeting of the Radiation Research Society, Big Island, Hawaii, Oct. 16-19, 2016.
Organizer, 6th International Workshop “Cytomegalovirus and Immunosenescence”, Tucson, AZ, Nov. 12-15, 2016
Session Chair and Invited Speaker, 2016 Annual Meeting of the Gerontological Society of America, New Orleans, LA, Nov. 16-21, 2016
Organizer, Round Table “Inflammation and Aging”, 2016 Annual Meeting of the Gerontological Society of America, New Orleans, LA, Nov. 16-21, 2016

2017

Invited Speaker, Health and Retirement Study Workshop, NIA, Baltimore, MD, Jan 30-Feb. 1, 2017
Invited Speaker, the 7th International Kyoto T Cell Conference, Kyoto, Japan, March 13-17th, 2017
Invited Speaker, NIA/NIAID Conference on Aging of the Immune System, Bethesda, MD, May 9-11, 2017
Invited Speaker, Session co-Chair and Biological Section Program Organizer, 21th IAGG World Congress of Gerontology and Geriatrics,, San Francisco, CA, July 23-27, 2017
Invited Speaker, KAIST Immunology Symposium, Daejeong, Korea, November 7, 2017
Invited Speaker, Korean Association of Immunologists Annual Congress, Seoul, Korea, November 8-10, 2017

2018

Invited Speaker, Keystone Symposium on Aging, Immunity and Inflammation, Austin, TX, Feb. 25-Mar. 2, 2018
Invited Speaker, 2018 Annual meeting of the Clinical Immunology Society, Toronto, Canada, April 26-29, 2018
Invited Speaker, 7th Congress of Serbian Pharmacy Associations with International Participation – Plenary Lecture; Belgrade, Serbia, October 10-14, 2018
Invited Speaker, Round Table Moderator and Summary Address Speaker, 7th CMV and Immunosenescence Workshop, Waldthousen Castle, Mainz, Germany, Nov. 8-10, 2018
Invited Speaker, Disparities with Aging and Regeneration of Cells and Tissues (two invited lectures), Annual Meeting of the Gerontological Society of America, Boston, MA, Nov. 14-18, 2018
Invited Speaker, German Society for Research on Aging (DGfA), Jena, Germany, Dec. 6-7, 2018.

2019

- Invited Speaker, Undoing Aging Symposium, Berlin, Germany, March 28-30, 2019
- Invited Speaker and Session Chair, ThymE- EMBO workshop, Rehovot, Israel, May 19-24 2019
- Invited Speaker, Association of Serbian Pharmacy Societies, Kopaonik, Serbia, May 24-25, 2019
- Invited Speaker, Systems Biology of Aging, Jackson Labs, Farmington, CT, Sept 4-5, 2019
- Plenary Opening Lecture, "Immunology at the Confluence of Biomedical Disciplines", Serbian Immunological Association, Belgrade, Serbia, Dec. 6-8, 2019

2020

- Invited Speaker, "The Intersection of Aging and COVID-19", joint GSA and AGE Symposium, Oct. 20, 2020.
- Invited Speaker, "Biology of Aging and our Body's Readiness for COVID-19 Vaccines", American Federation of Aging Research and Grantmakers in Aging joint webinar, Oct. 28, 2020

2021

- Plenary Speaker, European Congress of Immunology, Belgrade, Serbia, Sept. 1-4, 2021 (blended virtual/in person event).
- Keynote Opening Lecture, "Immune response to SARS-CoV-2 infection and vaccination in adult and older populations"; Global Conference of Medical Students, Belgrade, Serbia, Oct. 29, 2021 (recorded release; live lecture given 10/20/2021)

Invited Seminars and Lectures :

- Medical Biology Institute, La Jolla, CA, 1989
- Ludwig Institute for Cancer Research, Lausanne, Switzerland, 1989
- Basel Institute for Immunology, Basel, Switzerland, 1989
- Tufts University Department of Pathology, 1989
- Massachusetts Institute of Technology, Cambridge, MA, 1990
- Sloan-Kettering Institute, New York, NY, 1990
- Columbia University, New York, NY, 1990
- New York University, Department of Pathology, New York, NY, 1990
- Cornell University, Ithaca, NY, 1991
- Loma Linda University, Loma Linda, CA, 1992
- Scripps Research Institute, La Jolla, CA, 1992
- New York University, New York, NY, 1993
- North Shore University Hospital, Manhasset, NY 1993
- Serbian Association of Immunologists, Belgrade, Yugoslavia, 1993
- University of Washington, Seattle, WA, 1993
- Genentech Inc., So. San Francisco, CA, 1993
- DNAX Research Institute, Palo Alto, CA, 1993
- Massachusetts General Hospital, Charlestown, MA, 1994
- Targeted Genetics Corp., Seattle, WA, 1994
- Tufts University Sackler School of Biomedical Sciences, Boston, MA, 1995
- New York University, Division of Immunology, New York, NY, 1995
- University of Medicine and Dentistry of New Jersey, R.W. Johnson Medical

School, Piscataway, NJ, 1995
 Fox Chase Cancer Center, Philadelphia, PA, 1995
 University of Maryland, Department of Microbiology and Immunology,
 Baltimore, MD, 1995
 The Walter and Eliza Hall Institute, Melbourne, Australia, 1995
 Ludwig Institute for Cancer Research, Lausanne, Switzerland, 1995
 Basel Institute for Immunology, Basel, Switzerland, 1995
 Laboratory of Viral Diseases, NIAID, NIH, Bethesda, MD, 1996
 University of Connecticut Health Center, Farmington, CT, 1996
 Holland Laboratory, American Red Cross, Bethesda, MD, 1996
 University of Maryland at Baltimore, Baltimore, MD, 1997
 Experimental Immunology Branch, NCI, NIH, Bethesda, MD, 1997
 Centre d'Immunologie, INSERM/CNRS, Marseille, France, 1997
 Ecole Normale Supérieure de Lyon, Lyon, France, 1997
 Basel Institute for Immunology, Basel, Switzerland, 1997
 Walter and Eliza Hall Institute, Melbourne, Australia, 1998
 Monash University, Melbourne, Australia, 1998
 University of Toronto, Toronto, Canada, 1998
 The Scripps Research Institute, San Diego, CA, 1998
 National Institute for Medical Research, London, UK, 1999
 Department of Anatomy, University of Birmingham, Birmingham, UK, 1999
 University of Pittsburgh, Pittsburgh, PA 1999
 Mayo Foundation, Rochester, MN, 2000
 University of Maryland, College Park, MD, 2000
 University of Rochester, Rochester, NY, 2000
 Clinical Research Institute of Montreal, Montreal, Canada, 2000
 University of Vermont, Burlington, VT, 2000
 University of Maryland at Baltimore, Baltimore, MD, 2000
 Mt. Sinai Medical Center, New York, NY 2000
 Oregon Health & Science University, Portland, OR 2000
 The Walter and Eliza Hall Institute, Melbourne, Australia, 2000
 Dept. of Microbiology and Immunology, University of Maryland, Baltimore, MD, 2000
 Department of Hematology, Papanicolaou Hospital, Thessaloniki, Greece, 2000
 Department of Immunology, University of Washington, Seattle, WA, 2001
 Roswell Park Cancer Institute, Buffalo, NY, 2001
 National Institute on Aging, Baltimore, MD, 2001
 NIA Collaborator Meeting "Caloric Restriction in non-human primates", San Diego, CA
 2002
 Department of Microbiology and Immunology, Belgrade University Medical School,
 Belgrade, Yugoslavia, 2002
 New York University Graduate Program in Immunology, New York, NY 2002
 Memorial Sloan-Kettering Cancer Center, New York, NY, 2002
 Visiting Lecture, School of Medicine, University of Belgrade, Belgrade, Yugoslavia, 2003
 The Walter and Eliza Hall Institute, Melbourne, Australia, 2003
 NIA Collaborator Meeting "Caloric Restriction in non-human primates", Baltimore, MD
 2003.
 Department of Pathology, Washington University, St. Louis, MO, 2004
 Faculty of Medicine, UAE University, Al Ain, UAE, 2004
 NIA Collaborator Meeting "Caloric Restriction in non-human primates", Portland, OR
 2004

