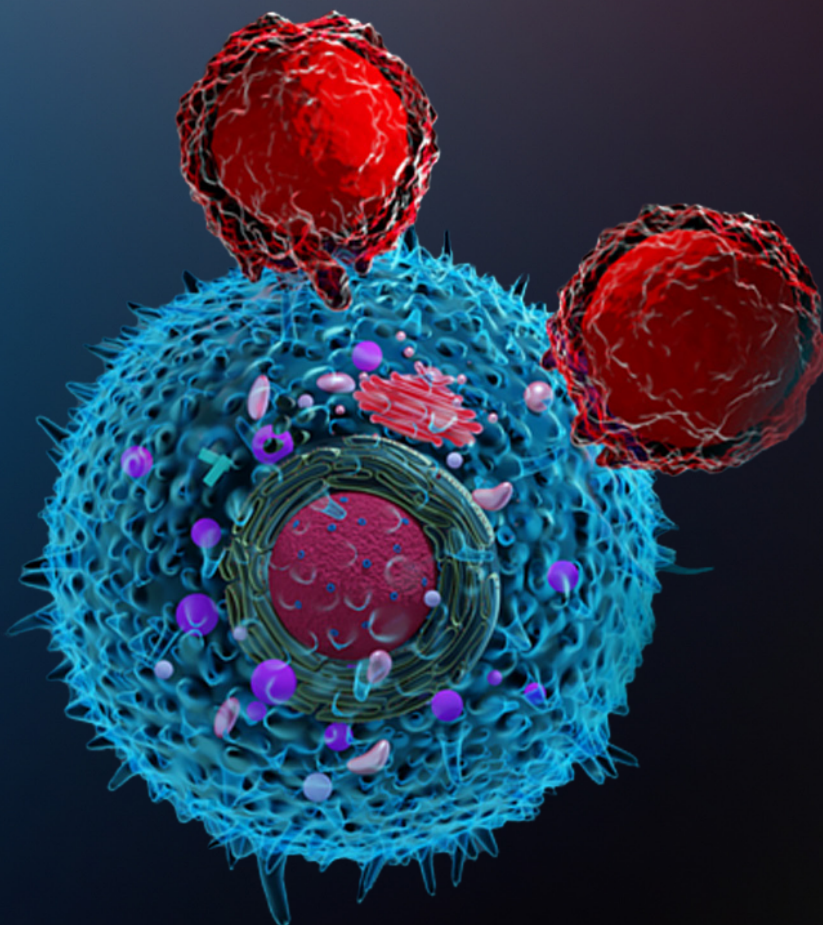
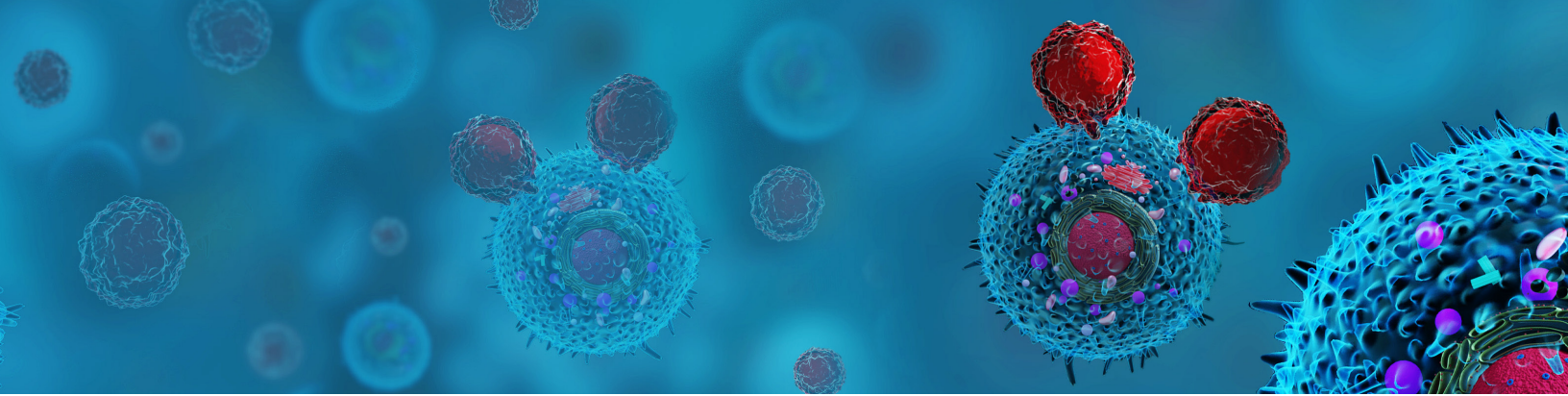


# Immunopeptidomics

Orbitrap Fusion Lumos Tribrid MS literature list





### **Targeting of intracellular oncoproteins with peptide-centric CARs**

Mark Yarmarkovich, Quinlen F. Marshall, John M. Warrington, Rasika Premaratne, Alvin Farrel, David Groff, Wei Li, Moreno di Marco, Erin Runbeck, Hau Truong, Jugmohit S. Toor, Sarvind Tripathi, Son Nguyen, Helena Shen, Tiffany Noel, Nicole L. Church, Amber Weiner, Nathan Kendsersky, Dan Martinez, Rebecca Weisberg, Molly Christie, Laurence Eisenlohr, Kristopher R. Bosse, Dimiter S. Dimitrov, Stefan Stevanovic, Nikolaos G. Sgourakis, Ben R. Kiefel, and John M. Maris

*Nature* . 2023 Nov;623(7988):820-827

<https://www.nature.com/articles/s41586-023-06706-0>

### **DNMT and HDAC inhibition induces immunogenic neoantigens from human endogenous retroviral element-derived transcripts**

Ashish Goyal, Jens Bauer, Joschka Hey, Dimitris N. Papageorgiou, Ekaterina Stepanova, Michael Daskalakis, Jonas Scheid, Marissa Dubbelaar, Boris Klimovich, Dominic Schwarz, Melanie Märklin, Malte Roerden, Yu-Yu Lin, Tobias Ma, Oliver Mücke, Hans-Georg Rammensee, Michael Lübbert, Fabricio Loayza-Puch, Jeroen Krijgsveld, Juliane S. Walz, and Christoph Plass

*Nat Commun* . 2023 Oct 23;14(1):6731

<https://www.nature.com/articles/s41467-023-42417-w>

### **Systematic discovery of neoepitope–HLA pairs for neoantigens shared among patients and tumor types**

Hem R. Gurung, Amy J. Heidersbach, Martine Darwish, Pamela Pui Fung Chan, Jenny Li, Maureen Beresini, Oliver A. Zill, Andrew Wallace, Ann-Jay Tong, Dan Hascall, Eric Torres, Andy Chang, Kenny 'Hei-Wai' Lou, Yassan Abdolazimi, Christian Hammer, Ana Xavier-Magalhães, Ana Marcu, Samir Vaidya, Daniel D. Le, Ilseyar Akhmetzyanova, Soyoung A. Oh, Amanda J. Moore, Uzodinma N. Uche, Melanie B. Laur, Richard J. Notturmo, Peter J. R. Ebert, Craig Blanchette, Benjamin Haley, and Christopher M. Rose

