**CURRICULUM VITAE**

**OREGON HEALTH & SCIENCE UNIVERSITY**

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| --- | --- | --- | --- |
| NAME | Ferdinando Pucci | DATE | 9/2020 |
|  |
| **PRESENT POSITION AND ADDRESS** |
| Academic Rank:  | Assistant Professor |
| Department/Division: | Otolaryngology, CDCB |
| Professional Address: | KCRB |
| E-Mail Address: | pucci@ohsu.edu |

**II. EDUCATION**

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

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| --- | --- | --- | --- |
| 2004 | University of Ferrara, Italy | M.Sc. | Pharmaceutical Chemistry |
| 2010 | San Raffaele University, Italy | Ph.D. | Cellular and Molecular Biology |

Postgraduate (Include Year, Degree, and Institution):

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| --- | --- | --- | --- |
| 2011 | EPFL, Switzerland | Post-doc | Tumor angiogenesis |
| 2012-2016 | Harvard University, Boston | Post-doc | Tumor Immunology |

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

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

**III. PROFESSIONAL EXPERIENCE**

Academic (Include Year, Position, and Institution):

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| --- | --- | --- | --- |
| 2019-present | Oregon Health & Science University | Assistant Professor (tenure-track) | Otolaryngology (primary)Head & Neck SurgeryCell, Developmental & Cancer Biology (secondary) |

Administrative (Include Year, Position, and Institution):

Other (Include Year, Position, and Institution):

|  |  |  |  |
| --- | --- | --- | --- |
| 2016-2018 | Torque Therapeutics, Inc. | Senior Scientist | R&D |
| 2018 | Marathon Scientific Consulting | Consultant | Immuno-Oncology |

**IV. SCHOLARSHIP**

**Area(s) of Research/Scholarly Interest: tumor immunology, lymph node biology, extracellular vesicles, B cells, immunoglobulins**

**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)

|  |  |
| --- | --- |
| **Grant #** **AOTOL0357**  (**PI**: Ferdinando Pucci) | 06/2019-05/2020 |
| **Source**: Medical Research Foundation | $40,000 directs/yr |
| **Title**: Mapping the network of immune synapses between sentinel node immune cells and tumor-derived extracellular vesicles |
| The major goals of this program are to: * Demonstrate the presence of tEV-Immunoglobulin immune complexes in vivo;
* Map tEV-immune cell interaction network in lymph nodes.
 |
| **Role**: PI (10% effort) |
| **Grant #** **AOTOL0359**  (**PI**: Ferdinando Pucci) | 05/2019-04/2020 |
| **Source**: Collins Medical Trust | $30,000 directs/yr |
| **Title**: Genetic approaches to study tumor‐derived extracellular vesicles and their role in generating tumor‐promoting antibodies |
| The major goals of this program are to: * Map tEV-immune cell interaction network in lymph nodes;
* Study the significance of tEV particulate form.
 |
| **Role**: PI (10% effort) |

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

|  |  |
| --- | --- |
| **Application #** V2019-012 | 2020-2021 |
| **Source**: V Foundation Scholar Program | $100,000 directs/yr |
| **Title**: Toward therapeutic cancer vaccines: understanding humoral immunity in cancer |
| The major goals of this program are to: * Study the role of LN macrophages in extrafollicular antibody production;
* Dissect the role of LN macrophages in the generation of anti-tumor antibodies during HNSCC growth
 |
| **Role**: PI (10% effort) |
| **Application #** A29681 | 2020-2021 |
| **Source**: CRUK-OHSU Early Detection Committee Joint Project Award | $150,000 directs/yr$45,000 indirects |
| **Title**: The role of extracellular vesicles in senescence surveillance |  |
| The major goals of this program are to: * Characterize the biodistribution and cargo of sEVs in vivo;
* Assess sEVs as cancer-risk biomarkers in oral leukoplakia patients.
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| **Role**: PI (10% effort) |  |

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

Pew-Stewart Scholars Program for Cancer Research

Title: Breaking the black box: deciphering B cell responses for curative cancer immunotherapy

