

Anthony Purcell  
Biochemistry & Molecular Biology  
Monash Biomedicine Discovery Institute  
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## Biography

Our laboratory specialises in targeted and global quantitative proteomics of complex biological samples, with a specific focus on identifying targets of the immune response and host-pathogen interactions. The laboratory has an outstanding track record in delivering high end outcomes including recent publications in highly regarded peer reviewed journals including Nature (5), Nature Immunol (9), Science Immunology, Nat Struc Mol Biol (2), Nature Communications (5), PNAS (14), J Exp Med (8), Immunity (8), Nature Protocols, Mol Cell Proteomics (5), Proteomics (7) and J Proteomics Res (3). We combine cutting edge proteomics with human immunology, molecular virology, structural and functional immunology to address a wide variety of immune questions.

## Employment

### Professor (Research)

Biochemistry & Molecular Biology  
MONASH UNIVERSITY  
2 Jul 2012 → present

### Monash Biomedicine Discovery Institute

MONASH UNIVERSITY  
1 Jan 2016 → present

### Councillor Human Proteome Organisation

Human Proteome Organization  
Houston, United States of America  
1 Jan 2017 → 31 Dec 2023

### Visiting Professor

University of Southampton  
Highfield, United Kingdom  
1 Jan 2016 → 31 Dec 2019

## Research outputs

### **The allopurinol metabolite, oxypurinol, drives oligoclonal expansions of drug-reactive T cells in resolved hypersensitivity cases and drug-naïve healthy donors**

Mifsud, N. A., Illing, P. T., Ho, R., Tuomisto, J. E., Fettke, H., Mullan, K. A., McCluskey, J., Rossjohn, J., Vivian, J., Reantragoon, R. & Purcell, A. W., Nov 2023, In: Allergy. 78, 11, p. 2980-2993 14 p.

### **Need to know which MHCs protect against COVID? There's an App for that!**

Witney, M. J., Purcell, A. W. & Tschärke, D. C., Oct 2023, In: Immunology and Cell Biology. 101, 9, p. 789-792 4 p.

### **A population pharmacokinetic model of polymyxin B based on prospective clinical data to inform dosing in hospitalized patients**

Hanafin, P. O., Kwa, A., Zavascki, A. P., Sandri, A. M., Scheetz, M. H., Kubin, C. J., Shah, J., Cherng, B. P. Z., Yin, M. T., Wang, J., Wang, L., Calfee, D. P., Bolon, M., Pogue, J. M., Purcell, A. W., Nation, R. L., Li, J., Kaye, K. S. & Rao, G. G., Sept 2023, In: Clinical Microbiology and Infection. 29, 9, p. 1174-1181 8 p.

**Complimentary electrostatics dominate T-cell receptor binding to a psoriasis-associated peptide antigen presented by human leukocyte antigen C\*06:02**

Anand, S., Littler, D. R., Mobbs, J. I., Braun, A., Baker, D. G., Tennant, L., Purcell, A. W., Vivian, J. P. & Rossjohn, J., Jul 2023, In: *Journal of Biological Chemistry*. 299, 7, 10 p., 104930.

**SAPrim, a semi-automated protocol for mid-throughput immunopeptidomics**

Lim Kam Sian, T. C. C., Goncalves, G., Steele, J. R., Shamekhi, T., Bramberger, L., Jin, D., Shahbazy, M., Purcell, A. W., Ramarathinam, S., Stoychev, S. & Faridi, P., 2 Jun 2023, In: *Frontiers in Immunology*. 14, 10 p., 1107576.

**Are Induced/Altered Self-peptide Antigens Responsible for De Novo Autoreactivity in Transplantation?**

Sharland, A. F., Hill, A. E., Son, E. T., Scull, K. E., Mifsud, N. A. & Purcell, A. W., 1 Jun 2023, In: *Transplantation*. 107, 6, p. 1232-1236 5 p.

**Benchmarking Bioinformatics Pipelines in Data-Independent Acquisition Mass Spectrometry for Immunopeptidomics**

Shahbazy, M., Ramarathinam, S. H., Illing, P. T., Jappe, E. C., Faridi, P., Croft, N. P. & Purcell, A. W., Apr 2023, In: *Molecular & Cellular Proteomics*. 22, 4, 14 p., 100515.