*Nat Biotechnol*. 2023 Oct 19

<https://www.nature.com/articles/s41587-023-01945-y>

### **Cryptic MHC-E epitope from influenza elicits a potent cytolytic T cell response**

Michael J. Hogan, Nikita Maheshwari, Bridget E. Begg, Annalisa Nicastrì, Emma J. Hedgepeth, Hiromi Muramatsu, Norbert Pardi, Michael A. Miller, Shanelle P. Reilly, Laurent Brossay, Kristen W. Lynch, Nicola Ternette, and Laurence C. Eisenlohr

*Nat Immunol*. 2023 Nov;24(11):1933-1946

<https://www.nature.com/articles/s41590-023-01644-5>

### **Microbial peptides activate tumour-infiltrating lymphocytes in glioblastoma**

Reza Naghavian, Wolfgang Faigle, Pietro Oldrati, Jian Wang, Nora C. Toussaint, Yuhan Qiu, Gioele Medici, Marcel Wacker, Lena K. Freudenmann, Pierre-Emmanuel Bonté, Michael Weller, Luca Regli, Sebastian Amigorena, Hans-Georg Rammensee, Juliane S. Walz, Silvio D. Brugger, Malte Mohme, Yingdong Zhao, Mireia Sospedra, Marian C. Neidert, and Roland Martin

*Nature*. 2023 May;617(7962):807-817

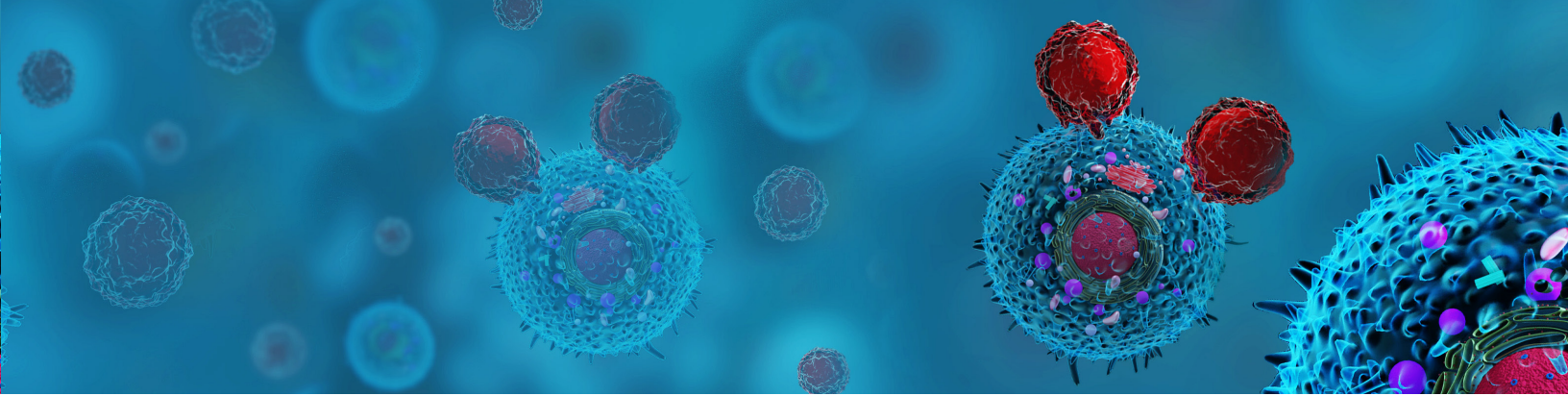
<https://www.nature.com/articles/s41586-023-06081-w>

### **Long non-coding RNA-derived peptides are immunogenic and drive a potent anti-tumour response**

Wojciech Barczak, Simon M. Carr, Geng Liu, Shonagh Munro, Annalisa Nicastrì, Lian Ni Lee, Claire Hutchings, Nicola Ternette, Paul Klenerman, Alexander Kanapin, Anastasia Samsonova, and Nicholas B. La Thangue

*Nat Commun*. 2023 Feb 25;14(1):1078

<https://www.nature.com/articles/s41467-023-36826-0>



### **The oncogenic fusion protein DNAJB1-PRKACA can be specifically targeted by peptide-based immunotherapy in fibrolamellar hepatocellular carcinoma**

Jens Bauer, Natalie Köhler, Yacine Maringer, Philip Bucher, Tatjana Bilich, Melissa Zwick, Severin Dicks, Annika Nelde, Marissa Dubbelaar, Jonas Scheid, Marcel Wacker, Jonas S. Heitmann, Sarah Schroeder, Jonas Rieth, Monika Denk, Marion Richter, Reinhild Klein, Irina Bonzheim, Julia Luibrand, Ursula Holzer, Martin Ebinger, Ines B. Brecht, Michael Bitzer, Melanie Boerries, Judith Feucht, Helmut R. Salih, Hans-Georg Rammensee, Stephan Hailfinger, and Juliane S. Walz

*Nat Commun.* 2022 Oct 27;13(1):6401

<https://www.nature.com/articles/s41467-022-33746-3>

### **Differential ion mobility mass spectrometry in immunopeptidomics identifies neoantigens carrying colorectal cancer driver mutations**

Yuriko Minegishi, Kazuma Kiyotani, Kensaku Nemoto, Yoshikage Inoue, Yoshimi Haga, Risa Fujii, Naomi Saichi, Satoshi Nagayama, and Koji Ueda

*Commun Biol.* 2022 Aug 18;5(1):831

<https://www.nature.com/articles/s42003-022-03807-w>

### **STUB1 is an intracellular checkpoint for interferon gamma sensing**

Simon Ng, Shuhui Lim, Adrian Chong Nyi Sim, Ruban Mangadu, Ally Lau, Chunsheng Zhang, Sarah Bollinger Martinez, Arun Chandramohan, U-Ming Lim, Samantha Shu Wen Ho, Shih Chieh Chang, Pooja Gopal, Lewis Z. Hong, Adam Schwaib, Aaron Zefrin Fernandis, Andrey Loboda, Cai Li, Uyen Phan, Brian Henry, and Anthony W. Partridge

*Sci Rep.* 2022 Aug 18;12(1):14087

<https://www.nature.com/articles/s41598-022-18404-4>

### **Deep learning boosts sensitivity of mass spectrometry-based immunopeptidomics**

Mathias Wilhelm, Daniel P. Zolg, Michael Graber, Siegfried Gessulat, Tobias Schmidt, Karsten Schnatbaum, Celina

Schwencke-Westphal, Philipp Seifert, Niklas de Andrade Krätzig, Johannes Zerweck, Tobias Knaute, Eva Bräunlein, Patroklos Samaras, Ludwig Lautenbacher, Susan Klaeger, Holger Wenschuh, Roland Rad, Bernard Delanghe, Andreas Huhmer, Steven A. Carr, Karl R. Clauser, Angela M. Krackhardt, Ulf Reimer, and Bernhard Kuster

