

Nathan D. Seligson, PharmD

Contact Information

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Education

2011 – 2015 *Doctor of Pharmacy*
University of South Florida College of Pharmacy; Tampa, FL

2007 – 2011 *Bachelor of Science in Molecular Biology and Microbiology*
University of Central Florida; Orlando, FL

Post-Doctoral Training

2016 – 2019 *Post-doctoral Fellowship – Hematology/Oncology Translational Research*
The Ohio State University Comprehensive Cancer Center; Columbus, OH

2015 – 2016 *Residency – Internal Medicine*
Baptist Memorial Hospital; Memphis, TN

Professional Licenses

2016 – Present Licensed Pharmacist – State of Florida Board of Pharmacy
2016 – 2019 Licensed Pharmacist – State of Ohio Board of Pharmacy
2015 – 2017 Licensed Pharmacist – State of Tennessee Board of Pharmacy

Professional Appointments

06/2019 – Present *Clinical Assistant Professor*
Department of Pharmacotherapy and Translational Research
Division of Translational Research
University of Florida College of Pharmacy; Jacksonville, FL

07/2019 – Present *Clinical Pharmacogenomics Specialist*
Center for Pharmacogenomics and Translational Research
Nemours Children's Health; Jacksonville, FL

07/2016 – 06/2019 *Outpatient Clinical Trial Unit Clinical Pharmacy Specialist*
Inpatient Clinical Pharmacy Oncology Generalist
The Ohio State University Comprehensive Cancer Center; Columbus, OH

Courtesy Appointments

02/2021 – Present *Adjunct Assistant Professor – Department of Internal Medicine*
The Ohio State University College of Medicine; Columbus, OH

07/2019 – Present *Research Scientist – Department of Hematology and Oncology*
Nemours Children's Health; Jacksonville, FL

Clinical Service Development

07/2019 – Present Clinical Pharmacogenomics Specialist, Clinical Pharmacogenomics Service

I serve as a clinical pharmacogenomics specialist in a comprehensive genomic consult service designed to: 1) develop in-house pharmacogenomics testing and clinical implementation of pharmacogenomics within the health system; 2) provide comprehensive research support to internal investigators; 3) implement multi-site clinical research studies throughout the health system.

06/2020 – Present Co-coordinator, Somatic Testing Stewardship and Molecular Tumor Board

I serve as co-coordinator of the Nemours Children's Specialty Care Molecular Tumor Board and system-wide somatic testing stewardship program. In this role, I provide somatic test selection and interpretation support for pediatric patients and have developed clinical testing protocols across our health system. In 2021 I led a team to revise somatic sequencing guidelines across the Nemours Children's Health system.

Research Grants

Current

Source: UF College of Medicine – Jacksonville Center for Research Training

Title: "Characterizing molecular heterogeneity in Ewing's sarcoma"

Amount: \$43,000.00; Role: PI

Source: Hematology/Oncology Pharmacy Association Foundation

Title: "Patterns of resistance to initial therapeutic treatment in Ewing's Sarcoma"

Amount: \$31,000.00; Role: PI

Completed

Source: Hematology/Oncology Pharmacy Association

Title: "Characterizing molecular heterogeneity in fusion-driven sarcomas"

Amount: \$5,000.00; Role: PI

Source: Pelotonia Idea Grant

Title: "Personalizing Multiple Myeloma Treatment"

Amount: \$50,000.00; Role: co-investigator (PIs: Mitch Phelps, Ming Poi, Susan Geyer)

