IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF OREGON

REACH COMMUNITY DEVELOPMENT et al., *Plaintiffs*, v. U.S. DEPARTMENT OF HOMELAND SECURITY et al., *Defendants*.	Case No. 3:25-cv-2257

DECLARATION OF RAMA B. RAO, M.D.

I, Rama B. Rao, declare as follows:

1. I am a licensed physician specializing in Emergency Medicine and Medical Toxicology.

2. I have been retained by counsel for Plaintiffs. I am making this declaration in support of Plaintiffs' Motion for a Preliminary Injunction. The facts and opinions set forth in this Declaration are true and of my own personal knowledge or are based on information typically relied upon by experts in my area. If called as a witness, I could and would testify competently under oath as to the facts and opinions set forth herein. I have been retained in my individual capacity and not as a representative of any hospital, employer, or other organization.

Background and Qualifications

3. I am a licensed physician in the state of New York, New Jersey and Florida and I am currently working as an Attending Physician for the Department of Emergency Medicine at New York-Presbyterian Hospital Weill Cornell.

4. I am fully trained and dually board certified by the American College of Emergency Medicine in both Emergency Medicine and Medical Toxicology.

5. I am associate professor at the Weill Cornell Medical College where I train medical students, residents, and fellows on various topics in emergency medicine, toxicology, pharmacology, as well as trauma informed care of survivors of sexual assault and interpersonal violence.

6. I am Chief of the Division of Medical Toxicology for my institution, where I started the first medical toxicology consultation service in 2008. I lead a team of board-certified medical toxicologists on bedside, phone and virtual consultations for patients exposed to chemicals, drug overdoses, medication errors, environmental and industrial toxins including liquids and gases, pediatric unintentional exposures to medications and toxins, and withdrawal syndromes. I also practice critical care toxicology where the exposure is life-threatening and provide treatment with antidotes or other life-saving interventions.

7. I am a graduate of the Icahn School of Medicine (previously the Mount Sinai School of Medicine) in New York. I received my clinical training in emergency medicine at the Albert Einstein School of Medicine/Jacobi Medical Center in the Bronx, New York. I further completed a fellowship in medical toxicology at New York University/Bellevue Hospital in New York (currently NYU Langone).

8. I have 33 years of experience caring for thousands of patients suffering from overdoses, withdrawal syndromes, traumatic physical and mental injuries, environmental or chemical exposures, and undifferentiated illnesses. As a medical toxicologist, I treat adults, pregnant and lactating women, infants and children.

9. I serve on my hospital's Formulary and Therapeutics Committee reviewing drug safety profiles.

10. I served on my institution's Environmental Safety Committee evaluating environmental hazards in the research workplace, including chemical, biological and inhalational exposure and dermal injuries.

11. I am a recognized Fellow of the American College of Medical Toxicology. Over the course of my career, I have been awarded my institution's inaugural Prize for Excellence in Emergency Medicine; my department's Save of the Month; my institution's Good Catch Recognition, NYP Recognition of Excellence, and Pharmacy Partner Award; and, at my prior employer, the Emergency Medicine Clinical Teacher of the Year. I was the recipient of the Off Service Rotation of the Year from the Department of Emergency Medicine of the Royal College of Physicians and Surgeons of Alberta Canada. During my residency I was awarded Chief Resident, and received an award for excellence in teaching medical students. In medical school I was awarded two recognitions for community service, and I was the first medical student to receive the Physician of the Year Award for nurse-physician collegiality.

12. I served as Chair of the Forensic Special Interest Section of the American College of Clinical Toxicology from 2016 through 2024.

13. I innovated and designed 3 credit graduate courses in Environmental Medicine and Public Health Emergencies for the NYU Masters in Global Public Health where I served on the Governance Board.

14. I have published peer-reviewed articles in medical journals such as the New England Journal of Medicine and the Annals of Emergency Medicine. I am the author of multiple peer reviewed publications, correspondence in the medical literature, meeting abstracts,

editorials and book chapters. I also was a guest for a podcast on sexual assault. A full list of my academic publications is attached to this declaration.

15. I have lectured regionally, nationally and internationally on various classes of pulmonary toxins including irritants, particulates, simple asphyxiants, carbon monoxide, cyanide and a variety of chemical and biological warfare agents.

16. I serve as a consultant to the New York City Poison Control Center and as an ad hoc consultant to the Office of Chief Medical Examiner for the City of New York.

17. I precepted seminars in biological weapons and seminars in mass casualty decontamination including serving as session leader for the NYU Advanced Science Seminar for the topics of Drugs of Abuse, Pharmacology, and Bioterrorism.

18. I contributed several chapters to the comprehensive toxicological textbook, Goldfrank's Toxicological Emergencies Nelson LS et al (eds) and am an editorial reviewer for the toxicological textbook Medical Toxicology - Occupational and Environmental Exposures. Metals and Metalloids: Clinical Assessment, Diagnostic Tests, and Therapeutics, Barceloux DG (ed) 2025. I am also an ad hoc reviewer for multiple emergency medicine, critical care, pharmacology and toxicology peer review journals.

19. I am the Medical Director of the Sexual Assault Forensic Examiners Program where I oversee care of survivors of sexual assault and I am a New York State Certified Sexual Assault Forensic Examiner since 2009.

20. I have expertise in interpersonal violence, screening and trauma informed care and in 2017 I was awarded city-wide recognition for my multi-disciplinary collaboration serving survivors of interpersonal and sexual violence.

21. I served as a member of the Institutional Review Board since 2015 and a Chair of the Institutional Review Board (IRB) from 2022 through 2025 completing over 700 reviews of clinical research. This board serves to ensure that any research proposed involving human subjects meets the federal criteria for the ethical conduct of research prior to initiation.

22. I have not served as an expert witness at trial or by deposition in the previous four years.

23. I am not receiving compensation for my work on this case.

24. This declaration is based on my clinical experience and academic expertise in the effects of chemicals and projectiles on the human body, more specifically pulmonary and mucosal irritants and their health impacts. My full CV is attached as Exhibit 35 and a list of publications is attached as Exhibit 36.

Materials Reviewed and Assumptions Provided

25. For purposes of this Declaration, Plaintiffs' counsel have asked me to assume the following facts:

- Law enforcement officers have been using crowd control agents on several dozen occasions over the past 4 months from a distance approximately 100 ft or less from Gray's Landing.

- The residents of Gray's Landing include a diverse population of people. Some have physical disabilities; some have underlying medical respiratory and cardiac conditions; some have post-traumatic stress disorder; at least one is pregnant; and, importantly, some are children.

26. I have not yet been able to analyze the specific agents used or any policies Defendants employ to mitigate harm, nor have I examined patients or reviewed their medical records.

27. Materials I reviewed included but are not limited to:

- Peer-reviewed medical publications;
- Maps of the streets and buildings around Gray's Landing, including maps showing Gray's Landing's courtyard area;
- Declarations prepared by Plaintiffs and included in filings related to this case;
- Videos taken by Plaintiffs and included in filings related to this case;
- The Complaint filed in this case;
- Material data safety sheets; and
- Various websites, including those of the Centers for Disease Control/National Institute for Occupational Safety and Health (CDC/NIOSH), Oregon Health Authority (OHA), Chemical Hazards Emergency Management (CHEMM), and the American Thoracic Society (ATS).

Scope

28. I have been asked to assess the short- and long-term physical health and psychological effects of repeated use of chemical agents such as 'tear gas' generally and, specifically, of the repeated use of chemical agents outside of Gray's Landing.

Introduction

29. The term “tear gas” references a broad group of airborne toxins that cause immediate pain on contact with the body. These were initially developed in World War I as chemical weapons with the intent to harm, kill or and disable enemy soldiers. (Brown 2021, Horowitz 2020).

30. More recently, they have been used extensively in war, by local law enforcement, and to quell civil demonstrations and unrest around the world. (Brown 2021, Horowitz 2020).

31. The active agents are powders at room temperature that are made airborne. Common mechanisms for deploying the powders include direct spray from a canister, such as ‘MACE™’ or bear spray; manually tossing a grenade, pellet or other cartridge; or firing a pellet (sometimes called “pepperballs”), grenade, or other cartridge from a launcher, which allows the projectile to travel over 300 feet. (Brown 2021).

32. Once deployed, the powder is triggered by a chemical or thermal reaction to create an aerosol by mixing with a solvent. An aerosol is finely suspended particles of powder in droplets of solvent that are suspended in air. The word ‘gas’ is commonly used to describe these agents as it appears as a fog, mist or cloud that is visible before it spreads and settles. As one of the first symptoms is eye pain and tearing, the term “tear gas” evolved to describe these collective agents.

33. Specific tear gas chemicals include but are not limited to chloroacetaphenone (CN), oleoresin capsicum (OC), and *o*-chlorobenzylidene malononitrile (CS). There are several others. (Brown 2021, Horowitz 2020, CHEMM).

34. In addition to the release of these chemicals, there are a variety of solvents, propellants, or pyrotechnic agents (explosion activators) that are also released into the environment.

35. Once these substances are airborne, their direction and movement are unable to be controlled. The persons exposed and 'dose' of the exposure cannot be modulated or adjusted by the person releasing the chemicals, nor can the area of contamination created once the toxin migrates through the air and settles. In other words, the person who dispenses chemical agents cannot control the amount or direction of the chemicals or confine the exposure and its effects to the intended target. Unintended injuries have occurred to law enforcement personnel, emergency medical responders, the press, civilian bystanders, and occupants of nearby buildings.

36. In addition to tear gas, control agents include a broad class of agents that may emit a smoke, emit a flash to transiently blind exposed, unprotected individuals, or produce a sudden high decibel sound. In addition, there are projectiles that can be aimed at individuals that may stop their movement or cause the affected individuals or those around them to retreat.

37. Agents that produce smoke by intent or as a byproduct of the agent's deployment can cause respiratory symptoms and exposure to particulates—fine molecules that can travel deep within the lungs.

38. The long-term effects of exposures to the particulates from these devices, particularly repeated exposures in persons without PPE, have not been definitively reported due to the ethical and logistical impediments to conducting such studies. However similar exposures, such as acute particulate exposure during house fires, and long-term particulate inhalation from air pollution, have significant adverse health effects that affect the lungs, heart and blood pressure.

39. Despite the risks of tear gas and these disabling agents, these are sometimes described in the scientific literature and lay press as "non-fatal" or "less-than-lethal." These

terms are misleading and erroneous. Death, critical illness and injury, and severe and permanent disability have resulted from tear gas exposures. (Haar 2017).

40. The scientific literature classifies these chemicals as toxins or poisons as they have no therapeutic indication, and they consistently and intentionally cause bodily injury. As such I will refer to their harmful clinical effects on the human body as poisonings.

Section Outline

41. In this declaration I use my scientific and medical expertise to describe and explain the following in the relevant sections:

Part I: Tear Gas Poisoning and Dose Effect

Part II: Contamination as a Health Threat

Part III: The Chemical and Environmental Factors that Augment or Mitigate Harms

Part IV: Vulnerability of Specific Populations

Part V: Analysis of the Information Provided to Me about Gray's Landing

Part VI: The Limitations of Science and the Precautionary Principle

Part VII: Summary of Key Facts and Conclusions

42. Throughout this Declaration, I use data, when available from published peer review journals, material safety data sheets, my clinical expertise, government websites, and the information provided in the complaint and plaintiff declarations. These are not exclusive sources, but specific examples are cited.

PART I: Tear Gas Poisoning and Dose Effect

43. Tear gas chemicals are designed to trigger pain fibers and cause irritation and inflammation of the skin and cells lining the eyes, nose, gastrointestinal (GI) tract and airways. Persons exposed almost immediately experience itching, tingling or burning of the skin, tearing,

pain and blinking of the eyes, swelling of the eye lids, runny nose, and burning in the nose and mouth. Persons may also experience blurred vision, sore throat, change in voice, lightheadedness, dizziness, and headaches. A higher dose of inhaled toxin may cause vomiting, wheezing, shortness of breath, chest pain, rapid heart rate, coughing, fluid in the lungs, the development of inflammatory membranes over the upper airways that affects speech and breathing, low oxygen levels, loss of consciousness, or death. (Thorburn 1982, Carron 2009; Haar 2017).

44. Direct skin contact with the un-aerosolized powder, prolonged contact, or a high concentration aerosol, can cause blisters and advanced burns. (Zekri 1995).

45. The "dose" that any given person is exposed to depends on the volume, proximity, frequency, duration, and mechanism of deployment. For example, a person sprayed directly in the face at close range with a spray canister will receive a higher concentration of toxin than persons walking through a less concentrated cloud of tear gas 20 feet away from a deployed pellet over the same time interval.

