

CURRICULUM VITAE

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EDUCATION

Medical School and/or Graduate School

1978-1985 (7-year MD program)	MD – Internal Medicine.	Yerevan Medical Institute, Yerevan, Armenia.
1989-1992	PhD – Dermatology and Sexually Transmitted Diseases, Genetics, Microbiology, Immunology.	Central Advanced Training Institute for Physicians, Moscow, Russia.

POSTDOCTORAL TRAINING

Internship, Fellowship and Residencies:

1983-1985	Internship Cardiology, Nephrology, Endocrinology.	Yerevan Medical Institute, Yerevan, Armenia
1985-1987	Clinical Internship, Specialization in Dermatology and Sexually Transmitted Diseases.	Belorussian Advanced Training Institute for Physicians, Minsk, Belarus.
1987-1988	Clinical Internship, Dermatology for Primary Care Physicians.	Belorussian Advanced Training Institute for Physicians, Minsk, Belarus.

Fellowships:

1996-1999	Post-Doctoral Fellowship: Aging, Photoaging, Gerontology, Cutaneous Oncology, Molecular and Cell Biology.	Boston University School of Medicine, Boston, MA - National Institute of Aging T32 Training Grant.
2001-2003	Post-Doctoral Fellowship: Aging, Endothelial Progenitor Cell Biology, Ischemia-induced Neovascularization, Tissue Repair and Regeneration.	Caritas St. Elizabeth's Medical Center of Boston, Division of Cardiovascular Research, Boston, MA – National Heart, Lung and Blood Institute.
2010 May-June	2010 NASA Space Radiation Summer School – Professional Auditor.	Brookhaven National Laboratory, Upton, NY, USA

ACADEMIC APPOINTMENTS

- 2008 – present** Associate Professor of Medicine, Tufts University School of Medicine and Principal Investigator, Genesys Research Institute, Cardiovascular Research Center, Boston, MA, USA.
- 2010-present** Adjunct Associate Professor of Medicine, Dermatology, Pathology and Laboratory Medicine, Boston University School of Medicine, Boston, MA, USA.
- 2004 – 2010** Associate Professor of Dermatology, with secondary appointments in Medicine, Pathology and Laboratory Medicine, Boston University School of Medicine, Boston, MA, USA.
- 2004 – 2008** Assistant Professor of Medicine, Tufts University School of Medicine and Principal Investigator, Steward St. Elizabeth’s Medical Center of Boston, Division of Cardiovascular Medicine, Boston, MA, USA.
- 2001 – 2004** Assistant Professor of Dermatology, Pathology and Laboratory Medicine, Boston University School of Medicine, Boston, MA, USA.
- 2000 – 2004** Associate Investigator, St. Elizabeth’s Medical Center of Boston, Division of Cardiovascular Medicine, Boston, MA, USA.
- 2000 – 2004** Assistant Professor of Dermatology, Boston University School of Medicine, Boston, MA, USA.
- 1999 – 2000** Instructor of Dermatology, Boston University School of Medicine, Boston, MA, USA.
- 1992 – 1994** Senior Scientist and Medical Director of International Project “Elasticity Imaging for Breast and Prostate Cancer”, Institute of Theoretical and Experimental Biophysics, Laboratory of Medical Acoustics, Russian Academy of Sciences, Pushchino, Moscow Region, Russia.

AWARDS AND HONORS

- 1998** World Congress Fund Award of the American Academy of Dermatology
- 1999** Japanese Society of Investigative Dermatology International Fellowship Shiseido Award
- 2000** Dermatology Foundation Research Award
- 2000** The Skin Cancer Foundation Research Award
- 2000** American Cancer Society Research Award
- 2000 – 2002** American Federation for Aging Research Award
- 2001 and 2003**-Merck and Co., Inc, Research Award
- 2002** American Cancer Society Research Award
- 2004 and 2007** – Industrial Cantabria Farmaceutica, Research Award
- 2005-2009** American Heart Association National Scientist Development Award
- 2007-2009** NIH/NIA R21 Exploratory Developmental Research Grant
- 2009-2010** - Cantabria Farmaceutica, Research Award
- 2010-2013** - NASA Human Research Program Award for Ground-Based Studies

HOSPITAL, MEDICAL SCHOOL, OR UNIVERSITY COMMITTEE

ASSIGNMENTS:

- 2005-2009** Member of Institutional Review Board, Caritas St. Elizabeth's Medical Center of Boston, MA, USA.
- 2006-2009** Member of the Committee on Faculty Affairs, Boston University School of Medicine, Boston, MA, USA.