**Screening self-peptides for recognition by mouse alloreactive CD8<sup>+</sup> T cells using direct ex vivo multimer staining**

Son, E. T., Paul-Heng, M., Leong, M., Wang, C., Hill, A. E., Denkova, M., Purcell, A. W., Mifsud, N. A. & Sharland, A. F., 17 Mar 2023, In: *STAR Protocols*. 4, 1, 17 p., 101943.

**PFresGO: an attention mechanism-based deep-learning approach for protein annotation by integrating gene ontology inter-relationships**

Pan, T., Li, C., Bi, Y., Wang, Z., Gasser, R. B., Purcell, A. W., Akutsu, T., Webb, G. I., Imoto, S. & Song, J., Mar 2023, In: *Bioinformatics*. 39, 3, 8 p., btad094.

**Immunolyser: A web-based computational pipeline for analysing and mining immunopeptidomic data**

Munday, P. R., Fehring, J., Revote, J., Pandey, K., Shahbazy, M., Scull, K. E., Ramarathinam, S. H., Faridi, P., Croft, N. P., Braun, A., Li, C. & Purcell, A. W., Jan 2023, In: *Computational and Structural Biotechnology Journal*. 21, p. 1678-1687 10 p.

**TCR\_Explore: A novel webtool for T cell receptor repertoire analysis**

Mullan, K. A., Zhang, J. B., Jones, C. M., Goh, S. J. R., Revote, J., Illing, P. T., Purcell, A. W., La Gruta, N. L., Li, C. & Mifsud, N. A., Jan 2023, In: *Computational and Structural Biotechnology Journal*. 21, p. 1272-1282 11 p.

**A tactile approach to introduce the skin autoimmune disease psoriasis to the general public and the vision-impaired community**

Song, R., Ye, J., Chung, S., Meyer, C. C., Déchelette, C., Purcell, A. W. & Braun, A., 2023, (Accepted/In press) In: *Immunology and Cell Biology*. 5 p.

**Quantitative affinity measurement of small molecule ligand binding to major histocompatibility complex class-I-related protein 1 MR1**

Wang, C. J. H., Awad, W., Liu, L., Mak, J. Y. W., Veerapen, N., Illing, P. T., Purcell, A. W., Eckle, S. B. G., McCluskey, J., Besra, G. S., Fairlie, D. P., Rossjohn, J. & Le Nours, J., Dec 2022, In: *Journal of Biological Chemistry*. 298, 12, 12 p., 102714.

**Understanding the Role of HLA Class I Molecules in the Immune Response to Influenza Infection and Rational Design of a Peptide-Based Vaccine**

Muraduzzaman, A. K. M., Illing, P. T., Mifsud, N. A. & Purcell, A. W., 21 Nov 2022, In: *Viruses*. 14, 11, 18 p., 2578.

**New insights and approaches for analyses of immunopeptidomes**

Illing, P. T., Ramarathinam, S. H. & Purcell, A. W., Aug 2022, In: *Current Opinion in Immunology*. 77, 8 p., 102216.

**PCfun: a hybrid computational framework for systematic characterization of protein complex function**

Sharma, V. S., Fossati, A., Ciuffa, R., Buljan, M., Williams, E. G., Chen, Z., Shao, W., Pedrioli, P. G. A., Purcell, A. W., Martínez, M. R., Song, J., Manica, M., Aebersold, R. & Li, C., Jul 2022, In: *Briefings in Bioinformatics*. 23, 4, p. 1-15 15 p., bbac239.

### **T Cell Epitope Discovery in the Context of Distinct and Unique Indigenous HLA Profiles**

Hensen, L., Illing, P. T., Rowntree, L. C., Davies, J., Miller, A., Tong, S. Y. C., Habel, J. R., van de Sandt, C. E., Flanagan, K. L., Purcell, A. W., Kedzierska, K. & Clemens, E. B., 6 May 2022, In: *Frontiers in Immunology*. 13, 23 p., 812393.

