

February 27, 2018



# CTS INSPIRATIONS

## CTS NEWS

### President's Letter

Dear colleagues and friends,

It is my distinct honor and pleasure to serve as CTS President in 2018. CTS has had a meaningful impact on my career. As a pulmonary fellow in training at UC San Diego, my mentors suggested CTS as a place to seek education, meaningful peer connections, and to advocate for our patients suffering from respiratory diseases in California. For me, the impact was immediate and the start of a long-term involvement with CTS. As Chair of the CTS Education Committee from 2015-2017, I discovered how best to provide educational outreach to health care professionals that was meaningful and valuable, yet more approachable and intimate than the larger national conferences. This, at its core, is what CTS is about – a community of California professionals working together to better our patients' lives. I am excited about the year ahead. We will certainly face challenges, such as fiscal responsibility and advocacy challenges at state and national levels, but with those challenges come many opportunities. My vision for the future of CTS includes enhancing our website to add value to membership, recruiting new members interested in advocacy, and expanding our strong and valuable educational outreach to health care professionals across California.



A handwritten signature in black ink, appearing to read "R. Morgan".

### **The Scourge of Air Pollution in the Central Valley of California: Why is progress elusive in this region?**

*Jose Joseph Vempilly, MBBS,MD,MRCP(UK)  
Professor of Clinical Medicine  
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Although California has been in the forefront of air pollution and climate change related research and innovation, its Central Valley, with an estimated population of 4 million, has been the epicenter of the worst air pollution indices for two decades. While PM10, CO, and sulfur dioxide concentrations have significantly

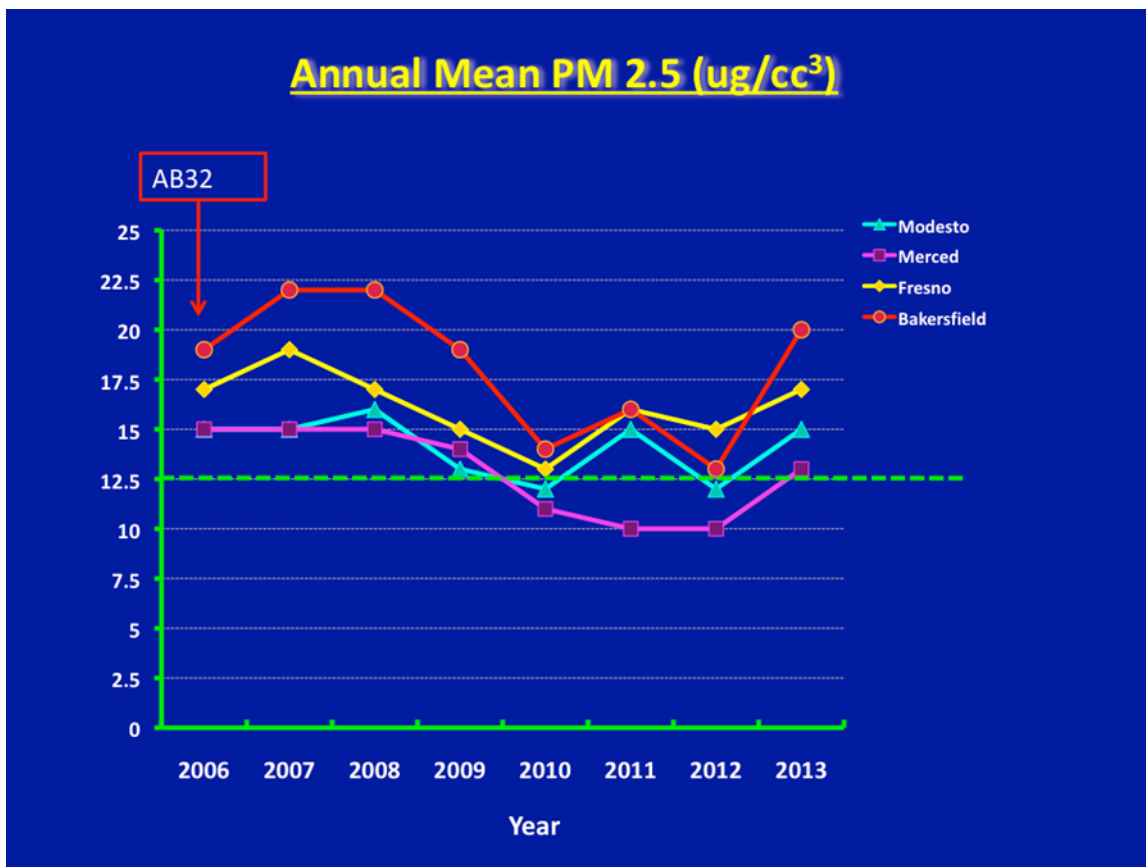


declined, the ambient PM2.5, and Ozone levels have been consistently well above the national standards set by the EPA. Legislative action taken by the California Air Board has improved air pollution conditions in Southern California, but all attempts to improve conditions in the Central Valley have only had a modest effect (Figure-1). The valley's topography, high summer temperatures, and subsidence inversion have all contributed to the lack of progress in containing the scourge of high annual PM2.5 and Ozone levels.

