

UNIVERSITY OF PENNSYLVANIA – PERELMAN SCHOOL OF MEDICINE
Curriculum Vitae

Date: 12/1/2020

Andrew J. Rech, MD, PhD

Address: 3400 Civic Center Blvd
Smilow Center for Translational Research
Building 421, June Lab
Philadelphia, PA 19104-5156

Education and Training:

2008 Visiting Student, University of Melbourne
2009 B.S., Biology, Haverford College
2019 M.D., Perelman School of Medicine, University of Pennsylvania
2019 Ph.D., Cell and Molecular Biology, University of Pennsylvania, Advisor: Robert H. Vonderheide
2019– Medical Resident, Clinical Pathology, Hospital of the University of Pennsylvania
2020– Post-Doctoral Research Fellow, Advisors: Garry P. Nolan, Stanford University; Carl H. June, University of Pennsylvania

Hospital and Administrative Appointments:

2018– Immune Health Advisory Council, University of Pennsylvania
2020– Research committee resident member, American Association of Pathology Chairs

Memberships in Professional & Scientific Societies and Other Professional Activities:

2015– American Association for Cancer Research
2018– American Society for Clinical Pathology
2018– Parker Institute for Cancer Immunotherapy
2020– Association for Pathology Informatics
2020– American Medical Informatics Association

Awards, Honors and Membership in Honorary Societies:

2009 BS, *magna cum laude*, Haverford College
2009 High honors in Biology, Haverford College
2009 Ariel G. Loewy Research Award in Biology, Haverford College
2017–2019 Parker Scholar fellowship, Parker Institute for Cancer Immunotherapy
2018 Mark L. Tykocinski, MD Award for Research, Department of Pathology and Laboratory Medicine, University of Pennsylvania
2019 Innovation Award, Department of Pathology and Laboratory Medicine, University of Pennsylvania
2020 Digital Innovation Technology Award, Philadelphia Alliance for Capital and Technologies
2020 2020 Resident Scholar, Society of '67 Scholars Program, Association of Pathology Chairs

Lectures by Invitation:

2010 American Society of Clinical Oncology Annual, Meeting, Developmental Therapeutics Track, Chicago, IL

2015	American Association of Cancer Research Annual Meeting, Immune Checkpoint, Inhibition Symposium, Philadelphia, PA
2018	Translational Research Cancer Centers Consortium, Seven Springs, PA
2019	Young Investigators Retreat, Parker Center for Cancer Immunotherapy, Atlanta, GA
2019	Parker Center for Cancer Immunotherapy Annual Retreat, Napa Valley, CA
2019	Abramson Family Cancer Research Institute Postdoctoral Symposium, Philadelphia, PA

Teaching and mentorship experience:

2015	Mentor, undergraduate in Vonderheide laboratory
2015	Mentor, graduate rotation project in Vonderheide laboratory
2015–2017	Manager, research technician in collaborator laboratory
2018–2019	Mentor, graduate project in Vonderheide laboratory
2019–2020	Mentor, medical student research fellow, Penn Center for Precision Medicine
2019	<i>Precision medicine for cancer immunotherapy: the next decade</i> . CME lecture, University of Pennsylvania
2020	<i>Human systems immunology: a strategy for getting going</i> . CME lecture, University of Pennsylvania
2020	<i>Clinical lessons learned for cellular therapy immunobiology</i> . CME lecture, University of Pennsylvania
2018–	Manager, research technician in Vonderheide laboratory

Research Publications, peer reviewed (17):

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, 15(13):4277-87.
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, 1174:99-106.
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, 59(4):599-607.
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, Vonderheide RH. CD25 blockade depletes and selectively reprograms regulatory T-cells in concert with immunotherapy in cancer patients. *Science Translational Medicine*, 2012, 4:134ra62.
5. **Rech AJ**, Vonderheide RH. Dynamic interplay of oncogenes and T cells induces PD-L1 in the tumor microenvironment. *Cancer Discovery*, 2013, 3(12):1330-2.
6. 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. Radiation and dual checkpoint blockade activates non-redundant immune mechanisms in cancer. *Nature*, 2015, 520(7547):373-7.
7. 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.
8. Balli D*, **Rech AJ***, Stanger BZ, Vonderheide RH. Immune cytolytic activity stratifies molecular subsets of human pancreatic cancer. *Clin Cancer Res*, 2016, 23(12):3129-3138.
9. 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. *PNAS*, 2017, 114(7):1655-1659.
10. **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.
 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, 49(1):178-193.e7.
 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, 78(15):4282-4291.
 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, 6(3):276-287.
 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, 25(14):4363-4374.
 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. 130:3594-3609.
 16. Richman LP, Balli D, Vonderheide RH†, **Rech AJ**†. Neoantigen quality metrics and response to immune checkpoint blockade in cancer. *Cell Systems*, 2019. S2405-4712(19)30307-2.
 17. Wells DK, van Buuren MM, Dang KK, Hubbard-Lucey VM, Sheehan KCF, Campbell KM, Lamb A, Ward JP, Sidney J, Blazquez AB, **Rech AJ**, Zaretsky JM, Comin-Anduix B, Ng AHC, Chour W, Yu TV, Rizvil H, Chen JM, Manning P, Steiner GM, Doan XC, The TESLA Consortium, Merghoub T, Guinney J, Kolom A, Selinsky C, Ribas A, Hellmann MD, Hacoheh N, Sette A, Heath JR, Bhardwaj N, Ramsdell F, Schreiber RD, Schumacher TN, Kvistborg P, Defranoux N. Key Parameters of Tumor Epitope Immunogenicity Revealed Through a Consortium Approach Improve Neoantigen Prediction. *Cell*, 2020. *In press*.

* shared first author

† shared senior authorship

Ad Hoc Scientific Reviewer:

Cell Systems, Cell Reports, Nature Scientific Reports, Cell Reports Medicine