

# AI-Powered qAAMP Biomarker Technology: Transforming Mucus Plug Diagnostics for Asthma and COPD Precision Medicine

Tech ID: 34575 / UC Case 2023-099-0

## TECHNOLOGY DESCRIPTION

UCSF inventors have developed the Quantitative Assessment of Airway Mucus Plug Pathology (qAAMP), a cutting-edge diagnostic technology that leverages deep learning algorithms to automate and quantify mucus plug burden and pathology in chronic respiratory diseases such as asthma and COPD. This innovation overcomes the limitations of traditional qualitative scoring by providing precise measurements of mucus plug volume, number, and location using multidetector row computed tomography (MDCT). Currently in advanced development, qAAMP enables large-scale analysis, improves clinical decision-making, and supports precision medicine by identifying patients who may benefit from muco-active treatments. With its ability to deliver comprehensive biomarkers and automated mucus plug mapping, this UCSF-developed technology is poised to revolutionize diagnostic tools in respiratory care, clinical trials, and precision medicine applications.

## PATENT STATUS

Patent Pending

## CONTACT

Kristin A. Agopian  
[kristin.agopian@ucsf.edu](mailto:kristin.agopian@ucsf.edu)  
tel: 415-340-2619.



## OTHER INFORMATION

### KEYWORDS

Chronic respiratory disease  
biomarkers, Asthma and  
COPD imaging solutions,  
Precision medicine for  
respiratory care, AI-powered  
lung disease diagnostics,  
Deep learning in respiratory  
diagnostics, qAAMP  
diagnostic technology,  
Multidetector computed  
tomography (MDCT)  
innovations

### CATEGORIZED AS

- ▶ **Medical**
  - ▶ Diagnostics
  - ▶ Disease: Respiratory and Pulmonary System
  - ▶ Imaging

▶ [Research Tools](#)

▶ [Bioinformatics](#)

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**ADDRESS**

**UCSF**

**Innovation Ventures**

600 16th St, Genentech Hall, S-272,  
San Francisco, CA 94158

**CONTACT**

Tel:

[innovation@ucsf.edu](mailto:innovation@ucsf.edu)

<https://innovation.ucsf.edu>

Fax:

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