### **Defective Proinsulin Handling Modulates the MHC I Bound Peptidome and Activates the Inflammasome in $\beta$ -Cells**

Khilji, M. S., Faridi, P., Pinheiro-Machado, E., Hoefner, C., Dahlby, T., Aranha, R., Buus, S., Nielsen, M., Klusek, J., Mandrup-Poulsen, T., Purcell, A. W. & Marzec, M. T., Apr 2022, In: *Biomedicines*. 10, 4, 19 p., 814.

### **HLA-A\*11:01-restricted CD8<sup>+</sup> T cell immunity against influenza A and influenza B viruses in Indigenous and non-Indigenous people**

Habel, J. R., Nguyen, A. T., Rowntree, L. C., Szeto, C., Mifsud, N. A., Clemens, E. B., Loh, L., Chen, W., Rockman, S., Nelson, J., Davies, J., Miller, A., Tong, S. Y. C., Rossjohn, J., Gras, S., Purcell, A. W., Hensen, L., Kedzierska, K. & Illing, P. T., Mar 2022, In: *PLoS Pathogens*. 18, 3, 28 p., e1010337.

### **MhcVizPipe: A Quality Control Software for Rapid Assessment of Small- To Large-Scale Immunopeptidome Datasets**

Kovalchik, K. A., Ma, Q., Wessling, L., Saab, F., Duquette, J. D., Kubiniok, P., Hamelin, D. J., Faridi, P., Li, C., Purcell, A. W., Jang, A., Paramithiotis, E., Tognetti, M., Reiter, L., Bruderer, R., Lanoix, J., Bonneil, É., Courcelles, M., Thibault, P., Caron, E., & 1 others Sirois, I., Jan 2022, In: *Molecular & Cellular Proteomics*. 21, 1, 15 p., 100178.

### **RHybridFinder: An R package to process immunopeptidomic data for putative hybrid peptide discovery**

Saab, F., Hamelin, D. J., Ma, Q., Kovalchik, K. A., Sirois, I., Faridi, P., Li, C., Purcell, A. W., Kubiniok, P. & Caron, E., 17 Dec 2021, In: *STAR Protocols*. 2, 4, 15 p., 100875.

### **A natural product compound inhibits coronaviral replication in vitro by binding to the conserved Nsp9 SARS-CoV-2 protein**

Littler, D. R., Liu, M., McAuley, J. L., Lowery, S. A., Illing, P. T., Gully, B. S., Purcell, A. W., Chandrashekar, I. R., Perlman, S., Purcell, D. F. J., Quinn, R. J. & Rossjohn, J., Dec 2021, In: *Journal of Biological Chemistry*. 297, 6, 13 p., 101362.

### **Transcriptional signature in microglia associated with A $\beta$ plaque phagocytosis**

Grubman, A., Choo, X. Y., Chew, G., Ouyang, J. F., Sun, G., Croft, N. P., Rossello, F. J., Simmons, R., Buckberry, S., Landin, D. V., Pflueger, J., Vandekolk, T. H., Abay, Z., Zhou, Y., Liu, X., Chen, J., Larcombe, M., Haynes, J. M., McLean, C., Williams, S., & 8 others Chai, S. Y., Wilson, T., Lister, R., Pouton, C. W., Purcell, A. W., Rackham, O. J. L., Petretto, E. & Polo, J. M., Dec 2021, In: *Nature Communications*. 12, 1, 22 p., 3015.

### **The differentiation state of the Schwann cell progenitor drives phenotypic variation between two contagious cancers**

Owen, R. S., Ramarathinam, S. H., Bailey, A., Gastaldello, A., Hussey, K., Skipp, P. J., Purcell, A. W. & Siddle, H. V., Nov 2021, In: *PLoS Pathogens*. 17, 11, 23 p., e1010033.

### **The self-peptide repertoire plays a critical role in transplant tolerance induction**

Son, E. T., Faridi, P., Paul-Heng, M., Leong, M. L., English, K., Ramarathinam, S. H., Braun, A., Dudek, N. L., Alexander, I. E., Lisowski, L., Bertolino, P., Bowen, D. G., Purcell, A. W., Mifsud, N. A. & Sharland, A. F., Nov 2021, In: *The Journal of Clinical Investigation*. 131, 21, 21 p., e146771.