Publications - Original Research

* Co-first author ‡ Corresponding Author

1. **Seligson ND**, Zhang X, Zemanek MC, Johnson JA, VanGundy Z, Wang D, Phelps M, Roddy J, Hofmeister C, Li J, Poi MJ. *CYP3A5* influences oral tacrolimus pharmacokinetics and timing of acute kidney injury following allogeneic hematopoietic stem cell transplantation. *Front Pharmacol*. 2024 Jan. doi: 10.3389/fphar.2023.1334440.
2. Walker V, Jin DX, Millis SZ, Nasri E, Corao-Urbe DA, Tan AC, Fridley BL, Chen JL, **Seligson ND**‡. Gene partners of the *EWSR1* fusion may represent molecularly distinct entities. *Transl Oncol*. 2023 Dec;38:101795. doi: 10.1016/j.tranon.2023.101795. Epub 2023 Oct 3.
3. Cook KJ‡, Grusauskas V, Gloe L, Duong BQ, Gresh RC, Kolb EA, Bansal M, Bechtel AS, Nagasubramanian R, Kirwin SM, Blake KV, **Seligson ND**‡. Comparison of variants in *TPMT* and *NUDT15* between sequencing and genotyping methods in a multistate pediatric institution. *Clin Transl Sci*. 2023 Jul 6. doi: 10.1111/cts.13539. Online ahead of print.
4. Duah E, **Seligson ND**, Persaud AK, Dam Q, Pabla N, Rocco JW, Li J, Poi M. CDK4/6 and autophagy inhibitors synergize to suppress the growth of human head and neck squamous cell carcinomas. *Mol Carcinog*. 2023 May 3. doi: 10.1002/mc.23556. Online ahead of print.
5. Thomas M, Li J, King K, Persaud AK, Duah E, Vangundy Z, Hofmeister CC, Lamba JK, Tan AC, Fridley BL, Poi MJ, **Seligson ND**‡. *PARP1* and *POLD2* as prognostic biomarkers for multiple myeloma in autologous stem cell transplant. *Haematologica*. 2023 Mar 2. doi: 10.3324/haematol.2022.282399. Epub ahead of print.
6. Nguyen NH, Rafiee R, Tagmount A, Sobh A, Loguinov A, K de Jesus Sosa A, Elsayed AH, Gbadamosi MO, **Seligson ND**, Cogle CR, Rubnitz JE, Ribeiro RC, Downing JR, Cao X, Pounds SB, Vulpe CD, Lamba JK. Genome-wide CRISPR/Cas9 Screen Identifies Etoposide Response Modulators Associated with Outcomes in Pediatric AML. *Blood Adv*. 2022 Sep 16;bloodadvances.2022007934. doi: 10.1182/bloodadvances.2022007934. Online ahead of print.
7. Busaidy NL, Konda B, Wei L, Wirth L, Devine C, Daniels GA, DeSouza JA, Poi M, **Seligson ND**, Cabanillas ME, Ringel MD, Shah MH. Dabrafenib vs dabrafenib + trametinib in BRAF-mutated radioactive iodine refractory differentiated thyroid cancer- results of a phase 2 trial. *Thyroid*. 2022 Oct;32(10):1184-1192. doi: 10.1089/thy.2022.0115. Epub 2022 Jul 5.
8. **Seligson ND**, Tang J, Jin DX, Bennett MP, Elvin JA, Graim K, Hays JL, Millis SZ, Miles WO, Chen JL. Drivers of Genomic Loss of Heterozygosity in Leiomyosarcoma are Distinct from Carcinomas. *NPJ Precis Oncol*. 2022 Apr 25;6(1):29. doi: 10.1038/s41698-022-00271-x.
9. **Seligson ND**, Maradiaga RD, Stets CM, Katzenstein HM, Millis SZ, Hays JL, Chen JL. Multiscale -omic assessment of *EWSR1-NFATc2* fusion positive sarcomas identifies the mTOR pathway as a potential therapeutic target. *NPJ Precis Oncol*. 2021 May 21;5(1):43. doi: 10.1038/s41698-021-00177-0.
10. Turner SC*, **Seligson ND***, Parag B, Shea KM, Hobbs ALV. Evaluation of the Timing of an MRSA PCR Nasal Screen Assay: How Long Can a Negative Assay be Used to Rule Out MRSA Pneumonia? *Am J Health Syst Pharm*. 2021 May 24;78(Supplement_2):S57-S61. doi: 10.1093/ajhp/zxab109.

11. Li J, **Seligson ND**, Zhang X, Zemanek MC, Johnson JA, Van Gundy Z, Wang D, Phelps MA, Roddy J, Hofmeister CC, Devine SM, Sadee W, Poi MJ. Polymorphism in *ANRIL* was associated with overall survival in adult patients with hematologic malignancies after allogeneic hematopoietic stem cell transplantation. *Anticancer Res.* 2020 Oct;40(10):5707-5713. doi: 10.21873/anticancer.14585.
12. **Seligson ND**, Awasthi A, Millis SZ, Turpin BK, Meyer CF, Grand'Maison A, Liebner DA, Hays JL, Chen JL. Common Secondary Genomic Variants Associated with Advanced Epithelioid Hemangioendothelioma. *JAMA Network Open.* 2019; 2(10):e1912416. doi:10.1001/jamanetworkopen.2019.12416.
13. **Seligson ND***, Stets C*, Demoret B, Awasthi A, Grosenbacher N, Shakya R, Hays J, Chen J. Targeting MDM2 expression through inhibition of histone deacetylase 2 reduces tumor growth in dedifferentiated liposarcoma. *Oncotarget.* 2019 Oct 1;10(55):5671-5679. doi: 10.18632/oncotarget.27144. eCollection 2019 Oct 1.
14. Persaud AK, Li J, Johnson JA, **Seligson N**, Sborov DW, Duah E, Cho YK, Wang D, Phelps MA, Hofmeister CC, Poi MJ. *XRCC1*-mediated DNA repair is associated with progression-free survival of multiple myeloma patients after autologous stem cell transplant. *Mol Carcinog.* 2019 Dec;58(12):2327-2339. doi: 10.1002/mc.23121. Epub 2019 Sep 22.
15. Bill KLJ*, **Seligson ND***, Hays J, Demoret B, Stets C, Duggan M, Bupathi M, Shakya R, Timmers C, Wakely P, Pollock R, Chen J. Degree of *MDM2* amplification affects clinical outcomes in dedifferentiated liposarcoma. *Oncologist.* 2019 Jul;24(7):989-996. doi: 10.1634/theoncologist.2019-0047. Epub 2019 Apr 24.
16. **Seligson ND**, Kautto E, Passen E, Stets C, Toland A, Millis S, Meyer C, Hays J, Chen J. *BRCA1/2* functional loss defines a targetable subset in leiomyosarcoma. *Oncologist.* 2019 Jul;24(7):973-979. doi: 10.1634/theoncologist.2018-0448. Epub 2018 Dec 12.
17. **Seligson ND†**, Hobbs A, Leonard J, Mills E, Evans A, Goorha S. Evaluating the impact of the addition of cladribine to standard acute myeloid leukemia induction therapy. *Ann Pharmacother.* 2018 May; 52(5):439-445. doi: 10.1177/1060028017749214. Epub 2017 Dec 14.