46. For aerosolization of tear gas from pellets or cartridges, the distance and time from the site of initial aerosolization may affect the dose, as the highest concentration will be closest to the munition immediately after deployment. Over time that concentration will dissipate. Visible fog, clouds, or mists have a higher concentration, but even when not visible due to dilution in the air, tear gas can cause significant poisoning.

47. Lower-concentration exposures over a period of hours or days especially from contamination are less understood but have resulted in serious and life-threatening injury. Symptoms caused by the exposure may progress from irritation of the eyes, nose, and mouth to life-threatening pulmonary injury over 24 hours. (Vaca 1996, Park 1972).

Once chemical agents are aerosolized into a 'gas,' only the tightest seals on closed windows and doors will limit entry into buildings. Heating, ventilating, and air conditioning systems (HVAC) are a source of entry and distribution of toxins. (CDC/NIOSH Bulletin 2002). Routine entry of the building, elevators or apartments by opening doors will also allow entry of circulating gases as will opening windows.

Part II: Contamination as a Health Threat

48. With tear gas, the chemicals remain in the environment long after the visible 'cloud' or 'fog' disappears. Any person or object coated or embedded with toxins is considered contaminated. Geographically, any contaminated area is a health hazard, especially as these agents may not be visible once they settle. Notably, even once the agents are no longer predominantly airborne, and may not be visible, they can still elicit significant symptoms such as tearing, coughing, and pain. Directly touching contaminated objects can cause burning sensations and the risk of transmitting the toxin to other body parts, other objects, or other persons.

49. This is why most manufacturers' material safety data sheets and expert bodies' advice on management of contamination recommend immediate removal of persons from contaminated areas (hot zones), restricting access to the areas, decontamination of contaminated persons, and containment of contaminated items and clothing, followed by bagging and sealing them, discarding them, or immediately washing contaminated items to prevent secondary injury. It is advised that personal protective equipment (PPE) be worn during the evacuation and decontamination steps and that PPE also be decontaminated after use. (MSDS/CDC/NIOSH). For example, the National Institute for Occupational and Safety and Health Emergency Response Card for chloroacetophenone (CN) advises not to touch or walk through spilled toxin and that personnel should wear appropriate PPE during environmental decontamination. (CDC/NIOSH).

50. Once tear gas enters a building as an aerosol, door handles, railings, elevator buttons, window treatments, furniture fabrics, footwear, jackets, toys, infant car seats and carriers, strollers, fabric headboards, kitchen items, furniture, glasses of water, unpackaged food items, or any contaminated surface can continue to be a source of illness, often for protracted periods. Some of these items are hard to decontaminate and may need to be discarded. (Hankin 2007, Horton 2008, CDC/NIOSH, CDC, CHEMM).

51. Particles may remain embedded and pose a risk of inadvertent poisoning by handling an object and experiencing the immediate effects, or transferring the contamination to eyes or skin, or in the case of a toddler or infant, a mouth. Contaminated objects are not distinguishable from uncontaminated objects complicating any decisions around what should be decontaminated or discarded. As mentioned, these objects may cause respiratory illness even though the toxin is no longer airborne.

52. There are multiple reports of poisoning in which persons not exposed to the initial gas deployment became symptomatic due to contamination of objects. In one published example, 21 staff at retail stores across Scotland were symptomatic with tearing, itching, burning or eyes and skin, headache, sore throat and breathing issues. The driver of the furniture delivered to these stores also experienced the similar symptoms. Ultimately the exposure was traced to 'CS,' a common tear gas agent, used as an antipersonnel spray in the delivery truck at least 3 days prior. Some of the symptomatic staff never handled the furniture or packaging or came closer than 10 feet, but still experienced poisoning symptoms. (Hankin 2007). Once the furniture was identified as the symptom source, subsequent exposures were prevented. The CS contamination was not visually evident so nothing about the packaging around the furniture, or the furniture itself provided forewarning of potential harm to people in its proximity.

53. Even health care workers exposed to contaminated persons are at risk. As an example, emergency department nurses caring for a patient contaminated with a CS developed eye skin and respiratory symptoms. (Horton 2005).

54. Contamination prolongs the health threat, causing symptomatic poisoning or exacerbating underlying illnesses. (See also Part IV).

55. Cannisters, pellet balls, and casings and munitions of any deployed gas should also be considered heavily contaminated with the tear gas powder residue along with any solvents or propellants used to disperse the powder into aerosols. (Hankin SM 2007).

56. If a deployed tear gas canister or pellet were found on a playground, the playground would be deemed unsafe for public use until a hazardous materials (HAZMAT) team assessed the need for a decontamination of the playground at large. Removing the munition alone would not be sufficient to ensure the safety of the children or adults in the area.

57. It should be re-iterated that once these agents are airborne after deployment, the direction of chemicals cannot be controlled. Non-targeted spaces or people are vulnerable in the vicinity. For example, in South Korea in 1987 when tear gas was used liberally to quell civil unrest, movement of gases through windows of unintended targets caused respiratory issues significant enough for some to seek medical care or require hospitalization, (Hu 1989), similar to the residents at Gray's Landing. Anecdotal reports suggest that the gas can affect people even further away than Gray's Landing; in 2024, over 20 students at an elementary school in San Bruno, CA developed symptoms such as trouble breathing and vomiting after a police training exercise deployed tear gas more than a third of a mile away. (SFSO 2024).

58. Ultimately these molecules will settle on surfaces of objects, plant and animal life, waterways, soil, and people in the vicinity rendering them contaminated. Animals and plants are vulnerable to these toxic effects as well. (Brown 2021).

PART III: Chemical or Environmental Factors Augmenting or Mitigating Toxic Injuries

Chemistry of the Agent and Its Associated Products

59. The molecular chemistry of an agent affects how it moves in space after being aerosolized. For example, substances heavier than air will tend to float downward after the energy to deploy them abates. The size and weight of the molecule affect how they move in the airways. Very small molecules or aerosols droplets can travel deeper in the lungs, potentially causing more severe injury. Tear gases are designed to trigger pain fibers and inflammation, disrupting the soft pink tissues (mucosa) around the lining the inner eyelids, nose, and mouth. These tissues make up the natural barriers from toxins in the environment to the blood and circulatory system. Because routine blood tests to measure the quantity of these chemicals are not readily available, we do not have a firm understanding of what chemical constituents or breakdown products are absorbed through these barriers into the blood and circulatory system.

60. In addition, the specific chemistry of any given tear gas may have breakdown products which may also pose health risks. Little is known about the impact or contamination of these breakdown products when deployed using explosives reaching high temperatures. For example, CS is demonstrated in laboratory studies to liberate hydrogen cyanide and hydrogen chloride during high-temperature dispersion. These are highly toxic even in very low doses. It is not known if the explosions required to propel these gases reach these temperatures. A teenager exposed to CS gas during a protest received medical care immediately after the exposure and was discharged. He returned 9 hours later with shortness of breath, grey skin and a toxin-induced

blood condition, methemoglobinemia, that required antidotal treatment. Notably his blood cyanide level was above the toxic range. (Salman 2020). This blood test is not routinely available.

61. Similar to the tear gas itself, we do not have information about concentrations or clinical exposures to the solvents or propellants in tear gas. One such solvent, methylene chloride, is dispersed on activation of the agent CS. (Park 2010). Methylene chloride is uniquely handled by the body—once inhaled and absorbed it is converted to carbon monoxide in the liver, a potent toxin. Poisoning due to isolated inhalation of methylene chloride is well described. (ATSDR). While methylene chloride is released in laboratory studies of the tear gas agent CS, it is not known if methylene chloride released with CS is inhaled and absorbed into the circulatory systems as laboratory testing of blood and urine for methylene chloride is not readily available.

The Effect of the Environment

62. Chemicals naturally move from higher to lower concentrations through dispersion or spreading of molecules or droplets. Outdoors, wind and rain can help disperse deployed chemicals and reduce the concentration of gases and therefore reduce the dose of the toxin present in a given area.

63. Deployment or entry of tear gas in an indoor environment can reduce the ability to spread and diffuse to a lower concentration. The gas will be relatively confined to the indoor space and settle on carpeting, floor, furniture, food, toys, infant carriers, car seats, clothing, footwear, blankets or any objects within that space. These objects are then considered contaminated, meaning the objects themselves become a reservoir for further poisoning. Contamination can occur in both indoor and outdoor spaces.

64. Other environmental conditions may affect the gas concentrations in a specific location for both indoor or outdoor settings. For example, elevated temperatures and humidity can reduce dispersion (or spreading/dissolving) and increase concentrations of gases in a given area.

65. The built environment, namely buildings and roads, create obstacles in the movement of outdoor air. Building size, building shape and street width can create "street canyons" that reduce the movement to lower concentrations that typically occur when gases are deployed in an open field. It is possible that in some circumstances, the building orientation and relative location of tear gas deployment may increase circulation or concentration in an area due to how the building or buildings affect air currents and gas dispersion. (Zhang 2025). Notably, Gray's Landing's U-shaped building around the courtyard creates conditions that may prevent aerosolized tear gas from readily moving past the building as air currents move into and out of the courtyard instead of through or past it due to the building design.

PART IV: Vulnerabilities of Specific Populations

66. A number of personal characteristics affect the severity of any exposure to tear gas agents. (Haar 2017). Data on exposures are often based on military recruits, who as a population are predominantly healthy males. (Brown 2021). In one report, 9 recruits developed cough and shortness of breath 36-84 hours after exposure to CS during a tactical training. Four of these recruits required intensive care for severely low oxygen (hypoxia). (Thomas 2002). The effects of exposure are likely to be more severe for children, older adults, and people with co-morbidities.

Age

NEONATES AND INFANTS

67. Age is a critical component to how inhaled gases are handled by the body. Neonates (aged less than 4 weeks) and infants have different physiology, rendering them much more vulnerable to inhalation, ingestion and skin contact than adults. (Chung 2020).

Neonatal and Infant Vulnerability Through Respiratory System

68. Infants' and neonates' airways are significantly smaller, so inhaled toxins such as tear gas that are designed to cause swelling or inflammation pose a greater risk to airway obstruction. They will also succumb to gas exposures faster than adults. Compared to adults, smaller organisms such as neonates, infants, pets, and small animals have relatively high respiratory rates per body surface area and are therefore exposed to a higher dose per body weight. Consider the use of canaries in the coal mine as a general historical example to illustrate the principle of relative dose. Coal miners would bring canaries into mines to warn them of the presence of dangerous gases when the canaries would stop singing or die. The miners themselves would have adequate time to retreat.

69. Ethical limits preclude definitive investigations of the effects of tear gas on infants and children. Therefore, the comparative effect of tear gases between adults and children has not been exhaustively studied. Nonetheless, it stands to logic that the respiratory principles outlined above apply, and that such chemicals will likely have a greater relative exposure per body size than an adult in the identical environment.

70. There are rare case reports that validate this conclusion. A 4-month-old infant developed severe respiratory distress 24 hours after being in an indoor environment where tear gas was deployed to subdue an adult. The child initially had tearing and coughing and required

suctioning to relieve airway obstruction. On the following day he developed severe respiratory distress from inflammation of the lungs known as pneumonitis. This condition profoundly reduces the ability of the lungs to transmit oxygen to the blood. He required 17 days of hospitalization with high concentrations of oxygen and supportive measures in an intensive care unit. (Park 1972).

71. In another case, a 4-week-old was inadvertently exposed to a self-defense pepper spray (oleoresin capsacin, OC). He immediately stopped breathing and was given mouth to mouth respirations until a breathing tube (intubation) was placed emergently. He remained on a ventilator, becoming acutely worse over the following day. He developed low blood pressure, bilateral lung collapse, and pneumonitis requiring high concentrations of oxygen and frequent suctioning to prevent the breathing tube from being clogged with secretions. Despite this he continued to worsen and the decision to institute a lung bypass machine (extracorporeal membrane oxygenation or ECMO) was made. This was an extraordinary measure to prevent death made even more complex by his size. He eventually survived to discharge and required 3 subsequent hospitalizations for wheezing in the setting of respiratory infections in the first year of life. (Billmire 1996).

72. In Chile in 2018, when tear gas was repeatedly deployed for a social uprising the incidence of emergency visits for respiratory diseases increased for infants under 1 year of age. From the data presented, it is not known whether this is additive to air pollution as a precipitant or an independent predictor of hospital visits. (Huerta 2023).

73. While the examples above vary in concentration, proximity, agent, dose and chronicity there are few if any other sources of information on the effects of tear gas chemicals on infants and children.

