**CURRICULUM VITAE**

# Evgeniy B. Eruslanov

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## PERSONAL STATEMENT

For the last decade, I have been studying human tumor immunology. Specifically, I have been investigating the role of inflammatory myeloid cells in the human tumor microenvironment and mechanisms by which tumors modulate their immune functions. My research interests are directed towards understanding the functional and regulatory roles of distinct subsets of tumor-infiltrating neutrophils and macrophages in patients with lung cancer. My ultimate research goal is to develop novel approaches that will enhance endogenous immune response in order to break tumor-induced tolerance/suppression and to improve the efficacy of immunotherapy for lung cancer.

## PROFESSIONAL APPOINTMENTS

**2022-present University of Pennsylvania** **Philadelphia, PA**

***Research Associate Professor,*** *Perelman School of Medicine, Department of Surgery*

- Investigating the role of tumor-associated neutrophils and macrophages and their functional cross-talk with tumor-specific T cells and NK cells in human tumor microenvironment

**2013-2022 University of Pennsylvania Philadelphia, PA**

***Research Assistant Professor,*** *Perelman School of Medicine, Department of Surgery*

- Investigating the newly discovered subpopulation of human tumor-associated neutrophils that exhibit characteristics of both neutrophil and antigen-presenting cells
- Investigating the regulation of the T cell response by subpopulations of tumor-associated neutrophils and macrophages in human tumors
- Investigating the differentiation and polarization of immature neutrophils in the tumor microenvironment using the novel model of long-lived human bone marrow neutrophils
- Investigating neutrophil-mediated cytotoxicity to tumor cells in human
- Studying the phenotypic and functional characteristics of human tumor-associated macrophages

**2012-2013 University of Pennsylvania Philadelphia, PA**

***Senior Research Investigator,*** *Perelman School of Medicine, Department of Surgery*

- Studied the role of tumor-infiltrating myeloid cell subsets in lung cancer patients
- Investigated the mechanisms by which tumor microenvironment affect the development/differentiation of myeloid cells

**2008-2012 University of Florida Gainesville, FL**

***Research Scientist,*** *College of Medicine, Department of Urology*

- Studied the role of CCL1/CCR8 chemokine axis in the tumor microenvironment
- Investigated and characterized the circulating and tumor infiltrating myeloid cell subsets (granulocyte-type $CD15^{high}$ $CD33^{low}$ cells and monocyte-type $CD15^{low}$ $CD33^{high}$ cells) in cancer patients.

**<u>Postgraduate Training and Fellowship Appointments</u>**

**2006-2008 University of Florida Gainesville, FL**

***Postdoctoral Research Associate****, College of Medicine, Department of Urology*

- Investigated the prostaglandin $E_2$ ($PGE_2$) and 15-hydroxyprostaglandin dehydrogenase (15-PGDH) in the regulation of local anti-tumor immune response
- Characterized the role of tumor induced VEGFR1/CD11b myeloid cells.

**2004- 2006 Harvard School of Public Health**, Harvard University **Boston, MA**

***Postdoctoral Research Fellow**, Laboratory for TB, Department of Immunology and Infectious Diseases*

- Investigated the of innate and acquired immune responses in infected mice with distinct susceptibility to tuberculosis infection
- Characterized the Ipr1 protein function in macrophages, the protein of a novel gene *Ipr1* (intracellular pathogen resistance 1)
- Developed the inducible *Ipr1*gene expression systems in macrophages, using lentyvirus constructs
- Bio Safety Level-3 experience

**2002-2004 Central Institute for Tuberculosis Moscow, Russia**

***PostDoc Fellow**, Laboratory for Immunogenetics,*

- Characterized local mechanisms of immune response to TB infection in the lung of infected mice with opposite susceptibility to infection;
- Investigated the *M.tuberculosis* interaction with lung macrophages and neutrophils isolated from susceptible and resistant mice to TB infection;
- Investigated the neutrophils response to TB infection in susceptible and resistant mice.