Department of Pediatrics, OHSU, Portland, OR 2004
La Jolla Institute for Allergy and Immunology, La Jolla, CA, 2005
University of Nevada, Reno, NV 2005
University of Wisconsin, Madison, WI 2005
University of Belgrade, School of Medicine, Belgrade, Serbia and Montenegro, 2005
National Jewish Center for Immunology and Respiratory Medicine, Denver, CO, 2006
Sidney Kimmel Cancer Center, La Jolla, CA, 2006
University of Montreal, Montreal, Canada 2006
University of Massachusetts, Worcester, MA 2006
Institute on Aging of the Austrian Academy of Science, Innsbruck, Austria, 2006
University of Basel, Basel, Switzerland, 2006
Georgetown University, Washington, DC, 2006
National Institute on Aging, Baltimore, MD, 2006
University of Arizona, Tucson, AZ, 2006
University of Iowa, Iowa City, IA, 2007
University of Belgrade, School of Medicine, Belgrade, Serbia, 2007
University of Parma, Parma, Italy, 2007
University of Vienna, Vienna, Austria, 2007
Special Lecture, College of Medicine, University of Arizona, 2008
Plenary Lecture, 3rd Annual Frontiers in Immunobiology & Immunopathogenesis
Symposium, Tucson, AZ 2008.
Department of Immunology, Duke University Medical Center, Durham, NC, 2008
Department of Medical Biology, University of Arizona College of Medicine, Phoenix, AZ,
2008
Rheumatology Grand Rounds, University of Arizona College of Medicine, Tucson, AZ
2008
Department of Immunology, University College, London, UK, 2009
Department of Immunology, Keio University, Tokyo, Japan, 2009
University of Tokushima, Tokushima, Japan, 2009
Radiation Effects Research Foundation, Hiroshima, Japan, 2009
University of Parma, Parma, Italy 2009
Department of Biomedicine, University of Basel, Basel, Switzerland, 2009
Department of Immunology, University of Toronto, Toronto, Canada 2010
Department of Molecular and Cellular Biology and the Barshop Center for Aging
Research, San Antonio, TX, 2010
The Garvan Institute for Medical Research, University of Sydney, Sydney, Australia,
2010
Queensland Institute for Medical Research, Brisbane, Australia, 2010
Walter and Eliza Hall Institute for Medical Research and the University of Melbourne,
Melbourne, Australia, 2010
The Kronos Longevity Research Institute, Phoenix, AZ, May, 2010
University of Belgrade School of Medicine and the Serbian Immunological Society,
Belgrade, Serbia, June 2010
The National Institute on Aging, Baltimore, MD, January 2011
INSERM/CNRS & The University of Nice, Nice, France, June 2011
University of Belgrade School of Medicine, Belgrade, Serbia, June 2011
Department of Pharmacology, University of Arizona, Tucson, AZ, Sept. 2011
Banner Sun Health Research Institute, Sun City, AZ, March 2012
Department of Experimental Pathology, University of Texas Medical Branch, Galveston,
TX, April 2012

Institute for Immunology, University of California, Irvine, April 2012
University of Belgrade School of Medicine, Belgrade, Serbia, June 2012
University of Kragujevac, Belgrade, Serbia, June 2012
Southwest National Primate Research Center, San Antonio, TX, July 2012
The Barshop Institute for Aging Studies, San Antonio, TX, July 2012
Memorial Sloan-Kettering Cancer Center, New York, NY, September 2012
Beckmann Center, Stanford University, Palo Alto, CA, December 2012
University of Belgrade School of Medicine, Belgrade, Serbia, July 2013
University of Kragujevac, Belgrade, Serbia, July 2013
The Doherty Institute, University of Melbourne, Melbourne, Australia, March, 2014
Queensland Institute for Medical Research, Brisbane, Australia, April 2014
University of New South Wales, Sydney, Australia, April 2014
Memorial Sloan-Kettering Cancer Center, New York, NY, May 2014
University of Utrecht, Utrecht, the Netherlands, June 2014
University of Belgrade School of Medicine, Belgrade, Serbia, June 2014
University of Kragujevac, Belgrade, Serbia, June 2014
Ohio State University, Columbus, OH, September 2014
Cincinnati Children's Hospital, Cincinnati, OH, October 2014
University of Miami, Miami, FL, November, 2014
University of Parma, Parma, Italy, April 2015
Mayo Clinic, Scottsdale, AZ, October 2015
University of Belgrade School of Medicine, Belgrade, Serbia, January 2016
University of Kragujevac Medical School, Serbia, January 2016
Queensland Institute for Medical Research, Brisbane, Australia, August 2016
University of New South Wales, Sydney, Australia, August 2016
University of Belgrade School of Medicine, Belgrade, Serbia, September 2016
University of Kragujevac Medical School, Serbia, September 2016
Institute for Biological Investigations and University of Belgrade School of Medicine,
Belgrade, Serbia, February, 2017
Department of Biochemistry and Molecular Biology and Institute for Biology of Aging and
Metabolism, University of Minnesota, Minneapolis, MN, February, 2017
Department of Microbiology and Immunology, University of Pennsylvania, Philadelphia,
PA, February, 2017
Department of Immunology and the Center on Aging, University of Connecticut,
Farmington, CT, March 2017
Department of Comparative Medicine, Yale University, New Haven, CT, March 2017
Department of Microbiology and Immunology, Tulane University, New Orleans, LA, April
2017
Department of Immunology and Microbiology, University of Colorado, Denver, CO, April
2017
Department of Microbiology and Immunology, University of Belgrade School of
Medicine, Belgrade, Serbia, August 2017
La Jolla Institute for Allergy and Immunology, San Diego, CA, October, 2017
Department of Molecular Biosciences, University of Texas, Austin, November 2017
BioDesign Institute, Arizona State University, Tempe, AZ, January 2018
National Institute on Aging, Baltimore, MD, January 2018
Department of Medicine, Drexel University College of Medicine, March 2018
Institute for Biological Investigations, Belgrade, Serbia, June, 2018
University of Kragujevac Medical School, Serbia, June, 2018
Memorial Sloan-Kettering Cancer Center, New York, NY, September, 2018

University of Belgrade School of Medicine, Belgrade, Serbia, September 2018
Institute for Stem Cells and Translation, (SIT), University of Leipzig, Leipzig, Germany,
December, 2018
University of Texas Health Sciences Center at San Antonio, San Antonio, TX, January
2019
Roche-Ventana Medical Systems, Tucson, AZ, June 2019
National Institute on Aging, Baltimore, MD, August 2019
Institute for Biological Investigations “Dr Sinisa Stankovic”, Belgrade, Serbia, March
2020
Viraholic Virtual Seminar Series, Arizona State University, Biodesign Institute, June
2020.
UTHSC San Antonio Department of Immunology, August 2020 (virtual)
Labroots Virtual Event, Coronavirus Webinar, Dec. 3, 2020
Workshop Organizer, Single-cell RNA Sequencing in Immunological Research, Institute
for Biological Investigations, Belgrade, Serbia, Oct. 22, 2021

Reviewer:

Papers: Aging Cell, Cell, Cell Host & Microbe, Cellular Immunology; eLife, Experimental Gerontology; Immunity; International Immunology; Journal of Biological Chemistry; Journal of Clinical Investigations, Journal of Experimental Medicine; J. Geront. Biol. Sci.; Journal of Immunology, Journal of Virology, Nature Immunology, Nature Medicine, Nature Reviews, PNAS, Science; etc.

