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May 21st, 2026

Edition 7

In this edition of Spheryx Spotlight:

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xSight Determines Your Particle's Morphology using Total Holographic Characterization

A particle's hologram encodes the particle's shape or morphology. The symmetry of the hologram reflects the symmetry of the of the particle. A spherical particle like a bead or an emulsion droplet or an air bubble gives rise to a circularly symmetric hologram. The hologram of a sphere-shaped particle resembles a bullseye, with many concentric circles. You can see the hologram of a spherical particle in the animation, color-coded blue.

In contrast, the hologram of a rod-like particle, such as a nanowire or a free fatty acid

aggregate, does not have circular symmetry, but instead has two axes of symmetry, just like a rod. In the animation, the hologram of the rod-shaped particle is color-coded yellow.

Finally, some particles have a complex shape that are not symmetric, such as many protein aggregates, and their holograms do not have an axis of symmetry. The hologram of an irregularly shaped particle is color coded orange in the animation.



If you would like to learn more about how the holograms of your particles can tell you the morphology of your particles contact us at info@spheryx.solutions.

Groundbreaking AbbVie Article with New Insights about AAV's using Spheryx's xSight

Congratulations to our customers at AbbVie on their new publication: "Investigating adeno-associated virus stabilization at the air-water interface through competitive adsorption", by Julie Garcia Gonzalez-Calero, Harri Rahn, Wu Kan, Josepha Rörig, Fabian Seebacher, Nikolai Hentze, Markus Hollmann, Dirk Grimm, and

Chen Zhou.

This work highlights the importance of surfactant selection for AAV formulations, using Spheryx's xSight with Total Holographic Characterization (THC), to monitor sub-visible particles (SVP). AAV-9 and AAV-PHP.eB were studied with Polysorbate 20, Polysorbate 80, Polxamer 188 and Kolliphor HS15 surfactants. The findings suggest that greater P 188 concentration not only offers protection by saturating the air-water interface and direct binding to the capsid, but may also form aggregate structures in presence of AAVs that further impede capsid adsorption and aggregation.

Spheryx is delighted that xSight's sensitivity, coupled with the ability to determine size, composition, shape and concentration in the size range of 0.5-10 μm was valuable in conducting these ground-breaking studies at AbbVie.

If you are interested to learn more, the article can be found below:

Journal of Pharmaceutical Sciences

PHARMACEUTICS, DRUG DELIVERY AND PHARMACEUTICAL TECHNOLOGY · Articles in Press, 104304, April 30, 2026

Investigating adeno-associated virus stabilization at the air-water interface through competitive adsorption

Julie Garcia Gonzalez-Calero¹ · Harri Rahn¹ · Kan Wu³ · Josepha Roerig¹ · Fabian Seebacher¹ · Nikolai Hentze¹ · Markus Hollmann¹ · Dirk Grimm² · Chen Zhou³ · Show less

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Highlights

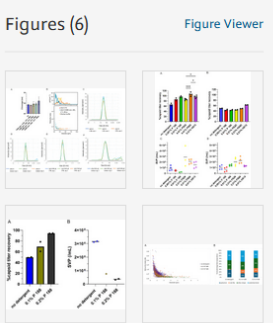
- The major degradation mechanism for AAVs at the air-water interface is capsid loss through adsorption.
- AAV-PHP.eB exhibited greater hydrophobicity and surface activity at the air-water interface than AAV-9.
- AAV-PHP.eB demonstrated higher adsorption at the air-water interface compared to AAV-9, necessitating a concentration of P 188 that was ten times greater to effectively prevent adsorption.

Abstract

This study investigated the stabilization of adeno-associated viruses (AAVs) at the air-water interface (AWI), focusing on the interplay between surfactant and capsid adsorption during agitation stress. AAV-9 and its engineered variant, AAV-PHP.eB—known for enhanced central nervous system tropism—were subjected to orbital shaking to simulate interfacial stress encountered during manufacturing and transportation. The impact of surfactant type and concentration was systematically evaluated using

Figures (6)

Figure Viewer



[Read the Article Here](#)

Schedule a Virtual xSight Demo today!

See xSight perform during a virtual demo with Spheryx. Our Spheryx Team will run samples and walk you through all of the capabilities of xSight for sub-visible particle characterization for particles from 0.5 - 10 μm . Experience xSight's user-friendly interface and see results on samples as they are being measured.

If you are interested to learn more about xSight, THC, or its applications, contact us: info@spheryx.solutions



Upcoming Events

Spheryx will be attending several conferences this summer!

APV Seminar for Drug-Device Combination Products for Parenteral Use June 9 - 10 in Basel, Switzerland. Spheryx CEO Laura Philips will be presenting a poster titled "Revealing Subvisible Contaminants in the Presence of Silicone Oil for Process Analytical Control".

2026 Colorado Protein Stability Conference August 3 - 6 in Breckenridge, Colorado. Spheryx is a sponsor. CEO Laura Philips and Director of Products and Applications Juliana Lumer will be hosting a booth, where we will be continuously running our xSight particle characterization instrument with xStream, our automated

robotic sample loader. We hope to see you there!

Bioprocessing Summit August 10 - 13 in Boston, Massachusetts. Spheryx CEO Laura Philips will be presenting a poster.

International Conference on Nanobubbles, Nanodroplets, and their Applications August 19 - 22 in Newark, New Jersey. Spheryx CEO Laura Philips will be giving a talk titled "Measurement of Nanobubbles in Heterogeneous Colloidal Mixtures with Total Holographic Characterization".

2026 Eastern Analytical Symposium November 16 - 18 in Plainsboro, New Jersey. Spheryx CEO Laura Philips has been invited to give a talk titled "Detecting, Identifying and Counting Sub-visible Particles in Heterogeneous Mixtures with Total Holographic Characterization".

Earlier this year, Spheryx CEO Laura Philips participated in the BioPharma Webinar "Addressing Subvisible Silicone Oil Droplets-Industry Challenges, Analytical Strategies, and USP's Rationale for a New General Informational Chapter" with USP's Desmond Hunt and Yokogawa Fluid Imaging Technologies' Tyler Carter including a live Q&A session. The webinar was recorded and is still available, click the link below to watch the free recording!

[Watch the Webinar Here](#)

Upcoming Appearances:



**APV Drug-Device Combination
Products for Parenteral Use,
Novartis Campus,
Basel, Switzerland, June 9th - 10th**

**COLORADO PROTEIN
STABILITY CONFERENCE**

**Colorado Protein Stability Conference,
Beaver Run Resort and Conference Center,
Breckenridge, CO, August 3rd - 6th**

**BIOPROCESSING
SUMMIT**

**Bioprocessing Summit 2026,
Omni Boston Hotel at the Seaport,
Boston, MA, August 10th - 13th**

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About Spheryx, Inc.

Spheryx, Inc. is a privately held analytical services and instruments company providing Total Holographic Characterization® of colloidal materials. Spheryx's proprietary technology uses holographic video microscopy to characterize each particle in colloidal dispersions and multi-component colloidal mixtures, offering unprecedented insights into these materials' characteristics. Applications include R&D, quality assurance and manufacturing process control across a broad spectrum of industries, where characterization of colloids can enhance innovation, improve safety and reduce costs. For more information: <https://www.spheryx.solutions/>

Note: This news release contains forward-looking statements regarding future events. These statements are just predictions and are subject to risks and uncertainties that could cause the actual events or result to differ materially.

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