**EDUCATION AND ACADEMIC TRAINING**

**2002 Central Institute for Tuberculosis**

**Gamaleya's Institute of Epidemiology and Microbiology Moscow, Russia**

*Laboratory for Immunogenetics*

***Ph.D.*** Immunology

**1999 Pirogov Russian National Research Medical University Moscow, Russia**

*Medico-Biological Department*

***M.S.*** Immunology, (**summa cum laude**), Department of Immunology

**PEER –REVIEWED PUBLICATIONS:**

1. **Eruslanov E**, Nefedova Y, and Gabrilovich D. The heterogeneity of neutrophils in cancer and its implication for therapeutic targeting. ***Nature Immunology***, 2025, Jan;26(1):17-28. PMID: 39747431
2. Akimova T, Wang L, Bartosh Z, Christensen LM, **Eruslanov E**, Singhal S, Aishwarya V, Hancock WW. Antisense targeting of FOXP3+ Tregs to boost anti-tumor immunity. **Front Immunol**. 2024 Aug 21;15:1426657. PMID: 39234236
3. Thompson JC, Li S, Jose JS, Predina J, Gupta A, **Eruslanov E**, Singhal S, Albelda SM, Mangalmurti NS. Red blood cells function as reservoirs of tumor DNA. Am J Physiol Lung Cell Mol Physiol. 2024 May 1;326(5): L646-L650. PMID: 38529551
4. Sunil Singhal, Abhishek S. Rao, Jason Stadanlick, Kyle Bruns, Neil T. Sullivan, Andres Bermudez Adam Honig-Frand, Ryan Krouse, Sachinthani Arambepola, Emily Guo, Edmund K. Moon, George Georgiou, Tomas Valerius, Steven M. Albelda, and **Evgeniy B. Eruslanov**. Human tumor-associated macrophages and neutrophils regulate anti-tumor antibody efficacy through lethal and sublethal trogocytosis. ***Cancer Research.*** 2024, 84(7): 1029-1047. PMID: 38270915
5. Azari F, Kennedy GT, Chang A, Low P, Basil M, Planer J, Katzen J, **Eruslanov E**, Albelda S, Singhal S. Molecular Imaging in Precision-Cut Non-Small Cell Lung Cancer Slices. ***Ann Thorac Surg***. 2024 Feb;117(2):458-465.PMID: 37572959
6. Kennedy GT, Azari FS, Chang A, Chang A, Bou-Samra P, Desphande C, Delikatny EJ, **Eruslanov E**, Kucharczuk JC, Rice DC, Singhal S. A pH-Activatable Nanoprobe Labels Diverse Histologic Subtypes of Human Lung Cancer During Resection. ***Mol Imaging Biol.*** 2023 Oct;25(5):824-832. PMID: 37697109
7. Azari F, Kennedy GT, Chang A, Nadeem B, Bou-Samra P, Chang A, Segil A, Bernstein E, Sullivan NT, **Eruslanov E**, Delikatny J, Singhal S. Sodium Multivitamin Transporter-Targeted Fluorochrome Facilitates Enhanced Metabolic Evaluation of Tumors Through Coenzyme-R Dependent Intracellular Signaling Pathways. ***Mol Imaging Biol***. 2023 Jun;25(3):569-585. MID: 36534331
8. Zhen Lu, Jinyun Chen, Pengfei Yu, Matthew J. Atherton, Jun Gui, Vivek S. Tomar, Justin D. Middleton, Neil T. Sullivan, Sunil Singhal, Subin S. George, Ashley G. Woolfork, Aalim M. Weljie, Tsonwin Hai, **Evgeniy B. Eruslanov**, and Serge Y. Fuchs. Tumor factors stimulate lysosomal degradation of tumor antigens and undermine their

cross-presentation in lung cancer. ***Nature Communications***, 2022, Nov4;13(1):6623. PMID:366333297

9. Kennedy GT, Holt DE, Azari FS, Bernstein E, Nadeem B, Chang A, Sullivan NT, Segil A, Deshpande C, Bensen E, Santini JT, Kucharczuk JC, Delikatny EJ, Bogyo M, Egan AJM, Bradley CW, **Eruslanov E**, Lickliter JD, Wright G, Singhal S. A cathepsin targeted quenched activity-based probe facilitates enhanced detection of human tumors during resection. ***Clin Cancer Res***. 2022: 28(17): 3729-3741. PMID: 35792882

10. Quail DF, Amulic B, Aziz M, Barnes BJ, **Eruslanov E**, Fridlender ZG, Goodridge HS, Granot Z, Hidalgo A, Huttenlocher A, Kaplan MJ, Malanchi I, Merghoub T, Meylan E, Mittal V, Pittet MJ, Rubio-Ponce A, Udalova IA, van den Berg TK, Wagner DD, Wang P, Zychlinsky A, de Visser KE, Egeblad M, Kubes P.J Neutrophil phenotypes and functions in cancer: A consensus statement. ***J. Exp Med.*** 2022 Jun6;219(6). PMID: 35522219