OTHER MAJOR COMMITTEE ASSIGNMENTS:

- 2001-Present** NIAMS Coalition-Coalition of Voluntary and Professional Associations Concerned with the NIH Programs.
- 2002-Present** Gerson Lehrman Group Healthcare Councils – Member of the Council.
- 2003-Present** Member – Society for Investigative Dermatology Education for Students (SIDES) program of DNA Repair Section of National Cancer Institute.
- 2005-Present** Member/Consultant - Center for Integration of Medicine and Innovative Technology a non-profit consortium of world-leading academic and research institutions founded by Partners Healthcare, Massachusetts General Hospital, Brigham and Woman's Hospital, MIT, and Draper Laboratory.

TRAINING OF GRADUATE STUDENTS/POST DOCTORAL FELLOWS, AND STUDENT

- 2013** Adam Taleb, MD – Post-Doctoral Fellow
- 2013** Layla Rahimi - Masters Student, BUSM, GMS Division
- 2013** Jin Song - Masters Student, BUSM, GMS Division
- 2012-2013** Sangue Bae, MD – Post-Doctoral Fellow
- 2012** Hannah Gee – Masters Student, BUSM, GMS Division
- 2012** Akhil Aggarwal – Medical Student (USMI) class of 2016 –summer internship
- 2011** Justin Wage – Medical Student, TUSM (1st year), Summer Internship.
- 2011** Daniel Park – Senior Internship, School-To-Career Program, Weston High School.
- 2010** Daniel Park – High School Internship, Weston High School.
- 2008** Danielle Levine – Medical Student, TUSM (3rd year), Research Rotation.
- 2007-2008** Joanna Rhodes – Master Student, BUSM, GMS Division (thesis defense April, 2008).
- 2004-2007** Simin Arad, MD – Post-Doctoral fellow, BUSM, GMS Division.
- 2006-2007** Christina Coleman – Masters Student (Honors for MS), BUSM, GMS Division.
- 2006** Edoardo Zattra, MD – Medical Resident, Post-Doctoral Research Fellow from University de Padova, Italy.
- 2006** Danielle Levine – Medical Student TUSM (1st year), Research rotation.

2005-2006	Alexandra Guillermo – Medical Student TUSM (3 rd year), Research Rotation.
2005-2006	Hu-Ya Chen, MD – Post-Doctoral Research Fellow, Taiwan.
2004-2005	Sepideh Bagheri, MD – Post-Doctoral Research Fellow.
2003-2004	Laila El-Keeb, MD – Post-Doctoral Research Fellow.

TEACHING RESPONSIBILITY

2001 – 2010	Lectures (2/semester), within the course of “Special Topic in Pathology”, GMS Division, BUSM.
1999 – 2003	Course of Integrated Clinical Problems for M.D./Ph.D. students, and of first and second year Medical School students, BUSM.

PROFESSIONAL SOCIETIES

1985 – 1992	All Union Society for Dermatologists and Venereologists (STDs).
1992 – 1994	Society for Biophysics and Medical Acoustics.
1996 – 2010	Society for Investigative Dermatology.
2000 – Present	New York Academy of Sciences American Association for the Advancement of Science.
2003 – Present	American Heart Association.