*Nat Commun.* 2021 Jun 7;12(1):3346

<https://www.nature.com/articles/s41467-021-23713-9>

### **The MHC-II peptidome of pancreatic islets identifies key features of autoimmune peptides**

Xiaoxiao Wan, Anthony N. Vomund, Orion J. Peterson, Alexander V. Chervonsky, Cheryl F. Lichti, and Emil R. Unanue

*Nat Immunol.* 2020 Apr;21(4):455-463

<https://www.nature.com/articles/s41590-020-0623-7>

### **Identification of antigens presented by MHC for vaccines against tuberculosis**

Paulo Bettencourt, Julius Müller, Annalisa Nicastrì, Daire Cantillon, Meera Madhavan, Philip D. Charles, Carine B. Fotso, Rachel Wittenberg, Naomi Bull, Nawamin Pinpathomrat, Simon J. Waddell, Elena Stylianou, Adrian V. S. Hill, Nicola Ternette, and Helen McShane

*NPJ Vaccines.* 2020 Jan 3;5(1):2

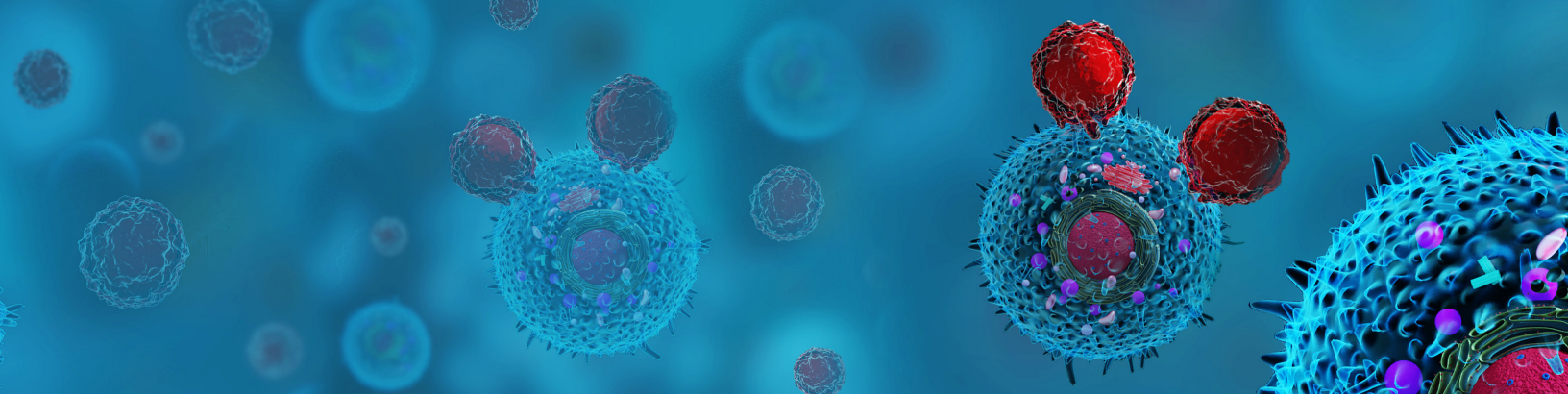
<https://www.nature.com/articles/s41541-019-0148-y>

### **Murine xenograft bioreactors for human immunopeptidome discovery**

James M. Heather, Paisley T. Myers, Feng Shi, Mohammad Ovais Aziz-Zanjani, Keira E. Mahoney, Matthew Perez, Benjamin Morin, Christine Brittsan, Jeffrey Shabanowitz, Donald F. Hunt, and Mark Cobbold

*Sci Rep.* 2019 Dec 6;9(1):18558

<https://www.nature.com/articles/s41598-019-54700-2>



### **Mass spectrometry–based identification of MHC-bound peptides for immunopeptidomics**

Anthony W. Purcell, Sri H. Ramarathinam, and Nicola Ternette

*Nat Protoc* . 2019 Jun;14(6):1687-1707

<https://www.nature.com/articles/s41596-019-0133-y>

### **A tissue-based draft map of the murine MHC class I immunopeptidome**

Heiko Schuster, Wenguang Shao, Tobias Weiss, Patrick G.A. Pedrioli, Patrick Roth, Michael Weller, David S. Campbell, Eric W. Deutsch, Robert L. Moritz, Oliver Planz, Hans-Georg Rammensee, Ruedi Aebersold, and Etienne Caron

*Sci Data* . 2018 Aug 7;5:180157

<https://www.nature.com/articles/sdata2018157>

### **Antigen presentation safeguards the integrity of the hematopoietic stem cell pool**

Pablo Hernández-Malmierca, Dominik Vonficht, Alexandra Schnell, Hannah J. Uckelmann, Alina Bollhagen, Mohamed A.A. Mahmoud, Sophie-Luise Landua, Elise van der Salm, Christine L. Trautmann, Simon Raffel, Florian Grünschläger, Raphael Lutz, Michael Ghosh, Simon Renders, Nádia Correia, Elisa Donato, Karin O. Dixon, Christoph Hirche, Carolin Andresen, Claudia Robens, Paula S. Werner, Tobias Boch, David Eisel, Wolfram Osen, Franziska Pitz, Adriana Przybylla, Corinna Klein, Frank Buchholz, Michael D. Milsom, Marieke A.G. Essers, Stefan B. Eichmüller, Wolf-Karsten Hofmann, Daniel Nowak, Daniel Hübschmann, Michael Hundemer, Christian Thiede, Lars Bullinger, Carsten Müller-Tidow, Scott A. Armstrong, Andreas Trumpp, Vijay K. Kuchroo, and Simon Haas

*Cell Stem Cell* . 2022 May 5;29(5):760-775.e10

<https://www.sciencedirect.com/science/article/pii/S1934590922001606>

### **Sensitive and Quantitative Detection of MHC-I Displayed Neopeptides Using a Semiautomated Workflow and TOMAHAQ Mass Spectrometry**

Samuel B. Pollock, Christopher M. Rose, Martine Darwish, Romain Bouziat, Lélia Delamarre, Craig Blanchette, Jennie R. Lill

*Mol Cell Proteomics* . 2021:20:100108

<https://www.sciencedirect.com/science/article/pii/S1535947621000803>

### **HLA Class II Presentation Is Specifically Altered at Elevated Temperatures in the B-Lymphoblastic Cell Line JY**

Laura C. Demmers, Wei Wu, and Albert J.R. Heck

*Mol Cell Proteomics* . 2021:20:100089

<https://www.sciencedirect.com/science/article/pii/S1535947621000621>

### **Guidance Document: Validation of a High-Performance Liquid Chromatography-Tandem Mass Spectrometry Immunopeptidomics Assay for the Identification of HLA Class I Ligands Suitable for Pharmaceutical Therapies**

