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2015

ANNUAL MEETING OF:
American Association of Anatomists (AAA)
The American Physiological Society (APS)
American Society for Biochemistry and Molecular Biology (ASBMB)
American Society for Investigative Pathology (ASIP)
American Society for Nutrition (ASN)
American Society for Pharmacology and Experimental Therapeutics (ASPET)
Liposomes are clearly established as an important drug delivery system. Many liposomal drugs have been approved by the FDA as these are biocompatible, non-toxic and may be formulated in small sizes. Long circulating times and enhanced permeability allows improved retention and bio-distribution coupled with a higher therapeutic index.

Drug efficiency improves with higher intraliposomal drug concentration, which is readily achieved using the superior characteristics of liposomes having trans-membrane ion gradients. These ion gradients drive highly efficient drug loading of liposomes to reach intraliposomal drug concentrations in the range of hundreds of mM, much higher than the drug concentration in the extraliposomal medium. Many times, drug loading efficiency is over 90% drug encapsulation when utilizing a trans-membrane ion gradient. This is critical when loading nano-liposomes due to their small encapsulated volume.

The remote loading approach is especially applicable to drugs which are amphiphatic weak acids or bases. Many examples of its use can be found in the list of references below. Doxil® is an excellent example of a successful liposomal nano-drug product based on the remote loading technique.

Use Avanti’s new Captisome™ to achieve improved drug delivery in your trials.