OFFICE AND COMMITTEE ASSIGNMENTS IN PROFESSIONAL SOCIETIES

2005-Present	American Federation for Aging Research – Member of National Scientific Advisory Council
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MAJOR RESEARCH INTERESTS

- Ischemia-induced angiogenesis and tissue regeneration (coronary and vascular diseases).
- Stem and progenitor cell biology (satellite cells, hematopoietic stem cells, endothelial progenitor cells).
- Age-associated decline in tissue repair and regeneration after ischemic damage (coronary and peripheral vascular diseases).
- Age-related decline in DNA repair capacity, increased mutagenesis and carcinogenesis.
- Translational research using murine skin cancer models of Squamous Cell Carcinoma, Basal Cell Carcinoma and melanoma-prone animal models.
- Translational research using organotypic models of human skin and development of organotypic models of human cancer.
- Inhibition of tumor angiogenesis, development of novel anticancer therapies.
- Development of anti-cancer therapies based on inhibition of TNF-alpha ligand-receptors interactions.
- Development of TNF-alpha ligand-receptors interactions-based therapies to improve post-ischemic repair, regeneration and neovascularization processes.
- Space Radiobiology - molecular mechanisms of space radiation-induced long-term CV degenerative risks, development of mouse models for evaluation of space radiation-induced Excess Relative Risks-ERR, development of predictive biomarkers for estimation of ERR.

EDITORIAL BOARDS AND ACTIVITY

2000 – Present	Reviewer for Journal of Investigative Dermatology
2002 – Present	Reviewer for Circulation
2003 – Present	Reviewer for Circulation Research
2003 – Present	Reviewer for Atherosclerosis Thrombosis and Vascular Biology
2004 – Present	Reviewer for Journal of Cellular Physiology
2005 – Present	Reviewer for FASEB Journal
2005 – Present	Invited grant reviewer for NIH/ National Heart, Lung, and Blood Institute, VCMB study section
2005 – Present	Reviewer for Journal of Biological Chemistry
2006 – Present	Reviewer for Proceeding of National Academy of Sciences, USA
2006 – Present	Reviewer for Cancer Research and American Association of Cancer Research related 3 other Journals
2007 – 2008	Invited Program Project Grant reviewer for NIH/NHLBI, Special Emphasis Panels.

BIBLIOGRAPHY ([#] denotes corresponding and or primary author) Refereed peer-reviewed papers selected from more than 50:

1. [#]**Goukassian D.A.** and Suvorova X.N.- Influence of Some Exogenous Factors on the Results of Atopic Dermatitis Treatment-Reports of Dagestan Republic Conference of Dermatovenerologists. Mahachkala, pp. 79-81, 1990.
2. Suvorova, X.N. and [#]**Goukassian D.A.**- Clinical Peculiarities of Mycotic Complications in Atopic Dermatitis Patients-Collection of Scientific Transactions-“Actual Questions of Dermatology and Venereology” Ekaterinburg, pp.56-61, 1991.
3. [#]**Goukassian, D.A.**-The Role of Fungal Infection in Atopic Dermatitis.-PhD. Thesis, Moscow, 137 p, 1992.
4. [#]**Goukassian, D.A.**, Suvorova X.N and Antoniev A.A.- Influence of Mycotic Infection and Sensitization on the Atopic Dermatitis Course.-Vestnik of Dermatology and Venereology-Moscow, 1993,2, pp. 54-57, 1993.
5. Sarvazian A.p., **Goukassian D.A.**, Maevsky E.I., et al.,-Elasticity Imaging as a New Modality of Medical Imaging for Cancer Detection.-Proceedings of International Conference on Interaction of Ultrasound with Biological Media, France, 5-9 April, pp.79-85, 1994.
6. Hara M., Yaar M., Byers H.R., **Goukassian D.A.**, Fine R.A. and Gilchrest B.A. Kinesin Participates in Melanosomal Transfer Along Melanocyte Dendrites.- Journal of Investigative Dermatology, 114, 3, pp. 438-443, 1999.
7. [#]**Goukassian D.A.**, Eller M.S. Yaar M. and Gilchrest, B.A.-Thymidine Dinucleotide Mimics the Effect of Solar Simulated Irradiation on p53 and p53-regulated proteins.-Journal of Investigative Dermatology, 112, 1, pp.25-31, 1999.
8. [#]**Goukassian D.A.**, Gad F., Yaar M., Eller M.S., Nehal U. and Gilchrest B.A. Mechanisms and Implications of the Age Associated Decrease in DNA Repair Capacity.- FASEB J, 14, 10, 1325-1334, 2000.

