

Dr Oliver Pearce

BSc PhD

School of Engineering and Materials Science
Queen Mary University of London
Mile End Road
London E1 4NS

tel: +44 (0)20 7882 3592

email: o.pearce@qmul.ac.uk web: www.sems.qmul.ac.uk/o.pearce

2021

A human multi-cellular model shows how platelets drive production of diseased extracellular matrix and tissue invasion.

Malacrida B, Nichols S, Maniati E, Jones R, Delanie-Smith R, Roozitalab R, Tyler EJ, Thomas M, Boot G, Mackerodt J, Lockley M, Knight MM, Balkwill FR and Pearce OMT. *Iscience* vol. 24, (6).

Modelling TGF β R and Hh pathway regulation of prognostic matrisome molecules in ovarian cancer.

Delaine-Smith RM, Maniati E, Malacrida B, Nichols S, Roozitalab R, Jones RR, Lecker LSM, Pearce OMT, Knight MM and Balkwill FR. *Iscience* vol. 24, (6).

Mechanical stimulation modulates osteocyte regulation of cancer cell phenotype.

Verbruggen SW, Thompson CL, Duffy MP, Lunetto S, Nolan J, Pearce OMT, Jacobs CR and Knight MM. *Cancers* vol. 13, (12).

Basement membrane stiffness determines metastases formation.

Reuten R, Zendeheroud S, Nicolau M, Fleischhauer L, Laitala A, Kiderlen S, Nikodemus D, Wullkopf L, Nielsen SR, McNeilly S, Prein C, Rafeeva M, Schoof EM, FurtwÄngler B, Porse BT, Kim H, Won KJ, Sudhop S, Zornhagen KW, Suhr F, Maniati E, Pearce OMT, Koch M, Oddershede LB, Van Agtmael T, Madsen CD, Mayorca-Guiliani AE, Bloch W, Netz RR and Clausen-Schaumann H. *Nature Materials* vol. 20, (6) 892-903.

2020

A sweet approach to heat up cancer response to immunotherapy.

Pearce OMT and LÄpubli H. *Cancer Discovery* vol. 10, (12) 1789-1790.

FAK activity in cancer-associated fibroblasts is a prognostic marker and a druggable key metastatic player in pancreatic cancer.

Zaghdoudi S, Decaup E, Belhabib I, Samain R, Cassant-Sourdy S, Rochotte J, Brunel A, Schlaepfer D, Cros J, Neuzillet C, Strehaiano M, Alard A, Tomasini R, Rajeeve V, Perraud A, Mathonnet M, Pearce OMT, Martineau Y, Pyronnet S, Bousquet C and Jean C. *Embo Molecular Medicine* vol. 12, (11).

Versican--A Critical Extracellular Matrix Regulator of Immunity and Inflammation.

Wight TN, Kang I, Evanko SP, Harten IA, Chang MY, Pearce OMT, Allen CE and Frevert CW. *Frontiers in Immunology* vol. 11, *Frontiers Media*.

Mouse Ovarian Cancer Models Recapitulate the Human Tumor Microenvironment and Patient Response to Treatment.

Maniati E, Berlato C, Gopinathan G, Heath O, Kotantaki P, Lakhani A, McDermott J, Pegrum C, Delaine-Smith RM, Pearce OMT, Hirani P, Joy JD, Szabova L, Perets R, Sansom OJ, Drapkin R, Bailey P and Balkwill FR. *Cell Reports* vol. 30, (2) 525-540.e7.

2018

Characterization of the Extracellular Matrix of Normal and Diseased Tissues Using Proteomics.

Naba A, Pearce OMT, Del Rosario A, Ma D, Ding H, Rajeeve V, Cutillas PR, Balkwill FR and Hynes RO. *Journal of Proteome Research* vol. 16, (8) 3083-3091.

Cancer Immunotherapy.

Pearce OMT and Läubli H. *Glycobiology* vol. 28, (9) 638-639.

Cancer glycan epitopes: biosynthesis, structure, and function.

Pearce OM. *Glycobiology*.

2017

Deconstruction of a metastatic tumor microenvironment reveals a common matrix response in human cancers.

Pearce OMT, Delaine-Smith R, Maniati E, Nichols S, Wang J, Böhm S, Rajeeve V, Ullah D, Chakravarty P, Jones RR, Montfort A, Dowe T, Gribben J, Jones JL, Kocher HM, Serody JS, Vincent BG, Connelly J, Brenton JD, Chelala C, Cutillas PR, Lockley M, Bessant C, Knight M and Balkwill FR. *Cancer Discov.*

N-glycolyl groups of nonhuman chondroitin sulfates survive in ancient fossils.

Bergfeld AK, Lawrence R, Diaz SL, Pearce OMT, Ghaderi D, Gagneux P, Leakey MG and Varki A. *Proc Natl Acad Sci U S A* vol. 114, (39) E8155-E8164.

2016

A strong B cell response is part of the immune landscape in human high-grade serous ovarian metastases.

Montfort A, Pearce OMT, Maniati E, Vincent B, Bixby LM, Böhm S, Dowe T, Wilkes EH, Chakravarty P, Thompson R, Topping J, Cutillas PR, Lockley M, Serody JS, Capasso M and Balkwill FR. *Clinical Cancer Research. American Association For Cancer Research.*

Neoadjuvant chemotherapy modulates the immune microenvironment in metastases of tubo-ovarian high-grade serous carcinoma.