Grants:

- Israeli Science Foundation (ad hoc, 1995);
- NIH Immunobiology Study Section (ad hoc 1995;1996; 2003, 2004);
- NIH Cellular and Molecular Immunology B Study Section (permanent member 2004-2008);
- NIH Immunological Sciences SS (Ad hoc 1997);
- Wellcome Trust (1999);
- NCI Special Emphasis Panel (2000);
- NIH IDM-A-03 SS (ad hoc - 2011);
- NIH Fogarty International Research Center (ad hoc, 2000,2001);
- NIH Cellular Mechanisms of Aging and Development Study section (ad hoc 2013);
- NIAID & NIA Special Emphasis Panels (1998; 1999; 2002; 2003,2004);
- NIA P01 Site visit teams 2002, 2003, 2004;
- Chairman, NIA P01 Site visit team, 2004, 2005;
- NIA Shock Centers Review (2010; 2014);
- NIA P01 Review (2010);
- NIA Intramural Scientist Review (2019);
- NIA U19 Review (2019)
- NIA U01 Review (2020).
- NIAID R21/R01 ad hoc (2020)

- NIH Common Fund SenNet Data Centers and SenNet Senescence Atlas – panel chair (2021)

Board Memberships:

Board of Directors, American Aging Association (2007-2020);
Chair of the Board and CEO, American Aging Association, 2014-202.

Editorial Boards:

Cellular Immunology, 1996-2015.
Journal of Immunology, Associate Editor, 1998-2002.
Journal of Virology 2008-2014
Gerontology, 2011-2016; 2020-
Longevity & Healthspan, 2011-2014
AGE/GEROSCIENCE: Journal of the American Aging Association, 2004-2012; Associate Editor 2012-
Journal of Gerontology:Biological Sciences, Associate Editor. 2007-2016; Editorial Board 2017-
Aging Cell, Associate Editor, 2008-
Rejuvenation Research -2009-
PloSPathogens – 2014-
Nutrition and Aging -2015-

NIH Workshop/Advisory Panels (all involve research presentations):

NIA Panel : “Immunology and Aging” , Bethesda, MD, 2002;
NIAID panel “Vaccination and protection of Special populations against bioattack” , Bethesda, MD, 2004;
NCCR panel : “Genomic and translational tools in the non-human primate research” , 2006, Bethesda, MD;
NIA/NIAID joint panel “ Thymic atrophy with aging” , Rockville, MD, 2007;
NIAID Panel “West Nile: Research Advances in Virology, Immunology and Genetics” , Rockville, MD, 2007;
RERF-NIAID Workshop “Radiation and Age-associated Immunosenescence “ Hiroshima, Japan, 2007;
Invited Presentation to the National Advisory Council on Aging, Bethesda, MD, 2008.
NIA Biology of Aging Summit (Co-Chair, Infection and Immunity Block), Gaithersburg, MD, 2008
NIAID Kickoff Meeting on the Pacific Northwest Research Center of Excellence in Biodefense and Emerging Diseases, Beaverton, OR, 2009
NIAID Workshop "Advances in West Nile virus research", Washington, DC, 2009.
NIAID/NIA Meeting “Rejuvenating the Aging Immune System”, Rockville, MD, 2009
NIAID meeting: “T cell memory”, Bethesda, 2010
NIAID/NIA Workshop “Rejuvenating the Aging Immune System”, Bethesda, MD, Oct. 5-6, 2011
NIAID Workshop “Immune protection in Special Populations”, Bethesda, MD, Jan 27, 2012
RERF-NIAID Workshop “Radiation and Age-associated Immunosenescence “ , Tokyo, Japan, July 28-31, 2012
NIA-NIH-wide Workshop “Inflammation and Aging”, Bethesda, MD, Sept. 6-7, 2012
RERF-NIAID Workshop “Radiation and Age-associated Immunosenescence “ , Bethesda, MD, April 2013
RERF-NIAID Workshop “Radiation and Age-associated Immunosenescence “ , Tokyo, Japan, November 2013

NIAID Workshop “Immune protection in Special Populations”, Bethesda, MD, May 8, 2014
NIA Workshop “Resilience in Aging Animal Models”, Bethesda, MD, August 27, 2014
NIA/NIAID Workshop “Immunity and Aging”, Rockville, MD September 8, 2014
NIA/NIAID Workshop “Immunity and Aging”, Vienna, Austria, September 4, 2015
RERF-NIAID Workshop “Radiation and Age-associated Immunosenescence “, Bethesda, MD, September 18-19, 2015
NIAID Workshop “Immune protection in Special Populations”, Bethesda, MD, May 9-10, 2016
NIA/NIAID Workshop “Immunity and Aging”, Bethesda, MD, October 4, 2016
NIA/NIAID Workshop “Immunity and Aging”, Rockville, MD September 26-27, 2017
NIA Workshop Aging Biology and Health Disparities, Bethesda, MD, September 20, 2017
NIA T1 Workshop Translational Aging Research: Meeting of the R21 Awardees, April 19-20, 2018
NHGRI KOMP2 Workshop to evaluate Knockout Mouse project, June 27, 2019, Bethesda, MD
NIAID Workshop Immune dysfunction from Radiation damage, Sept. 9-10, 2020 (virtual)
NIH-Wide Long COVID Workshop,
NIA/NIAID Workshop on COVID-19 and Aging, Virtual Conference, March 8, 2021

International Panels and Missions

Embassy of France-organized Mission: Aging and Immunity, Collaborative US-French initiative, October 18-23, 2010

Community outreach lectures/panels:

Lincoln High School, Portland, OR, 2003
Stoller Middle School, Portland, OR, 2004
Stoller Middle School, Portland, OR, 2005

Healthy Aging Forum, Kiewit Auditorium of the AZ Cancer Center, Tucson, AZ, Oct. 2009
Sun City Vistoso Community Lecture, Aging of the Immune System, Oro Valley, AZ, November, 2009
St. Phillip in the Hills Church Community Lecture: Aging of the Immune System, Tucson, AZ, Nov, 2010
Academy Village Community Lecture: Vaccines and aging, Tucson, AZ, Jan., 2011
Mended Hearts Club Community Lecture: Teaching an Old Immune System New Tricks, Tucson Medical Center, Tucson, AZ, April, 2011.
Discussion panel member (out of three panelist) for the movie “How to Live Forever”, The Loft Theater, Tucson, AZ, Oct. 13, 2011
Lecture “Biology of aging: Why our bodies grow old and what can we do about it” – part of the UA College of Science lecture series “Living Beyond 100’s”, Jan. 31, 2012 (YouTube Link: <http://www.youtube.com/watch?v=ZcyuHNLRSU>)
Lecture “Why are we aging?” – part of the series “Healthy aging 2012”, Foundation Ilija M. Kolarac, Belgrade, Serbia, June 7, 2012
Online lecture “Aging of the Immune System”, SENS Research Foundation, Dec. 2013 <http://www.youtube.com/watch?v=VVbGGA7ze1c&feature=youtu.be>
Lecture “Biology of Aging, Lifespan and Healthspan”, Wiseguise Community Group, Scottsdale, AZ, January 2014
Lecture “Aging and our Immune System”, Series “Living Healthy With Arthritis”, January

2018

Wonder at Home Virtual Lecture, UACoM-Tucson Outreach Series, Aug. 13, 2020.