Neonatal and Infant Vulnerability Through Skin Exposure

74. The skin of neonates and infants is uniquely different than adults. They have larger body surface area to weight ratios. The normal barriers in their skin cells that prevent absorption of chemicals are less formed. Substances that would be considered benign on adult skin contact, may have an exaggerated response. As historical examples of this principle, fresh ink imprinted on cloth diapers was absorbed onto the skin of infants, inadvertently causing severe injury and/ or death. Boric acid powder proved fatal to neonates when trialed for diaper rash, but not to the adults applying it. (BMJ Editorial 1970). There are no studies of topical tear gas in infants and neonates, but burns are well reported. (Park 1972).

Childhood Development

75. Children have developing nervous systems that are uniquely vulnerable to toxins in general. The long-term impact of these agents on the nervous system is not known, particularly with respect to repeated or prolonged exposures.

Infant and Toddler Behaviors as a Vulnerability

76. Children's behaviors are markedly different from that of adults. Infants and toddlers, in particular, explore their world orally, crawling on floors and placing their hands and other objects in their mouths. A child in a contaminated environment, even if spared an inhalation event, is at a significant risk of poisoning. In 2018, the American Academy of Pediatrics called for a ban on the use of tear gas around children at the Mexican-American border.

Psychological Impact on Children

77. The limited data regarding psychological impacts of tear gas deployments around children is concerning. They may respond with fear and confusion when they observe adults in

medical distress, or experience physical harm from the tear gas themselves. The overarching threat of that harm, and uncertainty about when harm may re-occur, is another stressor typically only experienced by children in war zones or homes with on-going violence.

78. Children may develop confusion around which adults in authority can be trusted to protect and them. Young children are naturally self-referential and may have a hard time discerning whether the suffering caused by tear gas is related to their own behaviors. The short and long-term psychological consequences of these exposures is at minimum a concern that no child should face under any circumstance. (Chung 2020, Brown 2021).

OLDER AGE

79. Elderly people exposed to the same concentration of a toxin as a healthy young adult may experience more severe symptoms based on common physical changes with age and the higher likelihood of conditions that would make clearing the airways more difficult and increase the risk posed by a vigorous cardiovascular response. (Carron 2009). A Gray's Landing resident (Dooley) who was treated in the emergency department for a low oxygen is one such example.

Co-Morbidities

80. Persons with underlying lung and heart conditions or immune-suppression may suffer more serious consequences.

Pulmonary Disease as a Vulnerability

81. Lung irritants may trigger severe asthma or exacerbations of chronic obstructive pulmonary disease (COPD) in patients with these conditions. Asthma and COPD are diseases of airway inflammation and periodic spasm that reduce the smooth flow of air into and out of the lungs. Chemicals like tear gas increase inflammation and irritability, can trigger spasm and

wheezing, and reduce the amount of oxygen entering the blood. This is experienced as shortness of breath and low oxygen measurements. Exposures can also cause fluid in the lungs, inflammation of the lining of the air sacs in the lungs (pneumonitis), or stress the heart, as examples of additional serious or life-threatening reactions. Persons with any underlying lung disease are at a higher risk of harm as they already have impairments to delivering oxygen into the blood.

Immune System Vulnerability

82. The immune system can also be sensitized with some exposed persons developing severe allergic reactions. (Thorborne 1982). In other circumstances, a significant exposure to an irritant gas can trigger a chemical sensitivity acute respiratory syndrome resulting in an exaggerated, adverse response to future chemical exposures such as scents, perfumes or other gases that were previously tolerated. (Hill 2000, Brown 2021). This response may include wheezing or difficulty breathing in persons without a prior history of wheezing or asthma. For example, in a prison exposure to tear gas without ventilation for 4 days, 28 inmates required medical care for symptoms including fainting, vomiting, inflammation of the upper and lower airways (laryngeal-tracheobronchitis) and delayed and acute shortness of breath. There were 8 hospitalizations and one individual without a prior history of asthma required therapy with inhalers typically prescribed to asthmatic patients, for 3 months post exposure. (Thorburn 1982).

83. Compounding this is that irritant gases cause inflammation of the normally protective cells lining the respiratory tract that usually prevent infection. Increased infections after tear gas exposures in healthy military recruits are described. (Hout 2014). The precise mechanism responsible is unclear; the coughing caused by inhaling the agents may increase the risk of transmission of infectious respiratory agents, but it is also possible that the tear gas itself

creates an opportunity for infections to take hold by disrupting the protective cells lining the airway.

84. Persons with diabetes, HIV, on transplant medications, or on chemotherapy or immune-modulators for cancer or inflammatory conditions are immunosuppressed and more vulnerable to complications of viral and bacterial infections. The American Thoracic Society called for a moratorium on the use of tear gas agents during the COVID-19 pandemic. (ATS).

Cardiovascular Disease as a Vulnerability

85. Patients with heart disease are at risk of more severe health implications. Cough, wheezing or straining to breathe from a tear gas exposure requires an increase in heart rate, which may strain a diseased heart. Persons on medications that suppress this or who have impaired heart function may experience this as a heart stressor. For example, a 24-year-old woman with a heart valve replacement experienced severe respiratory distress and pneumonitis after an 18-hour exposure to chloroacetophenone (CN) thought to be room deodorizer. She suffered fluid in her lungs, low measurements of oxygen in her blood, and required admission to the intensive care unit to prevent deterioration. (Vaca 1996).

86. There is some suggestion that these agents may precipitate abnormal heart rhythms such as atrial fibrillation or abnormalities of electrocardiograms in susceptible persons. (Brown 2021, Chakhunashvili 2025).

Eye Conditions as a Vulnerability

87. Persons with eye conditions may be at risk for worsening of these conditions on exposure to tear gas. Persons wearing contact lenses may inadvertently entrap chemicals under their lenses, prolonging contact time with the cornea and more severe symptoms. (CDC/NIOSH). The solvents in some of these agents may also be responsible for severe eye injuries. In one

assessment of the effect of OC gas, one patient was symptomatic for 5 months, and a trial of spraying CS on a polystyrene cup and a soft contact lens noted melting of the cup and discoloration and hardening of the contact lens as examples of their chemical corrosive properties. (Holopainen 2003).

Post-Traumatic Stress Disorder (PTSD) as a Vulnerability

88. Intrusive, harmful or violent threats to one's safety abruptly remove a person's sense of control. This can overwhelm the senses and induce psychological trauma. Long lasting effects include post-traumatic stress disorder, a condition of hypervigilance, sometimes avoidance and intrusive memories along with other negative symptoms that continue long after the threat is abated. In a study of persons exposed to tear gas, including a survey of Portland residents exposed to tear gas as a control agent in 2020, tear gas exposure was a precipitant of psychological trauma and PTSD. (Torgrimson-Ojerio 2021, Nathan 2003, Honeyman 2025).

89. It is notable that some residents of Grey's Landing are children whose resilience and coping strategies may be different from adults. Also, some residents are survivors of interpersonal violence and PTSD or PTSD from military trauma. The threat of imminent or ongoing harm and the intrusive and sudden nature of flash bangs, explosions, smoke and sounds associated with the deployment of chemical control agents can compound or trigger debilitating PTSD symptoms.

90. PTSD is well described in survivors of military trauma. The conditions created by use of chemical control agents and disabling agents are similar to war zones. Residents may not hear warnings, nor be able to retreat or block the smells, flashes, sounds or harmful chemical effects due to their proximity. (Honeyman 2025).

Poor Mobility or Factors Related to Inability to Retreat

91. Persons of limited mobility, neonates, infants and toddlers who are not yet walking, or persons with impaired cognition, are at risk as they are unable to retreat promptly from the environment, or remove themselves from a contaminated environment.

Personal Protective Equipment (PPE)

92. The use of PPE is helpful to reduce exposures. In order to prevent an incapacitating injury from tear gas, the skin and the entire face, including the eyes, nose and mouth, must be covered. Some protective gear has respirators with air filters. These types of respirators make breathing more difficult. These were not designed to be worn at all times, but rather only during a forewarned exposure or for limited periods while decontaminating an area.

93. There are few pediatric masks that are adaptable for a proper fit across various age groups. Children under 2 years of age, however should not have such covers as they may be unable to communicate when they have difficulty breathing or are at risk for suffocation. Deaths from improper use from gas masks have been reported in civilians, including children. (Hiss 1992, Shaller 1992).

Part V. Analysis of Information Provided To Me About Gray's Landing

Proximity and Plausibility of Exposure

94. Gray's Landing is in close proximity to the Immigration and Customs Enforcement (ICE) detention center. The U-shaped building creates a canyon around the courtyard that likely impedes the dispersion or gases, and depending on ambient conditions, feasibly concentrate such gases.

95. Video and photographic evidence show deployment of tear gas and other control agents directly outside Gray's Landing. Grouped personnel in tactical gear are throwing, kicking an activated munition and aiming what appear to be launchers, one of which is seen with a puff

of particulate matter rising from the tip while moving along the street outside Gray's Landing. Resident testimony corroborates these deployments.

Behavioral and Overt Evidence of Chemical Exposure

96. Most notably, visible clouds of tear gas are described as entering the building and photographs and video show an aerosol cloud close to residents' balconies and windows. Residents describe a residue on window screens. 'Pepperballs' and cannisters are described in the complaint as being on the sidewalks, balconies, and courtyard, and even directly below an apartment. Residents report that tear gas sometimes enter the enclosed parking garage below Gray's Landing, which connects to the building's living spaces through elevators.

97. As mentioned previously, were these munitions found on a playground, the area would be considered contaminated and unsafe for public use. The idea that so many of these contaminating, toxin-containing products are on a residential property is an unacceptably serious health hazard.

98. It is especially troubling that these products are used around and near children. Children may be curious and touch, taste, or inhale incompletely discharged contents or their chemical solvents or propellants. Even without touching, these pose a risk of inhalational harm from contaminated items as was previously described in several cases. The presence of these residual munitions on residential property is a serious health hazard that poses a high likelihood of continued adverse medical events to residents of the building.

99. Notably, video evidence and resident reports show that launchers (which, depending on the launcher, can travel up to 300 feet) are being carried and aimed within the range of this residential building and in close proximity to people immediately outside the

building. The potential of these high-velocity products to cause physical injury apart from chemical injury is well reported in the medical literature. (Brown 2021, Haar 2017).

100. Resident behaviors are consistent with an exposure to irritant gases. Teenagers and adults are wearing gas masks to evade exposure, placing towels and duct tape around their doors. Youth are sleeping in closets. These are all behaviors that would not likely occur without the threat or perceived threat of harm. In addition, there have been incidents of a dog coughing and plants with burned leaves. Plant and animal injury is reported from these agents and is an apt demonstration of how noxious and indiscriminate these agents are. (Brown 2021).

Direct Evidence of Chemical and Psychological Harm

101. Residents' descriptions of burning throats and eyes, difficulty breathing, coughing, dizziness, nausea and vomiting, and headaches is clinically and toxicologically consistent with tear gas exposure. Similarly, their reports that these symptoms do not stop when tear gas is no longer visible are consistent with ongoing exposure to contaminated surfaces, spaces, and items. Concerning reports of serious symptoms such as the sensation that the heart is being "squeezed" and episodes of loss of consciousness are consistent with reports in the literature of severe poisoning.

102. Most notable are multiple different residents from Gray's landing of various ages made ill enough to seek medical care, sometimes on multiple occasions, and in one case, Ms. Dooley, suffering critical illness with a low oxygen saturation and heart failure requiring hospitalization.

103. Children and residents who have experienced PTSD in the past are exposed to abrupt noxious stimuli in the form of flashbangs, explosions, and the chemical effects of the gases themselves. They are resorting to actions like fleeing to or sleeping in a closet. The abrupt

disorientation and typically unexpected sounds or flashes can render a person incapacitated, blind, unable to hear. Even after recovery such an experience is emotionally traumatic. (Honeyman 2025). These physical and psychological symptoms are consistent with the known effects of the kinds of chemical agents the defendants appear to be using.

PART VI. Limitations of Science and The Precautionary Principle

104. Repeated exposures, chronic low exposures, dermal exposures or exposures in children, pregnant, lactating or menstruating women, or fetal development are not well characterized as intentional exposure of these groups would not be ethical.

105. An evaluation of 93 males repeatedly exposed to tear gas multiple times over a 24-month period revealed a higher incidence of bronchitis lasting more than 3 months (air inflammation, cough, phlegm and sometimes wheezing) than unexposed persons. (Arbak 2014). Inmates directly exposed to tear gas in enclosed cells without adequate decontamination over a minimum of 4 days of exposure had symptoms for several months. (Thorburn 1982).

106. In a survey of over 2,000 civilians exposed to tear gas in Portland to quell civil demonstrations in 2020, 72% reported physical health issues with one day of exposure which increased to over 89% with 5 or more days of exposure. Similarly 51% reported psychological health issues with one day of tear gas exposure, which increased to 83% with 5 or more days of exposure. Thirty-two people reported a worsening of underlying medical conditions, sixteen reported injuries from projectiles in some cases requiring wound repair. Forty one percent of respondents sought medical care immediately after the exposure with 6% seeking care sometime after from a medical professional via telehealth, in person, or the emergency department. Some had significant symptoms for days or weeks after the exposure, including headaches, diarrhea, cramping, and nausea. Women reported menstrual changes after exposure. (Torgrimson-Ojerio

2020). Causality of menstrual change is not clear, but it is notable that the percentage of respondents reporting changes increased with greater than 5 days of exposure.

