Publications

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2025

Harms, C., **Nash, A**., et al. The collagen substrate changes matrix metalloprotease-1 dynamics and ligand binding affinity – bioRxiv 2025.02 08. 637235.
Under review with Biophysical Journal

2024

Harlow, C. E., **Nash, A**., et al. GWAS of Extended Prescription Analgesic Use Identifies Novel Genetic Loci in Chronic Pain - medRxiv 2024.12.
Second review after reply to Reviewers. Nature Communications

2022

Kamboj, S., Harms, C., Wright, D., **Nash, A.**, et al. Identification of allosteric fingerprints of alpha-synuclein aggregates in matrix metalloprotease-1 and substrate-specific virtual screening with single molecule insights. 2022. Scientific Reports 12 (1), 5764.

2021

Nash, A., et al. Lysine-arginine advanced glycation end-product cross-links and the effect on collagen structure: A molecular dynamics study. 2021. Proteins: Structure, Function, and Bioinformatics 89 (5), 521-530.

Kamboj, S., Harms, C., Wright, D., **Nash, A.**, et al. Quantification of allosteric communications in matrix metalloprotease-1 on alpha-synuclein aggregates and substrate-dependent virtual screening. 2021. BioRxiv.

Nash, A., et al. Rdrugtrajectory: An R Package for the Analysis of Drug Prescriptions in Electronic Health Care Records. 2021. BioRxiv.

2020

Nash, A., et al. Concurrent comorbidities substantially alter long-term health behaviours and outcomes of headache patients. 2020. MedRxiv.

Nash, A., et al. Extraction of CPRD additional clinical data using R. 2020. F1000Research 9 (1124), 1124.

Kumar, L., **Nash, A.**, et al. Allosteric communications between domains modulate the activity of matrix metalloprotease-1. 2020. Biophysical Journal 119 (2), 360-374

Pokhilko, A., **Nash, A**., et al. Common transcriptional signatures of neuropathic pain. 2020. Pain 161 (7), 1542-1554.

Noh, S. Y., **Nash, A**., et al. The aggregation of striped nanoparticles in mixed phospholipid bilayers. 2020. Nanoscale 12 (8), 4868-4881.

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Nash, A., et al. Glucosepane is associated with changes to structural and physical properties of collagen fibrils. 2019. Matrix Biology Plus 4 (100013).

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Shrestha, R., Khatiwada, R., **Nash, A.** A molecular dynamics study in structural dynamics of a V717I substitution in the Amyloid precursor. 2019. Proceedings of the first international conference on advances in nanomaterials and devices for energy and environment.

Nash, A., et al. A P system model of swarming and aggregation in a Myxobacterial colony. 2019. Journal of Membrane Computing, 1-9.

Collier, T. A., **Nash, A**., et al. Relative orientation of collagen molecules within a fibril: a homology model for homo sapiens type I collagen. 2019. Journal of Biomolecular Structure and Dynamics 37 (2), 537-549.

2018

Richards, L., **Nash, A**., et al. A Molecular Dynamics Study of Plasticiser Migration in Nitrocellulose Binders. 2018. New Journal of Chemistry 42, 17420-17428.

Nash, A., et al. MARDy: Mycology Antifungal Resistance Database. 2018. Bioinformatics 34 (18), 3233-3234.

Nash, A., et al. Headache and type 2 diabetes association: a US national ambulatory case-control study. 2018. BioRxiv.

Nash, A., et al. Simulations of CYP51A from Aspergillus fumigatus in a model bilayer provide insights into triazole drug resistance. 2018. Medical Mycology 56 (3), 361-373.

Collier, T. A., **Nash, A**., et al. Effect on the mechanical properties of type I collagen of intra-molecular lysine-arginine derived advanced glycation end-product cross-linking. 2018. Journal of Biomechanics 67, 55-61.

Farrer, R. A., **Nash, A**., et al. Genome sequencing reveals infection mechanisms for two amphibian-infecting chytrid species. 2018. Medical Mycology 56 (suppl. 2), S7-S7.

Richards, L. A., **Nash, A**., et al. Modelling water diffusion in plasticizers: development and optimisation of a force field for 2,4-dinitroethylbenzene and 2,4,6-trinitroethylbenzene. 2018. RSC Advances 8 (11), 5728-5739.

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Ahmed, T., **Nash, A**., et al. Combining nano-physical and computational investigations to understand the nature of “ageing” in dermal collagen. 2017. International Journal of Nanomedicine 12, 3303-3314.

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Collier, T. A., **Nash, A**., et al. A comparison of preferential sites for glucosepane and DOGDIC formation in fibrillar type I collagen - an all-atom molecular dynamics study. 2016. Spring Meeting of the British-Society-for-Matrix-Biology (BSMB) on Grey Area-Age and the Extracellular Matrix.

Collier, T. A., **Nash, A**., et al. Intra-molecular Lysine-Arginine derived Advanced Glycation End-product cross-linking in Type I collagen: A molecular dynamics simulation study. 2016. Biophysical Chemistry 218, 42-46.

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2013

Hall, V., **Nash, A**., et al. Elucidating protein secondary structure with circular dichroism and a neural network. 2013. Journal of Computational Chemistry 34 (32), 2774-2786.

Thake, T. H. F., Webb, J. R., **Nash, A**., et al. Permeation of polystyrene nanoparticles across model lipid bilayer membranes. 2013. Soft Matter 9 (43), 10265-10274.

2012

Beevers, A. J., **Nash, A**., et al. Effects of the Oncogenic V664E Mutation on the Membrane Insertion, Structure, and Sequence-Dependent Interactions of the Neu Transmembrane Domains in Micelles. 2012. Biochemistry 51 (12), 2558-2568.

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