Biomarkers: An approach to targeting SMARCB1-deficient sarcomas

Published by The Institute of Cancer Research

Product sector Biotech/Pharma

Partnering status Available for out-licensing

Marketing rights available/sought

Main sector Neoplasms / cancer / oncology

Subsector n/a

Description The basis for dual targeting SMARCB1-deficient sarcomas with inhibitors towards PDGFRalpha and FGFR1.

Key publications Wong et al. (2016) Dual targeting of PDGFRalpha and FGFR1 displays synergistic efficacy in malignant rhabdoid tumours. Cell Reports, Vol. 17(5), pp. 1265-1275

Biomarkers: Diagnostic for resistance to MPS1 inhibition

Published by The Institute of Cancer Research

Product sector Biotech/Pharma

Partnering status Available for out-licensing

Marketing rights available/sought

Main sector Neoplasms / cancer / oncology

Subsector n/a

Description We have identified 5 point mutations in the kinase domain of MPS1 that confer resistance against multiple inhibitors.

Key publications We have identified 5 point mutations in the kinase domain of MPS1 that confer resistance against multiple inhibitors.

Partners Breast Cancer Now

IP rights WO2016166159

Biomarkers: Diagnostic for sensitivity to ATR inhibition

Published by The Institute of Cancer Research

Product sector Biotech/Pharma

Partnering status Available for out-licensing

Marketing rights available/sought

Main sector Neoplasms / cancer / oncology

Subsector n/a

Description Method of identifying cancer patients likely to be responsive to treatment with an ATR inhibitor. Deficiency in ARID1A, a subunit of the SWI/SNF chromatin remodelling complex, has been identified as a potential genetic biomarker for synthetic lethal effects of the DNA damage checkpoint inhibitors, ATR inhibitors in human cancer.

Key publications Lord et al. (2016) ATR inhibitors as synthetic lethal therapy for tumors deficient in ARID1A. Nature Communications, Vol.7, pp. 13837.

Devices: Device for tissue processing

Published by The Institute of Cancer Research

Product sector Medical Technology

Partnering status Available for out-licensing

Marketing rights available/sought

Sector Imaging

Description Laboratory tool for rapid and accurate slicing of fresh tissue samples, providing for co-alignment with tissue imaging. Several prototypes sold to academic researchers.

Key publications Jhavar, S. G. et al. Processing of radical prostatectomy specimens for correlation of data from histopathological, molecular biological, and radiological studies: a new whole technique. J. Clin. Pathol. 2005; 58:504-508.

IP rights Patent granted in UK, GB2404607B

Devices: Endocovitary coil for 3T-MRI

Published by The Institute of Cancer Research

Product sector Medical Technology

Partnering status Available for out-licensing

Marketing rights available/sought

Sector Imaging

Description Endocovitary coil for improved 3T-MR diagnostic imaging of the cervix (proof of concept, clinical investigations ongoing).

Devices: PolyScope

Published by The Institute of Cancer Research

Product sector Medical Technology

Partnering status Available for out-licensing

Marketing rights available/sought

Sector Imaging

Development phase Development

Description PolyScope is a combined software and hardware solution for visualisation of digital microscopic samples. It is independent of platform and operating system and allows for synchronisation of image views with fully automated workflows. The system also provides remote viewing together with remote collaborative annotation of slides.

Key publications http://yuanlab.org/polyzoomer/index.html

Software: 3D kinetic volume rendering tool for MRI

Published by The Institute of Cancer Research

Product sector Medical Technology

Partnering status Available for out-licensing

Marketing rights available/sought

Sector Imaging

Description Software to enable separate display of MIPs derived from different phases of MR contrast capable kinetics. Evaluation currently ongoing.

Key publications Khazen, M. et al. Assessing tumour extent and heterogeneity on T1-weighted 3D DCE-MRI of the Breast: Comparative study of the computational fat suppression algorithm, and quantitative pharmacokinetic modelling. Proc. Intl. Soc. Mag. Reson. Med. 2005; 13:88.

IP rights Patents filed in EP and US.

WO 2007/054662 A1.

Software: 4D orthogonal display tool

Published by The Institute of Cancer Research

Product sector Medical Technology

Partnering status Available for out-licensing

Marketing rights available/sought

Sector Imaging

Description Software tool for rapid identification of tissue movement artifacts during analysis of dynamic MRI data sets.

IP rights Software tool for rapid identification of tissue movement artifacts during analysis of dynamic MRI data sets.

Software: MRI distortion correction

Published by The Institute of Cancer Research

Product sector Medical Technology

Partnering status Available for out-licensing

Marketing rights available/sought

Sector Imaging

Description Algorithms for evaluation and correction of geometric distortion in MR images, for applications including radiotherapy treatment planning. Evaluation currently ongoing.

Key publications Reinsberg SA et al. A complete distortion correction for MR images: I Gradient warp correction. Phys.Med. Biol. 2005; 50:1343-1361.