107. The medical literature regarding the severity of acute and chronic exposures to tear gas is limited, as these agents have been used most often to quell civilian protests around the world, including in Hong Kong, Chile, Turkey, Korea, and across the Middle East.

108. To perform human subjects research in these exposed populations is challenging as there is no pre-set schedule or location allowing real time data collection to occur easily. Concentrations, doses, and locations may be inexact or unmeasured, duration of exposure or presence or absence of contamination is not readily available to analyze outcomes and the ability to obtain subject consent may be limited by severity of illness, the dangerous environments or other factors. Often the exact toxin is not known or not disclosed. In addition to the practical difficulties of studying these events in a controlled way, in some circumstances the scientific community feared reprisal from repressive authorities from documenting medical impact. (Hu 1989).

109. As such, I must extrapolate from what is known about these agents to assess the risk to the residents and staff at Gray's Landing. The "Precautionary Principle" in toxicology holds that where there is uncertainty about the effects of a chemical, decisions regarding its use should err on the side of caution and public safety. (Kriebel 2000) With tear gas, the Precautionary Principle takes on additional importance, because these agents are intended to cause harm—that is how they achieve their intended effect of dispersing, subduing, or incapacitating targets—and a preponderance of evidence showing that they do cause harm, including to unintended targets.

PART VII. Summary of Key Facts and Conclusions

110. Medical societies such as the American Thoracic Society and the American Academy of Pediatrics have called for moratoriums on the use of tear gas.

111. Government bodies with expertise in toxic exposures describe the risks of acute exposure and the health concerns of contamination.

112. Contamination poses the future risk of harm through direct poisoning and in some cases, exacerbation of underlying medical conditions such as heart disease or asthma as examples.

113. Multiple residents have sought medical care, one requiring hospitalization for low oxygen and heart failure.

114. Given what is understood about building canyons, the U-shape of Gray's Landing may preclude rapid egress of any airborne chemicals from the courtyard.

115. Once tear gas is deployed, the direction, dose and targets cannot be controlled.

116. Newborns and infants, at high risk of adverse outcomes in Grays Landing, are not capable of retreat and there are no safe forms of protective equipment.

117. A pregnant person is reported as residing at Gray's Landing, indicating a very vulnerable neonate will be or is, a potential occupant.

118. Elderly persons, children and persons with limited mobility, underlying cardiovascular conditions and PTSD are residents of Gray's landing are also vulnerable.

119. Acute poisoning or poisoning from contaminated objects is harmful to healthy persons as these chemicals were designed to injure and disable soldiers.

120. PPE is not meant to be worn 24/7, nor is it practical. In and of themselves, self-administered respirators that are poorly fitting or improperly used may pose a health risk.

121. The symptomatic reports lasting beyond the days of deployment and evidence of the proximity of the gases to Gray's Landing indicate contamination of indoor spaces.

122. There is no visible way to readily distinguish a contaminated from uncontaminated object.

123. Given that pellets and cannisters were found in the courtyard and on the grounds around Gray's Landing, these are considered contaminated and unsafe spaces, especially for children who may not be capable of recognizing the risk.

124. Thorough decontamination of individual households after each deployment may be prohibitive in a residential setting.

125. While ventilating a contaminated space may be beneficial, it is only feasible if there is no threat of further contamination.

126. Persons with impaired mobility, respiratory and cardiac conditions and PTSD reside at Gray's Landing and may be more vulnerable to adverse effects or worsening of their underlying conditions.

127. The ongoing use of deleterious chemical agents such as tear gas in proximity to Gray's Landing, is a health hazard as it causes cardio-pulmonary, ocular, gastrointestinal and dermal injury that can be debilitating, severe or life-threatening. The staff and residents of Gray's Landing have suffered poisoning and are at risk for future injury due to contamination of their households and the area surrounding the building.

I declare that the above statement is true to the best of my knowledge and belief, and that I understand it is made for use as evidence in court and is subject to penalty for perjury.

Dated: December 28, 2025

Rama B. Rao, MD

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EXHIBIT 35

Weill Cornell Medical College, Cornell University
Faculty Curriculum Vitae

Name	Rama B. Rao
Signature (required):	
Version date:	December 23, 2025

A. PERSONAL DATA

Required Information:

Office address:	Department of Emergency Medicine New York Presbyterian Hospital, Weill-Cornell Medicine 525 East 68th at York Ave, Box 573 New York, NY 10065
Office telephone:	212-746-0780
Work Email	rar2023@med.cornell.edu
Home address:	501 East 87th St Apt 1G New York, New York, 10128
Cell phone:	917-319-7750
Personal Email:	raoramab@gmail.com
Eligibility base on employment visa?	No
If Yes, please provide type	NA

B. EDUCATION

1. Academic Degree(s)

Degree	Institution Name and Location	Dates attended	Year awarded
Bachelor of Arts, Honors with Distinction in Biology	Rutgers College, Rutgers the State University of New Jersey, New Brunswick, NJ	08/1984 to 05/1988	1988
Doctor of Medicine	Mount Sinai School of Medicine, New York, NY	08/1988 to 05/1992	1992

Other Educational Experiences

Description	Institution Name and Location	Dates attended
SAFE 40 Hour New York State Department of Health certification	Alliance Against Sexual Assault, New Yor, NY	2014-active

C. POSTDOCTORAL TRAINING

Title	Institution name and location	Dates held
Fellowship, Medical Toxicology	New York City Poison Control Center, New York University Medical Center/Bellevue Hospital, New York, New York, USA	07/1996 to 07/1998
Residency, Emergency Medicine	Albert Einstein College of Medicine, Jacobi Medical Center, Bronx, New York, USA	07/1993 to 07/1996
Internship, Internal Medicine	Mount Sinai School of Medicine, New York, NY, USA currently named Icahn School of Medicine	07/1992 to 07/1993

D. PROFESSIONAL POSITIONS AND EMPLOYMENT

1. Academic Appointments

Title	Institution name and location	Dates held
Associate Professor of Clinical Emergency Medicine	Weill Cornell Medicine, New York, NY, USA	07/2018-current
Associate Professor of Clinical Medicine	Weill Cornell Medicine, New York, NY, USA	7/2017-6/2018
Assistant Professor of Clinical Medicine	Weill Cornell Medicine, New York, NY, USA	7/2016-6/2017
Assistant Professor of Medicine	Weill Cornell Medicine, New York, NY, USA	8/2008-6/2016
Assistant Professor of Public Health	Weill Cornell Medicine, New York, NY, USA	8/2008-6/2012
Assistant Clinical Professor	Department of Emergency Medicine and Forensic Medicine, Bellevue Hospital Center/NYU School of Medicine, New York, NY (Now NYU Langone), USA	07/1998 – 07/2008

2. Hospital Appointments

Title	Institution name and location	Dates held
Associate Attending Physician	NewYork-Presbyterian Hospital (NYPH), Weill Cornell Medicine, New York, NY	7/2017-current
Attending Physician	NewYork-Presbyterian Hospital (NYPH), Weill Cornell Medicine, New York, NY	8/2008 –07/2017
Attending Physician	NYU Medical Center, Bellevue Hospital Center, Department of Emergency Medicine, New York, NY	7/1998 – 7/2008
Attending Physician, Per diem	North Shore University Hospital, Forest Hills, Queens, NY	1996 - 1998

3. Other Professional Positions & Employment

Title	Institution name and location	Dates held
Counsellor and advocate	Women Aware, Abused Womens' Services, Inc	1986-1988

E. EMPLOYMENT STATUS (current or anticipated)

Name of Employer(s):
Weill-Cornell Medical College, New York Presbyterian Hospital:Weill Cornell Medicine
Status: Full Time Salaried by Weill Cornell Medical College

F. LICENSURE, BOARD CERTIFICATION, OTHER

LICENSURE

a. State	Number	Date of issue	Date of last registration
New York State License: Certificate Number	200534 5871116	16 August 1995	3/2027

DEA number: *(optional)* BR4911714
NPI number: *(optional)* 1720077803

BOARD CERTIFICATIONS

Full Name of Board	Certificate #	Dates of Certification	Current or Not Current
Medical Toxicology, Sub-board, American Board of Emergency Medicine	960477	2021-Current	Current
American Board of Emergency Medicine	960477	2017	Current
Medical Toxicology, Sub-board, American Board of Emergency Medicine	960477	2008 -2021* extended due to sub-board service	Not Current
American Board of Emergency Medicine	960477	2007-2017	Not Current
Medical Toxicology, Sub-board, American Board of Emergency Medicine	960477	1999 -2008	Not Current
American Board of Emergency Medicine	960477	1997-2007	Not current

G. INSTITUTIONAL/HOSPITAL AFFILIATION

Primary Hospital Affiliation:	NewYork-Presbyterian Hospital, Weill-Cornell Medical College, New York, NY
Associated Affiliation	NewYork-Presbyterian Hospital, Lower Manhattan Hospital, New York, New York

H. HONORS AND AWARDS

Name of award	Organization	Date awarded
Everyday Amazing	NYP Weill Cornell	2023

Department of Emergency Medicine Save of the Month	Dept Emergency Medicine (EM), NYPH-Weill Cornell (WC)	2022
Good Catch Recognition, NYP Queens	NYP-Queens	2020
Nominee, Pioneers in Diversity , Weill Cornell	Dept EM, Dr Shah, NYPH-WC	2020
Everyday Amazing: NYP Recognition of Excellence	NYPH-Laura Forese	2019
Mentor Recognition: Samwrawit Abraha awarded Certificate of Excellence Area of Concentration	Weill Cornell Medical College	2018
Lydia Martinez Multidisciplinary Collaboration Award	Joyful Heart Foundation	2017
Inaugural for Excellence in Emergency Medicine	Dept EM, NYPH WC	2015
Nominee, Physician of the Year	Dept Nursing, NYPH WC	2014
Weill Cornell Pharmacy Partner Award	Dept of Pharmacy, NYPH WC	2013
Off-Service Rotation of the Year University of Alberta, Canada	Dept EM, Royal College of Physicians and Surgeons, University of Alberta, Canada	2007
Clinical Teacher of the Year,	Department of Emergency Medicine, Bellevue/NYU Emergency Medicine Residency	2004
Clinicopathological Conference, Second Place	Society for Academic Emergency Medicine	2000
Leo M. Davidoff Society Award for excellence in teaching medical students	Albert Einstein College of Medicine	1996
Chief Resident Emergency Medicine	Jacobi Medical Center, Dept EM	1995
Physician-of-the-Year Award First Medical Student to be recognized for Nurse Physician Collegiality	Mount Sinai School of Medicine (SOM)	1991
CIBA/GEIGY Award for Community Service	Mount Sinai SOM	1990
McGraw-Hill Award for Community Service	Mount Sinai SOM	1989
General Honors Program, Teagle Scholarship, Alumni Merit Scholarship, Phi Beta, Kappa, Dean's List	Rutgers University	1984-88

I. PROFESSIONAL ORGANIZATIONS AND SOCIETY MEMBERSHIPS

Organization	Dates
American Academy of Clinical Toxicology	1998-present
American College of Emergency Physicians	2012 to Present
Society of Academic Emergency Medicine	1996 to present
American College of Medical Toxicology (ACMT)	2004 to present 2009
ACMT Medication Management Section	2012 to present
American Academy for Emergency Medicine in India	2002 2003
Society for Emergency Medicine in India	2003

J. PERCENT EFFORT AND INSTITUTIONAL RESPONSIBILITIES

CURRENT % EFFORT	(%)	Does the activity involve WCMC students/researchers? (Yes/No)
TEACHING	12.5%	Yes

CLINICAL	55%	Yes
ADMINISTRATIVE	12.5%	No
RESEARCH (as IRB Chair)	20%	Yes
TOTAL	100%	