Virtual Panel 'Bear Down for Health: Sport and Science in the Era of COVID-19',

Livestream from the UArizona Health Sciences, Sept. 16, 2020

Virtual Lecture, the Arizona Senior Academy, "Immunity to COVID-19 with Aging", Nov. 16, 2020

Lecture "Immune responses against SARS-CoV-2 infection and vaccination in older adults – results, facts, fiction" Foundation Ilija M. Kolarac, Belgrade, Serbia, Oct. 19th, 2021.

Lecture "Immunology of Aging and Lessons learned from SARS-CoV-2 ". Saddlebrooke Health Night Out, Saddlebrooke Ranch Senior Living Community, Nov. 22, 2021

PATENTS, INVENTIONS, INTELLECTUAL PROPERTY

Co-inventor on patents:

1. US Patent No. 10,882,903, "Methods and compositions for treating an alphavirus infection" (doc identifier US 20180134778 A1)
2. US Patent No. 11,119,103, "Serological Assays for SARS-CoV-2"

Teaching, mentorship and institutional service:

1. Teaching

Cornell University Graduate School of Medical Sciences (CUGSMS), subsequently Weil Graduate School

1990-2000	Lecturer, Immunology Course,
1990-1996, 1998, 1999	Quarter I Examiner, Immunology Course
1997	Lecturer, Advanced Topics in Immunology
1996	Lecturer, Core Graduate School Course
1996	Organizer, Immunology Course
1996	Lecturer, Tri-Institutional MD/Ph.D. Course
1995	Lecturer, Molecular Medicine Course
1993	Organizer and Lecturer, Center-wide Course "Theory and Practice of Flow Cytometry"

Oregon Health and Sciences University (OHSU) Graduate School:

2002, 2004	Lecturer, Advanced Immunology Course
2001-2008	Ph.D. Program Annual Retreat Presentation
2001-2008	MD/Ph.D./ Program Annual Retreat Presentation

MedLearn (formerly ArizonaMed, UA College of Medicine Medical Student teaching)

2009-present	Lecturer, 2 nd Year Infection and Immunity Block (Tucson)
2009	Moderator, Case-Based Instruction
2009-2011	Lecturer, Life Cycle Block (Phoenix)
2011-2016	Advanced Topics Lecturer (Tucson)
2013-present	Life Cycle Block (Tucson)

UArizona Medical Teaching quality and evaluations: Formal evaluations have been collected for the medical school teaching of the Infection & Immunity Block at the UArizona annually. Dr Nikolich teaches essentially all of the basic immunology in 4 days of lectures, a very difficult and challenging task that can be frustrating to both the students and the teacher due to an extremely fast pace and intense and complex matter. Dr Nikolich's summary scores average for the past 11 years are 3.89. Typical comments include : "*Great instructor on an obviously difficult subject to teach in such a short amount of time*"; "*He did a good job of taking very difficult material and making it understandable and relevant to us*". Etc.

University of Arizona (UA) Graduate College:

2009-2013	Course Director, IMB 564 Advanced Topics in Immunobiology
2010	Lecturer, IMB 566, Immunology Course
2014, 15	Lecturer, IMB 548 Course "Basic and Advanced Immunology"
2019-present	Course Co-Director, IMB 695L, "Advanced Topics: Modulation of the Biology of Aging by Inflammation, Infection and Immunity"

UArizona Graduate Teaching quality and evaluations: Formal evaluations are collected when the number of students is >4. Dr Nikolich averaged an evaluation of 4.12 out of 5 since arriving at University of Arizona.

2. Faculty and Institutional Committees

Cornell University Graduate School of Medical Sciences (CUGSMS), subsequently Weil Graduate School:

1990-2000	Admissions Interviewer, Immunology Program
1990-2000	Admissions Interviewer, Tri-Institutional MD/Ph.D. Program
1993-1998	Chairman, Guest Speaker Committee
1991-1994	Curriculum Committee
1990-1994	Admissions Committee, CUGSMS
1991-1993	Member, Guest Speaker Committee, MSKCC
1994-1997	Institutional Animal Care and Use Committee
1995, 1997	Promotion & Tenure ad hoc committees
1998	Head Veterinarian Search Committee, MSKCC and Cornell University Medical College

OHSU, OHSU Graduate School and Oregon National Primate Research Center (ONPRC):

2001-2008	Admissions Interviewer, Molecular Microbiology and Immunology (MMI) and Pharmacology, Molecular and Cell Biology programs
2002	Qualifying exam reform committee
2003, 2004, 2005	Molecular Microbiology and Immunology Promotion & Tenure Committee
2003-2008	ONPRC Appointment, Promotion & Tenure Committee
2004	Ad Hoc Animal Use Cost Committee
2004	OHSU Institutional Award Committee
2001-2008	MMI/Vaccine and Gene Therapy institute Guest Speaker Committee (chairman)
2001-2008	Preceptor, MMI T32 training grant in Molecular Pathogenesis
2001-2006	Preceptor, OHSU Casey Eye Institute training grant in Immunology of the Eye

University of Arizona:

2008-present	Preceptor, UA Neurobiology T32 Training Grant
2008-present	Arizona Cancer Center Scientific Board Member
2009-10	University of Arizona Vice-President for Research TRIF (Technology, Research and Innovation Fund) Strategic Review Panel
2010-present	Arizona Arthritis Center Board of Overseers and Scientific Board Member
2010-2013	Chair, Arizona Arthritis Center Director Search Committee; new director (dr Kwoh) hired in Jan. 2013
2010-present	Strategic Integration Champion (one of 15 in a 6,000 employee, three organization workforce), guiding integration of the College of Medicine, the University Medical Center and University Physician Health Practice Plan into a single entity, UA Health Network
2011	Member, Special Performance Evaluation Committee for Department Head of Physiology
2011-present	Steering Committee, Heads Up (UA Department Heads Organization)
2012-14	Co-Chairman, Heads Up (UA Dept. Heads Organization), representing the organization with the President, Provost and the

	UA administration
2013-14	Chair, Senior Vice-President for Research Search Committee
2013-14	Member, Advisory Board to the Senior VP for Health Affairs on Precision Health
2013-	Member, University Innovation and Strategy Task Force
2014 -	Co-Founder, "Let's talk Multidisciplinarity" UA Seminar Series and Task force

[Accomplishments: Changed the UA Handbook of Appointed Personnel following University Senate vote, as follows:

- Appendix A on Shared appointments was promoted to align hiring, annual reviews and promotion reviews.
- Appendix C GIDP letters were expanded to focus on all interdisciplinary collaborations.
- Collaborator letters were revised to emphasize their usefulness in documenting interdisciplinary collaborations.
- Letters to external reviewers were revised to emphasize interdisciplinary collaborations.

Also, UA Vitae (University of Arizona online faculty biographical repository and performance evaluation database) was revised to allow for multiple departmental input on annual reviews.

2017-18	Search Committee Member, Senior Vice-President for Health Sciences
2018-19	Strategic Planning Task force, UA Health Science
2019	Strategic Planning Implementation Plan, Owner, Initiative 4.1 – Personalized Defense (formulation of charter, budget and implementation plan.