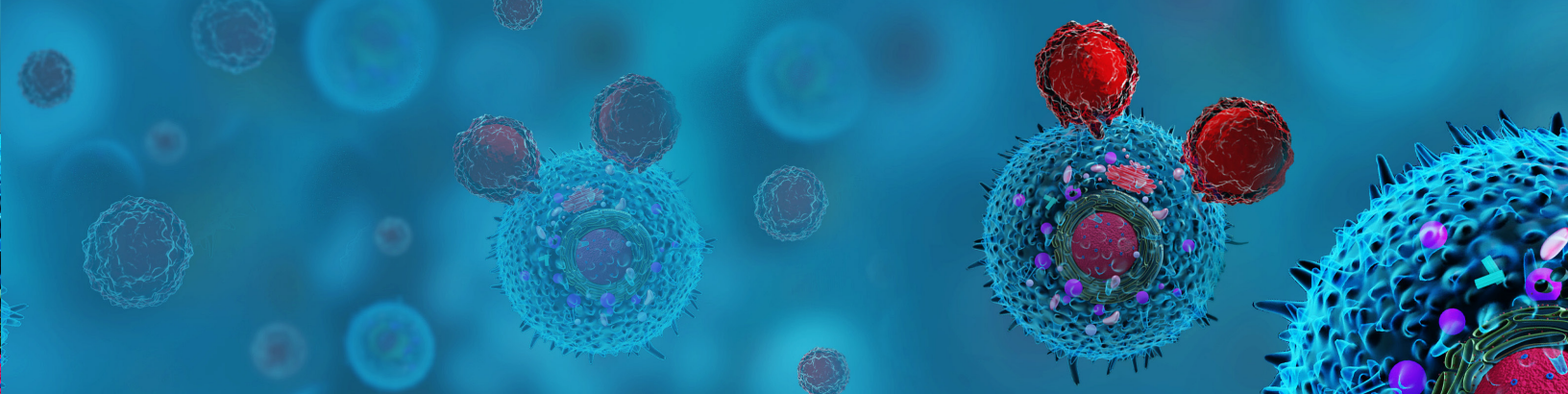
Michael Ghosh, Marion Gauger, Ana Marcu, Annika Nelde, Monika Denk, Heiko Schuster, Hans-Georg Rammensee, and Stefan Stevanović

*Mol Cell Proteomics* . 2020 Mar;19(3):432-443

<https://www.sciencedirect.com/science/article/pii/S1535947620350313>

### **The HLA ligandome landscape of chronic myeloid leukemia delineates novel T-cell epitopes for immunotherapy**

Tatjana Bilich, Annika Nelde, Leon Bichmann, Malte Roerden, Helmut R. Salih, Daniel J. Kowalewski, Heiko Schuster, Chih-Chiang Tsou, Ana Marcu, Marian C. Neidert, Maren Lübke, Jonas Rieth, Mirle Schemionek, Tim H. Brümmendorf, Vladan



Vucinic, Dietger Niederwieser, Jens Bauer, Melanie Märklin, Janet K. Peper, Reinhild Klein, Oliver Kohlbacher, Lothar Kanz, Hans-Georg Rammensee, Stefan Stevanović, and Juliane S. Walz

*Blood* . 2019 Feb 7;133(6):550-565

<https://www.sciencedirect.com/science/article/pii/S0006497120428125>

### **Characterization of HLA-A\*02:01 MHC Immunopeptide Antigens Enhanced by Ultraviolet Photodissociation Mass Spectrometry**

Eleanor Watts, Gregory K. Potts, Damien B. Ready, Alayna M. George Thompson, Janice Lee, Edwin E. Escobar, Melanie J. Patterson, and Jennifer S. Brodbelt

*Anal Chem* . 2021 Oct 5;93(39):13134-13142

<https://pubs.acs.org/doi/10.1021/acs.analchem.1c01002>

### **Allotype-Specific Glycosylation and Cellular Localization of Human Leukocyte Antigen Class I Proteins**

Max Hoek, Laura C. Demmers, Wei Wu, and Albert J. R. Heck

*J Proteome Res* . 2021 Sep 3;20(9):4518-4528

<https://pubs.acs.org/doi/10.1021/acs.jproteome.1c00466>

### **An Integrated Approach for Discovering Noncanonical MHC-I Peptides Encoded by Small Open Reading Frames**

Lei Chen, Yuanliang Zhang, Ying Yang, Yang Yang, Huihui Li, Xuan Dong, Hongwei Wang, Zhi Xie, and Qian Zhao

*J Am Soc Mass Spectrom* . 2021 Sep 1;32(9):2346-2357

<https://pubs.acs.org/doi/10.1021/jasms.1c00076>

### **MHCquant: Automated and Reproducible Data Analysis for Immunopeptidomics**

Leon Bichmann, Annika Nelde, Michael Ghosh, Lukas Heumos, Christopher Mohr, Alexander Peltzer, Leon Kuchenbecker, Timo Sachsenberg, Juliane S. Walz, Stefan Stevanović, Hans-Georg Rammensee, and Oliver Kohlbacher

*J Proteome Res* . 2019 Nov 1;18(11):3876-3884

<https://pubs.acs.org/doi/10.1021/acs.jproteome.9b00313>

### **Noncanonical splicing junctions between exons and transposable elements represent a source of immunogenic recurrent neo-antigens in patients with lung cancer**

Antonela Merlotti, Benjamin Sadacca, Yago A Arribas, Mercia Ngoma, Marianne Burbage, Christel Goudot, Alexandre Houy, Ares Rocañín-Arjó, Ana Lalanne, Agathe Seguin-Givelet, Marine Lefevre, Sandrine Heurtebise-Chrétien, Blandine Baudon, Giacomo Oliveira, Damarys Loew, Montserrat Carrascal, Catherine J Wu, Olivier Lantz, Marc-Henri Stern, Nicolas Girard, Joshua J Waterfall, and Sebastian Amigorena

*Sci Immunol* . 2023 Feb 3;8(80):eabm6359

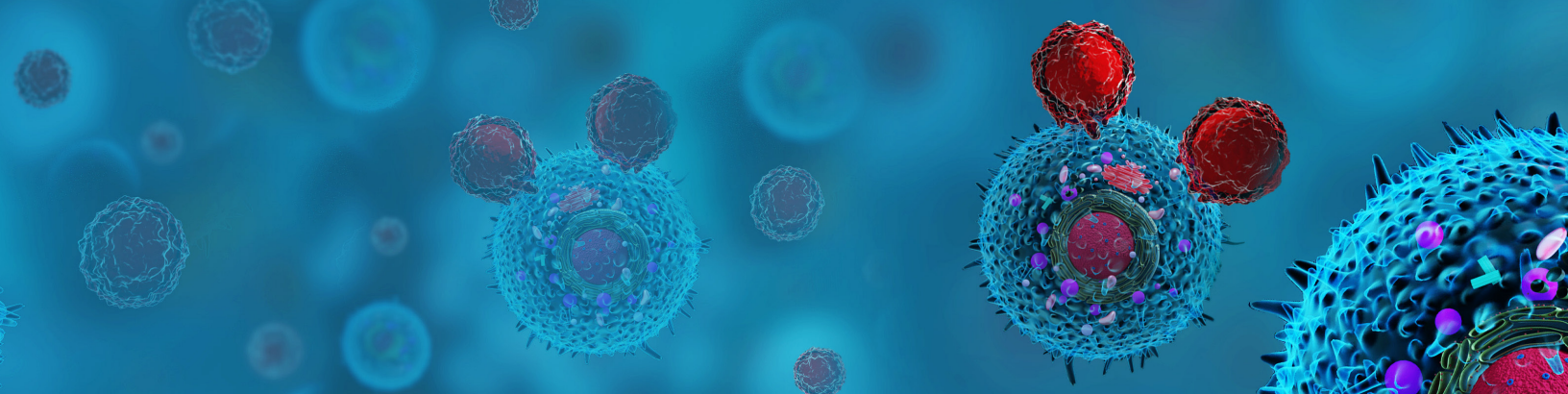
<https://www.science.org/doi/10.1126/sciimmunol.abm6359>

