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EDUCATION

- Assistant Professor (2019-), Department of Pharmacology and Toxicology, University of Utah, Salt Lake City, UT
- Postdoctoral Researcher (2016-2019), Department of Medicine, Division of Pulmonary, Allergy and Critical Care, University of Pennsylvania, Philadelphia, PA
- Postdoctoral Associate (2015-2016), Department of Pharmacology & Toxicology, Rutgers University School of Pharmacy, Piscataway, NJ
- Ph.D. (2015), Toxicology, Rutgers University, Piscataway, NJ
- Pharm. D., (2009), College of Pharmacy and Pharmaceutical Chemistry, Università degli Studi di Urbino, Italy

AWARDS AND ACHIEVEMENTS

- American Physiological Society, Respiration Section Usha Award (2019)
- Society of Toxicology, Immunotoxicology Specialty Section, Health and Environmental Sciences Institute (HESI) Immunotoxicology Young Investigator Travel Award (2018)
- Society of Toxicology, Immunotoxicology Specialty Section, Immunotoxicology SS Best Presentation by a Postdoctoral Trainee Award (2018)
- Biologend Research Travel award (2017)
- American Physiological Society, Respiration Section, Research Recognition Award (2017)
- American Society for Pharmacology and Experimental Therapeutics, Division for Toxicology, Postdoctoral Best Presentation Award, 1st place (2016)
- Abcam Research Trainee Travel Grant (2016)
- Rutgers University Teaching and Graduate Assistant Professional Development Fund Award (2015)
- American Society for Pharmacology and Experimental Therapeutics, Division for Toxicology, Graduate Student Best Abstract Award, 3rd place (2015)
- Society of Toxicology, Inhalation and Respiratory Specialty Section Graduate Student Research Award (2015)
- Society of Toxicology Graduate Student Travel Award (2015)
- Bristol Meyer-Squibb Graduate Fellowship (2014-2015)
- Rutgers University Graduate Student Travel Award (2014)
- Society of Toxicology, Toxicology and Exploratory Pathology Specialty Section Student Travel Award (2014)
- Society of Toxicology Outstanding Graduate Student Leadership Committee Award (2014)
- Genetic Toxicology Association, Student Travel Award (2013)
- Gordon Research Conference, Best Graduate Student Poster Award (2013)
- Early Graduation Scholarship, Urbino University, Urbino, Italy (2009)
- Merit Scholarship, Urbino University, Urbino, Italy (2004-2008)

PROFESSIONAL ACTIVITIES

- Symposium Chair and Speaker, “Immune-Epithelial Cell Crosstalk in Lung Toxicology and Disease”, 58th Annual Meeting, Society of Toxicology, 2019
- Reviewer, Experimental and Molecular Pathology (2019-present)
- Postdoctoral Representative, Immunotoxicology Specialty Section, Society of Toxicology (2018-2020)
- Postdoctoral Representative, Toxicologic and Exploratory Pathology Specialty Section, Society of Toxicology (2016-2018)
- Postdoctoral Representative, Division for Toxicology, Experimental Biology (2016-2017)
- Poster Session Chair, Inflammation in Disease, Society of Toxicology (2016)
- Young Scientist Committee Representative, Federation of American Societies of Experimental Biology (2015-2018)
- Reviewer, Toxicological Sciences (2016-present)
- Reviewer, Toxicology and Applied Pharmacology (2015-present)
- Student Seminar Chair, Gordon Research Conference. (2015-2017)
- Chair, Graduate Student Leadership Committee Board, Society of Toxicology (2014-2015)
- CE Coordinator, Society of Toxicology Annual Meeting Continuing Education Courses (2015)
- Senior Volunteer, Society of Toxicology Annual Meeting Continuing Education Courses (2014)
- Student Seminar Associate Chair, Gordon Research Conference (2013-2015)
- Secretary, Graduate Student Leadership Committee Board, Society of Toxicology (2013-2014)
- Graduate Student Representative, Toxicologic and Exploratory Pathology Specialty Section, Society of Toxicology (2012-2014)
- Student Officer, Graduate Program in Toxicology Teaching Assistant/Graduate Assistant Personnel Grievance Procedure Committee (2012-2013 and 2013-2014)
- Program Developer and Instructor, Toxicology Health and Environmental Diseases High School student summer program, Rutgers University Environmental and Occupational Health Sciences Institute. (2013, 2014, 2015)
- Member, Graduate Student Leadership Committee Communication Subcommittee, Society of Toxicology (2012-2013)
- President, Rutgers Association of Toxicology Students (2012-2013)