3. Student Committees

Admission to Ph.D. Candidacy/Qualifying exam Committee –

- Yiqing Xu (Cornell, 1993);
- Ruben Dyall (Cornell, 1993);
- Albert Molano (Cornell, 1994);
- Kimary Kulig (New York University, Dept. of Pathology, 1996);
- Teodora Staeva (Cornell, 1998);
- Ilhem Messaoudi, (Cornell, 1998);
- Standing Qualifying Exam committee, Department of Molecular Microbiology and Immunology, OHSU, 2002-2004 (14 student examinations total)

Thesis Committee -

- Teodora Staeva (Cornell, 1997-2001);
- Kimary Kulig (NYU Pathology) (1996-99);
- Michael Munks, (OHSU, 2001-2003);
- Vuna Fa (M.Sc., Univ of Arizona, 2008-09);
- Hao Chen (Univ. of Arizona, 2009);
- Parvathi Ranganathan (Univ. of Arizona, 2009-10);
- Lance Nesbit (Univ. of Arizona, 2008-10);

- Rajalakshmy Ramalingam (Univ. of Arizona, 2009-2012);
- Neha Deshpande (Univ. of Arizona, 2011-2015);
- Marvin O’Ketch (Univ. of Arizona, 2015-2018);
- Jacob Zbesko (Univ. of Arizona, 2016-2019)
- UTMB (2016-2019)
- Luis Santiago Esperero (2019-present)
- Rachel (Slater) Reyna (UTMB, 2018-2022)

Ph.D. Thesis Defense Committee -

- Iris Alroy (Cornell, 1995);
- Tonya Villafana (Cornell, chairman, 1998);
- Michael Munks (OHSU, 2003)

4. Mentoring

Rotation students:

Cornell –

Ruben Dyall 1991;
 Alberto Molano, 1992;
 Gregory Stella, 1992;
 Valeria Tortorelli, 1994;
 Richard Huard, 1996;
 Ilhem Messaoudi, 1997;
 Bidisha Dasgupta, 2000.

OHSU -

Anna Lang, 2001;
 James Brien, 2002;
 Cortney Hiddlestone, 2003;
 Erin Fitch, 2005;
 Stefanie Manzer, 2007;
 Lila Farrington, 2008.

University of Arizona –

Kristin Renkema, 2009;
 Jason Pugh 2009;
 Emily Goldberg, 2010;
 Andrea Tanner, 2010;
 Nicholas Fox, 2010;
 John S. Davies, 2012;
 Nasiha Ahmad, 2015;
 Alane Dy, 2015;
 Nico Contreras, 2015;
 Christopher Coplen, 2017-18;
 Christine Bradshaw 2019

Mentor to students who did not progress to degree:

Andrea Tanner, University of Arizona, 2010-2011 – Link between proliferative and differentiation defects in old mouse T-cells (left laboratory and graduate program in 2011)

Doctorate and Masters Mentor:

- Dr. Ruben Dyall, 1991-1995 - Thesis title : “The use of optimal MHC class I binding peptides to study T cell selection, recognition and activation”
(Present position - Staff Immunologist, Immunology Division, Discovery Oncology Program, Pharmacia-Monsanto, St. Louis, MO)
- Dr. Alberto Molano, 1994-1998 - Thesis title “Peptide binding, TCR recognition and intrathymic positive selection by an MHC H-2K^b class I molecule devoid of the central anchor (“C”) pocket”
(Present position – Staff Scientist, Department of Nutrition, Tufts University, Boston, MA)
- Dr. Ilhem Messaoudi, 1997-2001 - Thesis title “ Specificity, kinetics and homeostatic regulation of a cytotoxic T lymphocyte (CTL) response to an immunodominant viral epitope”
(Present position –Associate Professor, UC Riverside School of Medicine, Riverside, CA)
- Dr. Teodora Staeva (co-mentor with Dr. Leonard P. Friedman), 1998-2001 – Thesis title: “Role of Vitamin D3 transcription in T-cell function”
(Present position Program Director for Immune Therapies, Juvenile Diabetes Research Foundation)
- Dr. Anna Lang, OHSU, 2001-2007– Thesis title: “Impact of lifelong viral infection on development and maintenance of memory CD8⁺ T-cells”
(Present position – Medical Student, OHSU, Portland, OR)
- Dr. James Brien, OHSU, 2002-2007– Thesis title: “Immunological basis of age-related vulnerability to viral infection”
(Present position – Assistant Professor, Department of Microbiology, St. Louis University, St. Louis, MO)
- Nicholas Fox, M.Sc. University of Arizona, 2010-2012 – Human immune aging and resistance to the West Nile virus infection (Staff Scientist, Columbia University, New York, NY)
- Dr. Kristin R. Renkema, University of Arizona, 2009-2013 – Thesis title: Maintenance, activation and protective responses of naïve CD8 T cells with aging (Postdoctoral Fellow, Dept. of Laboratory Medicine, University of Minnesota, Minneapolis, MN)
- Dr. Jason L. Pugh, University of Arizona, 2009-2013 – Thesis title: Radiation and lymphocyte function in the context of cytomegalovirus (CMV) and aging (Postdoctoral Fellow, Department of Immunology, Stanford University, Palo Alto, CA).
- Dr. Emily L. Goldberg, University of Arizona, 2010- 2014 – Thesis title: Energy metabolism and immunity to infection in the old age (Postdoctoral Fellow, Department of Comparative and Laboratory Medicine, Yale University College of Medicine, New Haven, CT).
- Dr. John S. Davies, University of Arizona, 2012-2016 – Thesis title: Heterochronic parabiosis studies of the aging immune system (Postdoctoral Fellow, Tumor Vaccine Unit, National Cancer Institute, Bethesda, MD).
- Dr. Nico A. Contreras, University of Arizona, 2015-2019 – Dietary and virome-based modulation of immune function in aging
- Christopher P. Coplen, University of Arizona, 2018-present – Cytomegalovirus reactivation, T cell receptor diversity and immunity in aging
- Christine Bradshaw, University of Arizona, 2019-present – Immunity against SARS-CoV-2 in humans and mice

Undergraduate Mentoring

Alona S. Sukhina, University of Arizona, 2011-2013; senior thesis “Investigating murine cytomegalovirus acute infection and reactivation via irradiation in primary mouse tissues”; (MD, University of Arizona College of Medicine- Phoenix, 2018; Residency, Phoenix Children’s Hospital, Phoenix, AZ)

Lydia K. Lutes, University of Arizona, 2012-2014, senior Capstone thesis “Impaired nutrient sensing in old mouse CD8 T cells”. (Ph.D. Candidate, University of California, Berkeley)

Angela Wu, University of Arizona, 2012-2014, (MD Candidate, University of Arizona College of Medicine – Tucson, class of 2019)

Toulupe Obafemi, University of Arizona, 2014-2016, senior thesis “The effects of interleukin 6 and interleukin 10 on frailty in C57BL/6 mice” (MD candidate, University of Texas, Austin)

Carly Cabel, University of Arizona Honors College, 2014-2017 (Ph.D. Candidate, University of Arizona, Tucson)

Justin Frere, University of Arizona Honors College, 2014 -2018 (MD/Ph.D. Candidate, Mt. Sinai Medical Center, New York, NY)

Sarah White, University of Arizona, 2016-2017 (Masters student, University of Arizona)

Amanda Warner, University of Arizona, 2016-2018 (Undergraduate student, Univ. of Arizona)

Max Zelikowsky, University of Arizona, 2016-2017 (Undergraduate student, Univ. of Arizona)

Niels Mohty, University of Arizona, 2017-2019 (Univ. of Arizona, MD candidate)

Faith M. Warner, University of Arizona, 2018-2020

Arveen Ashgar, University of Arizona, 2018-2021

Elana Terner, University of Arizona, 2019-2022

Trevor N. Tankersley, 2021-present

Postdoctoral Mentoring

MSKCC – Nada Jain, Ph.D. 1990-92 (Patent Law, New York, NY)

Sofija Andjelic, MD 1991-1995 (Group Leader, Sanofi-Pasteur, Rahway, NJ)

Carolyn Tucek-Szabo, Ph.D. 1994-1998 (Australia, homemaker)

Jaemog Soh, Ph.D. -1994-1996 (Professor, Korea)

Ruben Dyall, Ph.D.-1996-1998 (unknown)

Joel Le Maoult, Ph.D. – 1998-2001 (Head, Laboratory of Immunology, Centre pour Energie Atomique, Professor, University of Paris VII, Paris, France)

Beatrix Metzner, Ph.D. - 1994-1998)