9. # **Goukassian D.A.**, Asahara T., Schratzberger P., Silver M., Murayama T., Isner J., Andres V., Overexpression of p27^{kip1} by Doxycycline-Regulated Adenoviral Vectors Inhibits Endothelial Cell Proliferation and Migration and Impairs Angiogenesis in Response to Tissue Ischemia-FASEB J, 15, pp. 1877-1885, 2001.
10. # **Goukassian D.A.**, Sanz-Gonzalez, Silvia M., Perez-Rogers, Ignacio, Font de Mora, Jaime, Urena, Jesus, Andres, Vicente. Inhibition of the Cyclin D1/E2F Pathway by PCA-4230, a Potent Repressor of Cellular Proliferation-British Journal of Pharmacology, 1327: pp. 1597-1605 2001.
11. Andres, Urena, J., Poch, E., Chen, D. # **Goukassian, D.A.** Role of Sp1 in the Induction of p27 Gene Expression in Vascular Smooth Muscle Cells In Vitro and After Balloon Angioplasty-Arteriosclerosis Thrombosis and Vascular Biology 21, pp. 342-347, 2001.
12. # **Goukassian D.A.**, Bagheri S., El-Keab L., Eller M.S., and Gilchrest B.A., DNA Oligonucleotide Treatment Corrects the Age-Associated Decline in DNA Repair Capacity. FASEB J, 16, pp. 754-756, 2002.
13. # **Goukassian D.A.**, Kishore R., Dolan C., Leutemann C., Krasinski K., Ma H., Hanley A., Asahara T., Isner J., and Losordo D.W. Engineering the Response to Vascular Injury: Divergent Effects of Deregulated E2F1 Expression on Vascular Smooth Muscle Cells and Endothelial Cells Result in Endothelial Recovery and Inhibition of Neointimal Growth. Circulation Research, 93: pp. 162-169, 2003.
14. Gonzales S., Astner S., An W., **Goukassian D.A.**, Pathak M.A. Dietary Lutein/Zeaxanthin Decreases Ultraviolet B-Induced Epidermal Hyperproliferation and Acute Inflammation in Hairless Mice. Journal of Investigative Dermatology, 121: pp. 399-405, 2003.
15. Kishore, R., Luedemann, C., Bord, E., **Goukassian, D.**, Losordo, D.W. Tumor Necrosis Factor-Mediated E2F1 Suppression in Endothelial Cells. Differential Requirement of c-Jun N-Terminal Kinase and p38 Mitogen-Activated Protein Kinase Signal Transduction Pathways. Circulation Research 93: 932-940, 2003.
16. # **Goukassian D.A.** and Gilchrest B.A. The Interdependence of Skin Aging, Skin Cancer, and DNA Repair Capacity: A Novel Perspective with Therapeutic Implications. Rejuvenation Res. 7(3):175-85, 2004.
17. # **Goukassian D.A.**, Helms, E., van Steeg H., van Oostrom C., Bhawan J., Gilchrest B.A. Topical DNA Oligonucleotide Therapy Reduces UV-Induced Mutations and Photocarcinogenesis in Hairless Mice. PNAS 101, pp. 3933-3938. 2004.
18. Middlekamp-Hup M.A., Pathak M.A., Parrado C., **Goukassian D.A.**, Rius-Diaz F., Mihm M.C., Fitzpatrick T.B., Gonzalez S. Oral *Polypodium leucotomos* extract decreases ultraviolet-induced damage of human skin. Journal of American Academy of Dermatology 51, pp.910-918, 2004.
19. # **Goukassian D.A.** Mending the Rift: DNA Repair and Aging. Geriatrics and Aging. 8(8): 57-60, 2005.
20. Kishore R, Qin G, Luedemann C, Bord E, Hanley A, Silver M, Gavin M, Yoon YS, **Goukassian D.A.**, Losordo DW. The Cytoskeletal Protein Ezrin Regulates EC Proliferation and Angiogenesis via TNF-alpha-induced Transcriptional Repression of Cyclin A. J Clin Invest. Jul;115(7):1785-96, 2005.
21. Luedemann C, Bord E, Qin G, Zhu Y, **Goukassian D.A.**, Losordo DW, Kishore R.

