Plan Overview

A Data Management Plan created using DMPTool

Title: The pulmonary immune response induced by single and multiple exposures to combustion products of burn pit constituents

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Funding opportunity number: PA-20-195

Template: NIH-Default DMSP

Project abstract:

Exposure to burn pits are a public health threat to those in the Armed Forces who are serving or have served in the Middle East. Our studies investigate the acute and chronic effects of exposure on lung health in studies of a mouse model that closely mimics the human exposure to burn pit toxicants, particularly the immune responses and the changes in the lung microenvironment that impact on the response. Our goal is to understand the critical pathways of the immune response that regulate the changes that occur during chronic compared to acute exposure, with the expectation that a therapeutically targetable pathway will emerge and will prove useful in modulating lung disease due to this exposure and to other environmental exposures.

Start date: 11-01-2023

Last modified: 05-10-2023

Copyright information:

The pulmonary immune response induced by single and multiple exposures to combustion products of burn pit constituents

In this proposed project, data will be generated via the following methods: flow cytometry, ELISA, real-time quantitative polymerase chain reaction (PCR) and single cell RNAseq. This data will be collected from a minimum of 3 independent experiments. The total size of the data collected is projected to be 300 GB.

We expect to generate the following data file types and formats during this project: tabular (.CSV).

In this proposed project, the cleaned, item-level spreadsheet data for all variables will be shared openly, along with example quantifications and transformations from initial raw data. Final files used to generate specific analyses to answer the Specific Aims and related results will also be shared. The rationale for sharing only cleaned data is to foster ease of data reuse.

To facilitate the interpretation and reuse of the data, a README file and data dictionary will be generated and deposited into a repository along with all shared datasets. The README file will include method description, instrument settings, RRIDs of resources such as antibodies, model organisms, and other tools. The data dictionary will define and describe all variables in the dataset.

Not applicable.

In accordance with FAIR Principles for data, we will use open file formats and persistent unique identifiers (PIDs) such as RRIDs for resources.

Data describing gene expression will be archived at GEO. other data will be archived at the University's approved repository.

These repositories provide metadata, persistent identifiers, and long-term access. Dataset(s) are available through a request process.

All scientific data generated from this project will be made available as soon as possible, and no later than the time of publication or the end of the funding period, whichever comes first. The duration of preservation and sharing of the data will be a minimum of 10 years after the funding period.

There are no anticipated factors or limitations that will affect the access, distribution or reuse of the scientific data generated by the proposal.

Controlled access will not be used. The data that are shared will be shared by unrestricted download.

Not applicable.

Lead PI Claire M. Doerschk, ORCID: 0000-0003-2638-3321, will be responsible for the day-to-day oversight of lab/team data management activities and data sharing. Broader issues of DMS Plan compliance oversight and reporting will be handled by the PI and Co-I team as part of campus stewardship, reporting, and compliance processes.

Planned Research Outputs

Data paper - "The pulmonary immune response induced by single and multiple exposures to combustion products of burn pit constituents"

Planned research output details

Title	Type	Anticipated release date	Initial access level	Intended repository(ies)	Anticipated file size	License	Metadata standard(s)	May contain sensitive data?	May contain PII?
The pulmonary immune response induced by single an ...	Data paper	Unspecified	Open	None specified	1 MB	None specified	None specified	No	No