Department of Pathology fully-funded PhD studentships: project proposal form

PIs to complete Parts A & B and to send to your Head of Division by 1 November 2020.
Heads of Division to complete Part C and to send to hod.sec@path.cam.ac.uk

PART A: PROJECT PROPOSAL	
Division	Immunology
Supervisor	Dr Louise Boyle
Second supervisor (If supervisor's contract ends before October 2025)	
Project title	Novel tools for cancer immunotherapy and vaccination
Project abstract for advert (Max 100 words)	We are seeking a dedicated and enthusiastic PhD student to join our laboratory in the Department of Pathology, at the University of Cambridge. (http://www.path.cam.ac.uk/directory/louise-boyle). Our major focus is to improve our understanding of the major histocompatibility complex (MHC) antigen processing and presentation pathway at a molecular level. This PhD project will explore whether manipulation of components of antigen processing pathway can be utilised to induce immune recognition of tumours and also drive T cell responses in the context of vaccination.
Keywords Please provide up to five	MHC class I, antigen presentation, immunotherapy, vaccination
Full details (Max 250 words) **Will be published on Departmental website; please do not include confidential information**	We are seeking a dedicated and enthusiastic PhD student to join our laboratory in the Department of Pathology, at the University of Cambridge. (http://www.path.cam.ac.uk/directory/louise-boyle). Our major focus is to improve our understanding of the major histocompatibility complex (MHC) antigen processing and presentation pathway at a molecular level. This PhD project will explore whether manipulation of components of antigen processing pathway can be utilised to induce immune recognition of tumours and also drive T cell responses in the context of vaccination.

Three of your most important publications in support of the proposed project	• Ilca FT, Neerincx A, Wills M, de la Roche M, **Boyle LH*** (2018). Utilizing TAPBPR to promote exogenous peptide loading onto cell surface MHC I molecules. **Proceedings of the National Academy of Science.** 115 (40):E9353-E9361. doi:10.1073/pnas.1809465115. PMC6176578 • Ilca FT, Neerincx A, Hermann C, Marcu A, Stevanovic S, Deane JE, **Boyle LH*** (2018). TAPBPR mediates peptide dissociation from MHC class I using a leucine lever. **eLife 7.** e40126. PMC6307860 • Ilca FT, Drexhage LZ, Brewin G, Peacock S, **Boyle LH*** (2019). Distinct polymorphisms in HLA class I molecules govern their susceptibility to peptide editing by TAPBPR**.** **Cell Reports** 29: 1621-1632 PMC7057265