POLAREAN

Xenon MRI Advances as a Cardiopulmonary Biomarker Platform at ATS 2026

20+ presentations highlight expanding role in pediatric lung disease, treatment-response assessment, and pharma trial endpoints

DURHAM, NC and LONDON, May 7, 2026 (GLOBE NEWSWIRE) – Polarean, a commercial-stage medical imaging company advancing functional MRI of the lungs, will be featured at the **American Thoracic Society's (ATS) 2026 Respiratory Innovation Summit (RIS)**, taking place May 15–16 in Orlando, Florida. Polarean will also participate in the **ATS 2026 International Conference** from May 17–20, engaging with leaders across pulmonary medicine, research, and drug development.

The Company's presence across both RIS and ATS reflects its expanding role at the intersection of clinical research and pharmaceutical innovation, as Xenon MRI continues to evolve into a practical cardiopulmonary biomarker platform for clinical trials and therapeutic development.

Polarean has been selected as an oral showcase company at RIS, where Chief Business Officer Alex Dusek will present on **Accelerating Cardiopulmonary Drug Development with Xenon MRI.** The presentation will highlight Xenon MRI as a quantitative biomarker to visualize alveolar diffusion and microvascular hemodynamics, with applications in clinical trial design, including trial enrichment, endpoint development, and earlier assessment of treatment response.

Across the ATS 2026 program, Xenon MRI will be featured in more than 20 presentations, reflecting continued scientific and clinical momentum. This year's body of work demonstrates a clear shift toward applications in cardiopulmonary physiology, longitudinal monitoring, and treatment-response assessment, alongside a notable expansion in pediatric and early-life lung disease research.

Of note, Bastiaan Driehuys, Polarean's Chief Scientific Officer, has two different prominent oral presentations:

1. **Beyond the Right Heart Cath: 129Xe MRI for Noninvasive, Multidimensional Monitoring in PH** as part of the mid-day symposium, "NOVEL TOOLS FOR DIAGNOSIS AND LONGITUDINAL MONITORING OF PULMONARY HYPERTENSION" on Wednesday at 12:15 pm

2. **Establishing Standardized Mapping of 129Xe Frequency Shift Heterogeneity in Capillary Red Blood Cells** as part of the mini-symposium, "SEEING THE INVISIBLE: AI, ADVANCED IMAGING, AND PRECISION PHENOTYPING IN PULMONARY VASCULAR DISEASE" on Tuesday at 10:15 am

Christopher von Jako, PhD, CEO of Polarean, said: "We are encouraged by the continued advancement of Xenon MRI across ATS, particularly in the context of cardiopulmonary physiology and its expanding application in pediatric populations. This year's presentations reflect a meaningful progression toward applications in treatment-response assessment and clinical trial development. As the field moves toward more precise, physiology-driven approaches, we believe Xenon MRI offers a unique capability to directly measure regional lung function and provide insights not accessible through conventional methods."

Polarean representatives will be on-site throughout RIS and the ATS International Conference and are available to meet with clinicians, researchers, and industry partners to discuss ongoing collaborations and future applications of Xenon MRI.

See the listing below for details on presentation titles, abstract numbers, session times, and locations.

About Polarean

Polarean is a commercial-stage medical imaging technology company advancing functional MRI of the lungs by enabling direct visualization of lung function using MRI. The Company is bringing the power and safety of MRI to the respiratory and cardiopulmonary healthcare community, addressing a critical need for modern tools to assess regional lung function and gas exchange, including regions of the lung that have historically remained a "silent zone."

Polarean is a leader in hyperpolarization science and has developed the first and only FDA-approved hyperpolarized Xenon-129 MRI inhaled contrast agent, XENOVIEW®. Through its integrated Xenon MRI platform, the Company provides a noninvasive, radiation-free approach to assessing lung ventilation and advanced cardiopulmonary physiology that enables clinical care, academic research, and pharmaceutical drug development, and seeks to optimize lung health and prevent avoidable loss by illuminating hidden disease across high-burden conditions including airway disease, interstitial lung disease, cardiopulmonary disorders, lung cancer, and unexplained dyspnea, addressing a global unmet medical need affecting more than 500 million patients worldwide. Founded in 2012, Polarean has offices in Durham, North Carolina, and London, United Kingdom. For more information, please visit www.polarean.com.

XENOVIEW IMPORTANT SAFETY INFORMATION

Indication
XENOVIEW®, prepared from the Xenon Xe 129 Gas Blend, is a hyperpolarized contrast agent indicated for use with magnetic resonance imaging (MRI) for evaluation of lung ventilation in adults and pediatric patients aged 6 years and older.

Limitations of Use
XENOVIEW has not been evaluated for use with lung perfusion imaging.

CONTRAINDICATIONS
None.

WARNINGS AND PRECAUTIONS
Risk of Decreased Image Quality from Supplemental Oxygen: Supplemental oxygen administered simultaneously with XENOVIEW inhalation can cause degradation of image quality. For patients on supplemental oxygen, withhold oxygen inhalation for two breaths prior to XENOVIEW inhalation, and resume oxygen inhalation immediately following the imaging breath hold.
Risk of Transient Hypoxia: Inhalation of an anoxic gas such as XENOVIEW may cause transient hypoxemia in susceptible patients. Monitor all patients for oxygen saturation and symptoms of hypoxemia and treat as clinically indicated.

