

Curriculum vitae

Adrian Williams

**Research Dean for Health and
Professor of Pharmaceutics**

February 2018

Novus Pharmaceuticals, Inc

Personal Details

Name: Adrian Christopher Williams

Present appointment: Professor of Pharmaceutics and
Research Dean for Health
University of Reading

Date of birth: 30th November 1963

Qualifications:

2013: FAPS; Fellow of the UK Academy of Pharmaceutical Sciences.

2007: FHEA; Fellow of The Higher Education Academy (23322).

1992: C.Chem. F.R.S.C. - Chartered Chemist, Fellow of the Royal Society of Chemistry.

1990: Ph.D. in Pharmaceutical Technology, University of Bradford. "Terpenes and Urea Analogues as Penetration Enhancers for Human Skin"

1987: B.Sc. (Honours) in Combined Sciences, Biology and Chemistry, (C.N.A.A.).

Previous appointments:

2011 to 2015: Head, School of Chemistry, Food and Pharmacy, University of Reading

2008 to 2011: Head, School of Pharmacy, University of Reading.

2004 to 2008: Professor of Pharmaceutics, School of Pharmacy, University of Reading.

2002 to 2004: Professor of Biophysical Pharmaceutics, School of Pharmacy, University of Bradford.

1999 to 2002: Reader in Pharmaceutical Technology, School of Pharmacy, University of Bradford.

1997 to 1999: Senior Lecturer in Pharmaceutical Technology, School of Pharmacy, University of Bradford.

1995 to 1997: Lecturer B in the Department of Pharmaceutical Technology, School of Pharmacy, University of Bradford.

1990 to 1995: Lecturer A in the Department of Pharmaceutical Technology, School of Pharmacy, University of Bradford.

Research and scholarship

Research outputs

ORCID ID: 0000-0003-3654-7916;

h-index: 52; i10-index 98; 11,064 total citations. (Google Scholar)

Refereed research papers published in journals:

Bold indicates principal author

1. Mansfield, E.D.H., Pandya, Y., Mun, E.A., Rogers, S.E., Abutbul-Ionita, I., Danino, D., Williams, A.C. and **Khutoryanskiy, V.V.** "Structure and characterisation of hydroxyethylcellulose-decorated silica nanoparticles". RSC Advances, DOI: 10.1039/c7ra08716k
2. **Kademoglou, K.**, Williams, A.C. and Collins, C.D. "Bioaccessibility of PBDEs present in indoor dust: A novel dialysis membrane method with a Tenax TA® absorption sink". Science of the Total Environment (STOTEN). 2018, 621: 1–8. DOI: 10.1016/j.scitotenv.2017.11.097
3. **Lenn, J.**, Neil, J., Donahue, C., Demock, K., Tibbetts, C.V., Cote-Sierra, J., Smith, S.H., Rubenstein, D., Therrien, J.-P., Pendergrast, S., Killough, J., Brown, M.B., and **Williams, A.C.** "RNA aptamer delivery through intact human skin", J. Invest. Dermatol., 2018, 138, 282-290. DOI: 10.1016/j.jid.2017.07.851.
4. Kabova, E.A., Cole, J.C., Korb, O., Williams, A.C. and **Shankland, K.** "Improved crystal structure solution from powder diffraction data by the use of conformational information". J. Appl. Cryst., 2017, 50: 1421-1427. DOI: 10.1107/S1600576717012596
5. Kabova, E.A., Cole, J.C., Korb, O., Lopez-Ibanez, M., Williams, A.C. and **Shankland, K.** "Improved performance of crystal structure solution from powder diffraction data through parameter tuning of a simulated annealing algorithm". J. Appl. Cryst., 2017, 50: 1411–1420. DOI: 10.1107/S1600576717012602
6. Arezki, N.R., **Williams, A.C.**, Cobb, A.J.A. and Brown, M.B. "Design, synthesis and characterisation of linear unnatural amino acids for skin moisturisation." Int. J. Cosmet. Sci., 2016, 39: 72–82. DOI: 10.1111/ics.12351
7. Mun, E.A., Williams, A.C. and **Khutoryanskiy, V.V.**, "Adhesion of thiolated silica nanoparticles to urinary bladder mucosa: Effects of PEGylation, thiol content and particle size", Int. J. Pharm., 2016, 512: 32-38. DOI: 10.1016/j.ijpharm.2016.08.026
8. Mansfield, E.D.H, de la Rosa, V.R., Kowalczyk, R.M., Grillo, I, Hoogenboom, R., Sillence, K., Hole, P., Williams, A.C. and **Khutoryanskiy, V.V.**, "Side chain variations radically alter the diffusion of poly(2-alkyl-2-oxazoline)s functionalised nanoparticles through a mucosal barrier". Biomaterials Science, 2016, 4, 1318-1327. DOI: 10.1039/c6bm00375c.
9. Spillman, M.J., **Shankland, K.**, Williams, A.C. and Cole, J.C. "CDASH: a cloud-enabled program for structure solution from powder diffraction data". J. Appl. Cryst., 2015, 48, 2222–2229. DOI: 10.1107/S160057671500010X

