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Acuitas' CSO Co-Authors Article in *NPJ Vaccines* with Johns Hopkins School of Public Health Scientists & the University of Pennsylvania

Vancouver, B.C. – Acuitas' Chief Scientific Officer, Dr. Ying Tam, collaborated with scientists from Johns Hopkins School of Public Health and Dr. Drew Weissman from the University of Pennsylvania on a novel mRNA lipid nanoparticle (LNP) vaccine that confers superior protection against *Plasmodium falciparum*, a protozoan parasite that causes malaria in humans.

In response to a resurgence in malaria the WHO approved two *P, falciparum* circumsporozoite protein (CSP)-targeting vaccines, RTS,S and R21. Unfortunately, these remain limited in availability and provide suboptimal protection. Leveraging the success of mRNA-LNP vaccines against COVID-19, in the work described here, the scientists developed a novel mRNA vaccine comprised of LNP encapsulating a mRNA encoding a chemokine MIP3α and CSP fusion protein to target immature dendritic cells (iDC). Mice immunized with MIP3α-CSP mRNA-LNP exhibited stronger multifunctional CD4 + T cell responses and higher anti-NANP6 antibody titers than a LNP vaccine encapsulating conventional CSP mRNA as well as enhanced protection against liver infection following challenge with *P. berghei* PfCSP transgenic sporozoites. This study underscores iDC targeting as a promising strategy to enhance malaria vaccine efficacy. (*NPJ Vaccines* 2025)

Please click here to read the publication.

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