- Ethanol Modulation of TNF-alpha Biosynthesis and Signaling in Endothelial Cells: Synergistic Augmentation of TNF-alpha Mediated Endothelial Cell Dysfunctions by Chronic Ethanol. *Alcohol Clin Exp Res.* Jun;29(6):930-8, 2005.
22. Marwaha V, Chen YH, Helms E, Arad S, Inoue H, Bord E, Kishore R, Sarkissian RD, Gilchrest BA, [#]*Goukassian DA*. T-oligo Treatment Decreases Constitutive and UVB-induced COX-2 Levels Through p53- and NFkappaB-dependent Repression of the COX-2 Promoter. *J Biol Chem.* 280(37):32379-88, 2005.
 23. Kusano KF, Pola R, Murayama T, Curry C, Kawamoto A, Iwakura A, Shintani S, Ii M, Asai J, Tkebuchava T, Thorne T, Takenaka H, Aikawa R, *Goukassian D.A.*, von Samson P, Hamada H, Yoon YS, Silver M, Eaton E, Ma H, Heyd L, Kearney M, Munger W, Porter JA, Kishore R, Losordo DW. Sonic Hedgehog Myocardial Gene Therapy: Tissue Repair Through Transient Reconstitution of Embryonic Signaling. *Nature Medicine.* 11(11):1197-204, 2005.
 24. Qin G, Ii M, Silver M, Wecker A, Bord E, Ma H, Gavin M, *Goukassian DA*, Yoon YS, Papayannopoulou T, Asahara T, Kearney M, Thorne T, Curry C, Eaton L, Heyd L, Dinesh D, Kishore R, Zhu Y, Losordo DW. Functional Disruption of {alpha}4 Integrin Mobilizes Bone Marrow-derived Endothelial Progenitors and Augments Ischemic Neovascularization. *J Exp Med.* 203(1): 153-63, 2006.
 25. Qin G, Kishore R, Dolan CM, Silver M, Wecker A, Luedemann CN, Thorne T, Hanley A, Curry C, Heyd L, Dinesh D, Kearney M, Martelli F, Murayama T, *Goukassian DA*, Zhu Y, Losordo DW. Cell Cycle Regulator E2F1 Modulates Angiogenesis via p53-dependent Transcriptional Control of VEGF. *PNAS.* 103(29): 11015-20, 2006.
 26. Arad S., Konnikov N., [#]*Goukassian D.A.* Gilchrest B.A. T-oligo Augment UV-induced Protective Responses in Human Skin. *FASEB J*, 20(11): pp. 1895-7, 2006.
 27. Rajasingh J., Bord E., Luedemann C., Asai J., Hamada H., Thorne T., Qin G., *Goukassian D.A.*, Zhu Y., Losordo D.W., Kishore R. IL-10-induced TNF-alpha mRNA Destabilization is Mediated via IL-10 Suppression of p38 MAP Kinase Activation and Inhibition of HuR Expression. *FASEB J*, 20(12): pp. 2112-4, 2006.
 28. [#]*Goukassian D.A.*, Qin G., Dolan C., Murayama T., Silver M., Curry C., Eaton E., Luedemann C., Ma H., Asahara T., Zak V., Mehta S., Burg A., Thorne T., Kishore R., Losordo D.W. Tumor Necrosis Factor-alpha Receptor p75 is Required in Ischemia-induced Neovascularization. *Circulation* 115(6): pp. 752-62, 2007.
 29. Rajasingh J., Bord E., Qin G., Ii M., Silver M., Hamada H., Ahluwalia D., *Goukassian D.A.*, Zhu Y., Losordo D.W., Kishore R. Enhanced Voluntary Alcohol Consumption After Estrogen Supplementation Negates Estrogen-mediated Vascular Repair in Ovariectomized Mice. *Endocrinology* 148(8): pp. 3618-24, 2007.
 30. Arad S., Konnikov N., [#]*Goukassian D.A.*, Gilchrest B.A. Quantification of Inducible SOS-like Photoprotective Responses in Human Skin. *J of Investigative Dermatology*, 127(11):2629-36. 2007.
 31. Astner S, Wu A, Chen J, Philips N, Rius-Diaz F, Parrado C, Mihm MC, *Goukassian D.A.*, Pathak MA, Gonzalez S. Dietary Lutein/ Zeaxanthin Partially Reduces Photoaging and Photocarcinogenesis in Chronically UVB-Irradiated Skh-1 Hairless Mice. *Skin Pharmacol Physiol*, 20: pp. 283-91, 2007.
 32. Aprahamian T, Takemura Y, *Goukassian D.A.*, Walsh K. Ageing is Associated with Diminished Apoptotic Cell Clearance in Vivo. *Clin Exp Immunol* 152(3):