### **Anthem: a user customised tool for fast and accurate prediction of binding between peptides and HLA class I molecules**

Mei, S., Li, F., Xiang, D., Ayala, R., Faridi, P., Webb, G. I., Illing, P. T., Rossjohn, J., Akutsu, T., Croft, N. P., Purcell, A. W. & Song, J., Sept 2021, In: *Briefings in Bioinformatics*. 22, 5, p. 1-16 16 p., bbaa415.

### **HLA class II immunopeptidomics reveals that co-inherited HLA-allotypes within an extended haplotype can improve proteome coverage for immunosurveillance**

Ramarathinam, S. H., Ho, B. K., Dudek, N. L. & Purcell, A. W., Sept 2021, In: *Proteomics*. 21, 17-18, 12 p., 2000160.

### **Proteomics special issue: Precision immunology and oncology**

Ramarathinam, S. H. & Purcell, A. W., Sept 2021, In: *Proteomics*. 21, 17-18, 3 p., 2000159.

**Resourcing, annotating, and analysing synthetic peptides of SARS-CoV-2 for immunopeptidomics and other immunological studies**

Li, C., Revote, J., Ramarathinam, S. H., Chung, S. Z., Croft, N. P., Scull, K. E., Huang, Z., Ayala, R., Braun, A., Mifsud, N. A., Illing, P. T., Faridi, P. & Purcell, A. W., Sept 2021, In: *Proteomics*. 21, 17-18, 11 p., e2100036.

**T cell receptor recognition of hybrid insulin peptides bound to HLA-DQ8**

Tran, M. T., Faridi, P., Lim, J. J., Ting, Y. T., Onwukwe, G., Bhattacharjee, P., Jones, C. M., Tresoldi, E., Cameron, F. J., La Gruta, N. L., Purcell, A. W., Mannering, S. I., Rossjohn, J. & Reid, H. H., 25 Aug 2021, In: *Nature Communications*. 12, 1, 13 p., 5110.

***Plasmodium berghei* Hsp90 contains a natural immunogenic I-A<sup>b</sup>-restricted antigen common to rodent and human *Plasmodium* species**

Enders, M. H., Bayarsaikhan, G., Ghilas, S., Chua, Y. C., May, R., de Menezes, M. N., Ge, Z., Tan, P. S., Cozijnsen, A., Mollard, V., Yui, K., McFadden, G. I., Lahoud, M. H., Caminschi, I., Purcell, A. W., Schittenhelm, R. B., Beattie, L., Heath, W. R. & Fernandez-Ruiz, D., 13 Jul 2021, In: *Current Research in Immunology*. 2, p. 79-92 14 p.

**Short duration alagebrium chloride therapy prediabetes does not inhibit progression to autoimmune diabetes in an experimental model**

Borg, D. J., Faridi, P., Giam, K. L., Reeves, P., Fotheringham, A. K., McCarthy, D. A., Leung, S., Ward, M. S., Harcourt, B. E., Ayala, R., Scheijen, J. L., Briskey, D., Dudek, N. L., Schalkwijk, C. G., Steptoe, R., Purcell, A. W. & Forbes, J. M., Jul 2021, In: *Metabolites*. 11, 7, 21 p., 426.

**The RNA-Binding Proteins SRP14 and HMGB3 Control HIV-1 Tat mRNA Processing and Translation During HIV-1 Latency**

Khoury, G., Lee, M. Y., Ramarathinam, S. H., McMahon, J., Purcell, A. W., Sonza, S., Lewin, S. R. & Purcell, D. F. J., 14 Jun 2021, In: *Frontiers in Genetics*. 12, 18 p., 680725.

**The immunopeptidomes of two transmissible cancers and their host have a common, dominant peptide motif**

Gastaldello, A., Ramarathinam, S. H., Bailey, A., Owen, R., Turner, S., Kontouli, N., Elliott, T., Skipp, P., Purcell, A. W. & Siddle, H. V., Jun 2021, In: *Immunology*. 163, 2, p. 169-184 16 p.