Publications - Perspective and Review Articles

* Co-first author ‡ Corresponding Author

1. **Seligson ND†**, Kolesar JM, Alam B, Baker L, Lamba JK, Fridley BL, Salahudeen AA, Hertz DL, Hicks JK. Integrating pharmacogenomic testing into paired germline and somatic genomic testing in patients with cancer. *Pharmacogenomics.* 2023 Sep 13. doi: 10.2217/pgs-2023-0125. Epub ahead of print. PMID: 37702060.
2. Bergsma EJ, Elgawly M, Mancuso D, Orr R, Vuskovich T, **Seligson ND†**. Atezolizumab as the First Systemic Therapy Approved for Alveolar Soft Part Sarcoma. *Ann Pharmacother.* 2023 Jul 19;10600280231187421. doi: 10.1177/10600280231187421. Online ahead of print.
3. K King, Davis HE, Cook KJ, **Seligson ND†**. Lessons learned in the Development of Campus-Wide Community Service Initiative During a Pandemic. *Pharmacy (Basel).* 2022 Apr 19;10(3):47. doi: 10.3390/pharmacy10030047.
4. Hsu J*, **Seligson ND***, Millis SZ, Hays JL, Miles WO, Chen JL. The Utility of CDK4/6-Inhibitors in Sarcoma. *JCO Precision Oncology.* 2022 Feb;6:e2100211. doi: 10.1200/PO.21.00211.

5. Cook KJ, Duong BQ, **Seligson ND**, Arn P, Vicky L, Funanage VL, Karen W, Gripp KW, Kirwin SM, Lawless ST, Lee MM, Robbins KM, West D, Blake KV. Selecting a Genomic Decision Support Platform for Implementing Pharmacogenomics at a Multi-State Pediatric Health System. *Clin Pharmacol Ther*. 2021 Sep;110(3):555-558. doi: 10.1002/cpt.2328. Epub 2021 Jul 13.
6. Nelson RS, **Seligson ND**, Del Cueto A, Parker A, Tillman EM, Hicks JK. *UGT1A1* Guided Cancer Therapy: Review of the Evidence and Considerations for Clinical Implementation. *Cancers* 2021, 13(7), 1566; <https://doi.org/10.3390/cancers13071566>
7. Apple JM, Guerri JC, **Seligson ND**, Curtis SD. Adding the second 'T': Elevating STAR to START for Behavioral Interviewing. *Am J Health Syst Pharm*. 2021 Jan 1;78(1):18-21. doi: 10.1093/ajhp/zxaa356.
8. Seligson JM, Patron AM, Berger MJ, Harvey RD, **Seligson ND**[‡]. Sacituzumab Govitecan-hziy: an Antibody-Drug Conjugate for the Treatment of Refractory, Metastatic, Triple Negative Breast Cancer. *Ann Pharmacother*. 2021 Jul;55(7):921-931. doi: 10.1177/1060028020966548. Epub 2020 Oct 17.
9. **Seligson ND**, Warner JL, Dalton WS, Martin D, Miller RS, Patt D, Kehl KL, Palchuk MB, Alterovitz G, Wiley LK, Huang M, Shen F, Wang Y, Nguyen KA, Wong AF, Meric-Bernstam F, Bernstam EV, Chen JL. Recommendations for Patient Similarity Classes: Results of the AMIA 2019 Workshop on Defining Patient Similarity. *J Am Med Inform Assoc*. 2020 Nov 1;27(11):1808-1812. doi: 10.1093/jamia/ocaa159.
10. Faheem MMF, **Seligson ND**, Ahmad SM, Rasool RU, Gandhi SG, Bhagat M, Goswam A. Convergence of Therapy Induced Senescence (TIS) and EMT in multistep carcinogenesis: current opinions and emerging perspectives. *Cell Death Discov*. 6, 51 (2020). <https://doi.org/10.1038/s41420-020-0286-z>.
11. **Seligson ND**[‡], Knepper TC, Ragg S, Walko CM. Developing drugs for tissue agnostic indications: a paradigm shift in leveraging cancer biology for precision medicine. *Clin Pharmacol Ther*. 2021 Feb;109(2):334-342. doi: 10.1002/cpt.1946. Epub 2020 Jul 16.
12. Chakraborty S, Mir KB, **Seligson ND**, Nayak D, Kumar R, Goswam A. Integration of EMT and Cellular Survival Instincts in Reprogramming of Programmed Cell Death to Anastasis. *Cancer Metastasis Rev*. 2020 Jun;39(2):553-566. doi: 10.1007/s10555-020-09866-x.

Published Abstracts

1. **Seligson ND**, Asmann YW, Almeray T, Attia S, Bagaria SP. Immune-suppressive tumor microenvironment leads to poor survival following curative intent surgical resection in soft-tissue sarcomas. *Cancer Research*. 83 (7_Supplement), 990-990.
2. J Hsu, **ND Seligson**, JL Hays, JL Chen. Increased phosphorylation of RB and protein expression of Cyclin E confers resistance to CDK4/6 inhibitors in dedifferentiated liposarcoma. *Journal of Clinical Oncology*. 2022. 40 (16_suppl), e23525-e23525.
3. Bennett M, Jin D, Graim K, Hays J, Miles W, Chen J, **Seligson N**. Comparative analysis of the rb pathway in leiomyosarcoma. *Clinical Pharmacology & Therapeutics*. 2022. 111, PT-001.