PROFESSIONAL EXPERIENCE

- Teaching Assistant for Research Initiatives, Rutgers University (2012-2014)
- Teaching Assistant, Rutgers University (2010-2012)
- Research Assistant, Rutgers University, Department of Pharmacology and Toxicology, Dr. R. Malaviya, mentor (2009)
- Undergraduate Research Thesis, University of Urbino, Italy, Department of Analytical Chemistry and Applied Radiochemistry, Dr. D. Desideri, mentor (2008- 2009)
- Formative Internship, Urbino Municipal Pharmacy, Urbino, Italy (2008- 2009)

PROFESSIONAL SOCIETY MEMBERSHIPS

- Society of Leukocyte Biology (2016-present)
- American Association of Immunologists (2016-present)
- American Society for Pharmacology and Experimental Therapeutics (2014-present)
- American Physiological Society (2014-present)
- New York Academy of Sciences (2012-present)
- Society of Toxicology (2011-present)
- Mid-Atlantic society of Toxicology (2010-present)

MENTORING EXPERIENCE

- Matthew Barrett, Summer Undergraduate Internship Program (SUIP), University of Pennsylvania (2017-18)
- James Gow, Partners in Science High School Summer Program, Liberty Science Center, NJ (2015)
- Ian Berman, School of Pharmacy, Rutgers University (2014-2015)
- Aleena Karim, School of Pharmacy, Rutgers University (2014)
- James Gow, High School Intern (summer 2014)
- Alina Jan, Partners in Science High School Summer Program, Liberty Science Center, NJ (2013)
- Akhil Chakravarti, Partners in Science High School Summer Program, Liberty Science Center, NJ (2012)

PUBLICATIONS

1. Sunil V, Vayas KN, Ebramova E, Rancourt R, Cervelli JA, Malaviya R, Goedken M, **Venosa A**, Gow AJ, Laskin JD, and Laskin DL. Lung injury, oxidative stress and fibrosis in mice following exposure to nitrogen mustard. (Submitted)
2. Kokkinaki D, Murphy S, **Venosa A**, Sherrill-Mix S, Hotz MJ, Casu C, Zhang P, Loy E, Ittner CAG, Meyer NJ, Worthen SG, Rivella S, Hahn B, Mangalmurti NS. TLR9 and CD47 form an immune sensing complex on RBCs. (In Revision)
3. Chen P, Zhang X, **Venosa A**, Lee IH, Myers D, Holloway JA, Prud'homme RK, Gao D, Szekealy Z, Laskin JD, Laskin DL, and Sinko PJ. Selective Uptake of Nanoparticles Displaying a Novel Bivalent Mannosylated Targeting Ligand by Alternatively Activated M2 Macrophages. (Submitted)
4. **Venosa A**, Gow JG, Taylor S, Golden T, Murray A, Abramova E, Malaviya R, Laskin DL and Gow AJ. Anti-TNF α Treatment Alters Myeloid Cell Dynamics in Bleomycin-Induced Pulmonary Injury in Mice. (In Preparation)
5. **Venosa A**, Gow AJ, Laskin JD, and Laskin DL. Regulation of Macrophage Foam Cell Formation during Nitrogen Mustard (NM)-Induced Pulmonary Fibrosis by Lung Lipids. *Toxicological Sciences*, 2019. <https://doi.org/10.1093/toxsci/kfz187>
6. **Venosa A**, Katzen J, Tomer Y, Kopp M, Jamil S, Russo SJ, Mulugeta S, and Beers MF. Epithelial Expression of an Interstitial Lung Disease Associated Mutation in Surfactant Protein-C Modulates Recruitment and Activation of Key Myeloid Cell Populations in Mice. *Journal of Immunology*, 2019. 202 (9) 2760-2771
7. Katzen J, Wagner BD, **Venosa A**, Kopp M, Tomer Y, Russo SJ, Headen AC, Basil MC, Stark JM, Mulugeta S, Deterding RR, and Beers MF. A SFTPC BRICHOS Mutant Links Epithelial ER Stress and Spontaneous Lung Fibrosis. *Journal of Clinical Investigation Insight*. 2019;4(6):e126125.
8. **Venosa A***, Nureki S-I*, Tomer Y*, Katzen J, Russo SJ, Jamil S, Barrett M, Nguyen V, Kopp M, Mulugeta S, Beers MF. Expression of Mutant Sftpc in Murine alveolar epithelia drives spontaneous lung Fibrosis. *Journal of Clinical Investigation*, 2018, 128(9): 172-179. (*contributed equally to this work)
9. **Venosa A**, Malaviya R, Hall L, Gow AJ, Laskin JD, and Laskin DL. Regulation of Nitrogen Mustard-Induced Lung Macrophage Activation by the Histone Deacetylase Inhibitor Valproic Acid. *Toxicological Sciences*, 2017, 157(1): 222-234.