11. Cooke M, Kreider-Letterman G, Baker MJ, Zhang S, Sullivan NT, **Eruslanov E**, Abba MC, Goicoechea SM, García-Mata R, Kazanietz MG. FARP1, $ARHGEF_{39}$ and TIAM2 are essential receptors tyrosine kinase effectors for Rac1-dependent cell motility in human lung adenocarcinoma. ***Cell Reports.*** 2021, Nov 2;37(5), PMID:34731623
12. Uyanik B, Goloudina AR, Akbarali A, Grigorash BB, Petukhov AV, Singhal S, **Eruslanov E**, Chaloyard J, Lagorgette L, Hadi T, Baidyuk EV, Sakai H, Tessarollo L, Ryffel B, Mazur SJ, Lirussi F, Garrido C, Appella E, Demidov ON: Inhibition of the DNA damage response phosphatase PPM1D reprograms neutrophils to enhance anti-tumor immune responses. ***Nature Communications***. 2021, June 15;12(1):3622, PubMed PMID: 34131120
13. Veglia F, Hashimoto A, Dweep H, Sanseviero E, De Leo A, Tcyganov E, Kossenkov A, Mulligan C, Nam B, Masters G, Patel J, Bhargava V, Wilkinson P, Smirnov D, Sepulveda MA, Singhal S, **Eruslanov EB**, Cristescu R, Loboda A, Nefedova Y, Gabrilovich DI. Analysis of classical neutrophils and polymorphonuclear myeloid-derived suppressor cells in cancer patients and tumor-bearing mice. ***J Exp. Med***. 2021, Apr 5; 218(4), PMID: 33566112
14. Quinn WJ 3rd, Jiao J, TeSlaa T, Stadanlick J, Wang Z, Wang L, Akimova T, Angelin A, Schäfer PM, Cully MD, Perry C, Kopinski PK, Guo L, Blair IA, Ghanem LR, Leibowitz MS, Hancock WW, Moon EK, Levine MH, **Eruslanov EB**, Wallace DC, Baur JA, Beier UH. Lactate Limits T Cell Proliferation via the NAD(H) Redox State. ***Cell Reports***. 2020 Dec 15;33(11):108500. doi: 10.1016/j.celrep.2020.108500.PMID: 33326785

15. Cresswell GM, Wang B, Kischuk EM, Broman MM, Alfar RA, Vickman RE, Dimitrov DS, Kularatne SA, Sundaram CP, Singhal S, **Eruslanov EB**, Crist SA, Elzey BD, Ratliff TL, Low PS. Folate Folate Receptor Beta Designates Immunosuppressive Tumor-Associated Myeloid Cells that Can Be Reprogrammed with Folate-Targeted Drugs. ***Cancer Research***.2021 Feb 1;81(3):671-684, PubMed PMID: 33203700
16. Predina JD, Haas AR, Martinez M, O'Brien S, Moon EK, Woodruff P, Stadanlick J, Corbett C, Sulyok LF, Bryski MG, **Eruslanov E**, Deshpande C, Langer C, Aguilar LK, Guzik BW, Manzanera AG, Aguilar-Cordova E, Singhal S, Albelda SM. Neoadjuvant Gene Mediated Cytotoxic Immunotherapy for Non-Small Cell Lung Cancer - Safety and Immunologic Activity. ***Molecular Therapy.*** 2020 Nov 4:S1525-0016(20)30599-2. doi: 10.1016/j.ymthe.2020.11.001.
17. Wang L, Ai Z, Khoyratty T, Zec K, Eames HL, van Grinsven E, Hudak A, Morris S, Ahern D, Monaco C, **Eruslanov EB**, Luqmani R, Udalova IA. ROS-producing immature neutrophils in giant cell arteritis are linked to vascular pathologies. ***JCI Insight***. 2020 Oct 15;5(20):e139163. doi: 10.1172/jci.insight.139163. PMID: 33326785
18. Shaul M, Eyal O, Guglietta S, Aloni P, Zlotnik A, Forkosh E, Levy L, Weber LM, Levin Y, Pomerantz A, Nechushtan H, **Eruslanov E**, Singhal S, Robinson M, Krieg C, Fridlender ZG. Circulating Neutrophil Subsets in Advanced Lung Cancer Patients Exhibit Unique Immune Signature and Relate to Prognosis. ***FASEB J***. 2020, Mar;34(3):4204-4218, PMID:31957112
19. Klampatsa A, O'Brien SM, Thompson JC, Rao AS, Stadanlick JE, Martinez MC, Liousia M, Cantu E, Cengel K, Moon EK, Singhal S, **Eruslanov E**, and Albelda S. Phenotypic and functional analysis of malignant mesothelioma tumor-infiltrating lymphocytes. ***Oncoimmunology*.** 2019 Jul 13;8(9):e1638211.
20. S.OBrien, A. Klampatsa, J.Thompson, M.Martinez, W.Hwang, A.Rao, J.Standalick, S. K im, E. Cantu, L. Litzky, S. Singhal, **E. Eruslanov**, E. Moon and S. Albelda. Function of human tumor-infiltrating lymphocytes in early stage non-small lung cancer. ***Cancer Immunology Research***. 2019, Jun;7(6):896-909
21. Singhal S, Stadanlick J, Annunziata MJ, Rao AS, Bhojnagarwala PS, O'Brien S, Moon EK, Cantu E, Danet-Desnoyers G, Ra HJ, Litzky L, Akimova T, Beier UH, Hancock WW, Albelda SM, **Eruslanov E**. Human tumor-associated monocytes/macrophages and their regulation of T cell responses in early-stage lung cancer. ***Science Translational Medicine***. 2019, Feb 13; 11(479)