$300,000

2021-2024

10% effort

**Publications/Creative Work:**

Peer-reviewed

Peer-reviewed Journal Publications

1. Hamilton N, Claudio NM, Armstrong RJ, **Pucci F**. Cell Surface Labeling by Engineered Extracellular Vesicles. Adv Biosyst. 2020.
2. Cortesi F, Delfanti G, Grilli A, et al. Bimodal CD40/Fas-Dependent Crosstalk between iNKT Cells and Tumor-Associated Macrophages Impairs Prostate Cancer Progression. Cell Rep. 2018;22(11).
3. Engblom C, Pfirschke C, Zilionis R, et al. Osteoblasts remotely supply lung tumors with cancer- promoting SiglecF(high) neutrophils. Science. 2017;358(6367).
	1. Comment in: Zhang, H., Lyden, D. Bone voyage-Osteoblasts remotely control tumors. *Science* 358:1127-1128; 2017. PMID: 29191891
4. Ramasamy S, Saez B, Mukhopadhyay S, et al. Tle1 tumor suppressor negatively regulates inflammation in vivo and modulates NF-kappaB inflammatory pathway. Proc Natl Acad Sci U S A. 2016;113(7):1871-1876.
5. **Pucci F**, Garris C, Lai CP, et al. SCS macrophages suppress melanoma by restricting tumor- derived vesicle-B cell interactions. Science. 2016;352(6282):242-246.
	1. Faculty Opinion (formerly F1000Prime) recommended as “exceptional article” (top 10%)
6. Pfirschke C, Engblom C, Rickelt S, et al. Immunogenic Chemotherapy Sensitizes Tumors to Checkpoint Blockade Therapy. Immunity. 2016;44(2).
7. **Pucci F**, Rickelt S, Newton AP, et al. PF4 Promotes Platelet Production and Lung Cancer Growth. Cell Rep. 2016;17(7).
8. Cortez-Retamozo V, Etzrodt M, Newton A, et al. Angiotensin II Drives the Production of Tumor- Promoting Macrophages. Immunity. 2013;38(2).
	1. Comment in: Gabrilovich, D. I. Applying pressure on macrophages. *Immunity* 38:205-206; 2013. PMID: 23438819
9. Hamm A, Veschini L, Takeda Y, et al. PHD2 regulates arteriogenic macrophages through TIE2 signalling. EMBO Mol Med. 2013;5(6).
	1. Comment in: Emanueli, C.; Kränkel, N. You can teach an old dog new tricks: angiopoietin-1 instructs Tie2(pos) myeloid cells to promote neovascularization in ischemic limbs. *EMBO Mol Med* 5:802-804; 2013. PMID: 23737442
10. Zonari E, **Pucci F**, Saini M, et al. A role for miR-155 in enabling tumor-infiltrating innate immune cells to mount effective antitumor responses in mice. Blood. 2013;122(2).
11. Cusimano M, Biziato D, Brambilla E, et al. Transplanted neural stem/precursor cells instruct phagocytes and reduce secondary tissue damage in the injured spinal cord. Brain. 2012;135(2).
12. Squadrito ML, **Pucci F**, Magri L, et al. MiR-511-3p Modulates Genetic Programs of Tumor- Associated Macrophages. Cell Rep. 2012;1(2).
13. Mazzieri R\*, **Pucci F**\*, Moi D, et al. Targeting the ANG2/TIE2 Axis Inhibits Tumor Growth and Metastasis by Impairing Angiogenesis and Disabling Rebounds of Proangiogenic Myeloid Cells. Cancer Cell. 2011;19(4):512-526.
	1. Comment in: Lewis, C. E.; Ferrara, N. Multiple effects of angiopoietin-2 blockade on tumors. *Cancer Cell* 19:431-433; 2011. PMID: 21481783
	2. Comment in: Zhou, D.; Lin, Z.; Huang, C.; Li, J. New venues for the treatment of hepatitis: pharmacological or genetical interventions of macrophage polarization by targeting Ang/Tie-2 axis. *Liver Int* 34:163-164; 2014. PMID: 24034349
14. Welford AF, Biziato D, Coffelt SB, et al. TIE2-expressing macrophages limit the therapeutic efficacy of the vascular-disrupting agent combretastatin A4 phosphate in mice. J Clin Invest. 2011;121(5).
15. Andreu P, Johansson M, Affara NI, et al. FcRgamma activation regulates inflammation- associated squamous carcinogenesis. Cancer Cell. 2010;17(2):121-134.
	1. Comment in: Mantovani, A. La mala educación of tumor-associated macrophages: Diverse pathways and new players. *Cancer Cell* 17:111-112; 2010. PMID: 20159603
16. Amendola M, Passerini L, **Pucci F**, Gentner B, Bacchetta R, Naldini L. Regulated and Multiple miRNA and siRNA Delivery Into Primary Cells by a Lentiviral Platform. Mol Ther. 2009;17(6):1039- 1052.
17. **Pucci F**, Venneri MA, Biziato D, et al. A distinguishing gene signature shared by tumor- infiltrating Tie2-expressing monocytes, blood “resident” monocytes, and embryonic macrophages suggests common functions and developmental relationships. Blood. 2009;114(4):901-914.
	1. Comment in: Yoder, M. C. Judging a proangiogenic cell by its cover. *Blood* 114:756-757; 2009. PMID: 19628717
18. De Palma M, Mazzieri R, Politi LS, et al. Tumor-targeted interferon-alpha delivery by Tie2- expressing monocytes inhibits tumor growth and metastasis. Cancer Cell. 2008;14(4):299-311.
19. Venneri MA, Palma MD, Ponzoni M, et al. Identification of proangiogenic TIE2-expressing monocytes (TEMs) in human peripheral blood and cancer. Blood. 2007;109(12):5276-5285.