- 448-55, 2008.
33. Arad S, Zattra E, Hebert J, Epstein EH, Jr, **#Goukassian DA**, Gilchrest BA. Topical pTT Treatment Reduces UV-induced BCC Development in *Ptch-1 +/-* Mice. *American Journal of Pathology*. 172(5):1248-55.2008.
 34. Zattra E, Coleman C, Arad S, Helms E, Levine D, Bord E, Guillaume A, El-Hajahmad M, Zwart E, van Steeg H, Gonzalez S, Kishore R, **#Goukassian DA**. Polypodium Leucotomos Extract Decreases UV-induced Cox-2 Expression and Inflammation, Enhances DNA Repair, and Decreases Mutagenesis in Hairless Mice. *Am J Pathol*. 175(5):1952-61, 2009.
 35. Coleman C, Levine D, Kishore R, Qin R, Thorne T, Lambers E, Sasi SP, Yaar M, Gilchrest BA, **#Goukassian DA**. Inhibition of Melanoma Angiogenesis by Telomere Homolog Oligonucleotides. *Journal of Oncology*, 2010: 2010:928628.
 36. Sasi SP, Yan X, Enderling H, Park D, Gilbert HY, Curry C, Coleman C, Hlatky L, Qin G, Kishore R, **#Goukassian D.A.** Breaking the 'Harmony' of TNF- α Signaling for Cancer Treatment. *Oncogene*, 567, pp 1-11, 2011
 37. **#Goukassian D.A.**, Gilchrest B.A. Topical Application of Thymidine Dinucleotide to Newborn Mice Reduces and Delays Development of UV-Induced Melanomas. *Journal of Investigative Dermatology*, 132: pp. 2664-6, 2012.
 38. Klement G.L., **Goukassian D.A.**, Hlatky L., Carrozza J., Morgan J.P., Yan X. Cancer Therapy Targeting the HER2-PI3K Pathway: Potential Impact on the Heart. *Frontiers in Pharmacology*, 3:113, 2012.
 39. Shtifman A, Pezone MJ, Sasi SP, Agarwal A, Gee H, Song J, Perepletchikov A, Yan X, Kishore R, **Goukassian DA**. Divergent Modification of Low-Dose ^{56}Fe -Particle and Proton Radiation on Skeletal Muscle. *Radiat Res*. 2013 Oct 17.
 40. Zhou J, Cheng M, Liao YH, Hu Y, Wu M, Wang Q, Qin B, Wang H, Zhu Y, Gao XM, **Goukassian D.A.**, Zhao TC, Tang YL, Kishore R, Qin G. Rosuvastatin enhances angiogenesis via eNOS-dependent mobilization of endothelial progenitor cells. *PLoS One*. 2013 May 21;8(5):e63126.
 41. Sasi SP, McDonald JT, Song J, Park D, Shtifman A, Yan X, **#Goukassian DA**. TNF-TNFR2/p75 interactions inhibit early and increase delayed non-targeted effects in EPC. *JBC*, 2013 (submitted).
 42. Yan X, Sasi SP, Lee J, Yang Y, Song J, Carrozza J, **#Goukassian DA**. Cosmic radiation-associated cardiovascular challenges and potential risks for future exploration-type space missions. *Nature*, 2013 (submitted).

