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Qualifications

Employment

ADJUNCT RESEARCH FELLOW

Biochemistry & Molecular Biology
MONASH UNIVERSITY
2 Aug 2017 → present

Research output

Human Plasminogen Exacerbates *Clostridioides difficile* Enteric Disease and Alters the Spore Surface

Awad, M. M., Hutton, M. L., Quek, A. J., Klare, W. P., Mileto, S. J., Mackin, K., Ly, D., Oorschot, V., Bosnjak, M., Jenkin, G., Conroy, P. J., West, N., Fulcher, A., Costin, A., Day, C. J., Jennings, M. P., Medcalf, R. L., Sanderson-Smith, M., Cordwell, S. J., Law, R. H. P. & 2 others, Whisstock, J. C. & Lyras, D., Oct 2020, In: *Gastroenterology*. 159, 4, p. 1431-1443.e6 19 p.

Anti-CDCP1 immuno-conjugates for detection and inhibition of ovarian cancer

Harrington, B. S., He, Y., Khan, T., Puttick, S., Conroy, P. J., Kryza, T., Cuda, T., Sokolowski, K. A., Tse, B. W. C., Robbins, K. K., Arachchige, B. J., Stehbens, S. J., Pollock, P. M., Reed, S., Weroha, S. J., Haluska, P., Salomon, C., Lourie, R., Perrin, L. C., Law, R. H. P. & 2 others, Whisstock, J. C. & Hooper, J. D., 2020, In: *Theranostics*. 10, 5, p. 2095-2114 20 p.

The cryo-EM structure of the acid activatable pore-forming immune effector Macrophage-expressed gene 1

Pang, S. S., Bayly-Jones, C., Radjainia, M., Spicer, B. A., Law, R. H. P., Hodel, A. W., Parsons, E. S., Ekkel, S. M., Conroy, P. J., Ramm, G., Venugopal, H., Bird, P. I., Hoogenboom, B. W., Voskoboinik, I., Gambin, Y., Sierecki, E., Dunstone, M. A. & Whisstock, J. C., 19 Sep 2019, In: *Nature Communications*. 10, 1, 9 p., 4288.

Structure and Function Characterization of the a1a2 Motifs of *Streptococcus pyogenes* M Protein in Human Plasminogen Binding

Quek, A. J. H., Mazzitelli, B. A., Wu, G., Leung, E. W. W., Caradoc-Davies, T. T., Lloyd, G. J., Jeevarajah, D., Conroy, P. J., Sanderson-Smith, M., Yuan, Y., Ayinuola, Y. A., Castellino, F. J., Whisstock, J. C. & Law, R. H. P., 6 Sep 2019, In: *Journal of Molecular Biology*. 431, 19, p. 3804-3813 10 p.

Tranexamic acid is an active site inhibitor of urokinase plasminogen activator

Wu, G., Mazzitelli, B. A., Quek, A. J., Veldman, M. J., Conroy, P. J., Caradoc-Davies, T. T., Ooms, L. M., Tuck, K. L., Schoenecker, J. G., Whisstock, J. C. & Law, R. H. P., 12 Mar 2019, In: *Blood Advances*. 3, 5, p. 729-733 5 p.

Crystal structure of TcpK in complex with oriT DNA of the antibiotic resistance plasmid pCW3

Traore, D. A. K., Wisniewski, J. A., Flanigan, S. F., Conroy, P. J., Panjikar, S., Mok, Y-F., Lao, C., Griffin, M. D. W., Adams, V., Rood, J. I. & Whisstock, J. C., 13 Sep 2018, In: *Nature Communications*. 9, 1, 11 p., 3732.

The first transmembrane region of complement component-9 acts as a brake on its self-assembly

Spicer, B. A., Law, R. H. P., Caradoc-Davies, T. T., Ekkel, S. M., Bayly-Jones, C., Pang, S-S., Conroy, P. J., Ramm, G., Radjainia, M., Venugopal, H., Whisstock, J. C. & Dunstone, M. A., 15 Aug 2018, In: *Nature Communications*. 9, 1, 7 p., 3266.

Perforin proteostasis is regulated through its C2 domain: supra-physiological cell death mediated by T431D-perforin
Brennan, A. J., Law, R. H. P., Conroy, P. J., Noori, T., Lukoyanova, N., Saibil, H., Yagita, H., Ciccone, A., Verschoor, S., Whisstock, J. C., Trapani, J. A. & Voskoboinik, I., 7 Feb 2018, In: Cell Death and Differentiation. 25, p. 1517-1529 13 p.

Perforin-A key (shaped) weapon in the immunological arsenal

Spicer, B. A., Conroy, P. J., Law, R. H. P., Voskoboinik, I. & Whisstock, J. C., Dec 2017, In: Seminars in Cell and Developmental Biology. 72, p. 117-123 7 p.

X-ray crystal structure of plasmin with tranexamic acid-derived active site inhibitors

Law, R. H. P., Wu, G., Leung, E. W. W., Hidaka, K., Quek, A. J., Caradoc-Davies, T. T., Jeevarajah, D., Conroy, P. J., Kirby, N. M., Norton, R. S., Tsuda, Y. & Whisstock, J. C., 9 May 2017, In: Blood Advances. 1, 12, p. 766-771 6 p.

Antibodies: From novel repertoires to defining and refining the structure of biologically important targets

Conroy, P. J., Law, R. H. P., Caradoc-Davies, T. T. & Whisstock, J. C., 1 Mar 2017, In: Methods. 116, p. 12-22 11 p.