10. Malaviya R, Sunil VR, **Venosa A**, Vayas KN, Businaro R, Heck DE, Laskin JD, Laskin DL. Macrophages and Inflammatory Mediators in Pulmonary Injury Induced by Mustard Vesicants. *Annals of the New York Academy of Sciences*. 2016, 1374(1): 168-175.
11. Weinberger B, Malaviya R, Sunil VR, **Venosa A**, Heck DE, Laskin JD, Laskin DL. Mustard Vesicant-Induced Lung Injury: Advances in Therapy. *Toxicology and Applied Pharmacology*, 2016, 305: 1-11. Review.
12. Malaviya R, Sunil VR, **Venosa A**, Vayas KN, Heck DE, Laskin JD, Laskin DL. Inflammatory Mechanisms of Pulmonary Injury Induced by Mustards. *Toxicology Letters*, 2016, 26;244: 2-7.
13. Malaviya R, Sunil VR, **Venosa A**, Verissimo VL, Cervelli JA, Vayas KN, Hall L, Laskin JD, Laskin DL. Attenuation of nitrogen mustard-induced pulmonary injury and fibrosis by anti-tumor necrosis factor- α antibody. *Toxicological Sciences*, 2015, 148(1): 71-88.
14. **Venosa A**, Malaviya R, Hall L, Gow AJ, Laskin JD, and Laskin DL. Protective role of spleen-derived macrophages in lung inflammation, injury, and fibrosis induced by nitrogen mustard. *American Journal Physiology Lung Cell Molecular Physiology*, 2015, 309(12): L1487-1498.
15. **Venosa A**, Malaviya R, Choi H, Gow AJ, Laskin JD, and Laskin DL. Characterization of Distinct Macrophage Subpopulations during Nitrogen Mustard-Induced Injury and Fibrosis. *American Journal Respiratory Cell Molecular Biology*, 2015, 54(3): 436-446.
16. Malaviya R, **Venosa A**, Hall L, Gow AJ, Sinko PJ, Laskin JD, Laskin DL. Attenuation of acute nitrogen mustard-induced lung injury, inflammation and fibrogenesis by a nitric oxide synthase inhibitor. *Toxicology and Applied Pharmacology*, 2012, 265(3): 279-291.

Invited Speaker and Oral Presentations

1. "Lung Epithelial Cell Stress Driven by Surfactant Protein-C Mutation Predisposes to Enhanced Susceptibility to Inhaled Toxicant Exposure". Cellular and Molecular Mechanisms of Toxicity, Gordon Research Seminar, 2019
2. "Understanding Epithelial-Effector Cell Crosstalk in the Pathogenesis of Diffuse Parenchymal Lung Disease". Society of Toxicology Platform Session 2019
3. "Modulation of Myeloid Cell Recruitment and Activation by Alveolar Epithelial Type 2 Cells Drives Early Inflammation in a Murine Model of Mutant Surfactant Protein-C Pulmonary Fibrosis". American Physiological Society - Experimental Biology 2018.
4. "Expression of a Pulmonary Fibrosis Associated Surfactant Protein C Mutant, SP-CI73T, in Alveolar type 2 Cells Induced Lung Inflammation and Aberrant Parenchymal Remodeling". American Physiological Society - Experimental Biology 2017.
5. "Mechanisms of Macrophage Recruitment and Activation During Chemical-Induced Lung Injury and Fibrosis". University of California San Francisco and University of Pennsylvania, 2016
6. "From the High School Classroom to the Laboratory Bench: Design of a One-Week Toxicology Summer Program". Society of Toxicology Platform Session, 2016
7. "Identification of Distinct Macrophage Subpopulations During Nitrogen Mustard-Induced Lung Injury and Fibrosis: Mechanisms of Recruitment and Activation". University of North Carolina and East Carolina University, 2016
8. "Role of Macrophage Populations in Nitrogen Mustard-Induced Pulmonary Toxicity". Università degli studi di Urbino, 2014
9. "Regulation of Macrophage Activity by Histone Deacetylases during Nitrogen Mustard-Induced Lung Injury". Joint Molecular Biosciences Graduate student association Annual Symposium, 2014