Chapters:

1. Suvorova X.N. and **#Goukassian D.A.**- Textbook for Physicians "Complications of Atopic Dermatitis by Secondary Infection and its Treatment". -Moscow, 1993.
2. Kishore R, Tkebuchava T, Sasi SP, Silver M, Gilbert H-Y, Yoon Y-S, Park H-Y, Thorne, T, Losordo W, **#Goukassian DA**. Tumor Necrosis Factor- α Signaling Via TNFR1/p55 is Deleterious whereas TNFR2/p75 Signaling is Protective in Adult Infarct Myocardium. Publisher Springer, *Adv Exp Med and Biol* 691, Chapter 45: pp. 433-48, 2011.
3. **#Goukassian D.A.** Morgan J, Yan X. Neuregulin1-ErbB Signaling in Doxorubicin-Induced Cardiotoxicity. Publisher Intech, Ed.: Manuela Fiuza, Book Chapter in: *Cardiotoxicity of Oncologic Treatments*. pp. 65-88, 2012.

Invited lectures (since 2002):

- **July, 2002** – 20th World Congress of Dermatology, Paris, France. “The interdependence of skin aging, skin cancer, and DNA repair capacity: a novel perspective with therapeutic implications”.
- **March, 2003** – Collaborative Course on Biology of Skin, Boston University School of Medicine, Boston, MA, Supported by: Johnson & Johnson, Ortho Dermatological, Medicis Pharmaceutical, Roche Laboratories, Galderma Laboratories. “Inducible Photoprotective Responses in Human Skin”.
- **September 2003** – 1st International Congress of Dermatologists and Venereologists of Russia and CIS, St Petersburg, Russia. “Topical DNA Oligonucleotide Therapy Reduces UV-Induced Mutations and Photocarcinogenesis in Hairless Mice”.
- **October 2006** – 21st World Congress of Dermatology, Buenos Aires, Argentina. “Inhibition of melanoma angiogenesis by telomere homolog oligonucleotides”.
- **May 14, 2007** - Yerevan Medical Institute, Yerevan, Armenia – “Tumor Necrosis Factor- α p75 Receptor, Satellite-Cell Activation and Neovascularization”.
- **May 18, 2007** - Yerevan Medical Institute, Yerevan, Armenia – “Skin cancer, epidemiology, prevention and treatment”.
- **November, 2007** – Center for Cancer System Biology, Caritas St. Elizabeth’s Medical Center of Boston, USA – “Inhibition of Tumor Angiogenesis by telomere homolog oligonucleotides”.
- **April 27, 2009** – 12th International TNF Conference, El-Escorial, Madrid, Spain – “Breaking the Harmony of Signaling via TNFR1/p55 or TNFR2/p75 for Cancer Treatment”
- **May 30, 2009** – Instituto de Biomedicina de Valencia, Valencia, Spain – “Modulation of TNFR1 or TNFR2 Signaling for Regulation of Neovascularization and Pathological Angiogenesis”.
- **May 18, 2009** - Yerevan Medical Institute, Yerevan, Armenia – “Suppression of Tumor Growth and Interruption of Tumor Angiogenesis by Selective Inhibition of TNFR2/75 in Murine Model of Lung Carcinoma and Melanoma”.
- **May 22, 2009** - Yerevan Medical Institute, Yerevan, Armenia – “Tumor Necrosis Factor- α p75 Receptor is Required in Post-MI Recovery in Adult Heart”.
- **May 31, 2011** – International Symposium for Radiation Research and Medical Physics, Shanghai, China – “Low Dose Gamma Radiation-Induced Early Responses in the Heart and BM-derived EPCs: Implications for Long-Term Cardiovascular Risks”.
- **July 9, 2011** – 2nd Continental Congress of Dermatology of the International Society of Dermatology, St. Petersburg, Russia – “Breaking the Harmony of Tumor Necrosis- α Receptor Signaling for Melanoma Treatment”.
- **September 30, 2012** – Steward St. Elizabeth’s Medical Center, Medicine Grand Rounds – “Cardiovascular Challenges for Future Human Exploration-Type Mars and Moon Missions”.
- **October 15, 2012** – European Radiation Research Society Meeting, Vietre Sul Mare, Italy – “TNFR2/p75 Signaling Induces Delayed Radiobiological Bystander

Responses in BM-derived EPCs: Implications for Development of Mitigating Factors”.

- **October 15, 2012** – European Radiation Research Society Meeting, Vietre Sul Mare, Italy – “Differential Effects of Full Body Single Low-dose Proton and Iron Radiation on Acute Myocardial Infarct Recovery in Adult Mice”.