### **Autoreactive napsin A-specific T cells are enriched in lung tumors and inflammatory lung lesions during immune checkpoint blockade**

Fiamma Berner, David Bomze, Christa Lichtensteiger, Vincent Walter, Rebekka Niederer, Omar Hasan Ali, Nina Wyss, Jens Bauer, Lena Katharina Freudenmann, Ana Marcu, Eva-Maria Wolfschmitt, Sebastian Hae, Thorben Gross, Marie-Therese Abdou, Stefan Diem, Stella Knöpfli, Tobias Sinnberg, Kathrin Hofmeister, Hung-Wei Cheng, Marieta Toma, Niklas Klümper, Mette-Triin Purde, Oltin Tiberiu Pop, Ann-Kristin Jochum, Steve Pascolo, Markus Joerger, Martin Früh, Wolfram Jochum, Hans-Georg Rammensee, Heinz Läubli, Michael Hölzel, Jacques Neefjes, Juliane Walz, and Lukas Flatz

*Sci Immunol* . 2022 Sep 2;7(75):eabn9644

<https://www.science.org/doi/10.1126/sciimmunol.abn9644>



### **Upstream open reading frames regulate translation of cancer-associated transcripts and encode HLA-presented immunogenic tumor antigens**

Annika Nelde, Lea Flötotto, Lara Jürgens, Laura Szymik, Elvira Hubert, Jens Bauer, Christoph Schliemann, Torsten Kessler, Georg Lenz, Hans-Georg Rammensee, Juliane S. Walz, and Klaus Wethmar

*Cell Mol Life Sci* . 2022 Mar 3;79(3):171

<https://link.springer.com/article/10.1007/s00018-022-04145-0>

### **A tissue-based draft map of the murine MHC class I immunopeptidome**

Heiko Schuster, Wenguang Shao, Tobias Weiss, Patrick G.A. Pedrioli, Patrick Roth, Michael Weller, David S. Campbell, Eric W. Deutsch, Robert L. Moritz, Oliver Planz, Hans-Georg Rammensee, Ruedi Aebersold, and Etienne Caron

*Sci Data* . 2018 Aug 7;5:180157

<https://www.nature.com/articles/sdata2018157>

### **A T-cell antigen atlas for meningioma: novel options for immunotherapy**

Heiko Schuster, Wenguang Shao, Tobias Weiss, Patrick G.A. Pedrioli, Patrick Roth, Michael Weller, David S. Campbell, Eric W. Deutsch, Robert L. Moritz, Oliver Planz, Hans-Georg Rammensee, Ruedi Aebersold, and Etienne Caron

*Acta Neuropathol* . 2023 Aug;146(2):173-190

<https://link.springer.com/article/10.1007/s00401-023-02605-w>

### **iBench: A ground truth approach for advanced validation of mass spectrometry identification method**

John A. Cormican, Wai Tuck Soh, Michele Mishto, and Juliane Liepe

*Proteomics* . 2023 Jan;23(2):e2200271

<https://analyticalsciencejournals.onlinelibrary.wiley.com/doi/10.1002/pmic.202200271>

### **Database search engines and target database features impinge upon the identification of post-translationally cis-spliced peptides in HLA class I immunopeptidomes**

Michele Mishto, Yehor Horokhovskiy, John A. Cormican, Xiaoping Yang, Steven Lynham, Henning Urlaub, and Juliane Liepe

*Proteomics* . 2022 May;22(10):e2100226

<https://analyticalsciencejournals.onlinelibrary.wiley.com/doi/10.1002/pmic.202100226>

### **The Choice of HLA-Associated Peptide Enrichment and Purification Strategy Affects Peptide Yields and Creates a Bias in Detected Sequence Repertoire**

Annalisa Nicastrì, Hanqing Liao, Julius Müller, Anthony W. Purcell, and Nicola Ternette

*Proteomics* . 2020 Jun;20(12):e1900401

<https://analyticalsciencejournals.onlinelibrary.wiley.com/doi/10.1002/pmic.201900401>

### **The dominantly expressed class II molecule from a resistant MHC haplotype presents only a few Marek's disease virus peptides by using an unprecedented binding motif**

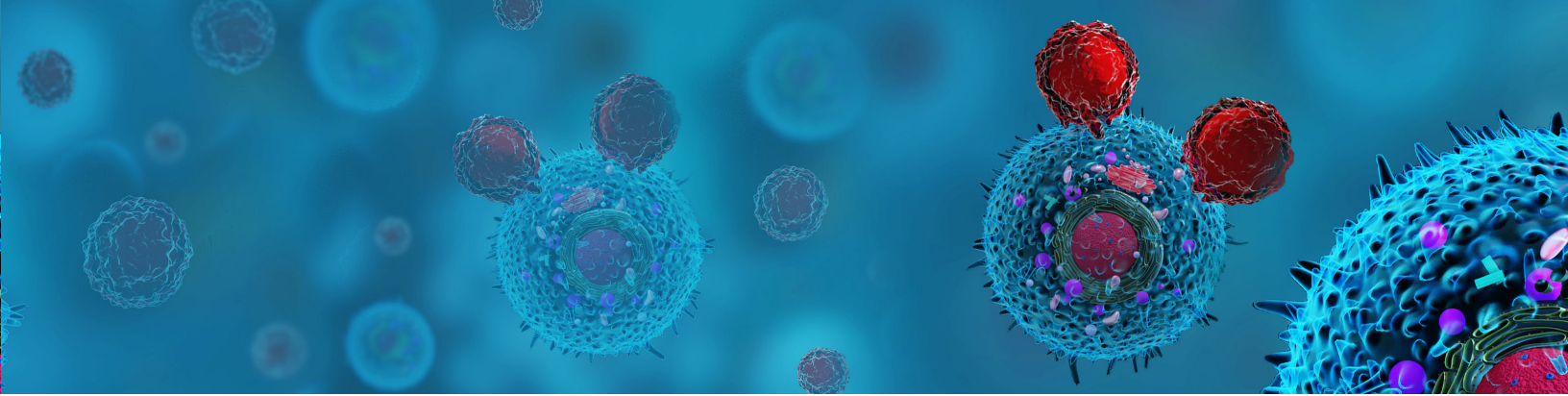
Samer Halabi, Michael Ghosh, Stefan Stevanović, Hans-Georg Rammensee, Luca D. Bertzbach, Benedikt B. Kaufer, Martin C. Moncrieffe, Bernd Kaspers, Sonja Härtle, and Jim Kaufman