Peer-reviewed Abstracts

1. Claunch, C.J., Diaz, C., Roth-Carter, R.A., Popp, L., Fu, R., Huddleston, A.E., et al. (2020) Abstract CT183: CD5+ B-cell count is a favorable prognostic factor associated with progression-free survival in glioblastoma patients receiving chemoradiation and pembrolizumab.
2. Cao, P., Chang, D.-K., Rakestraw, A., Shaw, A., Pucci, F., Fachin, F., et al. (2018) Application of deep IL-15 backpacks to human T cells demonstrates tunable loading with enhanced cell proliferation and antitumor activity.

Peer-review, Other

Non-peer-reviewed

Books

Chapters

Electronic Publications

1. Borriello, F., Spreafico, R., Poli, V., Chou, J., Barrett, N., Lacanfora, L., et al. The physical form of microbial ligands bypasses the need for dendritic cell migration to stimulate adaptive immunity. *BioRxiv* 2020

Reviews

Pucci F, Pittet MJ. Molecular pathways: Tumor-derived microvesicles and their interactions with immune cells In vivo. Clin Cancer Res. 2013;19(10).

Commentaries

Pucci F. Location-Dependent B-cell Function in Glioblastoma. Cancer Immunol Res. 2019;7(12):1902.

Patents

Title: Methods and compositions for promoting immune cell function.
Inventors: Pucci F, Rakestraw JA, Jones DS, Andresen TL, Nielsen U.
U.S. Patent Application Serial No. 62/349,473 filed June 13, 2016; AU2017283480A1
We applied cytokine nanogels to improve viability of T and NK cells after freezing/thawing, and support the logistics of cell therapeutics.

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

International and National Invited Presentations

2008 European Macrophage and Dendritic Cell Society (EMDS), Brescia, Italy

2009 American Society for Gene and Cell Therapy (ASGCT), San Diego, CA

2010 European Macrophage and Dendritic Cell Society (EMDS), Edinburgh, UK

2010 American Society for Gene and Cell Therapy (ASGCT), Washington DC

2018 International Society for Extracellular Vesicles, Barcelona, Spain

2020 Immuno-Oncology Young Investigator Forum (virtual, organized by MD Anderson)

Regional and Local Invited Presentations

2016 The in vivo biology of endogenous tumor-derived extracellular vesicles: a fresh new start. Mass. General Hospital, Boston, MA