International patents (non- provisional):

October 2005 – Use of Tumor Necrosis Factor- α p75 Receptor for augmentation of ischemia-induced neovascularization and for improvement of stem and progenitor cell therapy outcome. Inventors – Goukassain DA, Losordo, DW

October 2006 – Use of Tumor Necrosis Factor-Alpha p75 Receptor for the Reduction of Inflammation in Ischemic Tissue. Inventors – Goukassian DA, Kishore R.

February 2008 – Composition and Methods for the Treatment of Neoplasia. Inventor – Goukassian DA.

August 2011 – Compositions and Methods for the Treatment of Radiation Exposure. Inventor – Goukassian DA.

Non-print publications: Results of my published work was also widely reported and discussed in local, national and international media including – Nature Publishing Group, Lancet Oncology, The Scientist Journal, Science News online, WebMD Health, Medline Plus Technology News, Hindustan Times, Ananova, MediLexicon, Betterhumans, Boston Herald, Boston Globe, ASCO - American Society of Clinical Oncology, The Journal Times, BBS Brasil, Medical News Today, Daily Telegraph London, Sunday Telegraph London, OncoLink – Abramson Cancer Center of the University of Pennsylvania, Mednovosti Russia, Health Rambler Russia, Medlinks Russia, WolffSystem Germany, Vietnam Net, Preetext Schweiz Austria, Dermatologie Germany, Saglik Turkey, Wissenschaft Germany, Der Spiegel Germany, Ciencia e Technologia Portugal, Journal of Dermatologic Science, Personal MD, HealthCentral.

National and International Media: Many local and national TV and Radio stations also reported the results of my research work. They include such stations as: BBC World News UK, Reuters, NBC, ABC, CBS, WB56, KRON-TV, KLAS-TV, WIVB-TV, WFLX-TV, WNEP-TV, WKRN-TV, WAVY-TV, WHAG-TV, WSMV-TV, WTHR-TV, KSFY-TV, WHNS-TV, KCTV-TV, WMC-TV, WBAY-TV etc.

Citation Index: (selected papers that were cited by more than 40 other peer-scientists).

Cited by 188 papers – “Mechanisms and implications of the age-associated decrease in DNA repair capacity” Goukassian DA, et al., The FASEB J, 2000.

Cited by 179 papers – “Sonic hedgehog (Shh) is a crucial regulator of organ development during embryogenesis”. Kusano K, ...Goukassian, DA et al., - Nature Medicine, 2005.

Cited by 83 papers – “Overexpression of p27Kip1 by doxycycline-regulated adenoviral vectors inhibits endothelial cell proliferation and migration and impairs angiogenesis”. Goukassian, DA et al., The FASEB J, 2001.

Cited by 74 papers – “Topical DNA oligonucleotide therapy reduces UV-induced

- mutations and photocarcinogenesis in hairless mice” Goukassian D et al., - Proceedings of the National Acad Sciences, USA, 2004.
- Cited by 70 papers* – “Kinesin participates in melanosomal movement along melanocyte Dendrites”. Hara M, ...Goukassian D - Journal of Investigative Dermatology, 2000.
- Cited by 77 papers* – “IL-10-induced TNF-alpha mRNA destabilization is mediated via IL-10 suppression of p38 MAP kinase activation and inhibition of HuR expression”. Johnson R, Goukassian D et al., - FASEB J, 2006.
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PENDING GRANT APPLICATIONS AND RESUBMISSIONS

1. RO-1, National Cancer Institute – \$2,835,739 total; Title: “TNF and Angiogenesis: the Ying and Yang of Selective TNF Receptor Signaling for Cancer Treatment”; Role – PI, Original score – 32, Resubmission 03/2014

2. NSBRI, NASA – \$1,200,000 total, NSBRI Step 2, Role – PI. Invited application is due December 13, 2013.

RECENTLY COMPLETED 2009-2012:

National Institute on Aging R21 – \$425,000; American Heart Association – \$275,000
Industrial Farmaceutica Cantabria – \$150,000; NASA – \$1,150,000