Abstracts

1. Murray A, Banota T, Smith LC, Abramova E, Rizzolo DT, **Venosa A**, Kong B, Andres J, Guo GL, Gow AJ, Laskin JD, and Laskin DL. Regulation of Macrophage Phenotype by Farnesoid X Receptor during Nitrogen Mustard-Induced Lung Injury. (Presented at SOT 2019)
2. Zhao M, **Venosa A**, Tomer Y, Beers MF, Mulugeta S. Cell Type- and Protein-Specific Induction of LAMP3. (Presented at EB 2019)
3. Beers MF, Katzen JK, **Venosa A**, Tomer Y, Morley M, and Nureki S-I Transcriptomic profiling of alveolar type 2 cells from mice expressing an ILD associated SFTPC^{I73T} mutation supports their role in inflammatory cell recruitment and fibrotic lung remodeling. (Presented at ERS 2019)
4. Katzen JK, Tomer Y, Kopp M, **Venosa A**, Mulugeta S, Beers MF. A Novel Murine Model of Expressing a Surfactant Protein C BRICHOS Mutation Charts a Path from Epithelial Endoplasmic Reticulum Stress to Spontaneous Acute Lung Injury and Fibrotic Remodeling (Presented at ATS 2018)
5. Beers MF, J Katzen JK, **Venosa A**, Tomer Y, Nureki SI, Shumayatcher M, Mulugeta S, and Himes BE. Expression of An Interstitial Lung Disease Associated Surfactant Protein C (SFTPC) Mutation In Mice Produces Dynamic Alterations In The Alevolar Type 2 Cell Transcriptome And A Fibrotic Lung Phenotype. (Presented at ATS 2018)
6. **Venosa A**, Tomer Y, Jamil S, and Beers MF. Modulation of Myeloid Cell Recruitment and Activation By Alveolar Epithelial Type 2 Cells Drives Early Inflammation in a Murine Model of Mutant Surfactant Protein-C Pulmonary Fibrosis. (Presented at EB 2018)
7. **Venosa A**, Tomer Y, Jamil S, and Beers MF. Alveolar Epithelial Cells Drive Recruitment and Phenotypic Activation of Immune Effector Cells in Lung Surfactant Protein-C Dysfunction. (Presented at Society of Toxicology 2018)
8. Sunil V, Vayas K, Murray A, **Venosa A**, Gow AJ, Laskin JD, and Laskin DL. Suppression of Ozone-Induced Macrophage Activation and Oxidative Stress by Valproic Acid. (Presented at Society of Toxicology, 2018)
9. Murray A, **Venosa A**, Malaviya R, Adler D, Yurkow E, Gow AJ, Laskin JD, and Laskin DL. Live Animal Molecular Imaging Techniques Demonstrate that Anti-Tumor Necrosis Factor- α Antibody Mitigates Lung Injury Induced by Nitrogen Mustard. (Presented at Society of Toxicology, 2018)
10. Beers MF, Tomer Y, Russo SJ, **Venosa A**, Mulugeta S, Nureki S-I. Alveolar type 2 cell dysfunction from expression of a surfactant protein C (SFTPC) mutation drives a fibrotic lung phenotype in mice. (Presented at European Respiratory Society, 2017)
11. Tomer Y, Jamil S, **Venosa A**, and Beers MF. Spontaneous Alveolitis and Lung Injury Following Induction of Expression of the Surfactant Protein C Mutant SP-CI73T in the Alveolar Epithelium: An Acute Exacerbation of IPF in Mice? (Presented at ATS, 2017)
12. Gow JG, Taylor S, Murray A, Malaviya R, **Venosa A**, Gow AJ, Laskin JD, Laskin DL. Suppression of Bleomycin-Induced Pulmonary Fibrosis and Lung Macrophage Activation by Anti-Tumor Necrosis Factor-alpha (TNF α) Antibody. (The Toxicologist 2017;333(1):2415)
13. Taylor S, Francis M, **Venosa A**, Murray A, Gow AJ, Laskin JD, Laskin DL. Ethyl Nitrite Suppresses Ozone-Induced ProInflammatory Macrophage Activation and Lung Injury. (The Toxicologist 2017;332(1):2413)