*Proteomics* . 2020 Jun;20(12):e1900401

<https://journals.plos.org/plosbiology/article?id=10.1371/journal.pbio.3001057>

### **Immunopeptidome profiling of human coronavirus OC43-infected cells identifies CD4 T-cell epitopes specific to seasonal coronaviruses or cross-reactive with SARS-CoV-2**

Aniuska Becerra-Artiles, Padma P. Nanaware, Khaja Muneeruddin, Grant C. Weaver, Scott A. Shaffer, J. Mauricio Calvo-Calle, and Lawrence J. Stern



*PLoS Pathog* . 2023 Jul 27;19(7):e1011032

<https://journals.plos.org/plospathogens/article?id=10.1371/journal.ppat.1011032>

**Development of a semi-automated MHC-associated peptide proteomics (MAPPs) method using streptavidin bead-based immunoaffinity capture and nano LC-MS/MS to support immunogenicity risk assessment in drug development**

M Violet Lee, Ola M Saad, Sylvia Wong, Jason LaMar, Lynn Kamen, Ben Ordonia, Rachel Melendez, Azadeh Hassanzadeh, Shan Chung, and Surinder Kaur

*Front Immunol* . 2023 Nov 10;14:1295285

<https://journals.plos.org/plospathogens/article?id=10.1371/journal.ppat.1011032>

**The HLA Ligandome Comprises a Limited Repertoire of O-GlcNAcylated Antigens Preferentially Associated With HLA-B\*07:02**

Soumya Mukherjee, Alvaro Sanchez-Bernabeu, Laura C Demmers, Wei Wu, and Albert J R Heck

*Front Immunol* . 2021 Dec 1;12:796584

<https://www.frontiersin.org/journals/immunology/articles/10.3389/fimmu.2021.796584/full>

**Proteogenomic identification of Hepatitis B virus (HBV) genotype-specific HLA-I restricted peptides from HBV-positive patient liver tissues**

Soumya Mukherjee, Alvaro Sanchez-Bernabeu, Laura C Demmers, Wei Wu, and Albert J R Heck

*Front Immunol* . 2022 Dec 13;13:1032716

<https://www.frontiersin.org/journals/immunology/articles/10.3389/fimmu.2022.1032716/full>

**Apparent Lack of BRAFV600E Derived HLA Class I Presented Neoantigens Hampers Neoplastic Cell Targeting by CD8+ T Cells in Langerhans Cell Histiocytosis**

Paul G Kemps, Timo C Zondag, Eline C Steenwijk, Quirine Andriessen, Jelske Borst, Sandra Vloemans, Dave L Roelen, Lenard M Voortman, Robert M Verdijk, Carel J M van Noesel, Arjen H G Cleven, Cynthia Hawkins, Veronica Lang, Arnoud H de Ru, George M C Janssen, Geert W Haasnoot, Kees L M C Franken, Ronald van Eijk, Nienke Solleveld-Westerink, Tom van Wezel, R Maarten Egeler, Auke Beishuizen, Jan A M van Laar, Oussama Abla, Cor van den Bos, Peter A van Veelen, Astrid G S van Halteren

*Front Immunol* . 2020 Jan 10;10:3045

<https://www.frontiersin.org/journals/immunology/articles/10.3389/fimmu.2019.03045/full>

**Targeting self- and neoepitopes with a modular self-adjuncting cancer vaccine**

Elodie Belnoue, Jean-François Mayol, Susanna Carboni, Wilma Di Bernardino Besson, Eloise Dupuychaffray, Annika Nelde, Stefan Stevanovic, Marie-Laure Santiago-Raber, Paul R. Walker, and Madiha Derouazi

*JCI Insight* . 2019 Apr 23;5(11):e127305

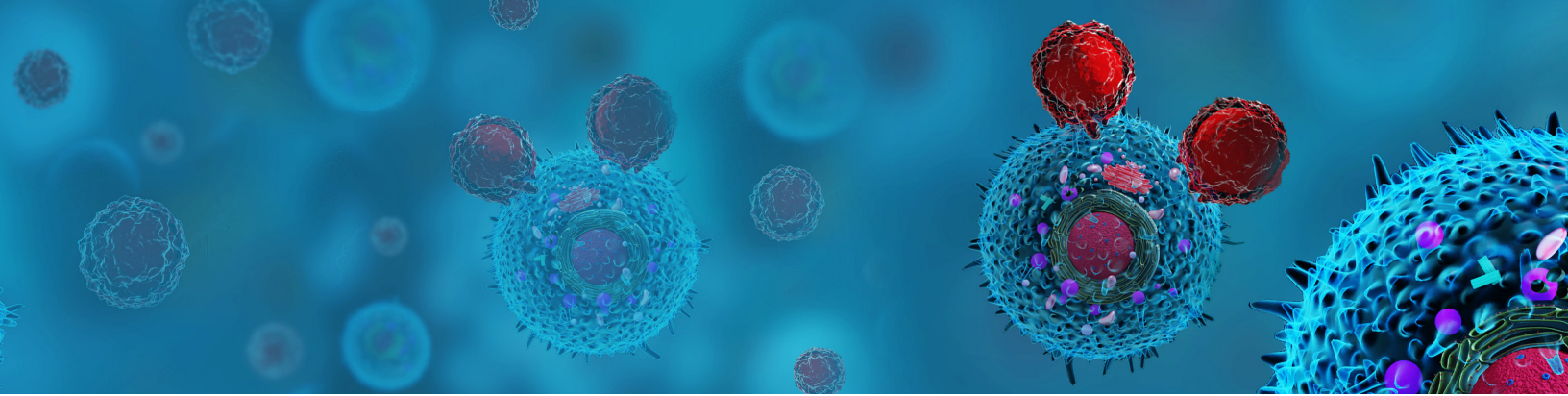
<https://insight.jci.org/articles/view/127305>

**Physical and in silico immunopeptidomic profiling of a cancer antigen prostatic acid phosphatase reveals targets enabling TCR isolation**

Zhiyuan Mao, Pavlo A. Nesterenko, Jami McLaughlin, Weixian Deng, Giselle Burton Sojo, Donghui Cheng, Miyako Noguchi, William Chour, Diana C. DeLucia, Kathryn A. Finton, Yu Qin, Matthew B. Obusan, Wendy Tran, Liang Wang, Nathanael J. Bangayan, Lisa Ta, Chia-Chun Chen, Christopher S. Seet, Gay M. Crooks, John W. Phillips, James R. Heath, Roland K. Strong, John K. Lee, James A. Wohlschlegel, and Owen N. Witte