K. EDUCATIONAL CONTRIBUTIONS

DIDACTIC TEACHING Weill Cornell NYP
Weill Cornell Medical College: Students
Department of Pharmacology, Graduate Students Toxicology in Drug Design Annually August 2014-2024
Essential Principles of Medicine, Pharmacology Unit Annual Lecture Toxicology/Pharmacological Principles 2014 -2024
Essential Principles of Medicine, Patient Care and Physicianship, Intimate Partner Violence 5.24.2021, 2022, 5.2023, 2024, 2025
Essential Principles of Medicine, Patient Care and Physicianship Sexual Assault , Annually 2023-2024 Over 100 learners
WCM Transition to Residency Bootcamp 2018, 4. 30.2019, 3.1.21, 2022, 3.31.25
Do No Harm Interest Group – Evidence Collection 11.13.18, 5.6.21
Wellness Orientation Session 8.17.17
Pharmacology Day, Graduate School Bench to Bedside 6.3.14
Airway Management Introduction for Medical Students 1.23.13
Medicine, Patients and Society II 5-6.13
Physical Diagnosis Second Year Medical Students 1.12
Medicine, Physicians and Society II 5-6.11
Medicine, Patients and Society I Skills Group Leader 5-6.10
Weill Cornell Medical College: Faculty
LMH Grand Rounds Pharm to Table Department of Internal Medicine
Blackwell Society: Panelist, Life Happens: The non-linear path of 5 successful women 12.7.22
Blackwell Society: Moderator, Promoting Yourself: Tips for Advancement in Rank 5.23.22
Faculty Development Series: Item Writers Workshop 12.12.17
EM Faculty Retreat, Career Reflections 3.4.13
New York Presbyterian Hospital ACGME Resident/Faculty Didactics by Department
Department of Pediatrics
Pediatric Morbidity and Mortality 5.1.25 Intrathecal Clinical Review 12.2012
Pediatric ICU Rounds: Toxidromes 6.11.2014, 6.21.17, 4.26.18
Pediatric Professors Rounds 4.29.22 Healing from Anti-Asian Hate_ Panelist resources for women suffering from gender based violence 1.25.2017, 9.21.2018 (botulinum) 1.25.2013, 12.4.2015, 9.2.2016, 9.30.16
Pediatric Emergency Medicine 5.8.24 5.1.19 Toxidromes 2.28.19 SAFE exam 1.25.19 Case review 6.2.2016 11.5.2015 3.5.2015 10.9.2014 10.3.2013 10.27.2011

Department of Emergency Medicine
Toxicology EM Theme Day Mentor: Methemoglobinemia Sim Center Approach to Caustics 3.20.19 Toxicology Cocaine 10.3.19 Oral Board Practice Review Day 2.19.15, 4.26.17, 3.14.18 Drug Trafficking 7.13.16 Approach to the Poisoned Patient 8.13.15 The Toxic ABG 3.25.15 Geriatric Toxicology 1.22.14 Oral Board Practice Review Day 2.18.14 Elderly Male with Agitation 6.25.14 Pediatric Toxicities 6.11.14 Toxidromes 6.10.14 The Swollen Patient 4.24.13 Vanity and Vice 2.6.13 Identify the Mechanism 7.3.13 Endocrine and Electrolyte Emergencies 12.18.12 GI Decontamination of Poisons 8.22.12
Emergency Medicine Annual Dedicated Intern AP SAFE Course 2020-current Co-coordinator, curriculum, lecturer
EM: Division of Toxicology, ACGME Rotators and EM Clerkship Rotators Weekly Case Conference since 2022-Current Decontamination 8.7.22 Multiple Tox lectures across rotations monthly to current
EM: Advanced Practitioners
PA/NP Clinical Updates in Emergency Medicine :Annual Review in Emergency Medicine Vaping and THC, Novel Oral Anticoagulants, Round Table Toxicology 12.8.19 Intro to Toxicology 11.2.18 Facial Swelling 12.3.17 Toxicology Review Day Walking away with some tips and tricks 11.8.15
EM: SAFE Program: Forensic Examiners: PA/NP, RNs, MDs
NYPWCM Inaugural AP SAFE Course , evidence handling, PEP, DFSA 11.14.2019 , annually thru 2024
Advocate Training Introduction to DFSA and Post Exposure Prophylaxis for SAFE patients 1.12.13, 3.15.14, 3.7.15,3.5.16, 3.4.17, 3.2018-2023
Qualifying Preceptor Evaluations and Teaching SAFE evidence collection with live teaching assistant 2013-2016
EM: SAFE Program Community Advocates
Weill Cornell Annual Advocate Training Annually 2014 to 2022
NewYork-Presbyterian Hospital Queens Advocate Training : PEP, Role of SAFE 10.2. 2021, 10.2022
Department of Internal Medicine
CIMA and Center for Special Studies Screening for Sexual Assault During Encounters for Post Exposure Prophylaxis 4.18-19.24
Internal Medicine Senior Seminar Mentor Dept Internal Medicine Venoms in Medicine Khan Pham 1.16.19 Noon conference 8.22.11 4.9.14, 11.17.25, 8.23.16, 11.7.17, 7.31.18, 2.22.25, 3.19.25
Cardiology Morbidity and Mortality Calcium Channel and Beta Blocker Overdose 8.8.23
Department of Psychiatry

Consult Liason Seminar 1.21.25 Psychotoxicology 3.1.18 Senior Resident conference 12.13.18, 5.21.19, 2.18.21 , 2022
Fatal Antidepressants 4.2.14
Serotonin Syndrome and NMS 12.10.13
What's the Rave? Residents Conference 11.30.12
Department of Neurology
Neurology Resident Conference Case Presentations: 12 learners, 6.10.13, 11.18.14, 7.16.15,12.9.16
Department of Neurosurgery
Morbidity and Mortality: Intrathecal Medication Errors 1.7.13
Review of Intrathecal Contrast Agents and Toxicities for Operating Room Nurses , 20 learners 2.11.13
Department of Surgery
Trauma M& M: Forensic Considerations in Managing Trauma Patients with Concern for Sexual Assault for residents, faculty 20 learners 6.25.2019
Surgical Nursing and Forensic Medicine: Nurses from Burn ICU, ED and Trauma Surgery 20 RNs and NPs 9.18.19
Department of OB/GYN:
COVID 19 Pandemic Emergency Training of OB/GYN Faculty in SAFE Care 3.27.20
Handling Disclosures of Sexual Assault/Amnestic Sexual Assault, 9 residents 7.2019
Critical Care Interdisciplinary Intensive Care Fellows Conference:
Critical Cases and Antidotes 11.11.15, 11.25.19, 2.14.22 Critical Care Toxicology 2.6.13 Updates in Mood Altering Substances 3.13 Electric Zoo 11.21.12
Other Hospital Staff Certified Sexual Assault Forensic Examiners
SAFE Drug review 8.9.17 PA/NP Orientation SAFE Updates in Medications 9.26.18 SAFE – Strangulation 7.22.20
Department of Pharmacy, Critical Care Pharmacy Residents 4.25-5.27.22 Lectures and bedside Preceptor for rotation 2023, 2024

NYP-Emergency Medical Services
NYP EMS Carbon Monoxide Poisoning, Smoke Inhalation, Cyanide Poisoning; NYC REMAC Protocols 500-A/B Hands on with the Rad-57, Drager CO, CyanoKit 3.1.12
NYP EMS CALL AUDIT CME:
NYP EMS CME Club Drugs and Critical Actions 12.12.12

CLINICAL TEACHING

CLINICAL TEACHING
Bedside teaching of fellows and residents throughout the institution, specifically the undifferentiated patient in the emergency department and throughout the institution with regards to medical toxicology patients
Morning Report Faculty Carolyn Stewart WPW 5.6.25 Michael Campbell Lessons Learns in Residency 5.5.25 Guadalupe Jimenez 4.7.25 Toxic Plants

Tyler Wise 5.24.24 Shriman Balasubramanian 4.18.24 Toxic Bradycardia Erin Falk 2.23.23 Critical Patient Robert Giles 1.23.23 Ear Injuries: P Acevedo Morning report 12.22 2022 Botulism Vineet Sharma 1 March 2021 Hyponatremia Sara Murphy 8.14.19 Procedures Phong H. 5.29.19 GYN J. Newberry 1.30.19 HTN Justin Henneman 2.14.18 Opioid Harm Reduction L Smith 1.25.17 The SAFE Exam Pon Pon Yeh 1.20.2016
Family and patient education on Naloxone Rescue and harm reduction strategies in at-risk or interested patients

ADMINISTRATIVE TEACHING

Curriculum Co-designer for the 2019 Inaugural NYP Advanced Practitioner SAFE Course, 11.14.2019 Provided annually through 2022- current
Curriculum designer Accelerated OB/GYN Faculty Training for SAFE examinations during COVID 19 Pandemic 2020
Facilitator/Co-organizer A Call to Men 4.3.19 The NYP Victim Intervention Program, WCM Title IX Office, and the Office of Student Affairs

CONTINUING EDUCATION AND PROFESSIONAL EDUCATION AS A TEACHER: N/A

OTHER EDUCATION/OUTREACH ACTIVITIES

COMMUNITY TEACHING	
Panelist, DFSA Enhancing the Response,DANY	11.13.24
Panelist, Sexual Assault Enhancing the Response, NYCASA	9.24.24
Trauma Informed Care, Video, Center for Virtual Care, Rama B. Rao, Gwenn Gideon, Wolters Kluwer 2.15.22 (Also bibliography)	https://vimeo.com/677909747
Podcast Guest, Sexual Assault Awareness Month Back To Health Series: Women's Health Wednesday Weill Cornell 4.13.22 (also bibliography)	https://weillcornell.org/news/podcast-sexual-assault-awareness
Panelist, Harlem YES: COVID-19 Women of Color I am Healed 8.22.20	
New York Disaster Interfaith Services 6.17.20 Presentation, Videos and Toolkit: Practical Tips for Preventing COVID-19 in Your Congregants	https://www.nydis.org/wp-content/uploads/2020/06/NYDIS-Webinar-Resource-Guide_Practical-COVID19-Guidance_20200616.pdf Includes Video Links
Keynote, Curious Creatures, How Toddlers Find Trouble and Other Toxic 'Tails'- Animal Medical Center's 5th Annual One Health Conference 11.2.19	
Panelist, Mayors Office to End Domestic and Gender Based Violence, Creating Pathways Conference , Enhancing System Responses to Gender Based Violence New York 4.29.19	300 interdisciplinary providers from across NYC focused on care of the sexual assault patient
American Museum of Natural History 4.6.14	Taught children and their parents about toxic sea creatures, emphasizing that the most danger in the ocean is the water itself, 40 lecture participants and a manned table with activities for children

The Dynamics of Domestic Violence 1996	Rape Crisis Intervention Program, Mt Sinai

L. CLINICAL PRACTICE, INNOVATION, and LEADERSHIP

Clinical Practice

Please include duration, i.e., year(s) of practice, name and location of practice, type of activity, level of activity (e.g., sessions, days or hours per week or month). Examples include attending on inpatient units, ambulatory practice, performing procedures.

Emergency Medicine Faculty	2008-Current 20-26 hr/week	Weill Cornell NYP	Evaluate, diagnose, stabilize and treat patients with undifferentiated acute clinical illness in the emergency department and telehealth settings
Emergency Medicine Faculty	1998-2008 24 hr/week	NYU/Bellevue	As above but without telehealth
Medical Toxicology Faculty (see also leadership)	2009-Current 40+ hours/week	Weill Cornell NYP	Perform bedside, intra-professional phone and virtual consultations for acutely poisoned or exposed patients, or undifferentiated conditions of potential toxicological etiologies
Medical Toxicology Faculty	1999-2008 10 hours/week	NYU/Bellevue	Provide Fellow Clinical Back up for pts as above

Clinical Innovations

Please include date innovation launched, title/location of innovation, role and short description of the influence on clinical care or practice management. Examples include development of innovative approaches to diagnosis, treatment or prevention of disease, applications of technologies, and/or models of care delivery.