ADVERSE REACTIONS
Adverse Reactions in Adult Patients: The adverse reactions (> one patient) in efficacy trials were oropharyngeal pain, headache, and dizziness.
Adverse Reactions in Pediatric Patients: In published literature in pediatric patients aged 6 to 18 years, the following transient adverse reactions were reported: blood oxygen desaturation, heart rate elevation, numbness, tingling, dizziness, and euphoria. In at least one published study of pediatric patients aged 6 to 18 years, transient decrease in SpO2% and transient increase in heart rate were reported following hyperpolarized xenon Xe 129 administration.

Please see full prescribing information at www.XENOVIEW.net.

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2026 ATS Abstract Title	Presentation Time	Format	Session Location	Clinical Focus Area
Elevated Membrane Uptake Seen on 129Xe MRI Reduces Effective KCO	May 19, 11:30 AM–1:15 PM	Poster Board #P351	Area B, Halls WA2–WA3	Cardiopulmonary
Identifying Long-term Cardiopulmonary Phenotypes in Preterm Children via Xenon MRI	May 18, 2:15–2:27 PM	Oral Presentation	W304 A-D	Cardiopulmonary / Pediatric
Establishing Standardized Mapping of 129Xe Frequency Shift Heterogeneity in Capillary Red Blood Cells	May 19, 10:15–10:27 AM	Oral Presentation	W224 AB/EF	Cardiopulmonary / PH
Beyond the Right Heart Cath: Xenon MRI for PH Monitoring	May 20, 12:15–12:30 PM	Oral Presentation	Mid-day Symposium	Cardiopulmonary / PH
Long-term Outcomes in Post-COVID Patients Using Xenon MRI	May 19, 11:30 AM–1:15 PM	Poster Board #P428	Area C, Halls WA2–WA3	Cardiopulmonary / Post-COVID
MRI in Evaluation of Pediatric Lungs: Systematic Review	May 19, 11:30 AM–1:15 PM	Poster Board #P367	Area B, Halls WA2–WA3	Pediatric
Ventilation Impairment and Quality of Life in Preterm Children	May 19, 2:15–4:15 PM	Poster Board #617	W303	Pediatric
Characterization of Lung Microstructural Injury in Bronchopulmonary Dysplasia Using 129Xe MRI	May 17, 10:39–10:51 AM	Oral Presentation	W204 (Level II, OCCC West Concourse)	Pediatric / BPD
Endobronchial Valve Case in Pediatric Air Leak	May 19, 11:30 AM–1:15 PM	Poster Board #P1921	Area L	Pediatric / Case Study
Hyperpolarized 129Xe MRI Detects Pulmonary Involvement in Inborn Errors of Immunity	May 19, 11:30 AM–1:15 PM	Poster Board #P368	Area B, Halls WA2–WA3	Pediatric / Rare

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Functional Measures in Inborn Errors of Immunity	May 19, 11:30 AM–1:15 PM	Poster Board #P369	Area B	Pediatric / Rare
Periostin and Airway Fibroblasts in Obesity-associated Asthma	May 20, 8:15–10:15 AM	Poster Board #205	W205	Asthma
Oxidant Stress and Ventilation Impairment in Obesity-related Asthma	May 18, 9:15–11:15 AM	Poster Board #504	West F3	Asthma
CT Mucus Scores and Lung Function in Cystic Fibrosis	May 20, 12:00–12:12 PM	Oral Presentation	W307	Cystic Fibrosis
Ventilation Defect Analysis in Cystic Fibrosis	May 19, 11:30 AM–1:15 PM	Poster Board #P373	Area B	Cystic Fibrosis
Ventilation Defect Percent as a Clinical Trial Endpoint	May 19, 2:15–4:15 PM	Poster Board #608	W303	COPD / Trial Endpoint
Functional Xenon Imaging in Pulmonary Sarcoidosis – Multi-center Cohort	May 17, 2:15–4:15 PM	Poster Board #515	West F3	ILD / Sarcoidosis
Ventilation Heterogeneity in Pulmonary Sarcoidosis	May 17, 11:30 AM–1:15 PM	Poster Board #P1984	Area L	ILD / Sarcoidosis
A First-in-human Study of Pulmonary Macrophage Transplantation Therapy of Hereditary Pulmonary Alveolar Proteinosis	May 18, 4:03–4:15 PM	Oral Presentation	W304 E-H (Level III, OCCC West Concourse)	Rare Lung Disease / PAP
Physiological Variability in Xe Gas Exchange Metrics Across Menstrual Cycle	May 19, 2:15–4:15 PM	Poster Board #613	W303	Healthy Cohort
Xenon MRI and Demographics in Lung Health Cohort	May 19, 2:15–4:15 PM	Poster Board #614	W303	Healthy Cohort
XeLHC: Lung Health Cohort Study	May 19, 2:15–4:15 PM	Poster Board #611	W303	Healthy Cohort
Repeatability of Fractional Ventilation Measurements	May 19, 11:30 AM–1:15 PM	Poster Board #P353	Area B	Methods / Validation
Illuminating Pulmonary Function on CT With Integrated 129Xe MRI Gas Exchange Maps	May 19, 2:15–4:15 PM	Poster Board #612	W303	Methods / Validation