4. Thomas M, King K, **Seligson N**. *PARP1* expression is a strong prognostic biomarker in multiple myeloma patients receiving autologous stem cell transplant. *Clinical Pharmacology & Therapeutics*. 2022. 111, P179.
5. Phipps L, **Seligson N**, Duong B, Kirwin S, Blake K, Cook K. Genotype and phenotype frequencies of *TPMT* and *NUDT15* in pediatric patients measured by sanger sequencing. *Clinical Pharmacology & Therapeutics*. 2022. 111, P113.
6. **Seligson ND**, Maradiaga R, Stets C, Katzenstein H, Millis S, Hays J, Chen J. Multiscale omic assessment of *EWSR1-NFATc2* fusion positive sarcomas to identify conserved fusion breakpoint and activation of the mTOR pathway. *Journal of Clinical Oncology*. 2020. 38, no. 15_suppl. doi: 10.1200/JCO.2020.38.15_suppl.e23536.
7. **Seligson ND**, Awasthi A, Millis S, Liebner D, Hays J, Chen J. Determinants of secondary alterations in *WWTR1-CAMTA1* fusion epithelioid hemangioendothelioma. *Journal of Clinical Oncology*. 2019. 37:15_suppl, 11045-11045.
8. Awasthi A, **Seligson ND**, Millis S, Hays J, Chen J. Histone H3 modifying genes may serve as a predictive marker for metastasis in synovial sarcoma. *Journal of Clinical Oncology*. 2019. 37:15_suppl, 11058-11058.
9. **Seligson ND**, Kautto E, Passen E, Stets C, Toland A, Meyer C, Hays J, Chen J. Genomic alterations in the homologous recombination pathway in soft-tissue sarcomas. *Journal of Clinical Oncology*. 2018. 36:15_suppl, 11549-11549.
10. Demoret B, Rogers A, **Seligson ND**, Kautto E, Hays J, Chen J. Genomic amplification of *CDK4* in dedifferentiated liposarcomas is a predictive biomarker for microtubule disrupting agents. *Journal of Clinical Oncology*. 2018 36:15_suppl, 11581-11581.
11. Stets C, Demoret B, **Seligson ND**, Grosenbacher N, Hays J, Chen J. Identification of *histone deacetylase 2 (HDAC2)* as a novel target for *MDM2* directed therapies in dedifferentiated liposarcoma. *Journal of Clinical Oncology*. 2018 36:15_suppl, 11583-11583.

Book Chapters

1. Dell K, Wantuch G, **Seligson ND**. Topical preparations: calcineurin inhibitors. In: Mackay I, Rose N, Ledford D, Lockey R. *Encyclopedia of Medical Immunology*. New York, NY: Springer; 2014: 651-654.

Invited Presentation

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| 11/2023 | Seligson ND . Oncogene Addiction in Fusion Driven Sarcomas. Trinity College Dublin School of Pharmacy and Pharmaceutical Sciences. Dublin, Ireland. [International] |
| 10/2023 | Seligson ND . Oncogene Addiction in Fusion Driven Sarcomas. Pediatric Cancer Immunotherapy Intuitive. Gainesville, Florida. [Local] |
| 9/2023 | Seligson ND . M2 Macrophages in Cold Immune Environments. UF Health Cancer Center Targeted Therapeutics Working Group. Gainesville, Florida. [Local] |

- 4/2023 **Seligson ND.** A Pathway-Based Approach to Targeted Therapy in Cancer. Duval County Pharmacy Association. Jacksonville, Florida. [Local]
- 3/2023 **Seligson ND.** Transforming Translational Research for Ewing's Sarcoma. University of Florida Sarcoma Tumor Board. Gainesville, Florida. [Local]
- 02/2023 **Seligson ND,** Cook K. How do we dose mercaptopurine? PGx Echo. *Virtual Event.* [National]
- 03/2021 **Seligson ND,** Kolesar JM, Salahudeen A, Hicks JK. Reimagining precision oncology by incorporating germline and somatic genomics into clinical care and research. American Society for Clinical Pharmacology and Therapeutics Annual Meeting. *Virtual Event.* [National]
- 01/2021 **Seligson ND,** Chen JL. Understanding the genomic landscape of epithelioid hemangioendothelioma. Epithelioid Hemangioendothelioma International Scientific Conference. *Virtual Event.* [National]
- 8/2021 **Seligson ND.** Gene signaling and drug sensitivity in *EWSR1-PATZ1* fusion positive cancers. University of Kentucky Molecular Tumor Board. Lexington, Kentucky. [National]
- 11/2020 **Seligson ND,** Millis SZ, Jin DX, Grosenbacher N, Bennett MP, Litvintchouk AM, Stets CW, Elvin JA, Hays JL, Chen JL. Homologous recombination DNA repair and loss of heterozygosity in leiomyosarcoma. Connective Tissue Oncology Society Annual Meeting. *Virtual Event.* [International]
- 10/2020 A Pathway-Based Approach to Targeted Therapy in Cancer: Rationalizing Outcomes with Molecular Pharmacology. Northeast Regional Hematology Oncology Pharmacists Symposium. Virtual. [National]
- 02/2020 Cancer Genetics and Evolution in Prostate Cancer. University of Florida Health Science Center Jacksonville. Department of Urology Grand Rounds. Jacksonville, FL. [Local]
- 11/2019 Cancer Genetics and Evolution in Gynecologic Malignancies. University of Florida Health Science Center Jacksonville. Department of Obstetrics and Gynecology Grand Rounds. Jacksonville, FL. [Local]
- 11/2019 What Defines a Patient Like Mine? A Collaborative Effort to Provide Clarity into the Computational Nomenclature of Patient Similarity, Their Requisite Data Categories, and Associated Algorithms. American Medical Informatics Association Annual Symposium. Washington, D.C. [National]
- 11/2019 Comprehensive genomic analysis of *EWSR1-NFATC2* fusion sarcomas identify distinctive genomic alterations and upregulation of the mTOR pathway. Connective Tissue Oncology Society Annual Meeting. Tokyo, Japan. [International]
- 03/2019 Targeting *MDM2* expression through inhibition of histone deacetylase 2 reduces tumor growth in dedifferentiated liposarcoma. University of Florida Precision Medicine Conference. Orlando, Florida. [Local]