14. Murray A, **Venosa A**, Gow AJ, Laskin JD, Laskin DL. Suppression of Nitrogen Mustard-Induced Inflammatory Macrophage Activation by Gadolinium Chloride. (Presented at Presented Gordon Research Conference 2017 and *The Toxicologist* 2017;252(1):2068)
15. **Venosa A**, Tomer Y, Jamil S, and Beers MF. Expression Of A Pulmonary Fibrosis Associated Surfactant Protein C Mutant, SP-CI73T, In Alveolar Type 2 Cells Induces Lung Inflammation and Aberrant Parenchymal Remodeling. (Presented at Experimental Biology 2017).
16. **Venosa A**, Adler D, Laskin JD, Yurkow E and Laskin DL Characterization and Quantification of Nitrogen Mustard-Induced Lung Injury Using Molecular Imaging Techniques. (Presented at Experimental Biology 2016)
17. **Venosa A**, Gow AJ, Laskin JD and Laskin DL. Role of Lipids in Macrophage Foam Cell Formation During Nitrogen Mustard (NM)-Induced Lung Fibrosis. (Presented at Society of Toxicology, 2016)
18. Guo G, **Venosa A**, Szilagyi JT, Marco S, Aleksunes LM, Gow AJ, Laskin DL. From the High School Classroom to the Laboratory Bench: Design of a One-Week Toxicology Summer Program. (Presented at Society of Toxicology, 2016)
19. Malaviya R, Sunil V, **Venosa A**, Vayas K, Hall L, Heindel ND, Lacey CJ, Laskin JD, Laskin DL. Attenuation of Nitrogen Mustard (NM) Induced Pulmonary Injury and Fibrosis by Inhibitors of Tumor Necrosis Factor (TNF) α and Reactive Oxygen and Nitrogen Intermediates. (Presented at Society of Toxicology, 2016)
20. **Venosa A**, Schumacher J, Adler D, Laskin JD, Yurkow E, Laskin DL. Use of MRI and PET-CT to Characterize Nitrogen Mustard-Induced Lung Injury and fibrosis (Presented at Gordon Research Conference 2015)
21. **Venosa A**, Gow AJ, Laskin JD and Laskin DL. Regulation of Lipid Homeostasis in Nitrogen Mustard (NM)-Induced Lung Injury. (Presented Gordon Research Conference 2015)
22. **Venosa A**, Gow AJ, Laskin JD and Laskin DL. Nitrogen Mustard (NM)-induced Lung Fibrosis is Associated with Altered Lipid Metabolism and Foam Cell Formation. *FASEB J*, 29:774.2, 2015
23. Sunil V, Vayas K, Cervelli J, Goedken M, **Venosa A**, Malaviya R, Laskin JD and Laskin DL. Role of Surfactant Protein-D in Vesicle-Induced Lung Toxicity. *FASEB J*, 29:774.3, 2015
24. **Venosa A**, Gow JG, Berman I, Malaviya R, Yaren H, Yaman H, Gow AJ, Laskin JD and Laskin DL. Regulation of Macrophage Activity by Histone Deacetylases during Nitrogen Mustard-Induced Lung Injury. *The Toxicologist* 2015;287(1):1342
25. Malaviya R, **Venosa A**, Sunil VR, Vayas K, Hall L, Laskin JD, and Laskin D. Attenuation of Nitrogen Mustard (NM)- Induced Pulmonary Injury, Inflammation, and Fibrosis by Anti-Tumor Necrosis Factor (TNF) Alpha Antibody. *The Toxicologist* 2015;448(1):2086
26. Guo GL, Moscovitz JE, **Venosa A**, Golden T, Aleksunes LM, Gow AJ and Laskin DL. Design and Assessment of Classroom and Laboratory Activities during a One-Week Toxicology High School Program. *The Toxicologist* 2015;237(1):1113
27. **Venosa A**, Gow JG, Berman I, Malaviya R, Yaren H, Yaman H, Gow AJ, Laskin JD and Laskin DL. Protection Against Nitrogen Mustard (NM)-Induced Injury by the Histone Deacetylase Inhibitor, Valproic Acid (VA) is Associated with Alterations in Lung Macrophage Phenotype (presented NYAS 'Pharmacologic Resolution of Inflammation as a Novel Therapeutic Approach' Conference, 2014)
28. Guo GL, Moscovitz JE, **Venosa A**, Aleksunes LM, Gow A and Laskin DL. Evaluation of Technical and Knowledge-Based Outcomes Following Participation in a One-Week High School Research Program in Toxicology and Environmental Health Sciences. *The Toxicologist* 2014;435(1):1669
29. Malaviya R, Sunil V, **Venosa A**, Vayas K, Sinko PJ, Shen J, Hall L, Shealy D, Heindel N, Lacey CJ, Laskin JD and Laskin DL. Attenuation of Nitrogen Mustard (NM)-Induced Pulmonary Injury and Inflammation by Antitumor Necrosis Factor (TNF) α Antibody and

