



# 2022 - 2023 Annual Report



UNIVERSITY OF SASKATCHEWAN

Respiratory Research Centre

COLLEGE OF MEDICINE

[MEDICINE.USASK.CA/RESPIRATORYRESEARCH](https://medicine.usask.ca/respiratoryresearch)

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# LETTER FROM THE DIRECTOR

We are excited to share with you the 2022-23 Annual Report of the Respiratory Research Centre (RRC), which describes the respiratory health research and knowledge translation initiatives undertaken by our Centre.

RRC members continue to advance respiratory health through research, education, and engagement. The RRC has provided support to individuals and teams dedicated to advancing the science of respiratory health through an array of funding opportunities, which in turn have contributed to larger provincial, national and international grants.



*Dr. Donna Goodridge, RN, Ph.D.  
Professor, College of Medicine*

We have also hosted research presentations by international and local respiratory scholars, as well as evolving and innovative respiratory health projects conducted by both undergraduate and graduate students at the University of Saskatchewan.

Over the past six years, I have had the privilege of working with a broad range of researchers, community stakeholders, and patient partners on a diverse range of respiratory health initiatives. I am grateful for the guidance of Megan Truscott, Drs. Sam Haddad and Marek Radomski, and the dedicated members of the RRC Executive. Finally, I extend a big note of appreciation to Britney Duncan, Research Coordinator. I have appreciated my tenure as Director and look forward to seeing the next phase of the RRC.