22. Maisel K, Merrilees MJ, Atochina-Vasserman EN, Lian L, Obraztsova K, Rue R, Vasserman AN, Zuo N, Angel LF, Gow AJ, Kang I, Wight TN, **Eruslanov E**, Swartz MA, Krymskaya VP. Immune checkpoint ligand PD-L1 is upregulated in pulmonary lymphangioleiomyomatosis (LAM). ***Am J Respir Cell Mol Biol***. 2018, Dec;59(6):723-732
23. Negorev D, Beier UH, Zhang T, Quatromoni JG, Bhojnagarwala P, Albelda SM, Singhal S, **Eruslanov E**, Lohoff FW, Levine MH, Diamond JM, Christie JD, Hancock WW, Akimova T. Human neutrophils can mimic myeloid-derived suppressor cells (PMN-MDSC) and suppress microbead or lectin-induced T cell proliferation through artefactual mechanisms. ***Science Reports,*** 2018, Feb 16;8(1):3135.
24. Bruno T, Ebner P, Moore B, Squalls O, Waugh K, **Eruslanov E**, Singhal S, Mitchell J, Franklin W, Merrick D, McCarter M, Palmer B, Kern J, and Jill Slansky. Antigen-presenting tumor B cells affect CD4+TIL phenotype in non-small cell lung cancer patients. ***Cancer Immunology Research***, 2017, Oct5;(10): 898-907.
25. Akimova T, Zhang T, Negorev D, Singhal S, Stadanlick J, Rao A, Annunziata M, Levine M, Beier U, Diamond J, Christie J, Albelda S, **Eruslanov E**, and Hancock W. Tumor Treg upregulate a quartet of "Treg-locking" transcription factors. ***JCI Insight,*** 2017; 2(16): e94075.
26. **Eruslanov E.** Phenotype and function of tumor-associated neutrophils and their subsets in early-stage human lung cancer. ***Cancer Immunology, Immunotherapy***. 2017, Aug; 66(8): p997-1006
27. **Eruslanov E,** Singhal S, and Albelda S. Mouse versus Human Neutrophils in Cancer: A Major Knowledge Gap. ***Trends in Cancer***. 2017, Vol. 3, No. 2, p149-160
28. Stephen TL, Payne KK, Chaurio RA, Allegrezza MJ, Zhu H, Perez-Sanz J, Perales-Puchalt A, Nguyen JM, Vara-Ailor AE, **Eruslanov E**, Borowsky ME, Zhang R, Laufer TM, Conejo-Garcia JR. SATB1 Expression Governs Epigenetic Repression of PD-1 in Tumor-Reactive T Cells. ***Immunity.*** 2017, Volume 46, Issue 1, 17, p51–64
29. Allegrezza MJ, Rutkowski MR, Stephen TL, Svoronos N, Perales-Puchalt A, Nguyen JM, Payne KK, Singhal S, **Eruslanov E**, Tchou J, Conejo-Garcia JR. Trametinib Drives T-cell-Dependent Control of KRAS-Mutated Tumors by Inhibiting Pathological Myelopoiesis. ***Cancer Research*.** 2016 Nov 1; 76(21): p6253-6265.
30. Svoronos N, Perales-Puchalt A, Allegrezza MJ, Rutkowski MR, Payne KK, Tesone AJ, Nguyen JM, Curiel TJ, Cadungog MG, Singhal S, **Eruslanov E**, Zhang P, Tchou J, Zhang R, Conejo-Garcia JR. Tumor Cell-Independent Estrogen Signaling Drives Disease Progression through Mobilization of Myeloid-Derived Supressor Cells. ***Cancer Discovery***.