Ljiljana Vasovic, MD (1995-1999)

Jose A. Guevara Patino, Ph.D. 1997-2001- (Professor, Loyola University, Chicago, IL)

Marco A. Mieza, M.D. - 1997-2000 – Hematologist, Sao Paulo, Brazil

H. Daniel Lacorrazza, Ph.D. 1996-2000 – Professor, Baylor University College of Medicine

Roberta Rivi, Ph.D. – 1998-2001 - deceased

Physician-Scientist Faculty Mentoring

MSKCC - Paul Sabolcz, MD, 1997-1999
OHSU - Robert O'Rourke, MD, 2006-08, K08
U. of Arizona- Kurt J. Griffin, MD, 2008-10, K08
Karen Taraszka-Hastings, MD, Ph.D., 2008-2018; K08
Zain Khalpey, MD, Ph.D. 2012-2013
Craig Wentkauf, MD 2015-
Richa Jain, MD, 2017-2019

Junior Faculty Mentoring (mentor or committee member):

OHSU: Mark Slifka, Ph.D., 2001-2004

U. of Arizona- Lonnie Lybarger, Ph.D., 2008-2014
Felicia Goodrum, Ph.D., 2008-2018
Karen Taraszka Hastings, 2008-2018
Sourav Ghosh, Ph.D., 2011-2014
Hsin-jung Joyce Wu, Ph.D., 2013-2018
Michael S. Kuhns, Ph.D., 2014-2017
Kristian Doyle, Ph.D., 2015- present
Dominik Schenten, Ph.D. 2017-present
John G. Purdy, Ph.D. 2015-present

Faculty Recruited/Hired

Jeffrey A. Frelinger, Ph.D., Professor, 2010
Michael S. Kuhns, Ph.D., Assistant Professor, 2010 (promoted & tenured 2017)
H-j. Joyce Wu, Ph.D., Assistant Professor, 2011 (promoted & tenured 2018)
Samuel K. Campos, Ph.D., Assistant Professor, 2011 (promoted & tenured 2018)
Megan J. Smithey, Ph.D., Research Assistant Professor, 2011
Anita Koshy, MD (co-hire with Neurology), Assistant Professor, 2012 (promoted & tenured 2018)
Kristian Doyle, Ph.D., Assistant Professor, 2013 (promoted and tenured 2019)
Dominik Schenten, Ph.D., Assistant Professor, 2013
John Purdy, Ph.D., Assistant Professor, 2015
Michael D.L. Johnson, Ph.D., Assistant Professor, 2016
Deepta Bhattacharya, Ph.D., Associate Professor, 2017
Protul Shrikant, Ph.D., Professor, 2017
Justin Wilson, Ph.D., Assistant Professor, 2018

Office address: 1656 E. Mabel St., Tucson, AZ 85719 **Phone :** 520/626-6065

e-mail: nikolich@email.arizona.edu

Community activities and volunteer work:

Baseball – assistant coach, Cedar Mill Little League, 2002;

Volleyball – assistant coach, Tualatin Hills Park and Recreation District, 2002-2005 (co-ed 4th & 5th grade; girls 6-8 grade); assistant coach, SunCats Volleyball Club, Columbia Empire Volleyball

Association (USAV member), 2002-2006; Head coach, Tualatin Hills Park and Recreation District, 2006 (girls 6-8th grade, competitive division).

Community outreach lectures – see above.

Publications (* - Peer Reviewed; ORCID # 0000-0001-5830-5323) :

- 1.* Nikolić, J. and S. Vukmanović. 1983. Production and characterization of alloreactive antisera in inbred rat strains. *Med. Podml.* XXXV (3-4), 197.
- 2.* Vukmanović, S. and J. Nikolić. 1983. Effects of Carrageenan in vivo: delineation of the effect on the immunocompetent and accessory cells. *Med. Podml.* XXXV (1), 21.
- 3.* Nikolić, J. 1984. Analysis of the interaction of cloned T cells and macrophages by the F(ab)'2 fragments of antigen-specific antibodies. *Med. Podml.* XXXVI (1), 21.
- 4.* Mostarica-Stojković, M., J. Nikolić, M. Petrović and M.L. Lukić. 1983. Genetic correlates of the resistance to the induction of experimental allergic encephalomyelitis. *Period. Biol.* 85:63.
- 5.* Burkly, L.C., J. Nikolić and H.H. Wortis. 1985. T cell regulation of light chain expression: Early dominance of Ig κ in a primary thymus-dependent response does not require affinity based selection. *J. Immunol.* 135:1573.
6. Nikolić-Žugić, J., T. Jovanovic, F.Y. Liew, W.L. Chan and M.L. Lukić. 1986. Immunogenic potential and protective capacity of HSV-I glycoproteins. In: Genetic and Biochemical Engineering in Biotechnology, P. Radicević, ed., pp. 117-125, Nolit, Belgrade, Yugoslavia.
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Chapter 3. Nikolić-Žugić, J. Phenotypic and functional stages in the intrathymic development of the $\alpha\beta$ thymocyte lineage.
Chapter 7. Nikolić-Žugić, J. Positive intrathymic selection of TcR alpha/beta T cells.
Chapter 8. Nikolic-Zugic, J. Clonal deletion in negative intrathymic selection.
Chapter 10. Nikolic-Zugic, J. The relationship between positive and negative selection.
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Paper #13 was followed by a News & Views commentary in the same issue of *Nature*. Paper #58 was highlighted by a commentary in *Nature Reviews Immunology*. Papers #58, 72, 84 and 93 were noted as papers of interest by Faculty of 1000, and were ranked between “must read” and “outstanding”. Paper #121 was highlighted in *Nature Reviews Immunology* 14:3, 2014 (Research Highlights, in Brief, by E. Kugelberg). Papers #123 & 131 (Comai L: F1000Prime Recommendation

of [Goldberg EL et al., Aging Cell 2015, 14(1):130-8]. In F1000Prime, 19 Feb 2015; DOI: 10.3410/f.725248287.793503904. F1000Prime.com/725248287#eval79350390) were selected by the Faculty of 1000 for F1000 Prime. Paper #139 was highlighted on the cover of Nature Immunology. Review #169 has been the most cited paper in Geroscience of all times. Review #170 has been the most read paper in the Journal of Immunology in 2021.

RESEARCH INTERESTS, MAJOR CONTRIBUTIONS AND SCHOLARLY OUTPUT

My principal interests are to understand:

- (i) basic mechanisms of immunity and how these mechanisms decline and deteriorate with age;
- (ii) how these defects in basic mechanisms of immunity with aging erode protective immunity against infection;
- (iii) how persistent infections, specifically the one with the cytomegalovirus (CMV), influence immune homeostasis and function with aging;
- (iv) how we can devise methods to correct or ameliorate immune dysfunction by means of new vaccines, immunomodulatory and metabolic intervention and/or immune rejuvenation.
- (v) how longevity and Healthspan modulation by nutritional and metabolic intervention impacts the function of the immune system

SCHOLARLY OUTPUT: >190 total publications, of which 148 primary peer reviewed and 47 reviews, opinions, books (1) and book chapters (h-factor 61; total citations >12,000, per Google Scholar; ORCID # 0000-0001-5830-5323). My major research accomplishments can be divided in several areas (highlighted are those I consider of exceptional importance), as follows:

1. **T cell development and lineage relationships.** In the course of my postdoctoral studies and the first ten years of my independent faculty work, I have been focused on delineating steps and checkpoints in T cell development and understanding changes that occur at these stages. This pioneering work helped establish a map of TCR $\alpha\beta$ lineage T cell development. Specific work included discoveries of the functional potential of immature CD8+CD4- single-positive subset in vivo (**Nikolic-Zugic and Bevan, PNAS 1988, 96 citations**); dissection of CD8-CD4- double-negative subsets with different in vitro and in vivo developmental potential, that identified the pre-T cell receptor checkpoint in T cell development (**Nikolic-Zugich, Moore and Bevan, Eur. J. Immunol. . 1989; Nikolic-Zugic and Moore, ibid. 1989, 74 and 48 citations, respectively**), and delineation of distinct subsets of CD4+ single-positive thymocytes and characterization of their developmental requirements, which marked chronologically the latest checkpoint in $\alpha\beta$ T cell development (**Nikolic-Zugic and Bevan, Int. Immunol. 1990; Dyall and Nikolic-Zugic, J. Exp. Med., 1995, and 1999, total 135 citations**). Subsequent work from my laboratory (another 15 primary papers) identified longevity and apoptosis characteristics of many of these subsets and thereby mapped programs necessary for cellular survival

2. **T cell receptor:peptide-MHC (TCR:p-MHC) interaction in repertoire selection, TCR diversity and functional immunity.** In parallel with studies of lineage and stage relationships in T cell development I started addressing another long-term interest – how the T cell receptor interacts with self (or foreign) peptides bound to self MHC molecules to mediate biologically relevant outcomes: T cell receptor repertoire selection in the thymus, T cell maintenance in the peripheral lymphoid organs and functional immunity upon infection. My major contributions to science were heavily defined by this topic, and included a seminal discovery that self peptides, bound to self MHC molecules, critically shape the specificity of positive intrathymic selection (#13 from full CV, Nikolic-Zugic and Bevan, Nature, 1990; 361 citations), a demonstration that limits of self-tolerance to self peptides can be used to manipulate and enhance antitumor immunity (Dyall, R. et al, J. Exp. Med 1998; 260 citations) and the first demonstration of a direct connection between *mhc* polymorphism, T cell affinity/avidity and immune defense (#58, Messaoudi, I. et al., Science, 2002; 343 citations). Please note that all papers related to peripheral maintenance of T cells during aging, that fundamentally rely on TCR:pMHC contact, are described under studies of T cell homeostasis with aging (#3 below).

3. **Long-term T cell homeostasis and T cell aging.** Studies under #2 have led to another long-term interest of mine, the biology of aging in T cells, specifically maintenance of their numbers, diversity and functional potential. Initially we studied a phenomenon of age-related T cell clonal expansions (TCE), providing the first detailed study of the kinetics of their accumulation with age (Le Maoult, J., et al., J. Immunol, 2000; 67 citations), and then a compelling analysis of their functional impact upon an ongoing immune response (Messaoudi, I. et al., J. Exp. Med. 2004; 150 citations); with another 4 papers addressing TCE or their B cell counterparts, BCE.

From that point, we have probed the boundaries of naive and memory T cell homeostasis and maintenance in the course of aging. We discovered several novel compensatory homeostatic mechanisms in mice (Rudd, B.D. et al., PNAS USA, 2011; 116 citations) and non-human primates (Čičin-Šain, L., et al., PNAS USA 2007; 127 citations; Čičin-Šain, L., et al., J. Immunol., 2010; 126 citations) that attempt to conserve naïve T cells during aging, but eventually fail, and actually precipitate further loss of naïve T cells at the end of life. We showed that this leads to selection of a small subset of surviving naive T cells that exhibit high avidity towards both self and foreign MHC, and that tend to dominate immune responses in an oligoclonal fashion, potentially favoring escape of microbial pathogens. In humans some naïve-like T cells were actually of memory type, specific for persistent infections (Pulko, V. et al., Nat. Immunol., 2016; 109 citations). Recently, we feel that we have ushered a true Copernican revolution when we reexamined whether the naïve T cells themselves carried age-related defects, and found that they did not (Jergovic, M., et al., Front. Immunol. 2019). Rather, old naïve T cells seem fine, and it is instead the lymph node

structure and function that collapses with aging, disabling naïve T cell maintenance and function due to fibrotic changes (Thompson, H.L. et al., *Aging Cell* 2019; 32 citations). I expect to make many additional contributions to this area, dissecting the mechanisms of age-related LN failure and methods for their rejuvenation.

4. **Infection and immunity to acute and persistent pathogens with aging:** how does an older immune system deal with new infection, reinfection and persistent infection? We have filled critical gaps in our knowledge in this regard, studying acute - West Nile virus (Brien, J.D. et al., *Eur. J. Immunol.*, 2007; 150 citations; Brien, J.D. et al., *J. Immunol.*, 2008, 176 citations; and Brien, J.D. et al., *J. Exp. Med.*, 2009, 149 citations), *Listeria monocytogenes*, Poxviruses, Chikungunya virus – 4 papers) and persistent (HSV-1 – 3 papers; cytomegalovirus, 18 papers, including - #123, Wertheimer, A.M. et al., *J. Immunol.*, 2014; 249 citations; Čičin-Šain, L., et al., *PloS Pathogens*, 2012; 127 citations; and Smithey, M.J. et al., *PNAS USA* 2018, 32 citations) microbial pathogens in mice, non-human primates and humans. We found profound, stereotypical lesions in adaptive immunity to acute infection, and a less well defined set of innate immune defects. As stated above, these defects, while manifesting themselves at the T or B cell levels, were actually precipitated by defects in the old microenvironments. With regard to persistent viruses, we have discovered that while these infections clearly have a negative impact on immune responses to third-party antigens, this impact is probably not fatal and can also have potential benefits. Since March, 2020, in partnership with Deepta Bhattacharya, Ryan Sprissler and colleagues, we have begun addressing **COVID-19** and its impact on Tucson and Arizona populations. We engineered and optimized an exceptionally accurate antibody test (FDA EUA ID#201116), described above under Exceptional Service to UA (p. 9). Using this tool, we have shown strong and persisting antibody immunity against SARS-CoV-2 in severe, but also mild and even asymptomatic cases, debunking the myth of rapid disappearance of immunity. We provided mechanistic explanation for some of the erroneous interpretations, showing that while antibodies to two parts of the virus (the RBD and S2 parts of the S glycoprotein) persist, those against nucleoprotein (N) wane more rapidly; we also showed exquisite correlation between RBD and S2 positivity and neutralizing (protective) antibody activity. Finally, we found no differences in humoral immunity by age and sex in our cohort of >6,000 subjects. This work has been highly cited (Ripperger, T.J. et al., *Immunity*, 2020 and *medRxiv*, 2020, combined 238 citations).
5. Finally, I have a longstanding interest in **longevity and Healthspan modulation by nutritional and metabolic intervention.** The promise of healthspan extension via dietary and pharmacologic intervention raises the possibility of delaying many organ-specific diseases of aging simultaneously with longevity extension. Along these lines, we performed key studies in non human primates and mice to document benefits (#72, Messaoudi, I. et al., *PNAS USA* 2006; 226 citations), as well as possible costs (#131,

Goldberg, E.L. et al., Aging Cell, 2015; 68 citations), of different treatments to achieve true healthspan extension.

From the full CV, the following work was highlighted in scientific press: Paper #13 was followed by a News & Views commentary in the same issue of Nature. Paper #58 was highlighted by a commentary in Nature Reviews Immunology. Papers #58, 72, 84 and 93 were noted as papers of interest by Faculty of 1000, and were ranked between “must read” and “outstanding”. Paper #121 was highlighted in Nature Reviews Immunology 14:3, 2014 (Research Highlights, in Brief, by E. Kugelberg). Papers #123 & 131 (were selected by the Faculty of 1000 for F1000 Prime. Paper #139 was highlighted on the cover of Nature Immunology.