According to the American Lung Association air quality surveys conducted over the last decade, the cities of the Central Valley have been adjudged to have the highest annual PM2.5 and Ozone levels in the USA. The 2017 ALA report for 24-hour PM2.5 showed that Bakersfield, Visalia-Hanford, Fresno-Madera, and Modesto-Merced took the top four positions for worst air quality in the nation respectively. The American Thoracic Society has adopted much more stringent levels for annual and 24-hour PM2.5 based on adverse health outcomes. According to the ATS Marran report, none of the counties in the Central Valley meet either the long-term mean level of 11 ug/mm<sup>3</sup> or the short term level of 25 ug/mm<sup>3</sup>. The pollution data correlates roughly with the number of calls that physicians and pulmonologists in the Central Valley receive for exacerbation of symptoms of asthma and COPD during bad air days. In addition to frequent hospitalization and ER visits for those with airway disease, poor air quality has been attributed to affect labor productivity according to a recently published article in the January edition of Science 2018 (<http://science.sciencemag.org/content/359/6371/39.long>).

What factors besides recognized sources of pollution such as internal combustion engines and coal power plants might be contributing to the persistently elevated levels of air pollution in the Central Valley? Dr. Linguan Wang from North Carolina State University presented her data during last years APCC symposium here at UCSF Fresno, demonstrating the role of poultry farming in air pollution. Groundbreaking findings published by Maya Almaraz and associate from UC Davis in the January issue of Science Advances 2018, reveals the significant role of smog-forming nitrogen oxides (molecular abbreviation: NOx) released from the heavily-fertilized farmland in the Central Valley in producing the high air pollution. These researchers found that excessive fertilizer use was responsible for up to 41 percent of the NOx in the valley; a much higher contribution than previously estimated.

These new findings of agriculture-related NOx contributing significantly to air pollution levels, if confirmed by additional research, could provide important answers as to why air pollution in the Central Valley has been so difficult to improve and provide new opportunities for innovative solutions to mitigate the deleterious effects of air pollution on the health and well-being of all Central Valley residents.



**References:**

1. American lung association state of air reports from 2006 to 13
2. Kevin R Cromar et.al American thoracic Society and Marron Report. Am J Respir Crit Care Jan Med 2018.
3. Zivin JG and Neidell M. Air pollutions hidden impact. Science January 2018.
4. Zivin JG and Neidell M. The impact of pollution on worker productivity. Am Econ Rev. December 2012.
5. Maya Almaraz et.al. Agriculture is a major source of NOx polluion in California. Science Advances. Jan 2018.

**ANNOUNCEMENTS**

*Professionalism • Advocacy  
Commitment • Excellence*

**Save the date ! The California Society for Respiratory Care will celebrate 50 years of providing California's pulmonary clinicians with a premier annual conference. The meeting will be held in Monterey on May 13th through 15th, featuring world class speakers to provide an exceptional learning experience. In addition, enjoy networking with your peers, exploring the exhibit hall, and participating in special events to celebrate and enjoy Monterey. For additional information please click on the following link: <http://csrc.org/event-2710230>**

