**CURRICULUM VITAE**

**OREGON HEALTH & SCIENCE UNIVERSITY**

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| --- | --- | --- | --- | --- |
| NAME | Robert Eil | | DATE | 11/6/20 |
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| **PRESENT POSITION AND ADDRESS** | | | | |
| Academic Rank: | | Assistant Professor | | |
| Department/Division: | | Surgery/ Oncology & Cell, Developmental and Cancer Biology | | |
| Professional Address: | | 2720 S Moody Ave KCRB 2006, Portland, OR 97201 | | |
| E-Mail Address: | | eil@ohsu.edu | | |

**II. EDUCATION**

Undergraduate and Graduate (Include Year, Degree, and Institution):

**Tulane University**, August 2001 – May 2005

Bachelor of Science, Neuroscience, *Summa Cum Laude*

**University of North Carolina at Chapel Hill School of Medicine,**August 2006 – May 2010, Doctor of Medicine

Postgraduate (Include Year, Degree, and Institution):

**Surgical Oncology Research Fellowship, National Cancer Institute**– Surgery Branch

Tumor Immunobiology and Immunotherapy, July 2013 – June 2016

**Oregon Health & Sciences University**

Surgical Intern, June 2010 – June 2011

Surgical Resident, July 2011 – June 2013

Surgical Resident, June 2016 – June 2018

**Memorial Sloan Kettering Cancer Center**

Fellow,Complex GeneralSurgical Oncology, August 2018 – July 2020

Certification (Include Board, Number, Date, and Recertification):

General Surgery, 064638, April 30, 2019; Recertification December 31st, 2021

Licenses (Include State, Date, Status, Number, and Renewal Date):

General Surgery – Certified

ABS Qualifying Exam: Passed 2018. 89th percentile

ABS Certifying Exam: Passed, April 29th 2019

New York State – Independent License 291471

Oregon State License MD161220 – Active, Expires 12/31/2021

**III. PROFESSIONAL EXPERIENCE**

Academic (Include Year, Position, and Institution):

**July – September 2006, 2007:** Research Associate, Brenman Lab, Department of Cell Biology and Physiology,UNC School of Medicine, Chapel Hill, NC

**January – May 2006:** Office of Science and Technology Cooperation, Bureau of Environment and International Oceans and Science, Department of State, Washington DC

**August 2004 – May 2005:** Honor’s Thesis in Learning & Memory, Colombo Lab, Department of Psychology, Tulane University, New Orleans, LA

**July – September 2004:** Research Associate, Courtoy Lab, Stem Cells and Organ Development, Institute de Duve, Brussels, Belgium

**July – September 2003:** Research Associate, Blobel Lab, Laboratory of Cell Biology, The Rockefeller University, New York, NY

**July – September 2002:** Research Associate, Fitzpatrick Lab, Department of Otolaryngology, UNC School of Medicine, Chapel Hill, NC

Administrative (Include Year, Position, and Institution):

Other (Include Year, Position, and Institution):

**IV. SCHOLARSHIP**

**Area(s) of Research/Scholarly Interest: *Engineering T cells to enact antitumor function within cancer***

**Grants and Contracts:**

Federal (Include Title, Source, PI, Award Amount, Period of funding, and % Effort)

State and Local (Include Title, Source, PI, Award Amount, Period of funding, and % Effort)

Other Support (Include Title, Source, PI, Award Amount, Period of funding, and % Effort)

| **Name of Principal Investigator** | **Name of Grant/Funding Source** | **Funding Agency** | **Grant Term** | **Amount of Funding** | **Percent Effort of Applicant** | **Title of Project** |
| --- | --- | --- | --- | --- | --- | --- |
| Eil, Robert | **OHSU Physician-Scientist Recruitment Award and Lamfrom Laureate** | OHSU School of Medicine | 8/10/2020-8/10/2023 | 500,000 | 0 | Modulation of potassium signaling in T cell function |

Pending Support (Include Title, Source, PI, Award Amount, Period of funding, and % Effort)