- the Inducible Nitric Oxide Synthase (iNOS) Inhibitor, N-(3-(Aminomethyl)benzyl)acetamide (1400W). *The Toxicologist* 2014;146(1):561
30. **Venosa A**, Malaviya R, Laskin JD, Laskin DL. Characterization of Distinct Macrophage (MP) Subpopulations in the Lung Following Exposure of Rats to Nitrogen Mustard (NM) (presented Genetic Toxicology Association 2014)
 31. **Venosa A**, Malaviya R, Laskin JD, Laskin DL. Accumulation of Distinct Macrophage (MP) Subpopulations in the Lung Following Nitrogen Mustard (NM) Exposure; Contribution of Splenic Monocytes. *The Toxicologist* 2014; 138(1):149
 32. **Venosa A**, Malaviya R, Laskin JD, Laskin DL. Alterations in lung macrophage microRNA expression and histone acetylation and methylation following nitrogen mustard exposure in rats (presented Genetic Toxicology Association 2013)
 33. **Venosa A**, Malaviya R, Laskin JD, Laskin DL. Nitrogen mustard exposure is associated with alterations in lung macrophage microRNA expression and histone modifications (presented Gordon Research Conference 2013)
 34. **Venosa A**, Malaviya R, Laskin JD, Laskin DL. Nitrogen mustard (NM)-induced pulmonary injury and inflammation are associated with alterations in histone methylation and acetylation. *The Toxicologist* 2013;76(1):359
 35. Chen P, Zhang X, **Venosa A**, Szekely Z, Laskin DL, Sinko PJ. Targeting alternatively activated rat macrophages using mannose functionalized nanocarriers. *The Toxicologist* 2013;375(1):1767
 36. Laskin DL, Malaviya R, **Venosa A**, Gow AJ, Heck D, Laskin JD. Role of reactive nitrogen species (RNS) generated via inducible nitric oxide synthase in vesicant-induced lung injury and inflammation. *Nitric Oxide* 07/2012; 27:S44. doi:10.1016/j.niox.2012.04.157
 37. **Venosa A**, Malaviya R, Hall L, Gow A, Laskin JD, Laskin DL. Abrogation of nitrogen mustard-induced lung injury and inflammation by the inducible nitric oxide synthase (iNOS) inhibitor aminoguanidine (AG). *The Toxicologist* 2012; 289(1):1340
 38. Malaviya R, Groves AM, **Venosa A**, Gow AJ, Laskin JD, Laskin DL. Induction of autophagy in the lung following inhalation of ozone is independent of age. *Am J Respir Crit Care Med* 183;2011: A1421
 39. Malaviya R, **Venosa A**, Laskin JD, Laskin DL. Role of inducible nitric oxide synthase in lung injury and inflammation induced by the pulmonary vesicant nitrogen mustard. *Am J Respir Crit Care Med* 183;2011: A3259.