2017 Jan;7(1):p72-85.

31. T Condamine, G. Dominguez, Je-In Youn, A. Kossenkov, S Mony, KAlicea-Torres, E Tcyganov, A Hashimoto, Y Nefedova, C Lin, S Partlova, A Garfall, D. Vogl, X Xu, S Knight, G Malietzis, G Han Lee, **E Eruslanov**, S Albelda, X Wang, J Mehta, M Bewtra, A Rustgi, N Hockstein, R Witt, G Masters, B Nam, D Smirnov, M Sepulveda and D Gabrilovich. Lectin-type oxidized LDL receptor-1 distinguishes population of human polymorphonuclear myeloid-derived suppressor cells in cancer patients. ***Science Immunology***. 2016, Aug; 1(2), DOI: 10.1126
32. Singhal S, Bhojnagarwala P, O'Brien S, Moon E, Garfall A, Rao A,. Quatromoni J, Stephen T, Litzky L, Deshpande D, Feldman M, Hancock W, Conejo-Garcia J, Albelda S, and **Eruslanov E.** Origin and Role of a Subset of Tumor-Associated Neutrophils with Antigen Presenting Cell Features in Early-Stage Human Lung Cancer. ***Cancer Cell***, 2016, Jun 30. doi: 10.1016/j.ccell.2016.06.001

33. Moon E, Ranganathan R, **Eruslanov E**, Kim S, Newick K, O'Brien S, Lo A, Liu X, Zhao Y, and Albelda S. Blockade of Programmed Death 1 Augments the Ability of Human T cells Engineered to Target NY-ESO-1 to Control Tumor Growth after Adoptive Transfer. ***Clinical Cancer Research***; 2016 Jan 15;22(2):436-47. doi: 10.1158/1078-0432.CCR-15-1070.
34. Karakasheva TA, Waldron TJ, **Eruslanov E**, Lee JS, O'Brien S, Hicks PD, Basu D, Singhal S, Malavasi F, Rustgi AK. CD38-Expressing Myeloid-Derived Suppressor Cells Promote Tumor Growth in a Murine Model of Esophageal Cancer. ***Cancer Research***, 2015 Oct 1;75(19):4074-85. doi: 10.1158/0008-5472.
35. **Eruslanov E** (corresponding author), Bhojnagarwala P, Quatromoni J, Stephen T, Ranganathan A, Deshpande C, Akimova T, Vachani A, Litzky L, Hancock W, Conejo-Garcia J, Feldman M, Albelda S, and Singhal S. Tumor-associated neutrophils stimulate T cell responses in early-stage human lung cancer. ***The Journal of Clinical Investigation***, 2014, Dec 1; 124(12): 5466-80, ***highlighted as a featured paper***
36. Quatromoni JG, Singhal S, Bhojnagarwala P, Hancock WW, Albelda SM, **Eruslanov E.** An optimized disaggregation method for human lung tumors that preserves the phenotype and function of the immune cells. ***J Leukoc Biol***. 2015 Jan; 97(1):201-9.
37. Holt D, Okusanya O, Judy R, Venegas O, Jiang J, DeJesus E, **Eruslanov E**, Quatromoni J, Bhojnagarwala P, Deshpande C, Albelda S, Nie S, Singhal S. Intraoperative near-

infrared imaging can distinguish cancer from normal tissue but not inflammation. ***PLoS One***. 2014 Jul 29; 9(7):e103342.