10. Mansfield, E.D.H, Sillence, K., Hole, P., Williams, A.C. and **Khutoryanskiy, V.V.**, "POZylation: a new approach to enhance nanoparticle diffusion through mucosal barriers". *Nanoscale*, 2015, 7, 13671-13679. DOI: 10.1039/C5NR03178H
11. **Ng, K.W.**, Lau, W.M. and Williams, A.C., "Towards pain-free diagnosis of skin diseases through multiplexed microneedles: biomarker extraction and detection using a highly sensitive blotting method". *Drug Delivery and Translational Research*, 2015, 5, 387-396. DOI: 10.1007/s13346-015-0231-5
12. Bizley, S.C., Williams, A.C. and **Khutoryanskiy, V.V.** "Thermodynamic and kinetic properties of interpolymer complexes assessed by isothermal titration calorimetry and surface plasmon resonance". *Soft Matter*, 2014, 10, 8254-8260. DOI: 10.1039/c4sm01138d
13. Mun, E.A., Morrison, P.W.J., Williams, A.C. and **Khutoryanskiy, V.V.**, "On the barrier properties of the cornea: a microscopy study of the penetration of fluorescently-labelled nanoparticles, polymers and sodium fluorescein", *Mol. Pharm.*, 2014, 11 (10), 3556-3564. DOI: 10.1021/mp500332m
14. Mun, E.A., Hannell, C., Rogers, S.E., Hole, P., Williams, A.C. and **Khutoryanskiy, V.V.** "On the role of specific interactions in the diffusion of nanoparticles in aqueous polymer solutions", *Langmuir*, 2014, 30, 308-317. DOI: 10.1021/la4029035
15. Aravindan, L, Bicknell, K.A., Brooks, G., **Khutoryanskiy, V.V.** and **Williams A.C.**, "A comparison of thiolated and disulphide-crosslinked polyethylenimine for nonviral gene delivery", *Macromol. Biosci.*, 2013, 13, 1163-1173. DOI: 10.1002/mabi.201300103
16. Majumder, M., Buckton, G., Rawlinson-Malone, C., Williams, A.C., Spillman, M.J., Pidock, E., **Shankland, K.** "Application of hydrogen-bond propensity calculations to an indomethacin-nicotinamide (1:1) co-crystal". *Cryst. Eng. Comm.*, 2013, 15, 4041-4044. DOI: 10.1039/c3ce40367j
17. **Williams A.C.**, "Brian Barry; Innovative Contributions to Transdermal and Topical Drug Delivery". In Special Issue "Developments in Skin Delivery: To Scheuplein and Beyond", *Skin Pharmacology and Physiology*, 2013, 26, 234-242. DOI: 10.1159/000351946.
18. Arif, I.S., Hooper, C.I., Greco, F., **Williams, A.C.**, **Boateng, S.Y.** "Increasing doxorubicin activity against breast cancer cells using PPAR γ -ligands and by exploiting circadian rhythms", *British Journal of Pharmacology*, 2013, 169, 1178-1188. DOI: 10.1111/bhp.12202.
19. Niemczyk, A.I., **Williams, A.C.**, Rawlinson, C.F., Hayes, W., Greenland, B.W., Chappell, D., Khutoryanskaya, O. "Novel polyvinylpyrrolidones to improve delivery of poorly-water soluble drugs; from design to synthesis and evaluation", *Mol. Pharm.*, 2012, 9, 2237-2247. DOI: 10.1021/mp300079x.
20. Sogias, I.A., Williams, A.C., **Khutoryanskiy, V.V.** "Chitosan-based mucoadhesive tablets for oral delivery of ibuprofen". *Int. J. Pharm.*, 2012, 436, 602-610. DOI: 10.1016/j.ijpharm.2012.07.007