| **Name of Principal Investigator** | **Name of Grant/Funding Source** | **Funding Agency** | **Grant Term** | **Amount of Funding** | **Percent Effort of Applicant** | **Title of Project** |
| --- | --- | --- | --- | --- | --- | --- |
| Eil, Robert | K08 | NIH | 12/1/2020-11/30/2025 | 1,168,887 | 75 | The effect of cell death and potassium abundance in tumors upon antitumor immunity |
| Eil, Robert | Peer Reviewed Cancer Research Program Career Development Award | Congressionally Directed Medical Research Program | 1/1/2021-12/31/2023 | 598,546 | 20% | Targeting the ionic checkpoint on T cell function within tumors |
| Eil, Robert | Searle Foundation | Searle Scholar Fellowship | 7/1/2021-6/30/2024 | 300,000 | 5% | The role of potassium and cell death in T cell function and antitumor immunity |
| Eil, Robert | Career Award for Medical Scientists | Burroughs Wellcome Fund | 12/1/2020-11/30/2025 | 700,000 | 10% | Targeting the Ionic checkpoint upon T cell function in tumors |
| Eil, Robert | MPM Oncology Charitable Foundation Transformative Cancer Research Grants | American Association for Cancer Research | 12/15/20-12/14/22 | 400,000 | 15% | Targeting the Ionic checkpoint upon T cell function in tumors |
| Eil, Robert | NextGen Grants for Transformative Cancer Research | AACR | 12/1/2020 – 11/30/2023 | 450,000 | 15% | Targeting the ionic checkpoint on T cell antitumor function |

**Publications/Creative Work:**

Peer-reviewed

Peer-reviewed Journal Publications:

1. Gurusamy, D, Henning AN, Yamamoto TN, Yu, Z, Zacharakis N, Krishna S, Kishton RJ, Vodnala SK, Eidizadeh A, Jia L, Kariya CM, Black MA, **Eil R**, Palmer D C, Pan JH, Sukumar M, Patel SJ, & Restifo NP. *Multi-phenotype CRISPR-Cas9 Screen Identifies p38 Kinase as a Target for Adoptive Immunotherapies*. **Cancer Cell**. 2020. PMID: 32516591
2. Grant FM, Yang J, Nasrallah R, Clarke J, Sadiyah F,  Whiteside SK,  Imianowski CJ, Kuo P, Vardaka P, Todorov T, Zandhuis N, Patrascan I, David F Tough, Kohei Kometani, Eil R, Kurosaki T, Okkenhaug K, Roychoudhuri R. *BACH2 drives quiescence and maintenance of resting Treg cells to promote homeostasis and cancer immunosuppression*. **J Exp Med**. 2020. PMID: 32515782
3. **Eil R\*,** Vodnala SK\*, Kishton RJ, Sukumar M, Yamamoto TN, Ha NH, Lee PH, Shin MH, Patel SJ, Yu Z, Palmer DC, Kruhlak MJ, Huang J, Roychoudhuri R, Finkel T, Klebanoff CA, Restifo NP. *T cell dysfunction and stemness in tumors are triggered by a common mechanism*. **Science*.*** 2019. PMID: 30923193
4. **Eil R**, Vodnala SK, Clever D, Klebanoff CA, Sukumar M, Pan JH, Palmer DC, Gros A, Yamamoto TN, Patel SJ, Guittard GC, Yu Z, Carbonaro V, Okkenhaug K, Schrump DS, Linehan WM, Roychoudhuri R, Restifo NP. *Ionic immune suppression within the tumour microenvironment limits T cell effector function*. **Nature**. 2016. PMID: 27626381
5. Yamamoto TN, Lee PH, Vodnala SK, Gurusamy D, Kishton RJ, Yu Z, Eidizadeh A, **Eil R**, Fioravanti J, Gattinoni L, Kochenderfer JN, Fry TJ, Aksoy BA, Hammerbacher JE, Cruz AC, Siegel RM, Restifo NP, Klebanoff CA.. *T cells genetically engineered to overcome death signaling enhance adoptive cancer immunotherapy*. **J Clin Invest.** 2019. PMID: 30694219
6. Klebanoff CA, Crompton JG, Leonardi AJ, Yamamoto TN, Chandran SS, **Eil R**, Sukumar M, Vodnala SK, Hu J, Ji Y, Clever D, Black MA, Gurusamy D, Kruhlak MJ, Jin P, Stroncek DF, Gattinoni L, Feldman SA, Restifo NP. *Inhibition of AKT signaling uncouples T cell differentiation from expansion for receptor-engineered adoptive immunotherapy.* **JCI Insight** 2017. PMID: 29212954
7. Patel SJ, Sanjana NE, Kishton RJ, Eidizadeh A, Vodnala SK, Cam M, Gartner JJ, Jia L, Steinberg SM, Yamamoto TN, Merchant AS, Mehta GU, Chichura A, Shalem O, Tran E, **Eil R**, Sukumar M, Guijarro EP, Day CP, Robbins P, Feldman S, Merlino G, Zhang F, Restifo NP. *Identification of essential genes for cancer immunotherapy.* **Nature**. 2017. PMID: 28783722
8. Gurusamy D, Clever D, **Eil R**, Restifo NP. *Novel “Elements” of Immune Suppression within the Tumor Microvenvironment.* **Cancel Immunol Res**. 2017. PMID: 28576921
9. Roychoudhuri R, **Eil R\*,** Clever D, Klebanoff CA, Sukumar M, Grant FM, Yu Z, Mehta G, Liu H, Jin P, Ji Y, Palmer DC, Pan JH, Chichura A, Crompton JG, Patel SJ, Stroncek D, Wang E, Marincola FM, Okkenhaug K, Gattinoni L, Restifo NP. *The transcription factor BACH2 promotes tumor immunosuppression*. **J Clin Invest**. 2016. PMID: 26731475
10. Cruz AC, Ramaswamy M, Ouyang C, Klebanoff CA, Sengupta P, Yamamoto TN, Meylan F, Thomas SK, Richoz N, **Eil R**,et al.*Fas/CD95 prevents autoimmunity independently of lipid raft localization and efficient apoptosis induction*. **Nature Communications**. 2016. PMID: 28008916
11. Clever D, Roychoudhuri R, Constantinides MG, Askenase MH, Sukumar M, Klebanoff CA, **Eil R**,Hickman HD, Yu Z, Pan JH, Palmer DC, Phan AT, Goulding J, Gattinoni L, Goldrath AW, Belkaid Y, Restifo NP. *Oxygen sensing by T cells Establishes an Immunologically Tolerant Metastatic Niche*. **Cell**. 2016. PMID: 27565342
12. Roychoudhuri R, Clever D, Li P, Wakabayashi Y, Quinn KM, Klebanoff CA, Ji Y, Sukumar M, **Eil R**, Yu Z, Spolski R, Palmer DC, Pan JH, Patel SJ, Macallan DC, Fabozzi G, Shih HY, Kanno Y, Muto A, Zhu J, Gattinoni L, O'Shea JJ, Okkenhaug K, Igarashi K, Leonard WJ, Restifo NP. *BACH2 regulates CD8(+) T cell differentiation by controlling access of AP-1 factors to enhancers*. **Nat Immunol**. 2016. PMID: 27158840
13. Klebanoff CA, Scott CD, Leonardi AJ, Yamamoto TN, Cruz AC, Ouyang C, Ramaswamy M, Roychoudhuri R, Ji Y, **Eil R**, Sukumar M, Crompton JG, Palmer DC, Borman ZA, Clever D, Thomas SK, Patel S, Yu Z, Muranski P, Liu H, Wang E, Marincola FM, Gros A, Gattinoni L, Rosenberg SA, Siegel RM, Restifo NP. *Memory T cell-driven differentiation of naive cells impairs adoptive immunotherapy*. **J Clin Invest**. 2016. PMID: 26657860
14. Sukumar M, Liu J, Mehta GU, Patel SJ, Roychoudhuri R, Crompton JG, Klebanoff CA, Ji Y, Li P, Yu Z, Whitehill GD, Clever D, **Eil R**, Palmer DC, Mitra S, Rao M, Keyvanfar K, Schrump DS, Wang E, Marincola FM, Gattinoni L, Leonard WJ, Muranski P, Finkel T, Restifo NP. *Mitochondrial Membrane Potential Identifies Cells with Enhanced Stemness for Cellular Therapy*. **Cell Metab**. 2016. PMID: 26674251
15. Palmer DC, Guittard GC, Franco Z, Crompton JG, **Eil R**, Patel SJ, Ji Y, Van Panhuys N, Klebanoff CA, Sukumar M, Clever D, Chichura A, Roychoudhuri R, Varma R, Wang E, Gattinoni L, Marincola FM, Balagopalan L, Samelson LE, Restifo NP. *Cish actively silences TCR signaling in CD8+ T cells to maintain tumor tolerance*. **J Exp Med***.* 2015. PMID: 26527801
16. Assadipour Y, Azoury SC, Schaub NN, Hong Y, **Eil R**, Inchauste SM, Steinberg SM, Venkatesan AM, Libutti SK, Hughes MS. *Significance of preoperative radiographic pancreatic density in predicting pancreatic fistula after surgery for pancreatic neuroendocrine tumors*. **Am J Surg**. 2015. PMID: 26782807
17. Crompton JG, Sukumar M, Roychoudhuri R, Clever D, Gros A, **Eil R**, Tran E, Hanada KI, Yu Z, Palmer DC, Kerkar SP, Michalek RD, Upham T, Leonardi A, Aquavella N, Wang E, Marincola FM, Gattinoni L, Muranski P, Sundrud MS, Klebanoff CA, Rosenberg SA, Fearon DT, Restifo NP. *Akt inhibition enhances expansion of potent tumor-specific lymphocytes with memory cell characteristics*. **Cancer Res**. 2015. PMID: 25432172
18. Crompton JG, Nacev BA, Upham T, Azoury SC, **Eil R**, Cameron DE, Haider AH. *Traumatic ventricular septal defect resulting in severe pulmonary hypertension*. **J Surg Case Rep**. 2014. PMID: 25326917
19. **Eil R**, Diggs B, Wang SJ, Dolan J, Hunter JG, Thomas CR. *Nomogram for predicting the benefit of neoadjuvant chemoradiotherapy for patients with esophageal cancer: a SEER - Medicare analysis*. **Cancer**2014. PMID: 24194477
20. **Eil R**, Hansen PD, Cassera M, Orloff SL, Sheppard BC, Diggs B, Billingsley KG. *Bile Duct Involvement Portends Poor Prognosis in Resected Gallbladder Carcinoma*. **Gastrointest Cancer Res**. 2013. PMID: 24147157
21. **Eil R**, Lu KC, Wettach GR, Tsikitis VL. *Intracranial Hemangiopericytoma Focally Recurrent to the Pelvis*. **Journal of Cancer Therapy**. 2012