*Proc Natl Acad Sci U S A* . 2022 Aug 2;119(31):e2203410119

<https://www.pnas.org/doi/10.1073/pnas.2203410119>



### **Integral Use of Immunopeptidomics and Immunoinformatics for the Characterization of Antigen Presentation and Rational Identification of BoLA-DR–Presented Peptides and Epitopes**

Andressa Fisch, Birkir Reynisson, Lindert Benedictus, Annalisa Nicastrì, Deepali Vasoya, Ivan Morrison, Søren Buus, Beatriz Rossetti Ferreira, Isabel Kinney Ferreira de Miranda Santos, Nicola Ternette, Tim Connelley, and Morten Nielsen

*J Immunol* . 2021 May 15;206(10):2489-2497

<https://journals.aai.org/jimmunol/article/206/10/2489/234505>

### **Identification of the Cryptic HLA-I Immunopeptidome**

Florian Erhard, Lars Dölken, Bastian Schilling, and Andreas Schlosser

*Cancer Immunol Res* . 2020 Aug;8(8):1018-1026

<https://aacrjournals.org/cancerimmunolres/article/8/8/1018/470266/Identification-of-the-Cryptic-HLA-I>

### **Immunopeptidome Diversity in Chronic Lymphocytic Leukemia Identifies Patients with Favorable Disease Outcome**

Maddalena Marconato, Yacine Maringer, Juliane S. Walz, Annika Nelde and Jonas S. Heitmann

*Cancers (Basel)* . 2022 Sep 25;14(19):4659

<https://www.mdpi.com/2072-6694/14/19/4659>

### **A Novel Proteogenomic Integration Strategy Expands the Breadth of Neo-Epitope Sources**

Haitao Xiang, Le Zhang, Fanyu Bu, Xiangyu Guan, Lei Chen, Haibo Zhang, Yuntong Zhao, Huanyi Chen, Weicong Zhang, Yijian Li, Leo Jingyu Lee, Zhanlong Mei, Yuan Rao, Ying Guó, Yong Hou, Feng Mu, and Xuan Dong

*Cancers (Basel)* . 2022 Jun 19;14(12):3016

<https://www.mdpi.com/2072-6694/14/12/3016>

### **IntroSpect: Motif-Guided Immunopeptidome Database Building Tool to Improve the Sensitivity of HLA I Binding Peptide Identification by Mass Spectrometry**

Le Zhang, Geng Liu, Guixue Hou, Haitao Xiang, Xi Zhang, Ying Huang, Xiuqing Zhang, Bo Li, and Leo J Lee

*Biomolecules* . 2022 Apr 14;12(4):579

<https://www.mdpi.com/2218-273X/12/4/579>

### **Orf Virus-Based Vaccine Vector D1701-V Induces Strong CD8+ T Cell Response against the Transgene but Not against ORFV-Derived Epitopes**

Alena Reguzova, Michael Ghosh, Melanie Müller, Hanns-Joachim Rziha and Ralf Amann

*Vaccines (Basel)* . 2020 Jun 10;8(2):295

<https://www.mdpi.com/2076-393X/8/2/295>

### **Identification of Naturally Processed Mumps Virus Epitopes by Mass Spectrometry: Confirmation of Multiple CD8+ T-Cell Responses in Mumps Patients**

Jelle de Wit, Maarten E Emmelot, Hugo Meiring, Jacqueline A M van Gaans-van den Brink, Cécile A C M van Els, and Patricia Kaaijk

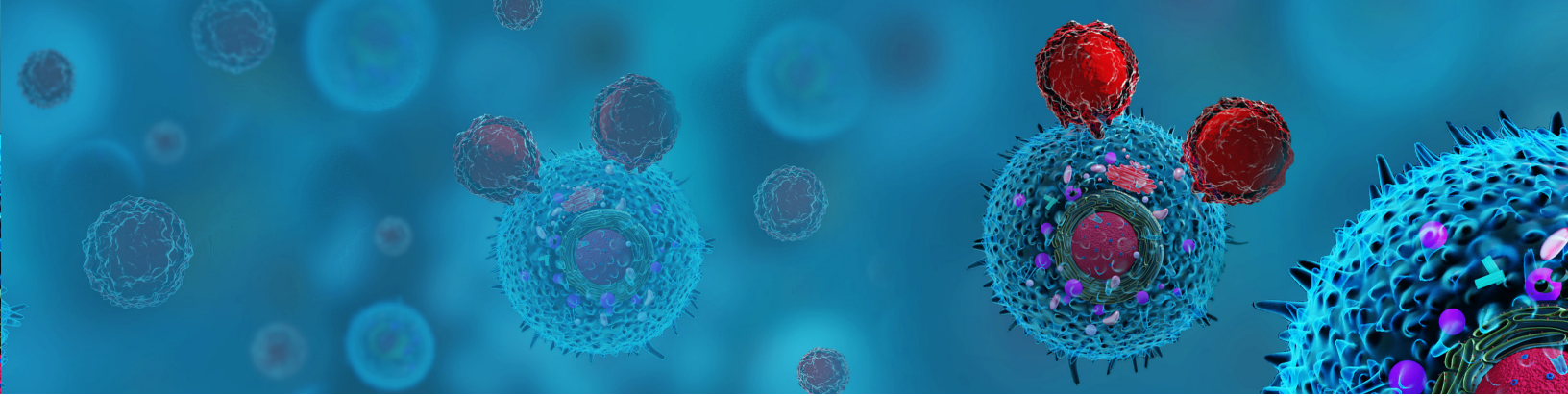
*J Infect Dis* . 2020 Jan 14;221(3):474-482

<https://academic.oup.com/jid/article/221/3/474/5575092>

### **HLA Ligand Atlas: a benign reference of HLA-presented peptides to improve T-cell-based cancer immunotherapy**

Ana Marcu, Leon Bichmann, Leon Kuchenbecker, Daniel Johannes Kowalewski, Lena Katharina Freudenmann, Linus Backert, Lena Mühlenbruch, András Szolek, Maren Lübke, Philipp Wagner, Tobias Engler, Sabine Matovina, Jian Wang, Mathias Hauri-Hohl, Roland Martin, Konstantina Kapolou, Juliane Sarah Walz, Julia Velz, Holger Moch, Luca Regli,





Manuela Silginer, Michael Weller, Markus W Löffler, Florian Erhard, Andreas Schlosser, Oliver Kohlbacher, Stefan Stevanović, Hans-Georg Rammensee, and Marian Christoph Neidert

*J Immunother Cancer* . 2021 Apr;9(4):e002071

<https://jitc.bmj.com/content/9/4/e002071>

### **Exploring the Immunogenicity of Noncanonical HLA-I Tumor Ligands Identified through Proteogenomics**

Maria Lozano-Rabella, Andrea Garcia-Garijo, Jara Palomero, Anna Yuste-Estevanez, Florian Erhard, Roc Farriol-Duran, Juan Martín-Liberal, Maria Ochoa-de-Olza, Ignacio Matos, Jared J Gartner, Michael Ghosh, Francesc Canals, August Vidal, Josep Maria Piulats, Xavier Matías-Guiu, Irene Brana, Eva Muñoz-Couselo, Elena Garralda, Andreas Schlosser, and Alena Gros