*Governance*

# RESTRUCTURING

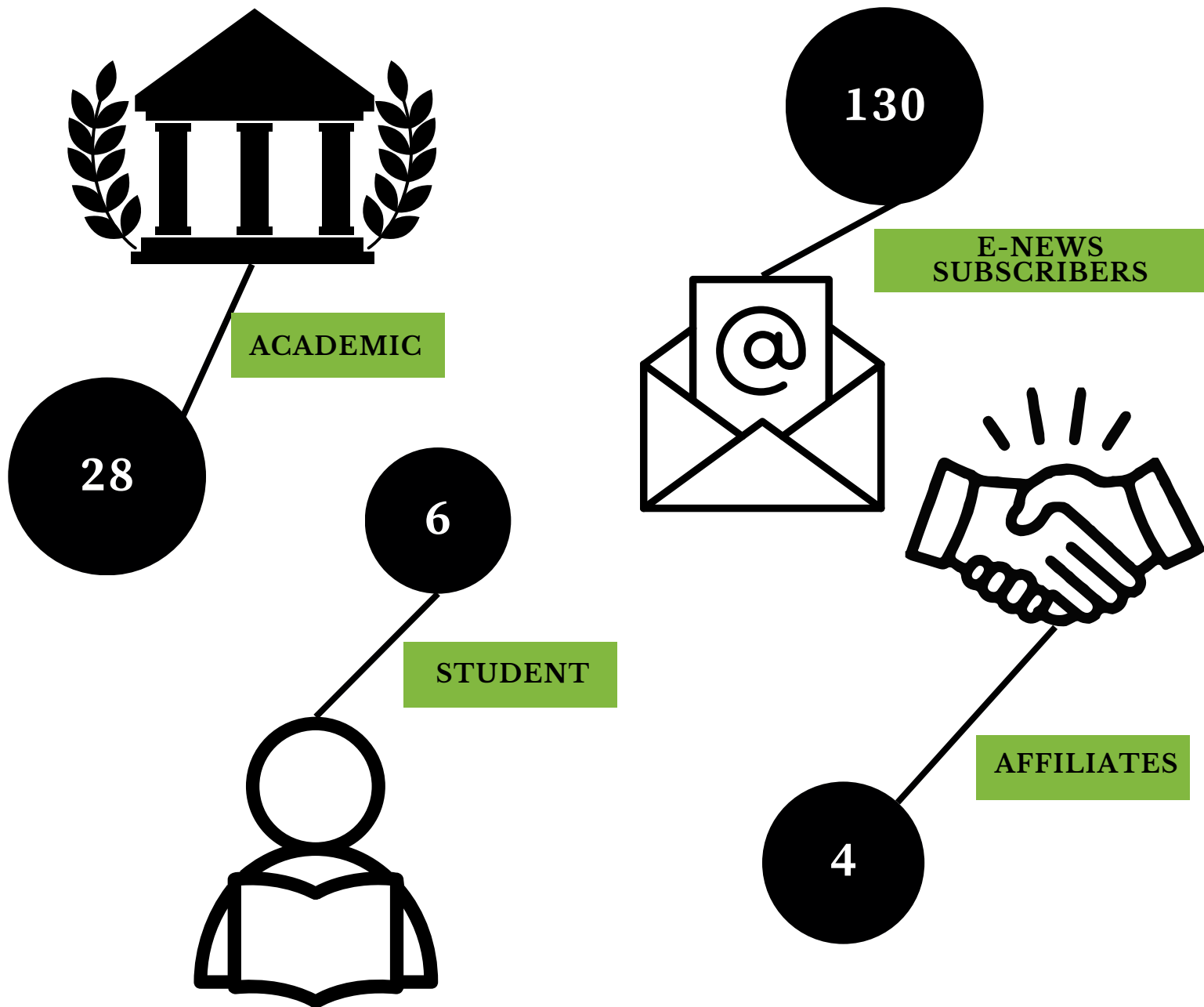


With the departure of Dr. Goodridge from the Director position, the RRC moved forward under the guidance of the 4 remaining Executive Committee members. Each committee member has shared responsibility in critical roles to maintain the Centre and ensure the activities of the RRC are always aligned with organizational strategy.



Pictured (clockwise from top left): Dr. Mark Fenton (SHA), Dr. Julia Montgomery (WCVN), Dr. Juan Ianowski (Dept. of Anatomy, Physiology and Pharmacology), Dr. Josh Lawson (CCRAH)





## MEMBERSHIP OVERVIEW

Membership to the RRC is open to clinicians, faculty, patient partners, students and organizational/community partners. Every year in the fall, the RRC begins the membership renewal process for interested individuals to indicate their membership status. This membership process allows the RRC to appropriately gauge levels of interest and participation as well as determine eligibility for RRC funding opportunities.

*Knowledge Translation*

# RESEARCH SEMINARS

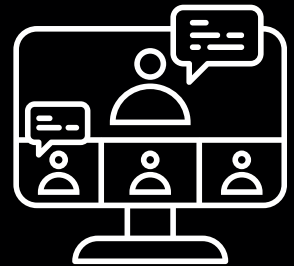
The RRC hosted a seminar series which included virtual and hybrid presentations. Presentations were delivered by students, research funding recipients and visiting scholars. Seminars were recorded and are currently available on the RRC website.

## "REACHING NEW DEPTH: THE DEVELOPMENT OF A NOVEL TRANSBRONCHIAL BIOPSY TOOL"

Dr. Anderson Tyan, Respiriology, Critical Care and Sleep Medicine

## "THE RELATIONSHIP BETWEEN CHILDHOOD ASTHMA AND MENTAL HEALTH CONDITIONS"

Dr. Josh Lawson. CCRAH



## GRADUATE STUDENT PRESENTATION: "EXPLORING HOW SLEEP ISSUES CONTRIBUTE TO SEX/GENDER INEQUALITIES IN WORK INJURY DIFFERENTIAL EXPOSURES AND SUSCEPTIBILITY"

Gopinath Narasimhan

## RRC SUMMER STUDENT PRESENTATIONS

Bonnie Yang & Ben Fenton



## VISITING SCHOLAR PRESENTATION: "THE ROLE OF MEASUREMENT OF THE FRACTIONAL CONCENTRATION OF EXHALED NITRIC OXIDE (FENO) IN EPIDEMIOLOGICAL STUDIES ON PEDIATRIC ASTHMA"

Dr. Jan Zedja, Medical University of Silesia (Poland)

## VISITING SCHOLAR PRESENTATION: "LYMPHATIC SYSTEM AND THE LUNG IN HEALTH AND DISEASE"

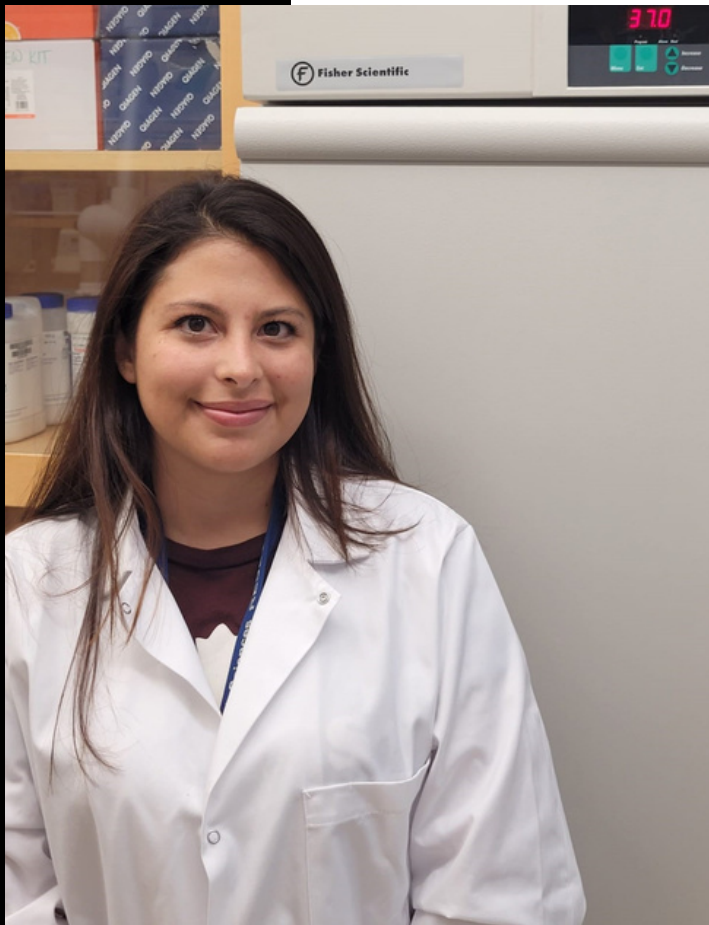
Dr. Andrzej Szuba, Wroclaw University of Medicine (Poland)

