

## Queensland Eye Institute

### Publications Report - 2017

- (1) Santander-Borrego M., Taran E., Shadforth A.M.A., Whittaker A.K., Chirila T.V. and Blakey I.: Hydrogels with lotus leaf topography: Investigating surface properties and cell adhesion. *Langmuir*, 33(2): 485-493, 2017.
- (2) Shadforth A.M.A., Suzuki S., Theodoropoulos C., Richardson N.A., Chirila T.V. and Harkin D.G.: A Bruch's membrane substitute fabricated from silk fibroin supports the function of retinal pigment epithelial cells in vitro. *J. Tissue Eng. Regen. Med.*, 11(6): 1915-1924, 2017.
- (3) Chirila T.V., Suzuki S. and Delcroix O.: Enzymatic crosslinking of Bombyx mori silk fibroin biomaterials: An investigation of the gel point by dynamic rheology. *Biomater. Tissue Technol.*, 2017, 1(1). DOI: 10.15761/BTT.1000103. [4 pages]
- (4) Chirila T.V., Suzuki S. and Papolla C.: A comparative investigation of Bombyx mori silk fibroin hydrogels generated by chemical and enzymatic cross-linking. *Biotechnol. Appl. Biochem.*, 64(6): 771-781, 2017.
- (5) Chirila T.V.: Oxygen permeability of silk fibroin membranes: A critical review and personal perspective. *Biomater. Tissue Technol.*, 2017, 1(2). DOI: 10.15761/BTT.1000109. [5 pages]
- (6) Santander-Borrego M., Chirila T.V., Shadforth A.M.A., Whittaker A.K. and Blakey I.: Effect of changes in the surface chemistry and topography of poly (2-hydroxyethyl methacrylate) on the in vitro attachment of human corneal epithelial cells. *J. Bioact. Compat. Polym.*, in press; DOI: 10.1177/0883911517744572.
- (7) Smith T.M., Suzuki S., Cronin B.G., Haghghatpanah M., Petcu E.B., Philippa C.J. and Chirila T.V.: Photochemically induced crosslinking of tarsal collagen as a treatment for eyelid laxity: assessing potentiality in animal tissue. *Ophthalm. Plast. Reconstr. Surg.*, in press; DOI: 10.1097/IOP.0000000000001063.
- (8) Bobba S., Di Girolamo N., Mills R.A., Daniell M., Chan E., Harkin D.G., Cronin B.G., Crawford G.J., McGhee C.N. and Watson, S.: Nature and incidence of severe limbal stem cell deficiency in Australia and New Zealand. *Clin. Exper. Ophthalmol.*, 45(2): 174-181, 2017.
- (9) Yang C.H., Albietz J., Harkin D.G., Kimlin M.G. and Schmid K.L.: Impact of oral vitamin D supplementation on the ocular surface in people with dry eye and/or low serum vitamin D. *Cont. Lens Anterior Eye*, in press; DOI: 10.1016/j.clae.2017.09.007.
- (10) Harkin D.G., Dunphy S.E., Shadforth A.M.A., Dawson R.A., Walshe J. and Zakaria N.: Mounting of biomaterials for use in ophthalmic cell therapies. *Cell Transplantation*, in press.
- (11) Natoli R., Fernando N., Jiao H., Racic T., Madigan M., Barnett N.L., Chu-Tan J.A., Valter K., Provis J. and Rutar M.: Retinal macrophages synthesize C3 and activate complement in AMD and in models of focal retinal degeneration. *Invest. Ophthalmol. Vis. Sci.*, 58: 2977-2990, 2017.

(12) Quek H., Luff J., Cheung K., Kozlov S., Gatei M., Lee C.S., Bellingham M.C., Noakes P.G., Lim Y.C., Barnett N.L., Dingwall S., Wolvetang E., Mashimo T., Roberts T.L. and Lavin M.F.: Rats with a missense mutation in Atm display neuroinflammation and neurodegeneration subsequent to accumulation of cytosolic DNA following unrepaired DNA damage. *J. Leukocyte Biol.*, 101: 927-947, 2017.

(13) Quek H., Luff J., Cheung K., Kozlov S., Gatei M., Lee C.S., Bellingham M.C., Noakes P.G., Lim Y.C., Barnett N.L., Dingwall S., Wolvetang E., Mashimo T., Roberts T.L. and Lavin M.F. A rat model of ataxia-telangiectasia: evidence for a neurodegenerative phenotype. *Hum. Mol. Genet.*, 26: 109-123, 2017. (14) Thakur S.S., Ward M.S., Popat A., Flemming N.B., Parat M.O., Barnett N.L. and Parekh H.S. Stably engineered nanobubbles and ultrasound - An effective platform for enhanced macromolecular delivery to representative cells of the retina. *PLoS One* 12: e0178305, 2017.