38. Quatromoni JG, Predina JD, Bhojnagarwala P, Judy RP, Jiang J, De Jesus EM, Kapoor V, Cheng G, Okusanya OT, **Eruslanov E**, Singhal S. Adenoviral-based immunotherapy provides local disease control in an orthotopic murine model of esophageal cancer. ***J Immunother***. 2014 Jun; 37(5):283-92.
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43. Predina J, **Eruslanov E**, Judy B, Kapoor V, Cheng G, Wang LC, Sun J, Moon EK, Fridlender ZG, Albelda S, Singhal S. Changes in the local tumor microenvironment in recurrent cancers may explain the failure of vaccines after surgery. ***Proceedings of the National Academy of Sciences USA*** Dec. 27, 2012 Jan 29; 110 (5): E415-24
44. Quatromoni JG, **Eruslanov E.** Tumor-associated macrophages: function, phenotype, and link to prognosis in human lung cancer**.** ***Am. J. Transl. Res***. 2012; 4(4): 376-89.
45. Daurkin I*, **Eruslanov E*** (***equally contributed**), Stoffs T, Perrin GQ, Algood C, Gilbert SM, Rosser CJ, Su LM, Vieweg J, and Kusmartsev S. Tumor-associated macrophages mediate immune suppression in the renal cancer microenvironment by activating the 15-lipoxygenase-2 pathway. ***Cancer Research***, 2011 Oct 15; 71(20): 6400-9
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Mycobacterium bovis and accelerates production of IFN-γ in their lungs. ***Clin. Exp. Immunol.***, 2001, 126:274-279.

66. Lyadova I. V., **E. B. Eruslanov**, V. V. Yeremeev, K. B. Majorov, B. V. Nikonenko, A. V**.** Pichugin, S. V. Khaidukov, T. K. Kondratieva, A. S. Apt. Comparative analysis of T lymphocytes recovered from the lungs of mice genetically susceptible, resistant and hyperresistant to *Mycobacterium tuberculosis*-triggered disease. ***J. Immunology***. 2000, 165:5921-5931.

**EDITORIALS, CHAPTERS, CASE REPORTS & BOOKS:**

1. **Eruslanov E.** Kusmartsev S. Identification of ROS using oxidized DCFDA and flow cytometry." Part I, Chap. 4 in Walker JM (ed.) and Armstrong DD (vol. ed.): Methods in Molecular Biology, Volume "Advanced Protocol in Oxidative Stress II." New York: Humana Press/ Springer, Vol. 594, 2010, 57-72.

**INVITED TALKS:**

1. American Association of Immunologists (AAI) annual meeting Immunology 2025, Symposium TIME2 Myeloid Cells in Cancer II. Talk title: "Dual role of Fc Receptor-triggered trogocytosis mediated by human tumor-infiltrating myeloid cells in the regulation of anti-tumor antibody efficacy" May 3-7, Honolulu, Hawaii.
2. Biomedical Research Center, Slovak Academy of Sciences, seminar title "Role of Neutrophils in Cancer", Bratislava, Slovakia, September 11-14, 2024.
3. 6th International Conference on Cytokines in Cancer, invited speaker, talk title: "Dual role of human tumor-associated macrophages and neutrophils in the regulation of anti-tumor antibody efficacy" Wyndham Loutraki Poseidon Conference Center Loutraki, Greece June 1 - 6, 2024.
4. AstraZeneca, Immuno-oncology virtual seminar, talk title: "Role of human tumor-associated myeloid cells in the regulation of anti-tumor antibody efficacy", 2024, March 8.

5. Institute of Immunology and Abramson Cancer Center (Basic Science) Cancer Retreat. Talk title: “Human tumor-associated canonical and APC-like neutrophils in the regulation of immune response triggered by tumor antigen-targeting antibodies”. University of Pennsylvania. December 16th, 2021, virtual conference.
6. Third Rock Ventures, seminar title: “Role of human tumor-associated FcR-bearing cells in the regulation of Ab-triggered tumor cell cytotoxicity in early-stage lung cancer”, Boston, November 12, 2019
7. Wistar Cancer Institute, IMM Program Meeting, talk title: “Human tumor-associated monocytes/macrophages and their cross talk with tumor-specific T cells in early-stage lung cancer”, Philadelphia, October 21, 2019
8. Bristol-Myers Squibb, seminar title: “Human tumor-associated monocytes/macrophages in early-stage lung cancer”, Lawrenceville, NJ, July 9, 2019
9. Janssen Inc, seminar title: “The immune tumor microenvironment in early-stage human lung cancer”. Spring House, PA, June 14, 2019
10. National Allergy and Infectious Diseases (NIAID), “Suppressor cell and TB”, talk title: “Human tumor-associated myeloid cells and their regulation of T cell responses in early-stage lung cancer”. Rockville, Maryland, January 16, 2019
11. Cold Spring Harbor Laboratory, Banbury meeting, “Diverse Functions of Neutrophils in Cancer”, talk title: “Human tumor-associated neutrophils with antigen presenting cell features in lung cancer”. LIoyd Harbor, New York, November 27-30, 2018
12. Pulmonary-A&I Research Conference, talk title: “Tumor-associated macrophages and their regulation of T cell responses in early-stage lung cancer”. University of Pennsylvania, October 31, 2018
13. Janssen Inc. Inflammasome symposium, talk title: “Human tumor-associated macrophages and neutrophils in early-stage lung cancer” Antwerp, Belgium, October 17-18, 2018
14. University of Burgundy, Lipids, Nutrition, Cancer annual seminar, seminar title “Origin and role of tumor-associated neutrophils with antigen-presenting cell features in early-stage human lung cancer”. Dijon, France, May 24th, 2018
15. Fox Chase Cancer Center, Inflammation Working Group. seminar title: “Human tumor-associated neutrophils and their subsets in early-stage lung cancer”. Philadelphia, January 31st, 2018.
16. Fall seminars of The Division of Transplant Immunobiology and the Department of