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Ongoing Research Support

OT2HL161847-01 NIH/NHLBI RECOVER OTA SUBAWARD (Nikolich, Subaward contact PI) Researching COVID to Enhance Recovery (RECOVER) initiative Goal: To study Post-acute Sequelae of COVID-19 (PASC) and recovery from them in a diverse national cohort of participants. Role: Contact PI	10/01/2021-05/23/2025 \$9.2M current year	1.8 Person months
R01/R37AG020719 (Nikolich-Zugich) NIH/NIA MERIT AWARD T Cell Homeostasis and Function in Immune Senescence The major goals of this project are to understand T cell dysregulation in immune senescence Role: Principal Investigator	04/01/2018-03/31/2028 \$263,850	1.20 Person Months
T32AG058503-01A1 (Nikolich-Zugich) NIH Infection and Inflammation as Drivers of Aging (IIDA) Predoctoral Training Program The major goals of the IIDA training program will be to provide unique opportunities for training the next generation of diverse scientists to advance our understanding of the biological basis of aging processes and develop strategies to enhance resilience and health span. Role: Principal Investigator	05/01/2019-04/30/2024 \$183,064	1.20 Person Months
U01AG060900-02S1 (Twigg, Nikolich, Weinstock) Indiana University (Prime: NIA) Development of Valid Reliable Markers of Aging-Related Biologic Mechanisms for Human Studies: Viral Burden and Systemic Inflammation as Biomarkers for Chronic Disease and Frailty in Aging The major goals of this project are to identify and validate virome biomarkers as predictors of systemic inflammation, immune aging, frailty and chronic comorbidities that arise with aging. Role: MPI	09/30/2018-05/31/2023 \$1,023,252	1.20 Person Mo.
R01AG057701 (Nikolich-Zugich)	05/01/2018-04/30/2023	1.20 Person Months

NIH/NIA	\$220,000	
Mechanisms of Age-related Susceptibility to the chikungunya virus (CHIKV)		
The major goals of this project are to dissect the impact of an arthritogenic alphavirus on the immune system of older individuals.		
Role: Principal Investigator		
P01AG052359 (Nikolich-Zugich)	09/15/2017 – 05/31/2022	2.40 Person Months
NIH	\$3,974,727	
Thymic and Peripheral Aspects of T Cell Aging and Rejuvenation		
Four integrated projects led by experts in the field, supported by four cutting-edge cores, will test this hypothesis and achieve the following Program Goals: 1. Define mechanistic changes in thymic and secondary lymphoid organ aging; 2. Generate the Human-Mouse Timeline by comparing the progression of thymus, lymph node and T cell aging in mice and humans; 3. Determine the endogenous regenerative capacity of thymic and secondary lymphoid organ stroma over the lifespan; 4. Devise and test rejuvenation strategies to improve thymopoiesis and peripheral T cell maintenance and function, so as to enhance protective immunity.		
Role: PI		
R21AI146388-01A1 (Schenten)	03/31/2020-02/28/2022	0.36 Person Months
NIAID	\$150,000	
Quality Control of Antibody Responses by the Innate Signaling Adaptor MAVS		
Our study will address fundamental mechanistic questions about the role of RLRs in the adaptive immune response to WNV and other RNA viruses. Such insights will advance the development of novel vaccine strategies against WNV and related flaviviruses.		
Role: Co-Investigator		
75D30120C08379 (Burgess)	06/15/2020-06/14/2022	0.60 Person Months
CDC	\$7,772,654	
Prospective Cohort to Assess Novel and Repeated SARS-CoV-2 Infection and COVID-19 Illness within a US State or Region		
Our primary objectives are to: 1) determine the incidence of asymptomatic and symptomatic infection using both molecular and serologic diagnostics in Arizona healthcare personnel, first responders and essential workers; and 2) estimate the incidence of novel infection and repeat infection in this cohort by employing a stratified design that over-enrolls seropositive individuals.		
Role: Co-Investigator		
CTR050053 (Nikolich)	05/06/2020-05/05/2022	2.40 Person Months
Arizona Department of Health Services (Prime: U.S. Department of the Treasury)		\$3,500,000
University of Arizona COVID-19 Serology Testing		
Role: Principal Investigator		
R01AG059711 (Burd)	06/01/2020-05/31/2024	0.60 Person Months
Ohio State University (Prime: NIA)	\$12,963	
Impact of Senescence on T-cell Function and Immunotherapeutic Response		
Dr. Nikolich will advise Dr. Burd with regard to cellular immunology and immunity model and assays will help her analyze data and write papers and reports related to immune senescence, cellular senescence and cancer.		
Role: Site PI		
YBI Contract (Nikolich-Zugich)	06/01/2018-06/07/2022	0.60 Person Months

The Young Blood Institute, Inc. \$306,954
 Plasma exchange to alter biomarkers of aging in humans
 The major goals of this project are to explore whether plasma exchange can improve biomarkers of aging in humans.
 Role: Principal Investigator

R01HL131834-01A1 (Brooks) 01/01/2017-12/31/2020 0.60 Person Months
 NIH/NHLBI \$237,500
 T cell-Mediated Regulation of Blood Pressure in Postmenopausal Hypertension
 The major goals of this project are to define the impact of ovarian failure on T cell-mediated hypertension, and its contribution to the postmenopausal rise in hypertension and associated cardiovascular complications.
 Role: Co-Investigator

OVERLAP

There is no scientific or budgetary overlap

Completed Research Support in the last 5 years:

1R21 AG054317 Nikolich-Zugich (PI) 09/30/2016-04/30/2019 1.2 mo
 NIH/NIA
Disparities in Immune Fitness in HIV+ Subjects with Aging
 Annual direct cost: \$132,976
 Goal: To investigate the roles of ethnic background and cytomegalovirus in immune aging in persons with HIV.

1R01 AG048021-04 Nikolich-Zugich (PI) 4/15/2014-03/31/2019 1.2 mo
 NIH/NIA
Impact of CMV upon T-cell aging and immune defense
 Annual direct cost: \$294,289/yr + diversity supplement \$47,338
 Goal: To dissect how CMV modulates T-cell receptor repertoire and function.

1R56 AG053358 (Nikolich-Zugich, PI) 09/15/2016-08/31/2017 1.2 mo
Mechanisms of Age-related Susceptibility to the chikungunya virus (CHIKV)
 Goal: To dissect the impact of an arthritogenic alphavirus on the immune system of older individuals.

1R21 AG045734 (Nikolich-Zugich, PI) 04/01/2014-03/31/2017 1.2 mo
Longevity extension and immune function in aging
 Goal : To examine whether the most potent longevity extension interventions may adversely affect innate and adaptive immunity.

Total award: \$422,085

BAA NIHA120100085 (Nikolich-Zugich, PI) 05/16/2011-05/15/2016 3.0 mo
 ADB Contract HHSN 272201100017C
 NIH/NIAID N01-AI-00017
Immune protection in Special Populations:

Role:PI

Total award: \$13.8 M

BAA-NIAID-DAIT-NIHAI2008023

9/30/2009-9/29/2015

1.2mo

*Studies of Immunosenescence and Other Late Effects of Acute Ionizing Radiation
Exposure in Atomic Bomb Survivors*

HHSN272200900059C

Radiation Effects Research Foundation (Nakachi, K, PI); Nikolich-Zugich (Subcontract PI) –
Project: *Effects of Radiation and Aging on T Cell homeostasis and function*

Total award to UA: \$873K

Goal: To elucidate whether and how radiation may precipitate or accelerate manifestations of
aging in the immune system.

5 U51 AI081680 Nelson (PI)

03/01/09-02/28/15

1.2 mo

NIH/NIAID

Research Centers of Excellence in Biodefense and Emerging Diseases

Nikolich-Zugich, Project 2 PI – *Broad-based strategies to improve T-cell mediated protection*

Role: Subcontract PI

Total award: \$2.6M

Updated 03/2022