**Kinetics of Abacavir-Induced Remodelling of the Major Histocompatibility Complex Class I Peptide Repertoire**

Illing, P. T., van Hateren, A., Darley, R., Croft, N. P., Mifsud, N. A., King, S., Kostenko, L., Bharadwaj, M., McCluskey, J., Elliott, T. & Purcell, A. W., 19 May 2021, In: *Frontiers in Immunology*. 12, 19 p., 672737.

**CD8<sup>+</sup> T cell landscape in Indigenous and non-Indigenous people restricted by influenza mortality-associated HLA-A\*24:02 allomorph**

Hensen, L., Illing, P. T., Bridie Clemens, E., Nguyen, T. H. O., Koutsakos, M., van de Sandt, C. E., Mifsud, N. A., Nguyen, A. T., Szeto, C., Chua, B. Y., Halim, H., Rizzetto, S., Luciani, F., Loh, L., Grant, E. J., Saunders, P. M., Brooks, A. G., Rockman, S., Kotsimbos, T. C., Cheng, A. C., & 16 others Richards, M., Westall, G. P., Wakim, L. M., Loudovaris, T., Mannering, S. I., Elliott, M., Tangye, S. G., Jackson, D. C., Flanagan, K. L., Rossjohn, J., Gras, S., Davies, J., Miller, A., Tong, S. Y. C., Purcell, A. W. & Kedzierska, K., 18 May 2021, In: *Nature Communications*. 12, 1, 20 p., 2931.

**PCprophet: a framework for protein complex prediction and differential analysis using proteomic data**

Fossati, A., Li, C., Uliana, F., Wendt, F., Frommelt, F., Sykacek, P., Heusel, M., Hallal, M., Bludau, I., Capraz, T., Xue, P., Song, J., Wollscheid, B., Purcell, A. W., Gstaiger, M. & Aebersold, R., May 2021, In: *Nature Methods*. 18, 5, p. 520-527 8 p.

**Spliced HLA-bound peptides: a Black Swan event in immunology**

Faridi, P., Dorvash, M. & Purcell, A. W., May 2021, In: *Clinical & Experimental Immunology*. 204, 2, p. 179-188 10 p.

**The shared susceptibility epitope of HLA-DR4 binds citrullinated self-antigens and the TCR**

Lim, J. J., Jones, C. M., Loh, T. J., Ting, Y. T., Zareie, P., Loh, K. L., Felix, N. J., Suri, A., McKinnon, M., Stevenaert, F., Sharma, R. K., Klareskog, L., Malmström, V., Baker, D. G., Purcell, A. W., Reid, H. H., La Gruta, N. L. & Rossjohn, J., 30 Apr 2021, In: *Science Immunology*. 6, 58, 16 p., eabe0896.

**IFN $\gamma$  Modulates the Immunopeptidome of Triple Negative Breast Cancer Cells by Enhancing and Diversifying Antigen Processing and Presentation**

Goncalves, G., Mullan, K. A., Duscharla, D., Ayala, R., Croft, N. P., Faridi, P. & Purcell, A. W., 22 Apr 2021, In: *Frontiers in Immunology*. 12, 13 p., 645770.

**Carbamazepine Induces Focused T Cell Responses in Resolved Stevens-Johnson Syndrome and Toxic Epidermal Necrolysis Cases But Does Not Perturb the Immunopeptidome for T Cell Recognition**

Mifsud, N. A., Illing, P. T., Lai, J. W., Fettke, H., Hensen, L., Huang, Z., Rossjohn, J., Vivian, J. P., Kwan, P. & Purcell, A. W., 12 Apr 2021, In: *Frontiers in Immunology*. 12, 20 p., 653710.

**Isolation of HLA Bound Peptides by Immunoaffinity Capture and Identification by Mass Spectrometry**

Pandey, K., Ramarathinam, S. H. & Purcell, A. W., Mar 2021, In: *Current Protocols*. 1, 3, 18 p., e92.