Poster Presentations

- 11/2023 Gabal E, Rodriguez A, Chen JL **Seligson ND**. Secondary genomic landscape of *CIC::DUX4* fusion sarcomas. Connective Tissue Oncology Society Annual Meeting. Dublin, Ireland.
- 11/2023 **Seligson ND**, Asmann YW, Almeray T, Attia S, Bagaria SP. M2 macrophage infiltration is associated with early disease recurrence following curative intent surgical resection in soft-tissue sarcomas. Connective Tissue Oncology Society Annual Meeting. Dublin, Ireland.
- 03/2023 **Seligson ND**, Asmann YW, Almeray T, Attia S, Bagaria SP. Immune-suppressive tumor microenvironment leads to poor survival following curative intent surgical resection in soft-tissue sarcomas. American Association of Cancer Research Annual Meeting. Orlando, Florida.
- 11/2022 Walker V, Jin DX, Millis SZ, Tan AC, Fridley BL, Hays JL, Chen JL, **Seligson ND**. Genomic landscape of Rare *EWSR1* Fusions. Connective Tissue Oncology Society Annual Meeting. Vancouver, Canada.
- 11/2022 Reid M, Jin DX, Elvin JA, Millis SZ, Fridley BL, Hays JL, Chen JL, **Seligson ND**. Genomic Drivers of Tumor Mutational Burden Highlight Unique Molecular Subtype in LMS. Connective Tissue Oncology Society Annual Meeting. Vancouver, Canada.
- 03/2022 Thomas M, King KD, **Seligson ND**. *PARP1* expression is a strong prognostic biomarker in multiple myeloma patients receiving autologous stem cell transplant. American Society for Clinical Pharmacology and Therapeutics Annual Meeting. *Virtual Event*.
- 03/2022 Bennett MP, Jin DX, Graim K, Hays JL, Miles WO, Chen JL, **Seligson ND**. Comparative Analysis of the Rb Pathway in Leiomyosarcoma. American Society for Clinical Pharmacology and Therapeutics Annual Meeting. *Virtual Event*.
- 12/2021 Caneus R, Duong BQ, **Seligson ND**, Blake KV, Cook KJ. Prescribing Trends of Psychiatric Medications with Pharmacogenomic Implications in Patients Treated at Nemours Children's Health. American Society of Health Systems Pharmacists Annual Meeting. *Virtual Event*.
- 11/2021 Hsu J, **Seligson ND**, Stets C, Hays JL, Chen JL. Biomarkers for de-novo and acquired CDK4-inhibitor resistance in DDLPS. Connective Tissue Oncology Society Annual Meeting. *Virtual Event*.
- 11/2021 **Seligson ND**, Tang J, Jin DX, Bennett MP, Elvin JA, Graim K, Hays JL, Millis SZ, Miles WO, Chen JL. Genomic loss of heterozygosity reveals rare, clinically meaningful subtypes of leiomyosarcoma. Connective Tissue Oncology Society. *Virtual Event*.
- 11/2021 **Seligson ND**, Asmann YW, Almeray T, Attia S, Bagaria SP. Multi-omic predictors of clinical outcomes following curative intent surgical resection in soft-tissue sarcomas. Connective Tissue Oncology Society. *Virtual Event*.
- 10/2021 A. Cera, H. Naik, R. M. Wasserman, B. Duong, A. Owusu Obeng, K. J. Cook, N. **Seligson**, N. Cody, V. F. Funanage, K. V. Blake, S. A. Scott. Clinical pharmacogenomic test reporting preferences among adult and pediatric providers. American Society of Human Genetics. *Virtual Event*.