21. Bizley, S.C., Williams, A.C., Kemp, F., **Khutoryanskiy, V.V.** "Optimizing layer-by-layer deposition of interpolymer complexes on solid substrates using Biacore". *Soft Matter*, 2012, 8, 6782-6787. DOI: 10.1039/C2SM25652E
22. Rizi, K., Green, R.J., Donaldson, M. **Williams, A.C.**, "Using pH abnormalities in diseased skin to trigger and target topical therapy", *Pharm. Res.*, 2011, 28, 2589-2598. DOI: 10.1007/s11095-011-0488-4
23. Majumder, M., Buckton, G., Rawlinson-Malone, C., Williams, A.C., Spillman, M.J., Shankland, N, **Shankland, K.** "A carbamazepine-indomethacin (1:1) cocrystal produced by milling", *Cryst. Eng. Comm.*, Nov. 2011, 13, 6327-6328. DOI: 10.1039/c1ce05650f
24. Rizi, K., Green, R.J., Khutoryanskaya, O., Donaldson, M. **Williams, A.C.**, "Mechanisms of burst release from polymeric microparticles", *J. Pharm. Pharmacol.*, 2011; 63, 1141-1155. DOI: 10.1111/j.2042-7158.2011.01322.x
25. Rizi, K., Green, R.J., Donaldson, M. **Williams, A.C.**, "Production of pH-responsive microparticles by spray drying: Investigation of experimental parameter effects on morphological and release properties", *J. Pharm. Sci.*, 2011, 100, 566-579. DOI: 10.1002/jps.22291
26. Ali, W., **Williams, A.C.**, and Rawlinson, C.F., "Stoichiometrically governed molecular interactions in drug:Poloxamer solid dispersions", *Int. J. Pharm.*, 2010, 391, 162-168. DOI: 10.1016/j.ijpharm.2010.03.014
27. Sogias, I.A., Khutoryanskiy, V.V. and **Williams, A.C.**, "Exploring the factors affecting the solubility of chitosan in water", *Macromol. Chem. Phys.*, 2010, 211, 426-433. DOI: 10.1002/macp.200900385
28. Aravindan, L, Bicknell, K.A., Brooks, G., Khutoryanskiy, V.V. and **Williams AC.**, "Effect of acyl chain length on transfection efficiency and toxicity of polyethylenimine", *Int. J. Pharm.*, 2009, 378, 201-210. DOI: 10.1016/j.ijpharm.2009.05.052
29. Sogias, I.A., **Williams, A.C.** and Khutoryanskiy, V.V., "Why is chitosan mucosadhesive?", *Biomacromolecules*, 2008, 9 (7), 1837-1842.
30. Khutoryanskaya, O.V., Williams, A.C. and **Khutoryanskiy, V.V.**, "pH-Mediated interactions between poly(acrylic acid) and methylcellulose in the formation of ultrathin multilayered hydrogels and spherical nanoparticles", *Macromolecules*, 2007, 40 (21), 7707-7713.
31. Rawlinson, C.F., **Williams, A.C.**, Timmins, P.T. and Grimsey, I., "Polymer-mediated disruption of drug crystallinity", *Int. J. Pharm.*, 2007, 336, 42-48.
32. DeMatos, L.L., **Williams, A.C.**, Booth, S.W., Petts C.R. and Blagden, N. "Solvent influences on metastable polymorph lifetimes: Real-time interconversions using energy dispersive X-ray diffractometry", *J. Pharm. Sci.*, 2007, 96, 1069-1078.
33. El Maghraby, G.M.M., Williams, A.C. and **Barry, B.W.** "Can drug-bearing liposomes penetrate intact skin?" *J. Pharm. Pharmacol.*, 2006, 58, 415-429.

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