**The complexity of T cell-mediated penicillin hypersensitivity reactions**

Goh, S. J. R., Tuomisto, J. E. E., Purcell, A. W., Mifsud, N. A. & Illing, P. T., Jan 2021, In: *Allergy*. 76, 1, p. 150-167 18 p.

**ggVolcanoR: A Shiny app for customizable visualization of differential expression datasets**

Mullan, K. A., Bramberger, L. M., Munday, P. R., Goncalves, G., Revote, J., Mifsud, N. A., Illing, P. T., Anderson, A., Kwan, P., Purcell, A. W. & Li, C., Jan 2021, In: *Computational and Structural Biotechnology Journal*. 19, p. 5735-5740 6 p.

**Immunopeptidogenomics: Harnessing RNA-Seq to illuminate the dark immunopeptidome**

Scull, K. E., Pandey, K., Ramarathinam, S. H. & Purcell, A. W., 2021, In: *Molecular & Cellular Proteomics*. 20, 16 p., 100143.

**Thermostability profiling of MHC-bound peptides: a new dimension in immunopeptidomics and aid for immunotherapy design**

Jappe, E. C., Garde, C., Ramarathinam, S. H., Passantino, E., Illing, P. T., Mifsud, N. A., Trolle, T., Kringelum, J. V., Croft, N. P. & Purcell, A. W., 9 Dec 2020, In: *Nature Communications*. 11, 1, 9 p., 6305.

**RNF41 regulates the damage recognition receptor Clec9A and antigen cross-presentation in mouse dendritic cells**

Tullett, K. M., Tan, P. S., Park, H. Y., Schittenhelm, R. B., Michael, N., Li, R., Policheni, A. N., Gruber, E., Huang, C., Fulcher, A. J., Danne, J. C., Czabotar, P. E., Wakim, L. M., Mintern, J. D., Ramm, G., Radford, K. J., Caminschi, I., O'Keeffe, M., Villadangos, J. A., Wright, M. D., & 7 others Blewitt, M. E., Heath, W. R., Shortman, K., Purcell, A. W., Nicola, N. A., Zhang, J-G. & Lahoud, M. H., 2 Dec 2020, In: *eLife*. 9, 31 p., e63452.

**Overlapping Peptides Elicit Distinct CD8<sup>+</sup> T Cell Responses following Influenza A Virus Infection**

Assmus, L. M., Guan, J., Wu, T., Farenc, C., Sng, X. Y. X., Zareie, P., Nguyen, A., Nguyen, A. T., Tschärke, D. C., Thomas, P. G., Rossjohn, J., Gras, S., Croft, N. P., Purcell, A. W. & La Gruta, N. L., 1 Oct 2020, In: *Journal of Immunology*. 205, 7, p. 1731-1742 12 p.

**Identification of Flucloxacillin-Haptenated HLA-B\*57:01 Ligands: Evidence of Antigen Processing and Presentation**

Waddington, J. C., Meng, X., Illing, P. T., Tailor, A., Adair, K., Whitaker, P., Hamlett, J., Jenkins, R. E., Farrell, J., Berry, N., Purcell, A. W., Naisbitt, D. J. & Park, B. K., Oct 2020, In: *Toxicological Sciences*. 177, 2, p. 454-465 12 p.

**Spliced peptides and cytokine-driven changes in the immunopeptidome of melanoma**

Faridi, P., Woods, K., Ostrouska, S., Deceneux, C., Aranha, R., Duscharla, D., Wong, S. Q., Chen, W., Ramarathinam, S. H., Lim Kam Sian, T. C. C., Croft, N. P., Li, C., Ayala, R., Cebon, J. S., Purcell, A. W., Schittenhelm, R. B. & Behren, A., Oct 2020, In: *Cancer Immunology Research*. 8, 10, p. 1322-1334 13 p.

**A shared TCR bias toward an immunogenic EBV epitope dominates in HLA-B\*07: 02-Expressing individuals**

Rowntree, L. C., Nguyen, T. H. O., Farenc, C., Halim, H., Hensen, L., Rossjohn, J., Kotsimbos, T. C., Purcell, A. W., Kedzierska, K., Gras, S. & Mifsud, N. A., 15 Sept 2020, In: *Journal of Immunology*. 205, 6, p. 1524-1534 11 p.