BALKWILL F, Anne Montfort and Oliver Pearce. *Clinical Cancer Research. American Association For Cancer Research.*

2015

Sialic acids in cancer biology and immunity.

Pearce OMT and Läubli H. *Glycobiology* vol. 26, (2) 111-128.

Interleukin-6 stimulates defective angiogenesis.

Gopinathan G, Milagre C, Pearce OMT, Reynolds LE, Hodivala-Dilke K, Leinster DA, Zhong H, Hollingsworth RE, Thompson R, Whiteford JR and Balkwill F. *Cancer Research* vol. 75, (15) 3098-3107.

Abstract 4162: Interleukin-6 stimulates defective angiogenesis.

Gopinathan G, Milagre C, Pearce OMT, Reynolds L, Hodivala-Dilke K, Leinster A, Zhong H, Hollingsworth RE, Thompson R, Whiteford JR and Balkwill F.

Rapid trimming of cell surface polysialic acid (PolySia) by exovesicular sialidase triggers release of preexisting surface neurotrophin.

Sumida M, Hane M, Yabe U, Shimoda Y, Pearce OMT, Kiso M, Miyagi T, Sawada M, Varki A, Kitajima K and Sato C. *Journal of Biological Chemistry* vol. 290, (21) 13202-13214.

Siglec receptors impact mammalian lifespan by modulating oxidative stress.

Schwarz F, Pearce OMT, Wang X, Samraj AN, Läubli H, Garcia JO, Lin H, Fu X, Garcia-Bingman A, Secret P, Romanoski CE, Heyser C, Glass CK, Hazen SL, Varki N, Varki A and Gagneux P. *Elife* vol. 2015, (4).

Reply to Mackenzie: A comparison of Neu5Gc and ?-gal xenoantigens.

Pearce OMT, Samraj AN, Läubli H, Varki NM and Varki A. *Proceedings of The National Academy of Sciences of The United States of America* vol. 112, (12).

A red meat-derived glycan promotes inflammation and cancer progression.

Samraj AN, Pearce OMT, Läubli H, Crittenden AN, Bergfeld AK, Band K, Gregg CJ, Bingman AE, Secret P, Diaz SL, Varki NM, Varki A and Kornfeld SA. *Proceedings of The National Academy of Sciences of The United States of America* vol. 112, (2) 542-547.

2014

Engagement of myelomonocytic Siglecs by tumor-associated ligands modulates the innate immune response to cancer.

Läubli H, Pearce OMT, Schwarz F, Siddiqui SS, Deng L, Stanczak MA, Deng L, Verhagen A, Secret P, Lusk C, Schwartz AG, Varki NM, Bui JD and Varki A. *Proceedings of The National Academy of Sciences of The United States of America* vol. 111, (39) 14211-14216.

Inverse hormesis of cancer growth mediated by narrow ranges of tumor-directed antibodies.

Pearce OMT, Läubli H, Verhagen A, Secret P, Zhang J, Varki NM, Crocker PR, Bui JD and Varki A. *Proceedings of The National Academy of Sciences of The United States of America* vol. 111, (16) 5998-6003.

Hormesis in cancer immunology: Does the quantity of an immune reactant matter?.

Pearce OMT, Läubli H, Bui J and Varki A. *Oncoimmunology* vol. 3, (6).

2013

Enhanced T cell function in a mouse model of human glycosylation.

Buchlis G, Odorizzi P, Soto PC, Pierce OMT, Hui DJ, Jordan MS, Varki A, Wherry EJ and High KA. *Journal of Immunology* vol. 191, (1) 228-237.

2012

Metabolism of vertebrate amino sugars with N-glycolyl groups: Elucidating the intracellular fate of the non-human sialic acid N-glycolylneuraminic acid.

Bergfeld AK, Pearce OMT, Diaz SL, Pham T and Varki A. *Journal of Biological Chemistry* vol. 287, (34) 28865-28881.

Metabolism of vertebrate amino sugars with N-glycolyl groups: Resistance of ?2-8-linked N-glycolylneuraminic acid to enzymatic cleavage.

Davies LRL, Pearce OMT, Tessier MB, Assar S, Smutova V, Pajunen M, Sumida M, Sato C, Kitajima K, Finne J, Gagneux P, Pshezhetsky A, Woodss R and Varki A. *Journal of Biological Chemistry* vol. 287, (34) 28917-28931.

Metabolism of vertebrate amino sugars with N-glycolyl groups: Incorporation of N-glycolylhexosamines into mammalian glycans by feeding N-glycolylgalactosamine.

Bergfeld AK, Pearce OMT, Diaz SL, Lawrence R, Vocadlo DJ, Choudhury B, Esko JD and Varki A. *Journal of Biological Chemistry* vol. 287, (34) 28898-28916.

2010

Chemo-enzymatic synthesis of the carbohydrate antigen N-glycolylneuraminic acid from glucose.

Pearce OMT and Varki A. *Carbohydrate Research* vol. 345, (9) 1225-1229.

2005

Glycoviruses: Chemical glycosylation retargets adenoviral gene transfer.

Pearce OMT, Fisher KD, Humphries J, Seymour LW, Smith A and Davis BG. *Angewandte Chemie - International Edition* vol. 44, (7) 1057-1061.