Homodimerization attenuates the anti-inflammatory activity of interleukin-37

Ellisdon, A. M., Nold-Petry, C. A., D'Andrea, L., Cho, S. X., Lao, J. C., Rudloff, I., Ngo, D., Lo, C. Y., Soares da Costa, T. P., Perugini, M. A., Conroy, P. J., Whisstock, J. C. & Nold, M. F., 10 Feb 2017, In: Science Immunology. 2, 8, 12 p., eaaj1548.

Circumventing the stability-function trade-off in an engineered FN3 domain

Porebski, B. T., Conroy, P. J., Drinkwater, N., Schofield, P., Vazquez-Lombardi, R., Hunter, M. R., Hoke, D. E., Christ, D., McGowan, S. & Buckle, A. M., 1 Nov 2016, In: Protein Engineering Design and Selection. 29, 11, p. 541-550 9 p.

Eosinophil peroxidase activates cells by HER2 receptor engagement and β 1-integrin clustering with downstream MAPK cell signaling

Hennigan, K., Conroy, P. J., Walsh, M. T., Amin, M., O'Kennedy, R., Ramasamy, P., Gleich, G. J., Siddiqui, Z., Glynn, S., McCabe, O., Mooney, C., Harvey, B. J., Costello, R. W. & McBryan, J., 1 Oct 2016, In: Clinical Immunology. 171, p. 1-11 11 p.

Comprehensive N-glycan profiling of avian immunoglobulin Y

Gilgunn, S., Martín, S. M., Wormald, M. R., Zapatero-Rodríguez, J., Conroy, P. J., O'Kennedy, R. J., Rudd, P. M. & Saldoval, R., 26 Jul 2016, In: PLoS ONE. 11, 7, 14 p., e0159859.

N-terminal domain of *Bothrops asper* Myotoxin II Enhances the Activity of Endothelin Converting Enzyme-1 and Neprilysin

Smith, A. I., Rajapakse, N. W., Kleifeld, O., Lomonte, B., Sikanyika, N. L., Spicer, A. J., Hodgson, W. C., Conroy, P. J., Small, D. H., Kaye, D. M., Parkington, H. C., Whisstock, J. C. & Kuruppu, S. M. S., 2 Mar 2016, In: Scientific Reports. 6, 10 p., 22413.

Structure of the poly-C9 component of the complement membrane attack complex

Dudkina, N. V., Spicer, B. A., Reboul, C. F., Conroy, P. J., Lukoyanova, N., Elmlund, H., Law, R. H. P., Ekkel, S. M., Kondos, S. C., Goode, R. J. A., Ramm, G., Whisstock, J. C., Saibil, H. R. & Dunstone, M. A., 4 Feb 2016, In: Nature Communications. 7, 6 p., 10588.

CORRIGENDUM: N-terminal domain of *Bothrops asper* Myotoxin II Enhances the Activity of Endothelin Converting Enzyme-1 and Neprilysin

Smith, A. I., Rajapakse, N. W., Kleifeld, O., Lomonte, B., Sikanyika, N. L., Spicer, A. J., Hodgson, W. C., Conroy, P., Small, D. H., Kaye, D. M., Parkington, H. C., Whisstock, J. & Kuruppu, D. M. S., 2016, In: Scientific Reports. 6, Article # 24333, p. 1 - 11 p.

Electrochemiluminescence platform for the detection of C-reactive proteins: application of recombinant antibody technology to cardiac biomarker detection

O'Reilly, E. J., Conroy, P. J., Hearty, S., Keyes, T. E., O'Kennedy, R., Forster, R. J. & Dennany, L., 31 Jul 2015, In: RSC Advances. 5, 83, p. 67874-67877 4 p.

Investigation of the mechanism of interaction between Mannose-binding lectin-associated serine protease-2 and complement C4

Drentin, N. C., Conroy, P., Gunzburg, M. J., Pike, R. N. & Wijeyewickrema, L. C., 2015, In: Molecular Immunology. 67, 2, p. 287 - 293 7 p.

Structural basis for Ca²⁺-mediated interaction of the perforin C2 domain with lipid membranes

Yagi, H., Conroy, P. J., Leung, E. W. W., Law, R. H. P., Trapani, J. A., Voskoboinik, I., Whisstock, J. & Norton, R. S., 2015, In: Journal of Biological Chemistry. 290, 42, p. 25213-25226 14 p.

Reconciling the structural attributes of avian antibodies

Conroy, P., Law, R. H. P., Gilgunn, S., Hearty, S., Caradoc-Davies, T. T., Lloyd, G., O'Kennedy, R. & Whisstock, J., 2014, In: Journal of Biological Chemistry. 289, 22, p. 15384 - 15392 9 p.

A tale of two specificities: bispecific antibodies for therapeutic and diagnostic applications

Byrne, H., Conroy, P., Whisstock, J. & O'Kennedy, R., 2013, In: Trends in Biotechnology. 31, 11, p. 621 - 632 12 p.

Aberrant PSA glycosylation-a sweet predictor of prostate cancer

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Cardiac troponin I: a case study in rational antibody design for human diagnostics

Conroy, P., O'Kennedy, R. & Hearty, S., 2012, In: Protein Engineering Design and Selection. 25, 6, p. 295 - 305 11 p.

Surface plasmon resonance for vaccine design and efficacy studies: recent applications and future trends

Hearty, S., Conroy, P., Ayyar, B. V., Byrne, B. & O'Kennedy, R., 2010, In: Expert Review of Vaccines. 9, 6, p. 645 - 664 20 p.

Antibody production, design and use for biosensor-based applications

Conroy, P., Hearty, S., Leonard, P. & O'Kennedy, R., 2009, In: Seminars in Cell and Developmental Biology. 20, 1, p. 10 - 26 17 p.