**REGISTRATION NOW OPEN!**

**May 17<sup>th</sup>, 2018**

NTM & Bronchiectasis Physician/Patient Conference  
La Jolla, CA



**UC San Diego**  
SCHOOL OF MEDICINE

*This activity has been approved for AMA PRA Category 1 Credit™*

**NTM**  
Non-tuberculous Mycobacteria  
NTM Info & Research, Inc.

**For more information or to register, click on the following link:**

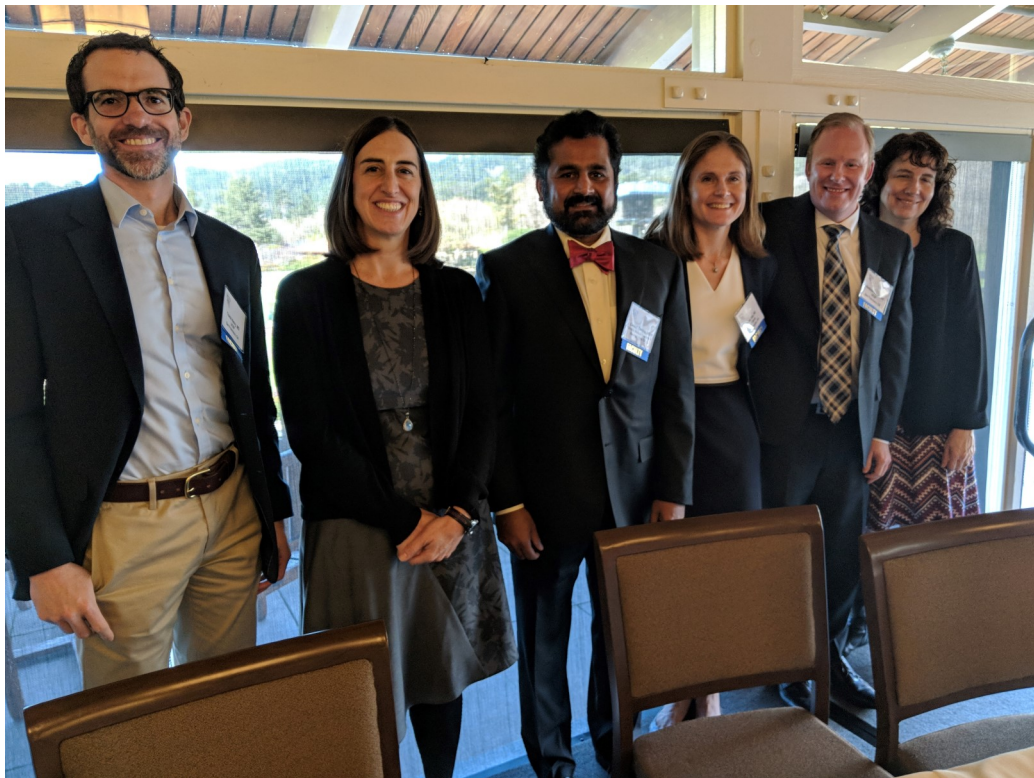
**<https://www.ntminfo.org/top-news/articles/current-news/item/723-2018-conference>**



# **CTS ANNUAL WINTER CONFERENCE 2018: Advancing the Science and Practice of Lung Cancer, Bronchiectasis, and Multidisciplinary Interstitial Lung Disease Care**

*From Left to Right:*

*Travis Henry, MD,  
Lorriana Leard, MD ,  
Ganesh Krishna, MD,  
Megan Daily, MD,  
Matthew Gubens, MD,  
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*From Left to Right:*

*Julian Choi, DO,  
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Abdul J. Zaid, MD,  
Laren Tan, MD*

## Southwestern Journal of Pulmonary and Critical Care Medicine

Volume 16, Issue 1							
Title (Click on title to open the manuscript, <b>CME in Bold</b> )	Journal Section	First Author	Year	Vol	Issue	Pages	Date Posted
<a href="#">Medical Image of the Week: Stomach Rupture</a>	Imaging	Raschke RA	2018	16	1	53-4	1/31/18
<a href="#">January 2018 Arizona Thoracic Society Notes</a>	Proceedings	Robbins RA	2018	16	1	51-2	1/28/18
<a href="#">Medical Image of the Week: Methemoglobinemia</a>	Imaging	Raschke RA	2018	16	1	49-50	1/24/18
<a href="#">Hospitals Plan to Start Their Own Generic Drug Company</a>	News	Robbins RA	2018	16	1	48	1/18/18
<a href="#">Medical Image of the Week: Pulmonary Artery Dilation</a>	Imaging	Ynosencio T	2018	16	1	46-7	1/17/18
<a href="#">Flu Season and Trehalose</a>	News	Robbins RA	2018	16	1	44-5	1/15/18
<a href="#">MedPAC Votes to Scrap MIPS</a>	News	Robbins RA	2018	16	1	42-3	1/13/18
<a href="#">Impact of Sleep Duration and Weekend Oversleep on Body Weight</a>	Sleep	Quan SF	2018	16	1	31-41	1/12/18
<a href="#">and Blood Pressure in Adolescents</a>							
<a href="#">CMS Announces New Payment Model</a>	News	Robbins RA	2018	16	1	29-30	1/11/18
<a href="#">Medical Image of the Week: Plastic Bronchitis</a>	Imaging	Natt B	2018	16	1	28	1/10/18
<b><a href="#">January 2018 Imaging Case of the Month</a></b>	<b>Imaging</b>	<b>Robbins RA</b>	<b>2018</b>	<b>16</b>	<b>1</b>	<b>16-27</b>	<b>1/4/18</b>
<a href="#">Varenicline (Chantix®) Associated with Increased Cardiovascular Events</a>	News	Robbins RA	2018	16	1	15	1/3/18
<a href="#">Medical Image of the Week: Pulmonary Alveolar Proteinosis</a>	Imaging	Natt B	2018	16	1	14	1/3/18
<b><a href="#">January 2018 Pulmonary Case of the Month</a></b>	<b>Pulmonary</b>	<b>Wesselius LJ</b>	<b>2018</b>	<b>16</b>	<b>1</b>	<b>8-13</b>	<b>1/2/18</b>
<b><a href="#">January 2018 Critical Care Case of the Month</a></b>	<b>Critical Care</b>	<b>Loftsgard T</b>	<b>2018</b>	<b>16</b>	<b>1</b>	<b>1-7</b>	<b>1/1/18</b>

**California Thoracic Society**

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**Connect with CTS at <https://calthoracic.org/>**

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