Sexual Assault Forensic Examiner Program	**INNOVATIONS** -First oversight of Sexual Assault Forensic Examiners (SAFEs)and care, promote Victim Intervention Service. -Initiated seamless follow-up services for survivors of sexual assault with CSS, GYN, Primary Care beginning in 2017 and 2018 -Created and updated step by step guidance documents that are used at WC, NYP and in 2021 were adapted by PEM -Initiated case review for best practices and regulatory adherence which improved knowledge and adherence -Developed operations guidance for administrative attendings -Content Consultant on call for cases -Nursing Recruiting, retention, -Coordinator and founding member of NYP Enterprise SAFE Medical Directors	2009-current In 2008 more than 90% SAFE examinations were performed by untrained faculty In 2018 more than 90% were performed by trained SAFEs SAFE Center for Excellence Awarded the Lydia Martinez Interdisciplinary for rape crisis professional for the city of New York

	Monthly Meeting 2020 through which we identified dotphrases and optimizations for EPIC transition, documentation, forensic photodocumentation , PEP updates, -Ensured adequate providers for SAFE during pandemic by petitioning for redeployment of SAFEs and creating a unique accelerated training for OB/GYN faculty -Advocated for resources to train 10 APPs at LMH in SAFE care -Bring regulatory and process questions to SAFE steering and legal -Faculty education -Serve on the advisory group for the Mayor's Office to End Gender-Based Violence -Create Patient facing media content (see Other Podcasts in bibliography or community teaching above) -Educate Providers in Trauma Informed Care (See other media in bibliography) -Instituted IPV screening pilot in virtual encounters -Co-founder NYP SAFE medical directors to improve care across the enterprise -Develop Guidance for telehealth encounters	
Division of Medical Toxicology	**INNOVATIONS** Initiated the institution's first full time medical toxicology consultation service throughout the hospital, ensure administration and public health reporting, and advocacy and securing and approving antidotes and education for toxicology consultations, ad hoc review for QA and risk management, 2019 Expand MAT, secure botulinum antitoxin, vaping alerts and coordination with NYC and NYS DOH, and the New York City Poison Control Center Oversee naloxone rescue distribution, direct patient care, and education.	2009-current

	Weekly case review Oversaw educational expansion through recruiting a toxicology educator Recruit and mentor faculty toxicologists Expanded to LMH Initiated a teleconsultation service in 2022, then e-consult Collaborate across the enterprise for clinical guidance and policies on alcohol withdrawal, high dose insulin euglycemic therapy, and formulary decisions Collaborate with ICU, Burn Service and Department of Pharmacy to align antidotes and therapies Collaborate with national professional societies for educational and academic content, and position statements (see bibliography) Serve as consultant to NYC Poison Control Center and The Office of Cchief Medical Examiner for the City of New York Oversee EPIC Ordering of Naloxone order panel to reduce errors Approximately 500 pt encounters annually	

Clinical Leadership
Include year(s), leadership role, and description of activity/program, i.e. director/head of service/clinic or procedure area.

Medical Director, First at Institution	SAFE Program	2009-Current
Chief- First at Institution	Division of Medical Toxicology	2009-Current
Clinical Director Opioid Overdose Prevention	For NYP Weill Cornell ED For NYC DOHMH	2018-2023
NYP Opioid Community Resource Initiative Committee	Collaborate with Population health for rollout of referral of patients with opioid use disorder	2018 to current
Leadership Committee	Review Issues related to ED	2015 to Current

M. RESEARCH

Research Activities: *In a paragraph or bullet points (up to 300 words), briefly highlight your various research interests and activities (similar to NIH Biosketch). List IRB protocols (both*

active and inactive) here. You may also refer to your "Statement of Key Contributions" and attach it. Use the subsection below to record Research Support.

My key contributions are primarily service to the institution regarding regulatory oversight on the IRB and affiliated committees. See also projects related to AOC.

Research Support: N/A

Current Research Funding NA
Duplicate table *below as needed. For each funding vehicle, please include the following:*

Award Source: *(funding agency – federal, foundation, industry; type of grant)**	NA
Project title:	
Annual direct costs: Non-financial support *(e.g., drugs or services provided)*:	
Duration of support: *(mm/yyyy-mm/yyyy)*	
Name of Principal Investigator:	
Your role*:	
Your percent (%) effort:	
(*Optional - The major goals of this project are):*	

**Please annotate multi-investigator, program project, center grants (P50 etc.) and sponsored clinical trials to clarify your role on the projects (PI, site PI, project leader, co-PI, co-investigator, core director, etc.).*

Past (Completed) Funding
Please summarize as for current projects: source-type, project title, dates, your role.

NYU School of Medicine: Indirect support for teaching CDC Fellowship: Medicine, Public Health and Clinical Investigation to design and implement a 3 credit graduate course PI Marc Gourevitch. 2005-2008

Pending Funding NA
Please summarize as for current projects: source-type, project title, dates, your role.

Patents & Inventions NA
Please include inventors, title of invention and patent number.

PROTOCOLS

IRB PROTOCOL	Title	Status	Findings
1701017882	Knowledge, attitudes and behaviors regarding care of sexual assault survivors in the emergency department AOC Mentee Andrea Liu	Closed	Platform Presentation American College of Emergency Physicians 2019 (see abstracts)
1702017961	Prognostic Utility of Electrolytes in Sepsis AOC Mentee Patrick Bedard	Closed	Sodium and Potassium are inadequate markers or predictors of outcome in sepsis
20-02021466	Knowledge, Comfort, and Training Regarding Care of Transgender	Closed	Faculty feel they could benefit from training

	and Gender Non-binary Patients in the Emergency Department AOC Mentee Kenny Chen		
1702017966	Comprehensive evaluation of care of survivors of sexual assault. A retrospective chart review AOC Mentee Samwarit Abraham	Closed	Non-SAFEs use more biasing Language Received a Certificate of Excellence for AOC presentation
22-08025150	Intimate Partner Violence Screening Pilot in the Virtual Urgent Care (VUC)	Closed	Presented at Virtual Healthcare in the Mainstream NYC 2022
23-08025150	Expansion of an Intimate Partner Violence Screening Pilot in Virtual Urgent Care AOC Mentee Sarah Rosselli	Open	
23-10026626	Knowledge and Behaviors of Providers Regarding Screening for Sexual Assault During Encounters for Post Exposure Prophylaxis and Pregnancy Prevention AOC Mentee Sarah Rosselli	Open	Presented at ACEP , Las Vegas 2024

A. MENTORING

Mentorship is a longitudinal, collaborative learning relationship to help the mentee or protégé succeed. Mentoring can be provided within many formats, including one-to-one, small groups, or large group workshops or lectures, which cover any topic directly related to the mentee's career development.

Please list trainees and faculty that you have formally supervised both at home institution(s) and for extramural organizations, etc. Individuals listed in this section should be those supervised in a research, teaching or clinical setting. List only those on whose careers you have had a substantial impact. Do not indicate those for whom you have provided general career advice. This section may be annotated to provide more information.

If this is the candidate's first faculty appointment at WCMC, please list mentoring contributions at institutions where the candidate previously held a faculty position.

Leadership and mentoring in programs (*Describe activity; include dates)*

WEILL CORNELL MEDICAL COLLEGE
Faculty Mentor Mary Mount College Nursing PhD Candidate Adelene Egan "Blood Before Bio" an Appoach to Improving DFSA Toxicological Capture 2024-2025
Women in Medicine 2016-present
Course Director: Area of Concentration: Emergency Medicine/Critical Care, Weill Cornell Medical College, Course Director Develop interdisciplinary educational curriculum for outcomes research and scholarly activity in the acute undifferentiated patient 2015-2019, 2022-2025
Annual PA/NP Course Toxicology Theme Day Co-develop training materials and outline for continuing educational toxicology review course for midlevel providers 11.8.2015, also 12.2.2018
New Curriculum Learning Discipline Workgroup: Therapeutic, Pharmacology and Precision Medicine 2013

Pharmacology Curriculum Committee, Weill Cornell Medical College: Reviewed materials for flipped classroom Developed podcasts “Five Minute Pharmacology” to integrate pharmacological concepts into clinical settings Provided lecture 2014, 2015	
Faculty Preceptor, Emergency Department Pharmacy Rotation, Department of Pharmacy 4.29.2013-5.24.2013, 2024, 2025	
Simulation Day Coordinator and CO-Coordinator: Design goals and objectives, create interactive educational sessions for 4 or 8 hour theme days, assemble faculty and mentor housestaff educators, provide a session Tox Sim 2.2.23 Geriatric Toxicology 1.22.14 Simulation Day DV and Sexual Assault 3.13.13 Simulation Session Radiation 1.25.12 Simulation Day 9.19.12. Simulation Day EM 10.26.11 Differentiating the Poisoned Patient 5.4.11 4 Simulation Day: Headache 3.23.11 Simulation Day Differentiating the Poisoned Patient: Breakout session ECGs 5.4.11 Simulation Day Toxicology Theme 9.22.10 Simulation Day: The Patient in Shock 6.10.10	
NYU SCHOOL OF MEDICINE	
Course Creator/Director Global Environmental Health I and II U10.2150-1.001 Masters Global PH candidates 3 credits	2005-2007 Created for NYU Masters of Global Public Health and CDC Fellowship in Public Health and Clinical Investigation
Course Creator/Director: Acute Public Health Emergencies (U10.2290): design and implement elective for Master Global PH candidates 3 credits Spring 2008	2007-8 Course Rating 4.62/5 Instructor Rating 5/5 n=13 Created for NYU Masters of Global Public Health and CDC Fellowship in Public Health and Clinical Investigation
Coordinator: Conversations in Public Health: Global Warming & Human Health - Panel Discussion for the Public; Coordinated panelists, moderator and outline for a community discussion 2007	Strong community attendance, standing room only
NYU Advanced Science Seminar Session Leader for the following Topics: Drugs of Abuse, Pharmacology, Bioterrorism May-June 2004-2008	
Faculty, Advanced Science Seminars for Rising Fourth Year Medical Students, NYU School of Medicine, New York Course Director, Global Public Health Educate students in global public health through lectures, group projects, and outside speakers over 12 to 14 class hours 2005-2007	Highly selected seminar 2006, 2007
Research Director, NYU/Bellevue Emergency Medicine Residency Program Coordinated scholarly projects by residents, monthly research series on publication in biomedical journals, the peer review process, abstract writing, ethics in medical publication and investigation, speaker coordination, research day and newsletter. 2003-2005	

Summer Fellows Research Coordinator, Faculty Preceptor, NYU/Bellevue, Dept EM Oversaw undergraduate summer research projects 2000-2004	Multiple small projects with clinical impact example: observational study of how non-retractable sharps are handled facilitated support for more available and portable sharps containers
MOUNT SINAI SCHOOL OF MEDICINE	
Mount Sinai Medical Center/School of Medicine: Nurse Physician Collegiality Program for student experience 1990-1991	Innovated and implemented a collaborative rotation requirement for medical students (recognized resulting in an award-see above)

Institutional Training Grants and Mentored Trainee Grants N/A

Duplicate table below as needed. Examples include serving as PI or Mentor on T32, K01, K08, K23 or other mentored grants.

Award Source *(funding agency, type of grant):*	NA
Project title:	
Duration of support *(mm/yyyy-mm/yyyy):*	

N. MENTORING

CURRENT MENTEES

Lucy Willis, MD	
Weill Cornell, New York, New York	Assistant Professor Clinical Emergency Medicine
Expected Mentoring	Current- foreseeable future
Projects/Accomplishments	Innovations and Leadership in Wellness, esp During COVID 19 Pandemic Publication in High Impact Journal/National presentation/Innovation/Regional and Local impact
Goals/Outcomes	Guidance on professional/academic advancement/self promotion
Type of Supervision	Leadership

He Sarina Yang	
Weill Cornell, New York, New York	Associate Professor of Clinical Pathology and Laboratory Medicine
Projects/Accomplishments	Leadership in Laboratory Medicine Publications and Presentations in High Impact Journals esp specific to COVID -19 assays
Expected Mentoring Period	2020-2028
Goals/Outcomes	Guidance on professional/academic advancement/promotion
Type of Supervision	Leadership/Insitutional knowledge

Sarah Rosselli LCSW -> MS4	
Weill Cornell Medical College, New York, New York	Medical Student Graduating Class 2025
Mentoring period	2018-2030
Goals/Outcomes	Guidance on professional/academic advancement/self promotion Area of Concentration Began as social worker, now working her way to medical degree Prior accomplishment: She developed script for Trauma Informed Care Video https://vimeo.com/677909747

	Current goal: AOC project Interpersonal screening expansion on virtual urgent care and screening for sexual assault duing encounters for sexual health presented at ACEP 2024
Type of Supervision	Leadership/professional development/academics

Elizabeth C. Moore, DO	
Weill Cornell, New York, New York	Assistant Professor of Clinical Emergency Medicine Director of Toxicology Education for the Medical Toxicology Consultation Service, Emergency Medicine Residency and Emergency Medicine Clerkship/Sub-Internship
Expected Mentoring Period	2019-2030
Project/Accomplishments	Formalized rotation requirements for ACGME and medical students Received Dean's Award for Excellence in Teaching 2021 Recognition for Outstanding Contributions to ACMT
Goals/Outcomes	Guidance on professional/academic advancement/self promotion
Type of Supervision	Leadership/Academics

Diksha Mishra, MD	
Weill Cornell, New York, New York	Assistant Professor of Clinical Emergency Medicine Director of Toxicology Education for the Medical Toxicology Consultation Service, Emergency Medicine Residency and Emergency Medicine Clerkship/Sub-Internship
Expected Mentoring Period	2023-2030
Project/Accomplishments	QI Academy application: Ensuring compliance within institution with SAFE regulations and best practices
Goals/Outcomes	Mentorship Guidance on professional/academic advancement/self promotion
Type of Supervision	Leadership/Academics/QI