- 12/2020 Shepard E, Awasthi A, Millis S, Hays J, Chen J, **Seligson ND**. Alterations in Histone H3 Modifying Genes in Synovial Sarcoma. UF Health Cancer Center Annual Symposium. *Virtual Event*.
- 12/2020 Litvintchouk A, Bennett M, Millis S, Jin D, Grosenbacher N, Stets C, Elvin J, Hays J, Chen J., **Seligson ND**. Homologous Recombination: DNA Repair and Loss of Heterozygosity in Leiomyosarcoma. UF Health Cancer Center Annual Symposium. *Virtual Event*.
- 12/2020 **Seligson ND**, Maradiaga R, Stets C, Katzenstein H, Millis S, Hays J, Chen J. Multiscale omic assessment of EWSR1-NFATc2 fusion positive sarcomas identifies conserved fusion breakpoint and activation of the mTOR pathway. UF Health Cancer Center Annual Symposium. *Virtual Event*.
- 11/2019 Passen E, **Seligson ND**, Stets C, Demoret B, Awasthi A, Hays J, Chen J. Cell cycle checkpoint inhibition synergizes with mitotic spindle inhibition in leiomyosarcoma. Connective Tissue Oncology Society. Tokyo, Japan.
- 06/2019 **Seligson ND**, Awasthi A, Millis S, Liebner D, Hays J, Chen J. Determinants of secondary alterations in *WWTR1-CAMTA1* fusion epithelioid hemangioendothelioma. American Society of Clinical Oncology. Chicago, IL.
- 06/2019 Awasthi A, **Seligson ND**, Hays J, Chen J. Histone H3 modifying genes may serve as a predictive marker for metastasis in synovial sarcoma. American Society of Clinical Oncology. Chicago, IL.
- 03/2019 Seligson ND, Stets C, Demoret B, Awasthi A, Grosenbacher N, Shakya R, Hays J, Chen J. Targeting MDM2 expression through inhibition of histone deacetylase 2 reduces tumor growth in dedifferentiated liposarcoma. University of Florida Precision Medicine Conference. Orlando, FL.
- 04/2019 Maradiaga R, Millis S, **Seligson ND**, Chen J. Examining the Genomic and Treatment Landscape of *EWSR1-NFATc2* Fusion Sarcomas. Ohio State University Comprehensive Cancer Center (OSUCCC) Annual Scientific Meeting. Columbus, OH.
- 03/2019 **Seligson ND**, Bill K, Hays J, Demoret B, Stets C, Duggan M, Bupathi M, Shakya R, Timmers C, Wakely P, Pollock R, Chen J. Degree of *MDM2* amplification affects clinical outcomes in dedifferentiated liposarcoma. American Society for Clinical Pharmacology and Therapeutics. Washington D.C.
- 12/2018 Zhang X, **Seligson ND**, Phelps M, Roddy J, Poi M. Risk factors of acute kidney injury in allogeneic hematopoietic stem cell transplant patients receiving oral tacrolimus during the inpatient phase of care. American Society of Health-System Pharmacists. Anaheim, CA.
- 06/2018 **Seligson ND**, Kautto E, Passen E, Stets C, Toland A, Meyer C, Hays J, Chen J. Genomic alterations in the homologous recombination pathway in soft-tissue sarcomas. American Society of Clinical Oncology. Chicago, IL.

- 06/2018 Demoret B, Rogers A, **Seligson ND**, Kautto E, Hays J, Chen J. Genomic amplification of *CDK4* in dedifferentiated liposarcomas is a predictive biomarker for microtubule disrupting agents. American Society of Clinical Oncology. Chicago, IL.
- 06/2018 Stets C, Demoret B, **Seligson ND**, Grosenbacher N, Hays J, Chen J. Identification of *histone deacetylase 2 (HDAC2)* as a novel target for *MDM2* directed therapies in dedifferentiated liposarcoma. American Society of Clinical Oncology. Chicago, IL.
- 04/2018 **Seligson ND**, Duah E, Persaud A, VanGundy Z, Li J, Hofmeister C, Poi M. Combination of poly (ADP-ribose) polymerase inhibition to melphalan conditioning therapy prior to autologous hematopoietic stem cell transplant in multiple myeloma. Ohio State University Comprehensive Cancer Center (OSUCCC) Annual Scientific Meeting. Columbus, OH.
- 04/2018 Persaud A, **Seligson ND**, Johnson J, Kuo C, Li J, Sborov D, Cho Y, Lamprecht M, Phelps M, Hofmeister C, Poi M. Genetic variants of DNA repair genes associated with differential response to high-dose melphalan autologous hematopoietic stem cell transplant in multiple myeloma patients. OSUCCC Annual Scientific Meeting. Columbus, OH.
- 04/2018 Duah E, Eisenman E, **Seligson ND**, Persaud A, Li J, Poi M. Enhancing therapeutic efficacy of the CDK4/6 inhibitor, abemaciclib, by blocking autophagy in human head and neck squamous cell carcinomas. OSUCCC Annual Scientific Meeting. Columbus, OH.
- 04/2018 Zhang X, **Seligson ND**, Zemanek M, VanGundy Z, Li J, Phelps M, Hofmeister C, Poi M. Body weight based tacrolimus dosing and other factors influencing tacrolimus dose in autologous stem hematopoietic stem cell transplant. College of Pharmacy Research Day. Columbus, OH.
- 03/2018 Passen E, **Seligson ND**, Stets C, Demoret B, Hays J, Chen J. Predicting response to mitotic spindle inhibition in leiomyosarcoma. NCCN 23rd Annual Conference. Orlando, FL.
- 12/2014 **Seligson ND**, Pirani S, Williams K, Sneed K, Hill A. Implementation of a four pronged approach to develop a personalized medicine training program for pharmacy students in an inter-professional setting. American Society of Health-Systems Pharmacists Midyear Clinical Meeting. Anaheim, CA.