Pathology and Laboratory Medicine at the Children's Hospital of Philadelphia. seminar title: "Tumor-Associated Hybrid Neutrophils in Human Lung Cancer". Philadelphia, September 20th, 2017.

17. American Association of Immunologists (AAI) annual meeting Immunology 2017, Major Symposium F: Neutrophils Function in Autoimmunity, Infection, and Cancer. talk title: "Tumor-associated neutrophils with antigen-presenting cell features in human lung cancer" May 12-16, Washington, D.C.
18. Immuno-oncology seminar, seminar title: "Tumor-associated neutrophils in human lung cancer". Translational Genomics Research Institute, Phoenix, April 25-26.
19. AstraZeneca Immuno-oncology seminar, seminar title: "Tumor-associated myeloid cells in human lung cancer". Waltham, MA, 2017, March 16.
20. Inflammation, Immunity and Cancer: The Society For Leukocyte Biology's 49th Annual Meeting and "Neutrophil 2016": Neutrophils and Other Leukocytes, Major Symposium. talk title: "Tumor-associated neutrophils in human lung cancer". University of Verona, Verona, Italy, September 15-17, 2016,
21. Regulatory Myeloid Suppressor Cells Conference, talk title: "Origin and role of tumor-associated neutrophils with antigen-presenting cell features in early-stage human lung cancer". Philadelphia, The Wistar Institute, June 16-19, 2016
22. Immunology School "Regulation of Lung Inflammation", seminar title: "Tumor-associated neutrophils and their subsets in human lung cancer" Moscow, Russia, May11-13, 2016.
23. Janssen Inc, Immuno-oncology seminar, title "Tumor-associated neutrophils and their subsets in human lung cancer". Spring House, March 12, 2016.
24. University of Pennsylvania LAM Symposium "Lymphatics Lymphangiogenesis, and VEGF-D: Targets for LAM", talk title: "Tumor-associated myeloid cells in human lung cancer". Philadelphia, PA, Feb 17, 2015.
25. University of Pennsylvania Respiration Research Retreat, talk title: "Role of Tumor-associated neutrophils in the regulation of T cell responses in early-stage human lung cancer". Philadelphia, June 13, 2014,

**PROFESSIONAL ASSOCIATION MEMBERSHIPS**

1. American Association for Cancer Research (AACR), member #147323.

2. American Association of Immunologists (AAI) member # 00213207

**PATENTS**

1. Kusmartsev S, Kaliberov S, **Eruslanov E**, Vieweg J. *Tumor Growth Inhibition Via Conditioning of Tumor Microenvironment*. Serial No. 61/041,106.
2. Eruslanov E. and Albelda S. *Compositions and methods of enhancing anti-tumor response using hybrid neutrophils*. Intrenational Patent Application No. PCT/US2016/049205, US Provisional Patent Application No.62/212,279.