PAST MENTEES

Brenna Marie Farmer, MD	
Weill Cornell Medicine, New York, New York	Associate Professor of Clinical Emergency Medicine Currently Chief of Emergency Medicine NYP-Brooklyn Methodist Hospital
Expected Mentoring Period	2008-2015
Project/Accomplishments	Leadership in Patient Safety, Leadership in LMH ED director Multiple publications and national presentations (see bibliography)
Goals/Outcomes	Guidance on professional/academic advancement/self promotion
Type of Supervision	Leadership

Rana Biary, MD	
NYU-Langone, New York, New York	Assistant Professor of Clinical Emergency Medicine Fellowship Director, Medical Toxicology
Expected Mentoring Period	2008-2018
Project/Accomplishments	Fellowship Director Award winning medical student rotations Leadership in national meetings Abstract see bibliography
Goals/Outcomes	Guidance on professional/academic advancement/self promotion
Type of Supervision	Leadership/Career guidance/Support

Zhanna Livshits, MD	
University of California, San Franciso, California	Associate Clinical Professor, Emergency Medicine Medical Toxicology

Expected Mentoring Period	2012-2019
Project/Accomplishments	The Haile T. Debas Academy of Medical Educators Excellence in Teaching Award 2021 Fellowship Director, Medical Toxicology, UCSF (Also see bibliography)
Goals/Outcomes	Guidance on professional/academic advancement/self promotion
Type of Supervision	Leadership/Academics/Career Guidance

Fiona Garlich, MD	
Keck School of Medicine, Los Angeles, California	Clinical Assistant Professor, Emergency Medicine Medical Toxicology
Expected Mentoring Period	2012-2018
Project/Accomplishments	American College of Medical Toxicology Position Statement on Limiting Harms of Vaping and E-cigarette Use Also Director, Medical Toxicology Consultation Service/Rotation
Goals/Outcomes	Guidance on professional/academic advancement/self promotion
Type of Supervision	Leadership/Academics

Denise Fernandez, MD	
Robert Wood Johnson Medical School, New Brunsick, New Jersey	Associate Clinical Professor, Emergency Medicine Medical Toxicology
Expected Mentoring Period	2011-2018
Project/Accomplishments	Initiate Medical Toxicology consultation services (also see bibliography)
Goals/Outcomes	Guidance on professional/academic advancement/self promotion
Type of Supervision	Leadership/Academics

Area of Concentration (AOC) MENTEES, Weill Cornell Medical College

Samrawit Abraha, MD	
Weill Cornell, New York, New York	
Expected Mentoring Period	2015-2018
Project/Accomplishments	Received certificate of excellence. Comprehensive evaluation of care of survivors of sexual assault. A retrospective chart review
Goals/Outcomes	AOC project continued by Andrea Liu
Type of Supervision	AOC Mentor

Patrick Bedard, MD	
Weill Cornell, New York, New York	
Expected Mentoring Period	2016-2019
Project/Accomplishments	Prognostic Utility of Electrolytes in Sepsis
Goals/Outcomes	AOC question
Type of Supervision	AOC Mentor

Andrea Liu, MD	
Weill Cornell, New York, New York	
Expected Mentoring Period	2017-2019
Project/Accomplishments	Comprehensive evaluation of care of survivors of sexual assault, continuation.
Goals/Outcomes	AOC project Presented at ACEP 2019
Type of Supervision	AOC Mentor

Kenny Chen, MD	
Weill Cornell, New York, New York	
Expected Mentoring Period	2018-2021
Project/Accomplishments	Knowledge, Comfort, and Training Regarding Care of Transgender and Gender Non-binary Patients in the Emergency Department
Goals/Outcomes	AOC project indicating more training would be useful in working with gender non-binary patients
Type of Supervision	AOC Mentor

O. INSITUTIONAL LEADERSHIP ACTIVITIES,

See also medical toxicology and SAFE leadership, and Area of Concentration

WEILL CORNELL	
Chair, Institutional Review Board G1 2022-Current	I work closely with institutional leaders, oversee and delegate reviews, solicit and mentor new IRB members, and support a metric-driven culture to help improve the overall performance of the IRB as well as chair bi-weekly meetings, act a liaison for members and researchers.
NEW YORK UNIVERSITY	
Governance Board NYU School of Public Health 2004-2008	Served on governance body to institute NYUs first school without walls for a Masters in Global Public Health

N. INSTITUTIONAL ADMINISTRATIVE ACTIVITIES

Please see above for leadership as well as the following

WEILL CORNELL	
Single IRB	2024 to current
Member, Executive IRB	2022 to current
Member, IRB G1	2015 to 2022
Dean's Conflict of Interest Taskforce	2019
Broad Consent Group - Research Integrity	2019-2020
User Acceptance Testing Research WRG Committee	2018
WEILL CORNELL QATAR	
Member WCM-Q IRB	2015-Current
NYP HOSPITAL/ENTERPRISE	
Naloxone Ordering in Epic Chair Workgroup	2024
Policy Review Committee A116	2025
Formulary and Therapeutics	Medication management decisions for NYP voting member 2009 -current
Subcommittee on Critical Care Therapeutics	Review and approve policies for critically ill patients throughout hospital Contribute to specific polices :HIE, Status epilepticus, IV APAP, hyper K, ETOH withdrawal, opioid withdrawal 2009- current
Inter-ICU Committee	Review Clinical practice issues 2009-2016
Environmental Safety Committee	TriCampus Review protocols for potential chemical and biological exposures from

	laboratory and research personnel, perform drills on pyrophoric exposures, work with consensus group. Special projects: care for exposure to MPTP or Herpes B virus 2009-2019, 2024
Medication Safety Committee NYP WC	Review and address hospital wide medication safety issues 2013-2016
DEPARTMENT OF EMERGENCY MEDICINE	
Area A 5S ED improvement program	Participant ED improvement 2019
ED Leadership Committee Member	Review Issues related to ED 2015 to current

Q. EXTRAMURAL PROFESSIONAL RESPONSIBILITIES

Leadership in Extramural Organizations	Dates
Chair Forensic Specialty Section American Academy of Clinical Toxicologists, Co-Chair 2023	2016 to current
Symposium Coordinator AACT Forensic Section Symposium: Kratom	9.23.24
Symposium Coordinator AACT Forensic Section Symposium: Delirious or Dead The History and Future of Hyperactive Delirium	9.29.23
Moderator and Organizer, "The HII Score or Scoring to Get High" Forensic Interest Webinar American Academy of Clinical Toxicologists 7 June 2022	2022
Session Content Developer/Organizer. Forensic Toxicology as a Means to Promote Global Peace. North American Congress of Clinical Toxicologists 17 Oct 2022	2022
Organizer, Moderator, AACT Forensic SIG Webinar "Toxicology In Capital Cases" 1 June 2021	2021
Moderator/Content Developer National AACT Webinar: Forensic SIG: Brain Behavior and the Courts 1 Oct 2019	2019
National AACT Webinar Organizer Case Files from the MEs Office: Unexplained Death of a HealthCare Worker 2 Oct 2018	2018
AACT Forensic Sig Panel: Moderator/Organizer Witness for the Prosecution Panel 28 Oct 2018	2018
ACMT Women In Toxicology Book Club Moderator: Women Don't Ask 28 March 2018	2018
Organizer/Moderator: On Being and Becoming an Expert Witness AACT Forensic Sig 5 Dec 2017	2017
EMCON 2004: Emergency Medicine Conference in India, Workshop: Pitfalls in Emergency Medicine, Abstract Reviewer and Judge: Oral and Poster presentations; October 4-6	2004 India

Service on Boards and/or Committees

Regional

Name of Committee	Role *(i.e., member, fellow, etc.)*	Organization *(Institution/Location)*	Dates *(yyyy-yyyy)*

REGIONAL EXRAMURAL SERVICE	Dates
Manhattan Sexual Assault Task Force, Member	2023 to current

Member, Mayor's Office to End Gender Based Violence (EGBV) Subcommittee on Near Fatal Strangulation	2024 to Current
Member, Gender Based Violence Working Group and Subcommittee on Capacity to Consent- Mayor's Office EGBV	2022 to Current
Medical Advisor: East End United Community Partners, (pro-bono)	2022 to current
Emergency Department Expert Advisory Group, Opioids NYC DOHMH	2017 to current
Office of Chief Medical Examiner of the City of New York , Toxicology Consultant (pro-bono)	1998 to Current
New York City Poison Control Center, Consultant (pro-bono)	1998 to Current
Search Committee, Chair, Emergency Medicine, Lincoln Hospital	2018
Society of Academic Emergency Medicine Regional Planning Committee and Abstract Reviewer	2002- 2004

National

Name of Committee	Role *(i.e., member, fellow, etc.)*	Organization *(Institution/Location)*	Dates *(yyyy-yyyy)*

NATIONAL EXRAMURAL SERVICE	Dates
Women in Toxicology , American College of Medical Toxicology	2017-Curren
Member, Medication Management, American College of Medical Toxicology	2015-Current

International

Name of Committee	Role *(i.e., member, fellow, etc.)*	Organization *(Institution/Location)*	Dates *(yyyy-yyyy)*

INTERNATIONAL EXTAMURAL SERVICE	
Delegate World Health Assembly, WHO , Geneva	2007
EMCON 2004 Abstract Reviewer and Judge: Oral and Poster presentations; October 4-6	2004
Academic Co-Chair and Abstract Reviewer Society of Emergency Medicine, India Conference Coordinator/Abstract Reviewer, Academic Section Emergency Medicine Conference of India, Pune, India, October	2003
Abstract Reviewer international Emergency Medicine, Hyderabad India	2002

Grant Reviewing/Study Sections N/A

Role(s)	Organization Name	Dates *(yyyy-yyyy)*

Editor/Co-Editor N/A

Books / Textbooks / Journals / Organization Name	Dates *(yyyy-yyyy)*

Journals/Textbooks/Books N/A

Journal /Textbook/Book Name	Dates *(yyyy-yyyy)*

Editorial Board Membership N/A

Board / Organization Name	
Editor, Toxicology Section, Journal of Emergency Medicine of India,	2003-2004

Journal Reviewing/Ad hoc Reviewing

2024

Journal / Organization Name

JOURNAL	DATES
Journal of Medical Toxicology	2013-2015,2023
Clinical Toxicology	2008,2015, 2018, 2019, 2024, 2025
British Journal of Pharmacology	2015
Emergency Medicine Antidotes in Review	2012
Human and Experimental Toxicology	2012
European Journal of Emergency Medicine	2008.2009, 2011
Alcohol and Alcoholism	2008
Intensive Care Medicine	1999

Editorial Activities: Ad hoc Reviewing

P. INVITED LECTURES

REGIONAL LECTURES
Mastering the SAFE Examination, Women's Healthcare in the Emergency Department, Northwell , Manhasset, NY 4.23.25
NYCPCC Fellows Conference: Intrathecal Medication Errors 6.7.24
Crime Victims Treatment Center Annual Advanced Practitioner DOH Certified SAFE Training Evidence Collection/DFSA 13 Oct 2018, 14 Nov 2017 then annually thru 2024
Strategies for Urgent Anticoagulation Reversal 2023 Annual Ian Portelli Trauma Conference, Poughkeepsie NY 11.8.23
NY American College of Emergency Physicians, 3 Part Series on Sexual Assault: Why Words Matter, Out with the Old, and Amnestic Sexual Assault, New York, 7.12-13.23
Updates in "Capacity to Consent Guidance Document" from the Subcommittee on Capacity to Consent of the Mayor's Office to End Gender Based Violence to the Manhattan Sexual Assault Task Force 4.11.23
Trauma and Sexual Assault, Annual Ian Portelli Memorial Trauma Conference 11.9.22 Poughkeepsie, NY
Grand Rounds Mt. Sinai, Elmhurst Drug Facilitated Sexual Assault. Department of Emergency Medicine 2.16.22
Assistant District Attorney's Training, Drug Facilitated Sexual Assault, Sex Crimes Unit , New York County District Attorney's Office 5.29.21
Panelist, Mayors Office to End Gender Based Violence, Creating Pathways Conference , Enhancing System Responses to Gender Based Violence New York 29 April 2019
NYC Poison Control Center (NYCPCC) : Annual Intensive Review Course in Medical Toxicology, Workshop Consultant with Fellows Approach to Coma, Caustic Exposures 1997, Gastric Decontamination 1997, Pesticides, Marine Toxins 1998, Hypoglycemia 1999, Snakes and Spiders 2005, 2006, Toxic Alcohols 17 March 2017, 13 March 2018, Gastric Decontamination 20 March 2019, NYCPCC Fellows Rounds: Antidotes in Oncology, Postmortem Toxicology 2008, 2009, 2010 NYCPCC Visiting Toxicologist: Fellows Rounds Postmortem Toxicology 12 July 2016 Clinical Teaching Rounds: Solving the cases with minimal clues, monthly to bimonthly NYCPCC for rotating medical students, residents and fellows 1998-current (suspended during pandemic, now resumed)