2019 Extracellular Vesicles Science Group, OHSU, Portland, OR

2019 Immune responses to senescent cell-derived extracellular vesicles, CEDAR Team Meeting, OHSU, Portland, OR

Professorships

**Honors and Awards for Scholarship:**

Source: Post-doctoral fellowship “Pierluigi Meneghelli” (Italian Association for

Cancer Research, AIRC)

Title: Functional studies of Tie2– and Tie2+ tumor macrophages

The major goal of this program is to study tumor-lymph node communication via extracellular vesicles Role: PI

2012-2013

Source: EMBO long-term postdoctoral fellowship

Title: Identification of endocrine signals involved in long-range tumor-host communication The major goal of this program is to study tumor-host communication via soluble mediators Role: PI

Ferdinando Pucci, PhD

2011-2013 (declined after 1 year)

Source: Post-doctoral fellowship “Tosteson&Fund for medical discovery” (MGH)

Title: In vivo analysis of the interaction between tumor-derived extracellular vesicles and immune cells The major goal of this program is to study tumor-lymph node communication via extracellular vesicles Role: PI

2015

**V. SERVICE**

**Membership in Professional Societies:**

AACR

AAI

SITC

**Granting Agency Review Work:**

**Editorial and Ad Hoc Review Activities:**

Frontiers in Immunology, Cancer Immunology Research, Nature Communication, Journal of Extracellular Vesicles, Immunity

**Committee and Professional Association Service:**

International/National

2014-2016 International Association of Italian Researchers (AIRI), Editor

Regional

Institutional

2016-2017 As part of a 9-month Mass. General Hospital Postdoc Association mentorship program, I mentored 2 post-docs to manage science projects, deal with conflicts and navigate careers in biomedical sciences.

2019 Judge for Summer Internship Program poster presentation

2019- Faculty member, OHSU Knight Cancer Institute, Program in Cancer Biology

2019- Faculty member, Graduate Program in Molecular & Cellular Biosciences

2019- Interviewed faculty candidates for CDCB, Dermatology and Heme/Onc Departments

2019- Interviewed candidates for OHSU MD/PhD program

2020 Qual exam, Cancer Biology grad program, OHSU

Departmental

**Health Policy and Advocacy Service:**

International/National

Regional

Institutional

2019 Advocated for lowering fees of OHSU Flow Cytometry Core Facility. Provided due diligence on flow core fees from 9 West Coast institutes, which led to a 30% reduction of fees.

Departmental

**Community Service:**

2019 Group Q&A on cancer vaccines with high school students, for the Knight Scholar Program in Health disparities

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

**Honors and Awards for Service:**

**VI. TEACHING**

Use the CV to list the following educational activities in the categories below.

An Educator’s Portfolio (EP) can be used to supplement the CV to document the quantity and quality impact of educational activities.

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

(Include type of activity, level of learner, and approximate hours per unit time)

International and National

Regional and Local

Institutional

|  |  |  |  |
| --- | --- | --- | --- |
| *Type* | *Level* | *Hours/unit* | *Number of Units* |
| Lectures | Graduate students | 1h | 3 |
| Journal club | Graduate and post-graduate | 12h/term | 3 |
|  |  |  |  |
|  |  |  |  |

**Curriculum Development:**

(Include faculty role in development, type of educational program, and years implemented)

**Mentoring and Advising:**

(Include level of learner, approximate number of mentees in each level, years serving as advisor)

|  |  |  |
| --- | --- | --- |
| *Level* | *Number of Mentees* | *Years* |
| Undergraduate students | 1 | 2019 |
| Research Technician | 1 | 2019-2020 |
| Senior research associate | 1 | 2019- |
| Postdoc | 1 | 2020- |
| Clinical Resident  | 1 | 2020 |
| International Visiting Scholars | 3 | 2021 |

**Educational Leadership and Administration:**

(Include Leadership of Educational Programs and Educational Committees)

International and National

Regional and Local

Institutional

Departmental

**Learner Assessment Tool Development:**

(Include educational program, years implemented)

**Honors and Awards for Education:**