

UNIVERSITY OF PENNSYLVANIA – PERELMAN SCHOOL OF MEDICINE
Curriculum Vitae

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Andrew J. Rech, MD, PhD

Address:

8-179 Smilow Center for Translational Research
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Perelman School of Medicine
University of Pennsylvania
Philadelphia, PA 19104 USA

Citizenship:

United States

Education:

2009	BS	Biology, Haverford College
2017	PhD	Cancer Biology, Cell and Molecular Biology, University of Pennsylvania
2019	MD	Perelman School of Medicine, University of Pennsylvania

Post-graduate Training and Fellowships:

2019–current	Clinical Pathology, Physician Scientist Pathway, University of Pennsylvania
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Awards, Honors and Membership in Honorary Societies:

2007	Hurford Humanities Center Undergraduate Fellow
2009	Phi Beta Kappa, Zeta of Pennsylvania
2009	High honors in Biology
2009	BS, <i>magna cum laude</i>
2009	Ariel G. Loewy Research Award in Biology
2017–2019	Parker Scholar fellowship, Parker Institute for Cancer Immunotherapy
2015–current	American Association for Cancer Research
2018–current	American Society for Clinical Pathology
2018	Mark L. Tykocinski, MD Award for Research
2019	Innovation Award, Department of Pathology and Laboratory Medicine

Lectures by Invitation:

2010	<i>Phase I study of anti-CD25 mAb daclizumab to deplete regulatory T cells prior to telomerase/survivin peptide vaccination in patients with metastatic breast cancer.</i> American Society of Clinical Oncology Annual Meeting, Developmental Therapeutics Track, Chicago, IL
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- 2015 *Radiation and dual immune checkpoint blockade overcome tumor resistance and distinctly improve immunity.* American Association of Cancer Research Annual Meeting, Immune Checkpoint, Inhibition Minisymposium, Philadelphia, PA
- 2018 *Antigen garnish: ensemble neoepitope prediction from DNA variants.* Translational Research Cancer Centers Consortium, Seven Springs, PA
- 2019 *Determinants of adaptive tumor immunity.* Young Investigators Retreat, Parker Center for Cancer Immunotherapy, Atlanta, GA
- 2019 *Neoantigen quality metrics and response to immune checkpoint blockade in cancer.* Parker Center for Cancer Immunotherapy Annual Retreat, Young Investigators Session, Napa Valley, CA

Teaching and mentorship experience:

Mentor , undergraduate in Vonderheide laboratory, <i>trainee joined laboratory</i>	2015
Mentor , graduate rotation project in Vonderheide laboratory, <i>trainee completed PhD</i>	2015
Manager , research technician in collaborator laboratory, <i>trainee joined MSTP program</i>	2015–2017
Manager , research technician in Vonderheide laboratory	2018–present
Mentor , graduate project in Vonderheide laboratory	2018–present

Bibliography:

Research Publications, *under review*:

Research Publications, peer reviewed (print or other media):

1. Carpenter EL, Mick R, **Rech AJ**, Beatty GL, Colligon TA, Rosenfeld MR, Kaplan DE, Chang KM, Domchek SM, Kanetsky PA, Fecher LA, Flaherty KT, Schuchter LM, Vonderheide RH: Collapse of the CD27+ B cell compartment associated with systemic plasmacytosis in patients with advanced melanoma and other cancers. *Clinical Cancer Research*, 2009, 10.1158/1078-0432.CCR-09-0537.
2. **Rech AJ**, Vonderheide RH: Clinical use of anti-CD25 antibody daclizumab to enhance immune responses to tumor antigen vaccination by targeting regulatory T cells. *Ann NY Acad Sci*, 2009, 10.1111/j.1749-6632.2009.04939.x.
3. **Rech AJ**, Mick R, Kaplan DE, Chang KM, Domchek SM, Vonderheide RH: Homeostasis of peripheral FoxP3+ CD4+ regulatory T cells in patients with early and late stage breast cancer. *Cancer Immunol Immunother*, 2010, 10.1007/s00262-009-0780-x.
4. **Rech AJ***, Mick R*, Martin S*, Recio A, Aqui NA, Powell DJ Jr, Colligon TA, Trosko JA, Leinbach LI, Pletcher CH, Tweed CK, DeMichele A, Fox KR, Domchek SM, Riley JL, Vonderheid RH *shared first author. CD25 blockade depletes and selectively reprograms regulatory T-cells in concert with immunotherapy in cancer patients. *Science Translational Medicine*, 2012, 4:134ra62.
5. Twyman-Saint Victor C*, **Rech AJ***, Maity A, Rengan R, Pauken KE, Stelekati E, Benci J, Xu B, Dada H, Odorizzi PM, Herati RS, Mansfield KD, Patsch D, Amaravadi RK, Schuchter LM, Ishwaran H, Mick R, Pryma D, Xu X, Feldman MD, Gangadhar TC, Hahn SM, Wherry EJ, Vonderheide RH, Minn AJ. *shared first author. Radiation and dual checkpoint blockade activates non-redundant immune