Service to the College and University

College of Pharmacy, University of Florida

- Member: College of Pharmacy Faculty Governance Council; 2023-Present
- Member: Pathways to Career Advancement Task Force; 2019-Present
- Faculty Advisor: ASHP-SSHP Jacksonville Chapter; 2019-Present
- Faculty Advisor: Kappa Epsilon Beta-Alpha Chapter; 2019-Present
- Member: Teacher of The Year Award Committee; 2022
- Faculty Advisor: Bioinformatics Interest Group - Jacksonville; 2020-2022
- Judge: Graduate Student Posters, College of Pharmacy Annual Research Showcase; 2020
- Member: Exemplary Clinician Award Committee; 2020

Service to the Profession

American Medical Informatics Association (AMIA)

- Informatics summit scientific program committee member; 2021-Present
- Annual meeting content reviewer; 2020-Present

American Association of Colleges of Pharmacy (AACP)

- Innovations in Teaching Committee; 2022
- Annual meeting content reviewer; 2021-Present

American Society for Clinical Pharmacology and Therapeutics (ASCPT)

- Oncology community steering committee member; 2020-Present
- Annual meeting content reviewer; 2020-Present

M2Gen Oncology Research Information Exchange Network (ORIEN)

- Sarcoma landscape analysis committee member; 2020-Present

Additional Coursework

Coursera – Johns Hopkins University (Genomic Data Science Certificate Program)

Fall 2020	Python for Genomic Data Science
Fall 2020	Genomic Data Science with Galaxy
Fall 2020	Introduction to Genomic Technologies

The Ohio State University

Spring 2017	BMI 8150 - Rigorous and Reproducible Design and Data Analysis
Fall 2016	BIOETHC 6010 - Biomedical Research Ethics
Fall 2016	PUBHBIO 6210 - Design and Analysis of Studies in the Health Sciences

University of Tennessee

2015 – 2016	Teaching and Learning Certificate
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Non-University Affiliated

Spring 2023	Childhood Cancer Data Lab (CCDL) Advanced Single-cell RNA-Seq workshop
Summer 2021	Focused Investigator Training (ACCP)
Spring 2021	Childhood Cancer Data Lab (CCDL) RNA-seq Analysis Workshop
Summer 2020	Workshop on Methods in Clinical Cancer Research (AACR/ASCO)
Summer 2020	Workshop on Methods in Clinical Cancer Research (AACR/EORTC/ESMO)

Journal Peer Reviewer

- Journal of Managed Care and Specialty Pharmacy; 2023-Present
- Clinical and Translational Medicine; 2023-Present
- Expert Review of Clinical Pharmacology; 2023-Present
- Breast Cancer Basic and Clinical Research; 2023-Present
- International Journal of Molecular Sciences; 2023-Present
- Experimental Hematology & Oncology; 2022-Present
- Cancer Medicine; 2022-Present
- Journal of Personalized Medicine; 2022-Present
- BMC Medical Genomics; 2021-Present
- Pharmaceutics; 2021-Present
- Clinical Pharmacology & Therapeutics; 2021-Present
- Clinical and Translational Science; 2021-Present
- CPT: Pharmacometrics & Systems Pharmacology; 2021-Present
- Cancers; 2021-Present
- JCO Clinical Cancer Informatics; 2020-Present

- Annals of Pharmacotherapy; 2020-Present

Teaching Experience

01/2020 – Present

University of Florida; Jacksonville, FL

PHA 5007: Pharmacy & Population Health

- Fall 2021: Capstone Project Leader (3 hr)
- Fall 2020: Capstone Project Leader (3 hr)
- Fall 2019: Capstone Project Leader (3 hr)

PHA 5901: Pharmacy Research Elective

- Fall 2023: 3 credits
- Spring 2022: 3 credits
- Fall 2021: 2 credits
- Summer 2021: 1 credit
- Spring 2021: 2 credits
- Fall 2020: 5 credit hours
- Summer 2020: 4 credit hours

Putting Families First:

- Spring 2022: Small Group Leader
- Spring 2021: Small Group Leader
- Fall 2020: Small Group Leader

PHA 5012: Clinical Applications of Personalized Medicine

- Spring 2023 Lecture: Precision Medicine in Cancer (2hr)
- Spring 2023 Workshop: Precision Medicine in Cancer (2hr)
- Spring 2022 Lecture: Precision Medicine in Cancer (2hr)
- Spring 2022 Workshop: Precision Medicine in Cancer (2hr)
- Spring 2021 Lecture: Precision Medicine in Cancer (2hr)
- Spring 2021 Workshop: Precision Medicine in Cancer (2hr)
- Spring 2020 Workshop: Precision Medicine in Cancer (2hr)

PHA 5759 Advanced Pharmacy Practice Experience Readiness

- Spring 2023 Faculty Proctor
- Spring 2022 Faculty Proctor
- Spring 2021 Campus Course Coordinator
- Spring 2020 Campus Course Coordinator

PHA 6136: Clinical Applications of Precision Medicine: Oncology

- Fall 2023 Course Coordinator
- Fall 2023 Lecture: Course Introduction (1hr)
- Fall 2023 Lecture: Introduction to Cancer Biology (1hr)
- Fall 2023 Lecture: Germline and Somatic Testing (1hr)
- Fall 2023 Lecture: A Pathway-Based Approach to Targeted Therapy in Cancer (1hr)
- Fall 2023 Lecture: Tissue Agnostic Therapy (1hr)
- Fall 2023 Lecture: Molecular Tumor Boards (1hr)
- Fall 2023 Lecture: Capstone Lecture (3hr)
- Fall 2023 Course Coordinator
- Fall 2022 Lecture: Course Introduction (1hr)
- Fall 2022 Lecture: Introduction to Cancer Biology (1hr)
- Fall 2022 Lecture: Germline and Somatic Testing (1hr)

