

Detergent-Specific Membrane Protein Crystallization Screens

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A suite of reagents has been developed for three-dimensional crystallization of integral membranes present in solution as protein-detergent complexes (PDCs). The compositions of these reagents have been determined in part by proximity to the phase boundaries (lower consolute boundaries) of the detergents present in the

PDCs. The acquisition of some of the requisite phase-boundary data and the preliminary design of several of the detergent-specific screens was supported by a NASA contract. At the time of expiration of the contract, a partial set of preliminary screens had been developed. This work has since been extended under non-NASA sponsorship,

leading to near completion of a set of 20 to 30 different and unique detergent-specific 96-condition screens.

This work was done by Michael Wiener of the University of Virginia for Marshall Space Flight Center. For further information, contact Sammy Nabors, MSFC Commercialization Assistance Lead, at sammy.a.nabors@nasa.gov. Refer to MFS-32436-1.