- mechanisms in cancer. *Nature*, 2015, 10.1038/nature14292.
6. Evans RA, Diamond MS, **Rech AJ**, Chao T, Richardson MW, Lin JH, Bajor DL, Byrne KT, Stanger BZ, Riley JL, Markosyan N, Winograd R, Vonderheide RH. Lack of immunoediting in murine pancreatic cancer reversed with neoantigen. *JCI Insight*, 2016, 1:pil:e88328
 7. Balli D*, **Rech AJ***, Stanger BZ, Vonderheide RH *shared first author. Immune cytolytic activity stratifies molecular subsets of human pancreatic cancer. *Clin Cancer Res*, 2016, pii:clincanres.2128.2016.
 8. Calcedo R, Somanathan S, Qin Q, Betts MR, **Rech AJ**, Vonderheide RH, Mueller C, Flotte TR, Wilson JM. Class I restricted T cell responses to polymorphic peptide in a gene therapy clinical trial for alpha-1-antitrypsin deficiency. *Proceedings of the National Academy of Sciences*, 2017, 10.1073/pnas.1617726114.
 9. **Rech AJ**, Vonderheide RH. T-Cell Transfer Therapy Targeting Mutant KRAS: letter to the editor. *New England Journal of Medicine*, 2017, 16;376(7):e11.
 10. Balli D*, **Rech AJ***, Stanger BZ, Vonderheide RH *shared first author. Immune cytolytic activity stratifies molecular subsets of human pancreatic cancer. *Clin Cancer Res*, 2016, pii:clincanres.2128.2016.
 11. Li J, Byrne KT, Yan F, Yamazoe T, Chen Z, Baslan T, Richman LP, Lin J, Sun YH, **Rech AJ**, Balli D, Hay CA, Sela Y, Merrell AJ, Liudah SM, Gordon N, Norgard RJ, Yuan S, Yu S, Chao T, Ye S, Eisinger-Mathason TSK, Faryabi RB, Tobias JW, Lowe S, Coussens LM, Wherry EJ, RH Vonderheide. Tumor cell-intrinsic factors underlie immune heterogeneity and therapeutic response. *Immunity*, 2018, 10.1158/2326-6066.CIR-17-0559.
 12. **Rech AJ**, Dada H, Twyman-Saint Victor C, Vonderheide RH. Radiotherapy and CD40 activation separately augment immunity to checkpoint blockade in cancer. *Cancer Research*, 2018, 10.1158/0008-5472.CAN-17-3a821.
 13. **Rech AJ**, Balli D, Mantero A, Ishwaran H, Nathanson KL, Stanger BZ, Vonderheide RH. Tumor immunity and survival as a function of alternative neopeptides in human cancer. *Clinical Cancer Research*, 2018, 10.1158/2326-6066.CIR-17-0559.
 14. Kraya AA, Maxwell KN, Wubbenhorst B, Wenz BM, Pluta J, **Rech AJ**, Dorfman LJ, Lunceford N, Barrett A, Mitra N, Morrisette JJ, Feldman M, Nayak A, Domshek SM, Vonderheide RH, Nathanson KL. Genomic signatures predict the immunogenicity of BRCA-deficient breast cancer. *Clin Cancer Res*, 2019, 10.1158/1078-0432.CCR-18-0468.
 15. Markosyan M, Li J, Sun YH, Richman LP, Lin JH, Yan F, Quinones L, Sela Y, Yamazoe T, Gordon N, Tobias JW, Byrne KT, **Rech AJ**, FitzGerald G, Stanger BZ, Vonderheide RH. Tumor cell-intrinsic EPHA2 suppresses anti-tumor immunity by regulating PTGS2 (COX-2). *JCI*, 2019. *In press*.
 16. Richman LP, Balli D, Vonderheide RH*, **Rech AJ***. Neoantigen quality metrics and response to immune checkpoint blockade in cancer. *Cell Systems*, 2019. *In press*. *shared senior authorship.

Research Publications, peer-reviewed reviews:

1. **Rech AJ**, Vonderheide RH. Dynamic interplay of oncogenes and T cells induces PD-L1 in the tumor microenvironment. *Cancer Discovery*, 2013, 10.1158/2159-8290.CD-13-0775.