MICU Fellows Conference NYP Queens 4 Dec 2018
Vassar Brothers Annual Trauma Conference: Sedation of Agitation 15 Nov 2017, Poughkeepsie NY Novel Oral Anticoagulants 14 Nov 2018
Managing Missed Methadone: Kennedy Health System/Rowan School of Medicine Emergency Medicine Residency Journal Club Guest via Conference Call 4 Nov 2015
Controversies and Consensus in Emergency Medicine, Northampton Massachusetts 25 Sept 2015
Grand Rounds Mt Sinai/Elmhurst Department of Emergency Medicine Novel Oral Anticoagulants 11.5.2014
NYU Masters in Public Health, Guest Speaker, Epidemiology, Infectious Diseases and Bioterrorism: Annual lecture Terrorism: Chemicals and Biologicals 2009-2013
Grand Rounds Jacobi Medical Center, Emergency Medicine Residency: Lipid Emulsion for Toxic Cardiovascular Collapse 4.23.2012, Disorders of Acetylcholine Metabolism 1997
Grand Rounds, Jacobi Medical Center, Emergency Medicine Residency : A Common Case 1.21.2009
Memorial Sloan Kettering Pediatric Morbidity & Mortality: Methemoglobinemia 20 April 2009
Nassau County Pediatric Society 2002 Street Drugs: A Threat to Our Children
High Altitude IllnessJacobi Medical Center 1997
Central Nervous System EMS St Vincents Paramedics Program 9.1996

NATIONAL INVITED LECTURES
Intrathecal Errors-Updates to Supportive Care AACT Pre-Symposium Denver,CO 9.20.24
Working with the IRB :AACT Research Seminar: The Nuts and Bolts of Toxicology Research - Building a Foundation in Epidemiology, Biostatistics and Evidence-Based Medicine NACCT Virtual 8.15.2023
A Walk in the Woods : Toxicology Meets the Trail And Buprenorphine and Illicit Agents Medical Directors Academy, Park City Utah 11. 3.22
Lecturer, Liposuction at “Drop Dead Gorgeous” American Academy of Clinical Toxicology Pre-Symposium 14 Oct 2021
Panelist, Critical Care American College of Medical Toxicology, Pre-symposium Critical Measures Intensive Care Toxicology Case Review 13 Oct 2021
Children’s Hospital of Philadelphia, Case Review DFSA, Invited Expert 13 Oct 2021
New York City Poison Control (National Broadcast) Drug Facilitated Sexual Assault 5.6.2021 see youtube under other video in bibliography
Panelist , Critical Care Case Conference, Fellows In Training, ACMT, San Francisco, 14 April 2019
American College of Medical Toxicology Lecture Working with the IRB 31 March 2017
ACMT Annual Spring Meeting 2012 Botulinum and Tetanus Review
ACMT Clinical Case Conference Acetaminophen 18 April 2012
NACCT/ACMT Pre-Symposia Tumescent Anesthesia, Toxicological Update 2012
NACCT Panelist/Discussant in the Toxicological Literature- Bisphenol A review 2008
NACCT/ACMT Pre-symposium Toxicological Emergencies in Oncology: Methotrexate antidotes and extravasation antidotes 2005
Intrathecal Medication Errors Pre-symposium – The Dark Side of Pharmaceuticals NACCT , Orlando 2005

Society for Academic Emergency Medicine(SAEM)CPC Thrombosis and thrombocytopenia in a patient with abdominal pain, Orland Florida 2004
American Academy of Dermatology, Annual Meeting, San Francisco, Lidocaine Toxicity 22 March 2003
Office Based Surgery, Wakeforest, North Carolina2002; Deaths Related to Liposuction 19 Jan 2002
CPC Decreased Walking in a Febrile Child. Society for Academic Emergency Medicine, San Francisco 2000,
NACCT: CPC Delirium and Movement disorder in and elderly Male, Tuscon, AZ 2000
NACCT/ACMT Pre-Symposium on the Dark Side of Pharmaceuticals: Intrathecal Medication Errors 2000

INTERNATIONAL LECTURES
Emergency Management of the Poisoned Patient, Tirgu Mures, Romania 12-14 September2019
European Association of Poison Control Centres and Toxicologists : Novel Oral Anticoagulants 24 May 2018 Romania
Symposium Medicus Rio Mar 2012 This Cough is Killing Me; Vanity and Vice
Grand Rounds Invited in Recognition of Off Service Rotation of the Year Royal College of Physicians and Surgeons, University of Alberta, Department of Emergency Medicine Pediatric Calcium Channel Blocker Toxicity 6.12.2007
Hong Kong Review Course in Medical Toxicology 2004, 2006, 2008. Pediatric and Psychiatric Poisons; Inhalational Poisoning, Pesticides, Terrorism, Drugs of Abuse, CPC Hyponatremia in a Woman with Headache, Workshops:Tachycardia/Bradycardia, Hypoglycemic agents, Tricyclic Antidepressants and SSRIs
Hong Kong Health Authority Commissioned Training Clinical Toxicology Course for Nurses: Decontamination 2008
Symposium Medicus St Thomas 2005 ABGs vs VBGs, Transfusion Errors, Non-Invasive Mechanical Ventilation
Hong Kong Academy of Medicine: Homicidal Poisons 2004
EMCON Emergency Medicine Conference in India, Workshop: Pitfalls in Emergency Medicine 10.2004
Asian Conference of Emergency Medicine, Toxins of Terrorism, Moderator of Trauma in EM 8-9 Oct 2004
Acetaminophen , International Emergency Medicine Hyderabad, India 2002

A. BIBLIOGRAPHY

S. BIBLIOGRAPHY

Entries should follow standard journal format, listing all authors, complete titles and inclusive pagination. Please also include PMCID: PMC number (or DOI number).

Bold your name *wherever it appears in the author list. Publications also may be annotated here (or in the Statement of Key Contributions) to indicate the role of the candidate, where appropriate. This should be considered for co-first authorship, co-senior authorship, and in publications in which the candidate played an important role (leadership of a site, or methodology, etc.) that may not be apparent from the author order. Indicate if you are a co-first-author or co-senior author with an annotation*.

Number the entries. The listings must be organized by category, preferably in ***chronological*** *order (most recent last). Use the following categories:*

1. Peer-reviewed Research Articles:

Appel G, Avery JJ, Ho K, Livshits Z, **Rao RB,** Avery J. Improved Emergency Medicine Physician Attitudes Towards Individuals with Opioid Use Disorder Following Training in Naloxone Rescue Kit Distribution. American Journal of Emergency Medicine 2020; 38(5):1039

Berlin D, Farmer BM, **Rao RB**, Rella J. Deaths and Severe Adverse Events Associated with Anesthesia-Assisted Rapid Opioid Detoxification — New York City, 2012 Morbidity and Mortality Weekly Report September 27, 2013 / 62(38);777-780

Sharma R, **Rao RB**, Chu J. Compartment syndrome of the hand from prolonged immobilization secondary to drug overdose.J Emerg Med. 2013 Apr;44(4):845-6. doi: 10.1016/j.jemermed.2012.07.067. Epub 2013 Jan 20. PMID:23340119

Manini A, Labinson RM, Kirrane B, Hoffman RS, **Rao R,** Stajic M, Nelson LS. A novel neuromuscular syndrome associated with clenbuterol tainted heroin. Clin Tox 2008;46(10):1088-1092 PMID:19016097

Rao RB, Hoffman RS. Nicotinic toxicity from tincture of blue cohosh *(Caulophyllum thalictroides)* used as an abortifacient. Vet Hum Toxicol. 2002 Aug;44(4):221-2. PMID:12136970

Rao RB, Ely SF, Hoffman RS. Deaths related to liposuction. N Engl J Med. 1999 May 13;340(19):1471-5 . PMID:10320385

Nelson LS, Hoffman RS, **Rao R**, et al: Poisonings associated with illegal use of aldicarb as a rodenticide. MMWR 1997;46:961-963.

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2. Reviews and Editorials:

Rao RB. Nelson LS Case studies in toxicology: managing missed methadone. Emergency Medicine 2015 Volume: 47 Issue: 8 Pages: 353-356

Livshits Z, **Rao RB**, Smith SW. An approach to chemotherapy-associated toxicity. Emerg Med Clin North Am. 2014 Feb;32(1):167-203. doi: 10.1016/j.emc.2013.09.002. Review.PMID:24275174

Caldwell JD, **Rao RB,** Stern ME. Altered mental status in an elderly woman. Emergency Medicine 2014 Volume: 46 Issue: 12

Goldfrank LR, Wall SP, **Rao RB.** The role of the medical toxicologist in organ transplantation. J Med Tox 2012;8:247-249

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Waters DA, **Rao RB,** Petracchi HE. Providing health care for the Hmong. Wis Med J. 1992 Nov;91(11):642-51. PMID 1471350

3. Books: N/A

4. Chapters:

Rao, RB. Acute isoniazid toxicity. UptoDate.com. 2023

Rao RB, Flomenbaum M. Postmortem Toxicology. In Hoffman RS, Howland MA, Lewin NA, Nelson LS et al, (eds) Goldfrank's Toxicological Emergencies. 11th Edition. McGraw-Hill. New York. 2023 Chapter contribution in previous editions. 2023

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5. Non-peer-reviewed Research Publications: (Correspondence)

Rao RB. Regarding the effect of dabigatran plasma concentrations.J Am Coll Cardiol. 2014 Jul 1;63(25 Pt A):2885. doi: 10.1016/j.jacc.2014.02.610. Epub 2014 May 7.

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Rao RB, Hoffman RS. Acetaminophen toxicity in an urban county hospital.
N Engl J Med. 1998 Feb 19;338(8):544; author reply 544-5. PMID:9471555

Rao RB, Palmer M, Touger M.Thrombocytopenia after rattlesnake envenomation.
Ann Emerg Med. 1998 Jan;31(1):139-41.
PMID:9437365

6. Case Reports *(optional, or list 10 best)*:

Halcombe SE, Howland MA, Hoffman RS, Nelson LS, Barbey JT, **Rao RB** Arsenic Induced Torsade de Pointes in a Patient with Multiple Myeloma Prague, European Association of Poison Control Centers June 2006

Stone MB, Marrill K, **Rao RB**, Goldfrank LR. Access to Harm Reduction Education Among Injection Drug Users in an Urban Emergency Department ACEP 408, 2001

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Chiang WK, Lucaine R, Sangalli BC, Hack J, **Rao RB**. Detection of methanol using a rapid alcohol oxidase reaction test. Abstract/Poster: North American Congress of Clinical Toxicology. J Toxicol Clin Toxicol 1997;35:509.

7. In review *(manuscripts submitted or in preparation – list separately)*: NA

8. Abstracts *(optional, list 10-20 best or most recent only)*:

Rosseli S, Morrison J, Rippon B, Rao R. Knowledge and Behaviors of Providers Regarding Screening for Sexual Assault Exposure During Encounters for Post Exposure Prophylaxis. ACEP, Las Vegas 9.30.24

Rosselli S, Halpern A, Stern ME, Lowe G, Pombo M, **Rao RB**. Intimate Partner Violence Screening Pilot in the Virtual Urgent Care (VUC) Setting. Poster Presentation. Virtual Healthcare in the Mainstream 2022. New York, New York Oct 21, 2022

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9. Other *(media, podcasts, etc.)*:

POSITION STATEMENTS

Farmer BM, Cole JB, Olives TD, Farrell NM, **Rao RB**, Nelson LS Mazer-Amirshahi, Stolbach AI., American College of Medical Toxicology Position Statement: Medication Administration and Safety During the Response to COVID-19 Pandemic J Med Toxicol. 2020 Oct; 16(4): 481–483.

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Video Education for Providers Trauma Informed Care. **Rao RB**, Gideon G. (written by Sarah Rosselli) Center for Virtual Care, Wolters Kluwer 15 Feb 2022 https://vimeo.com/677909747

Podcast for Community
Guest Speaker in observation of Sexual Assault Awareness Month. Back To Health Series: Women's Health Wednesday Weill Cornell 4.13.22 https://weillcornell.org/news/podcast-sexual-assault-awareness

NYC Poison Control Center (see invited lectures) Broadcas on DFSA t https://youtu.be/txUP_E41658. May 2021

EXHIBIT 36

DR. RAMA RAO - PUBLICATIONS AND ABSTRACTS

Appel G, Avery JJ, Ho K, Livshits Z, **Rao RB,** Avery J. Improved Emergency Medicine Physician Attitudes Towards Individuals with Opioid Use Disorder Following Training in Naloxone Rescue Kit Distribution. American Journal of Emergency Medicine 2020; 38(5):1039

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