**GRANT REVIEW ACTIVITIES:**

Ad Hoc reviewer for:
NIH/NCI, Spore (P50), ZCA1 RPRB-H(M1)
Department of Defense (DOD), Congressionally Directed Medical Research Programs (CDMRP), Lung Cancer Research Program
Israel Science Foundation (ISF),
Cancer Research UK,
French National Cancer Institute,
Belgium Research Foundation - Flanders (Fonds Wetenschappelijk Onderzoek - Vlaanderen, FWO),
Medical Research Councils UK (RCUK), UK,
The Swiss 3R Competence Centre (3RCC),
ITMO Cancer of the French National Alliance for Life and Health Sciences,
Poland National Science Center, Panel: NZ3 (Cellular and developmental biology)

**MANUSCRIPT REVIEWER FOR:**

Cell, Cancer Cell, Cancer Discovery, Journal of Clinical Investigation, Journal of Experimental Medicine, Nature Communications, Nature Nanotechnology, Cancer Research, Clinical Cancer Research, Cancer Immunology Research, European Journal of Immunology, Cancer Immunology and Immunotherapy, Journal of Leukocyte Biology.

**TEACHING:**
Give a lecture "Role of neutrophils in innate and adaptive immunity" in Basic and Translational Immunology course for Cell and Molecular Biology Graduate Group at the University of Pennsylvania

**GRANT SUPPORT**

**Current:**
1. **Incyte Inc.**
Title: To determine the role of TGFBR2 x PD1 Bispecific Ab in the regulation of immune response
01/01/2024 – 01/01/2025
Role: Co-I (PI-Albelda)

2. **Incyte Inc.**
Title: To determine the role of DGK inhibitors in the regulation of immune response
01/01/2024 – 01/01/2025
Role: Co-I (PI-Albelda)

3. **NIH/NCI,**
P01 CA254859-01A1
Title: Intraoperative Near Infrared Molecular Imaging of Lung Cancer
06/22/2022 – 6/21/2027
Role: Co-I (Dr. Singhal-PI)

**Completed:**
1. **Department of Defense**-LC140199, Career Development Award, W81XWH-15-1-0717
2015 -2017
Title: Tumor-associated neutrophils in human lung cancer
Role: PI

2. **NIH/NCI** R01 CA187392-01A1
2015-2020
Title: Tumor-associated neutrophils in human lung cancer.
Role: PI

3. **Department of Defense** -LC140042
2015 -2017
Title: Targeted Repolarization of Tumor-Associated Macrophages in Lung Cancer
Role: Co-I (Dr. Singhal-PI)

4. **NIH/NCI** R01 CA193556
2016-2021
Title: Near infrared intraoperative molecular imaging of lung adenocarcinoma
Role: CO-I (Dr. Singhal-PI)

5. **NIH/NHLBI**, **R01** 1R01HL131626-01
2016-2020

Title: Lymphangiogenesis in Pulmonary Lymphangioleiomyomatosis (LAM)
Role: Co-I (Dr. Krymskaya-PI)

6. **Translational Center for Excellence, University of Pennsylvania**
2013-2015
Title: Characterization of Immune Infiltrate in Non-Small Cell Lung Cancer
Role: Co-I (Dr. Albelda-PI)

7. **Janssen Pharmaceuticals, Inc.**/ Johnson & Johnson
2013-2015
Title: Analysis of Immune Infiltrate in Lung Cancer
Role: Co-I (Dr. Danet-Desnoyers -PI)

8. **Incyte Inc.**
2017-2019
Title: The role of PI3K and JAK pathways on the capacity of lung tumor-derived factors to alter macrophage differentiation, effector functions and T cell suppressive activity.
Role: Co-PI (Dr. Albelda-PI)

9. **Incyte Inc.**
2020-2021
Title: Role adenosine in Myeloid cells in human lung cancer
Role: Co-PI (Dr. Albelda-PI)

10. **Janssen Pharmaceuticals, Inc**./ Johnson & Johnson
2020-2023
Title: Role of inflammasome in human lung cancer
Role: PI

11. **Janssen Pharmaceuticals, Inc**./ Johnson & Johnson
2021-2023
Title: Role of EGFR–cMET bispecific antibodies and tumor-infiltrating $FcR^+$ effector cells in mediating of tumor cell cytotoxicity in human lung cancer
Role: PI

12. **Incyte Inc.**
2020-2022
Title: Determine the role of role of TGFBR2XPD1 bispecific Ab in the regulation of the tumor-specific T cell responses in the presence of tumor microenvironment
Role: Co-PI (Dr. Albelda-PI)

13. **NIH/NCI**
R01 CA193556
Title: Near infrared intraoperative molecular imaging of lung adenocarcinoma
03/03/2016-03/03/2022
Role: Co-I (Dr. Singhal-PI)