- Fall 2022 Lecture: Sarcomas (1hr)
- Fall 2022 Lecture: A Pathway-Based Approach to Targeted Therapy in Cancer (1hr)
- Fall 2022 Lecture: Tissue Agnostic Therapy (1hr)
- Fall 2022 Lecture: Molecular Tumor Boards (1hr)
- Fall 2022 Lecture: Capstone Lecture (3hr)
- Fall 2022 Course Coordinator
- Fall 2021 Lecture: Course Introduction (1hr)
- Fall 2021 Lecture: Germline and Somatic Testing (1hr)
- Fall 2021 Lecture: A Pathway-Based Approach to Targeted Therapy in Cancer (1hr)
- Fall 2021 Lecture: Tissue Agnostic Therapy (1hr)
- Fall 2021 Lecture: Molecular Tumor Boards (1hr)
- Fall 2021 Lecture: Capstone Lecture (3hr)
- Spring 2021 Course Coordinator
- Spring 2021 Lecture: Course Introduction (1hr)
- Spring 2021 Lecture: Germline and Somatic Testing (1hr)
- Spring 2021 Lecture: A Pathway-Based Approach to Targeted Therapy in Cancer (1hr)
- Spring 2021 Lecture: Tissue Agnostic Therapy (1hr)
- Spring 2021 Lecture: Molecular Tumor Boards (1hr)
- Spring 2021 Lecture: Capstone Lecture (3hr)
- Spring 2020 Course Co-coordinator
- PHA 6935: Advanced Concepts in Oncology*
- Spring 2023 Course Coordinator
- PHA 5956: Foundations of Clinical Pharmacy Practice*
- Summer 2020 Small Group Leader
- PHA5165L: Professional Practice Skills Labs V*
- Fall 2019: Various

07/2016 – 05/2019

- Ohio State University; Columbus, OH
- PHR 6302 Concepts in Patient Care 2*
- Spring 2019 Lecture: Introduction to Clinical Pharmacogenomics
- PHR 7604 Integrated Pharmacotherapy 4*
- Spring 2019 Lecture: Precision Medicine in Oncology
 - Spring 2019 Workshop: Molecular Tumor Board
- PHR 7603 Integrated Pharmacotherapy 3*
- Fall 2018 Lecture: Clinical Pharmacogenomics
 - Fall 2018 Lecture: Pharmacogenomics in Neuropsychology
- PHR 7601 Integrated Pharmacotherapy 1*
- Fall 2018 Lecture: Clinical Cardiovascular Pharmacogenomics
- CBG 5700 Personalized Therapeutics and Pharmacogenomics*
- Spring 2017 Lecture: Targeted Cancer Therapy

08/2015 – 05/2016

- University of Tennessee; Memphis, TN
- PHCY 223 Applied Therapeutics I*
- Spring 2016 Longitudinal Workshop: Clinical Case Discussions

PHCY 321 Landmark Clinical Trials

- Spring 2016 Lecture: Clinical Trial Design

PHCY 313 Applied Therapeutics II

- Fall 2015 Longitudinal Workshop: Clinical Case Discussions

Honors and Awards

2022	AACP Pharmacogenomics Interest Group Innovations in Teaching Award
2021	ACCP Focused Investigator Trainee
2021	HOPA Research Training Scholarship
2020	Member - Leiomyosarcoma International Research Roundtable
2020	Flims Alumni Club
2018	Sarcoma Central Science Spotlight Winner (twice)
2018	Top Poster Presentation – Ohio State University Comprehensive Cancer Center Annual Scientific Meeting
2018	First Place Poster Presentation (Residents and Fellows Division) – Ohio State University College of Pharmacy Research Day
2018	Second Place Poster Presentation (Graduate Student Division) – Ohio State University College of Pharmacy Research Day
2015	Inducted into Phi Lambda Sigma (Honorary Pharmacy Leadership Fraternity)

Additional Skills

Proficient in Phoenix WinNonlin 64 for non-compartmental analysis (NCA)

Proficient in R for statistical and bioinformatic analysis

Proficient in R for genomic analysis

Working knowledge in Python and Galaxy for genomic analysis

Proficient in Stata for statistical analysis

Working knowledge in clinical trial design

Proficient in basic and translational pharmacology

Professional Memberships

2020 – Present	American Association of Colleges of Pharmacy (AACP)
2020 – Present	Hematology/Oncology Pharmacy Association (HOPA)
2019 – Present	Connective Tissue Oncology Society (CTOS)
2019 – Present	American Medical Informatics Association (AMIA)
2017 – Present	American Society for Clinical Pharmacology and Therapeutics (ASCPT)

Community Service

2020 – Present	Take Stock in Children
2017 – 2019	Hope Presbyterian Church – Children's Nursery Staff
2015	New Hope Christian Academy – Volunteer Groundskeeper
2012 – 2015	Holy Trinity Presbyterian Church - Sound Engineer
2012	Dover Boys & Girls Club - Youth flag football coach, mentor