Peer-reviewed Abstracts

Peer-review, Other

Non-peer-reviewed

Books

Chapters

**Eil R**, Voncken F, Torres-Roca J, Thomas CR Jr. Esophageal cancer, In Gaspar LE, Nieder C (Eds). Decision Tools for Radiation Oncology: Prognosis, Treatment Response and Toxicity, Springer, 2014

Electronic Publications

Reviews

Roychoudhuri R, **Eil R,** Restifo NP. *The interplay of effector and regulatory T cells in cancer*. **Curr Opin Immunol***.*  2015. PMID: 25728990

Other

**Eil R**, Thomas CR Jr. *New methodology, tools, and protocolized analysis are needed to advance individualized treatment paradigms in esophageal cancer*. **Dis Esophagus**. 2014. PMID: 24592977

**Invited Lectures, Conference Presentations or Professorships:**

International and National Invited Presentations

Regional and Local Invited Presentations

14th annual Research Retreat for the Dept of Radiation Medicine

Engineering T cell function to enhance antitumor immunity

November 7th, 2020

Pancreatic Multi-disciplinary Working Group, Brenden Colson Center

Targeting PDAC with mutated KRAS specific T cells

September 17th, 2020

Western Esophageal Cancer Action Network (WECAN) –

Prospects for current and novel immunotherapies in esophageal cancer,

March 11th, 2017

Earle A. Chiles Research Institute Providence Cancer Center -

Interrogating T cell ion transport as a means to improve cancer immunotherapy, January 27th, 2017

Tumor Vaccine Group, University of Washington School of Medicine –

Interrogating T cell ion transport as a means to improve cancer immunotherapy, December 18th, 2016

Melanoma Joint Faculty Lab Meeting, Oregon Health & Sciences University - Interrogating T cell ion transport as a means to improve cancer immunotherapy, October 14th, 2016

Surgical Grand Rounds, St. Vincent’s Hospital Portland, OR –

Developments in checkpoint based and cellular cancer immunotherapy,

August 4th, 2016

NCI CCR Fellows and Young Investigators Colloquium - Potassium suppresses T cell activation in the intratumoral immune compartment, March 31st, 2016

NIH Immunology Interest Group Annual Retreat – Potassium suppresses T cell activation in the intratumoral immune compartment, September 9th, 2015

**Honors and Awards for Scholarship:**

**V. SERVICE**

**Membership in Professional Societies:**

AACR

ASCO

ICRN/ CCF

**Granting Agency Review Work:**

**Editorial and Ad Hoc Review Activities:**

JAMA Oncology

Journal for the Immunotherapy of Cancer

**Committee and Professional Association Service:**

none

International/National

Regional

Institutional

Departmental

**Health Policy and Advocacy Service:**

International/National

Regional

Institutional

Departmental

**Community Service:**

**Clinical Responsibilities (summarize types of clinical work since last promotion):**

Providing independent and definitive care for patients with cancers involving the liver, pancreas, bile ducts (HPB), or sarcomas involving the retroperitoneum.

**Honors and Awards for Service:**

**VI. TEACHING**

**Direct Teaching Activities (Didactic and Clinical)**

As part of my role in providing patient care to patients with HPB cancers, owing to the team-based approach to patient care, students and trainees at all levels are involved and receive ongoing training.

Medical students – typically 3rd and 4th year students

Surgical Residents & Fellows – Trainees range between post graduate year 1 up to Fellowship level HPB surgeons.

International and National

Regional and Local

Institutional

**Curriculum Development:**

**Mentoring and Advising:**

- Advisor and mentor for 3 mid-level residents interested in physician scientist executed cancer research (Radiation Medicine, Neurological Surgery, Surgical Oncology)

International and National

Regional and Local

Institutional

Departmental

**Honors and Awards for Education:**