### **HLA class II specificity assessed by high-density peptide microarray interactions**

Osterbyrne, T., Nielsen, M., Dudek, N. L., Ramarathinam, S. H., Purcell, A. W., Schafer-Nielsen, C. & Buus, S., 1 Jul 2020, In: *Journal of Immunology*. 205, 1, p. 290-299 10 p.

### **Immuno-peptidomic Analysis Reveals That Deamidated HLA-bound Peptides Arise Predominantly from Deglycosylated Precursors**

Mei, S., Ayala, R., Ramarathinam, S. H., Illing, P. T., Faridi, P., Song, J., Purcell, A. W. & Croft, N. P., 1 Jul 2020, In: *Molecular & Cellular Proteomics*. 19, 7, p. 1236-1247 12 p.

### **A comprehensive review and performance evaluation of bioinformatics tools for HLA class I peptide-binding prediction**

Mei, S., Li, F., Leier, A., Marquez-Lago, T. T., Giam, K., Croft, N. P., Akutsu, T., Smith, A. I., Li, J., Rossjohn, J., Purcell, A. W. & Song, J., Jul 2020, In: *Briefings in Bioinformatics*. 21, 4, p. 1119-1135 17 p., bbz051.

### **In-depth mining of the immuno-peptidome of an acute myeloid leukemia cell line using complementary ligand enrichment and data acquisition strategies**

Pandey, K., Mifsud, N. A., Lim Kam Sian, T. C. C., Ayala, R., Ternette, N., Ramarathinam, S. H. & Purcell, A. W., Jul 2020, In: *Molecular Immunology*. 123, p. 7-17 11 p.

### **A Natural Peptide Antigen within the Plasmodium Ribosomal Protein RPL6 Confers Liver T<sub>RM</sub> Cell-Mediated Immunity against Malaria in Mice**

Valencia-Hernandez, A. M., Ng, W. Y., Ghazanfari, N., Ghilas, S., de Menezes, M. N., Holz, L. E., Huang, C., English, K., Naung, M., Tan, P. S., Tullett, K. M., Steiner, T. M., Enders, M. H., Beattie, L., Chua, Y. C., Jones, C. M., Cozijnsen, A., Mollard, V., Cai, Y., Bowen, D. G., & 15 others Purcell, A. W., La Gruta, N. L., Villadangos, J. A., de Koning-Ward, T., Barry, A. E., Barchet, W., Cockburn, I. A., McFadden, G. I., Gras, S., Lahoud, M. H., Bertolino, P., Schittenhelm, R. B., Caminschi, I., Heath, W. R. & Fernandez-Ruiz, D., 10 Jun 2020, In: *Cell Host & Microbe*. 27, 6, p. 950-962 13 p.

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

Nicastri, A., Liao, H., Muller, J., Purcell, A. W. & Ternette, N., Jun 2020, In: *Proteomics*. 20, 12, 6 p., 1900401.

### **Benchmarking predictions of MHC class I restricted T cell epitopes in a comprehensively studied model system**

Paul, S., Croft, N. P., Purcell, A. W., Tschärke, D. C., Sette, A., Nielsen, M. & Peters, B., 26 May 2020, In: *PLoS Computational Biology*. 16, 5, 18 p., e1007757.

### **The molecular basis of how buried human leukocyte antigen polymorphism modulates natural killer cell function**

Saunders, P. M., MacLachlan, B. J., Pymm, P., Illing, P. T., Deng, Y., Wong, S. C., Oates, C. V. L., Purcell, A. W., Rossjohn, J., Vivian, J. P. & Brooks, A. G., 26 May 2020, In: *Proceedings of the National Academy of Sciences of the United States of America*. 117, 21, p. 11636-11647 12 p., A63.

### **Tentacle Transcriptomes of the Speckled Anemone (*Actiniaria: Actiniidae: Oulactis* sp.): Venom-Related Components and Their Domain Structure**

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