*Clin Cancer Res* . 2023 Jun 13;29(12):2250-2265

<https://aacrjournals.org/clincancerres/article/29/12/2250/727077>

### **Immune Surveillance of Acute Myeloid Leukemia Is Mediated by HLA-Presented Antigens on Leukemia Progenitor Cells**

Annika Nelde, Heiko Schuster, Jonas S Heitmann, Jens Bauer, Yacine Maringer, Melissa Zwick, Jens-Peter Volkmer, James Y Chen, Anna M Paczulla Stanger, Ariane Lehmann, Bismark Appiah, Melanie Märklin, Elke Rücker-Braun, Helmut R Salih, Malte Roerden, Sarah M Schroeder, Max-Felix Häring, Andreas Schlosser, Johannes Schetelig, Marc Schmitz, Melanie Boerries, Natalie Köhler, Claudia Lengerke, Ravindra Majeti, Irving L Weissman, Hans-Georg Rammensee, and Juliane S Walz

*Blood Cancer Discov* . 2023 Nov 1;4(6):468-489

<https://aacrjournals.org/bloodcancerdiscov/article/4/6/468/729757>

### **T cells of colorectal cancer patients' stimulated by neoantigenic and cryptic peptides better recognize autologous tumor cells**

Sandra Schwarz, Johanna Schmitz, Markus W Löffler, Michael Ghosh, Hans-Georg Rammensee, Evgenia Olshvang, Marvin Markel, Nadine Mockel-Tenbrinck, Andrzej Dzionek, Susann Krake, Basak Arslan, Kapil Dev Kampe, Anne Wendt, Peter Bauer, Christina S Mullins, Andreas Schlosser, and Michael Linnebacher

*J Immunother Cancer* . 2022 Dec;10(12):e005651

<https://jitc.bmj.com/content/10/12/e005651.long>

### **The Autophagy Receptor TAX1BP1 (T6BP) improves antigen presentation by MHC-II molecules**

Gabriela Sarango, Clémence Richetta, Mathias Pereira, Anita Kumari, Michael Ghosh, Lisa Bertrand, Cédric Pionneau, Morgane Le Gall, Sylvie Grégoire, Raphaël Jeger-Madiot, Elina Rosoy, Frédéric Subra, Olivier Delelis, Mathias Faure, Audrey Esclatine, Stéphanie Graff-Dubois, Stefan Stevanović, Bénédicte Manoury, Bertha Cecilia Ramirez, and Arnaud Moris

*EMBO Rep* . 2022 Dec 6;23(12):e55470

<https://www.embopress.org/doi/full/10.15252/embr.202255470>

### **Mutation position is an important determinant for predicting cancer neoantigens**

Aude-Hélène Capietto, Suchit Jhunjhunwala, Samuel B Pollock, Patrick Lupardus, Jim Wong, Lena Hänsch, James Cevallos, Yajun Chestnut, Ajay Fernandez, Nicolas Lounsbury, Tamaki Nozawa, Manmeet Singh, Zhiyuan Fan, Cecile C de la Cruz, Qui T Phung, Lucia Taraborrelli, Benjamin Haley, Jennie R Lill, Ira Mellman, Richard Bourgon, and Lélia Delamarre

*J Exp Med* . 2020 Apr 6;217(4):e20190179

<https://rupress.org/jem/article/217/4/e20190179/133605/Mutation-position-is-an-important-determinant-for>

**Blood leukocytes recapitulate diabetogenic peptide–MHC-II complexes displayed in the pancreatic islets**

Anthony N Vomund, Cheryl F Lichti, Orion J Peterson, Ana Maria Arbelaez, Xiaoxiao Wan and Emil R Unanue

*J Exp Med* . 2021 Jun 7;218(6):e20202530

<https://rupress.org/jem/article/218/6/e20202530/211955/>

[Blood-leukocytes-recapitulate-diabetogenic-peptide](https://rupress.org/jem/article/218/6/e20202530/211955/)

**Identification of HCMV-derived T cell epitopes in seropositive individuals through viral deletion models**

Maren Lübke, Stefanie Spalt, Daniel J Kowalewski, Cosima Zimmermann, Liane Bauersfeld, Annika Nelde, Leon Bichmann, Ana Marcu, Janet Kerstin Peper, Oliver Kohlbacher, Juliane S Walz, Vu Thuy Khanh Le-Trilling, Hartmut Hengel, Hans-Georg Rammensee, Stefan Stevanović, and Anne Halenius

*J Exp Med* . 2020 Mar 2;217(3):jem.20191164

<https://rupress.org/jem/article/217/3/e20191164/133529/>

[Identification-of-HCMV-derived-T-cell-epitopes-in](https://rupress.org/jem/article/217/3/e20191164/133529/)

**FAK suppresses antigen processing and presentation to promote immune evasion in pancreatic cancer**

Marta Canel, Aleksandra Dominika Sławińska, David W Lonergan, Ashwin Adrian Kallor, Rosie Upstill-Goddard, Catherine Davidson, Alex von Kriegsheim, Andrew V Biankin, Adam Byron, Javier Alfaro, and Alan Serrels

*Gut* . 2023 Dec 7;73(1):131-155

<https://gut.bmj.com/content/73/1/131.abstract>

**The Human Leukocyte Antigen Class II Immunopeptidome of the SARS-CoV-2 Spike Glycoprotein**

Michael D. Knierman, Megan B. Lannan, Laura J. Spindler, Carl L. McMillian, Robert J. Konrad, and Robert W. Siegel

*Cell Rep* . 2020 Dec 1;33(9):108454

[https://www.sciencedirect.com/science/article/pii/](https://www.sciencedirect.com/science/article/pii/S2211124720314431)

[S2211124720314431](https://www.sciencedirect.com/science/article/pii/S2211124720314431)

**An input-controlled model system for identification of MHC bound peptides enabling laboratory comparisons of immunopeptidome experiments**

Martin G. Klatt, Zita E.H. Aretz, Michael Curcio, Ron S. Gejman, Heather F. Jones, and David A. Scheinberg

*J Proteomics* . 2020 Sep 30;228:103921

[https://www.sciencedirect.com/science/article/abs/pii/](https://www.sciencedirect.com/science/article/abs/pii/S187439192030289X)

[S187439192030289X](https://www.sciencedirect.com/science/article/abs/pii/S187439192030289X)

**Empirical Evaluation of the Use of Computational HLA Binding as an Early Filter to the Mass Spectrometry-Based Epitope Discovery Workflow**

Rachid Bouzid, Monique T A de Beijer, Robbie J Luijten, Karel Bezstarosti, Amy L Kessler, Marco J Bruno, Maikel P Peppelenbosch, Jeroen A A Demmers, and Sonja I Buschow

*Cancers (Basel)* . 2021 May 12;13(10):2307

<https://www.mdpi.com/2072-6694/13/10/2307>

Find out more at [thermofisher.com/immunopeptidomics](https://thermofisher.com/immunopeptidomics)