IP rights Copyright

Targeting: Monocolonal antibodies against Cerb-B2 (HER2)

Published by The Institute of Cancer Research

Product sector Biotech/Pharma

Partnering status Available for out-licensing

Marketing rights available/sought

Main sector Neoplasms / cancer / oncology

Subsector n/a

Molecule type Antibody

Description A panel of rat anti Cerb-B2 antibodies with high affinity cell surface binding to the erbB2 protein core has been developed and is now available for diagnostic and therapeutic applications.

Extensive pre-clinical evaluation is completed.

Targeting: Monocolonal antibodies against EGFR

Published by The Institute of Cancer Research

Product sector Biotech/Pharma

Partnering status Available for out-licensing

Marketing rights available/sought

Main sector Neoplasms / cancer / oncology

Subsector n/a

Molecule type Antibody

Description A set of high-affinity rat monoclonal anti EGFR antibodies with diverse specificities across the external domain has been developed and are available to license for diagnostic and therapeutic applications.

Therapeutics: Alpha-folate receptor targeted agent

Published by The Institute of Cancer Research

Product sector Biotech/Pharma

Partnering status Available for out-licensing

Marketing rights available/sought

Main sector Neoplasms / cancer / oncology

Subsector Ovarian cancer

Development phase Phase I

Molecule type Small Molecule/NCE

Description First-in-class α-folate receptor targeted ovarian cancer therapeutic and companion diagnostic; phase 1 results presented at ASCO 2017 (Abstract #2503)

Partners BTG

Therapeutics: Gene Directed Enzyme Prodrug Therapy

Published by The Institute of Cancer Research

Product sector Biotech/Pharma

Partnering status Available for out-licensing

Marketing rights available/sought

Main sector Neoplasms / cancer / oncology

Subsector n/a

Development phase Preclinical

Molecule type Other Macromolecule

Description Gene-Directed Enzyme Prodrug Therapy. Bacterial carboxypeptidase G2 (CPG2) enzyme. Exclusive rights in the GDEPT field to develop with an alkylating agent prodrug. Wide range of additional prodrugs. Rights to novel vectors and molecular imaging probes.

Demonstrated proof of concept in preclinical human tumour xenograft models in vivo in lung, colorectal carcinoma, hepatoma, head & neck human tumour xenografts. First product in pre-clinical development.

Key publications Schepelmann, S. et al. Systemic gene-directed enzyme prodrug therapy of hepatocellular carcinoma using a targeted adenovirus armed with carboxypeptidase G2. Cancer Res. 2005, 65, 5003-8.

Hedley D;Ogilvie L;Springer C. Carboxypeptidase G2-based gene-directed enzyme-prodrug therapy: a new weapon in the GDEPT armoury. Nat Rev Cancer 2007; 7 :870-879.

Schepelmann S et al. Suicide gene therapy of human colon carcinoma xenografts using an armed oncolytic adenovirus expressing carboxypeptidase G2. Cancer Res 2007; 67 (4949-4955)

IP rights GB 0011060

GB 201310917

Therapeutics: Novel dual inhibitors of FLT3/Aurora kinases

Published by The Institute of Cancer Research

Product sector Biotech/Pharma

Partnering status Available for out-licensing

Marketing rights available/sought

Main sector Neoplasms / cancer / oncology

Subsector Myeloid leukaemia

Development phase Preclinical

Molecule type Small Molecule/NCE

Description Clinic ready development candidate which is a potent, orally bioavailable dual FLT3/Aurora kinase inhibitor. Single agent dose dependent growth inhibition in FLT3 ITD positive human AML xenograft models has been shown in-vivo. Mutation-driven resistance to selective FLT3 inhibition overcome in AML in in-vivo models. Potential for treatment of other cancers including neuroblastoma and pancreatic, neuroendocrine, prostate cancer targeting Aurora A-MYCN. Capacity and expertise to run first-in-man paediatric clinical trials at the Royal Marsden NHS Foundation Trust with PK/PD support.

Partners Cancer Research UK and Breast Cancer Now.

IP rights WO2007/072017

WO/2013/190319

Therapeutics: Novel LOX inhibitors

Published by The Institute of Cancer Research

Product sector Biotech/Pharma

Partnering status Available for out-licensing

Marketing rights available/sought

Main sector Neoplasms / cancer / oncology

Subsector Pancreatic cancer

Development phase Lead optimization

Molecule type Small Molecule/NCE

Description LOX expression is regulated by hypoxia inducible factors (HIFs) and LOX is upregulated in hypoxic tumours. Secreted LOX leads to invasion and metastases and hence inhibitors of LOX prevent tumour progression and metastases. Our selected inhibitors have primary anti-tumour efficacy as well as anti-metastatic activity. The programme is currently at late lead optimisation and has ongoing funding from the Wellcome Trust.

Key publications Erler J.T. et. al., Lysyl oxidase is essential for hypoxia-induced metastasis. Nature 2006; 440: 1222-1226.

Partners The Wellcome Trust