*Award Recipients*

# GRADUATE STUDENT AWARD



During the 2022-23 academic term, the RRC in conjunction with the OVDR (ComGRAD), selected **Alejandra Castillo Toro** as this competition's award recipient. Each year, this cost-shared award is offered to students performing research in targeted areas such as respiratory health.



Alejandra is a microbiologist who comes to us from Colombia. In her second year of training as a microbiologist, she was involved in the laboratory of environmental microbiology and soil. While there, she worked as a student research assistant which transitioned into an undergrad thesis. From that experience, she has two publications, one of which she is the first author.

Alejandra acknowledges that getting involved in the laboratory was crucial for her professional growth. There, she felt inspired and moved by the passion and love her supervisors have for research. She coordinated a student research group focused on the biodegradation of plastic pollutants. That leadership experience helped her to win an ELAP scholarship in 2020 founded by Global Affairs Canada to intern at Laval University in Quebec, Canada. Since then, she has become interested in applied sciences and environmental health.

Currently, Alejandra is a graduate student in Health Sciences under the supervision of Dr. Shelley Kirychuk. Furthermore, she is studying the distribution of bioaerosols with antibiotic-resistance genes emitted from livestock operations. This work will contribute to the Respiratory Research Center (RRC) in helping to understand bioaerosols and antimicrobial-resistance genes present in animal confinement facilities as part of agricultural exposure that can impact the respiratory health of workers and the surrounding communities of these facilities.

*Award Recipients*

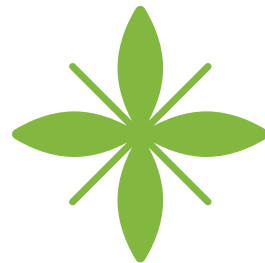
# TEAM BUILDING GRANTS

The Team Building Grant (TBG) aims to encourage collaborative research by funding interdisciplinary teams conducting human health and translational research projects. This year's competition awarded two PIs along with their teams a total of just under \$100,000 in funding.



## DR. VERONICA MARCOUX

Dr. Marcoux, MD, FRCPC Associate Professor Respiriology, Critical Care and Sleep Medicine and her team were awarded \$42,300 for the project, "Prevalence and decline in lung function among two Saskatchewan First Nations communities, and association with reported exposures."



## DR. ANEESH THAKUR

Dr. Thakur, Research Scientist VIDO and his team were awarded \$50,000 for his project, "Inducing protective immunity in the lungs with an inhalable and thermostable dry powder Tuberculosis vaccine."



*Award Recipients*

# PUBLICATIONS FUND



The RRC established a Publications Fund in order to support scholarly works related to respiratory health published by members. This funding opportunity aims to encourage knowledge translation activities of researchers conducting human health and translational research projects. This year's award recipient received \$2,000.



## DR. GURPREET AULAKH

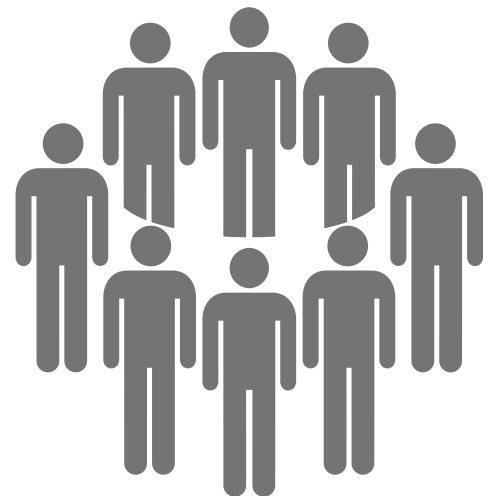
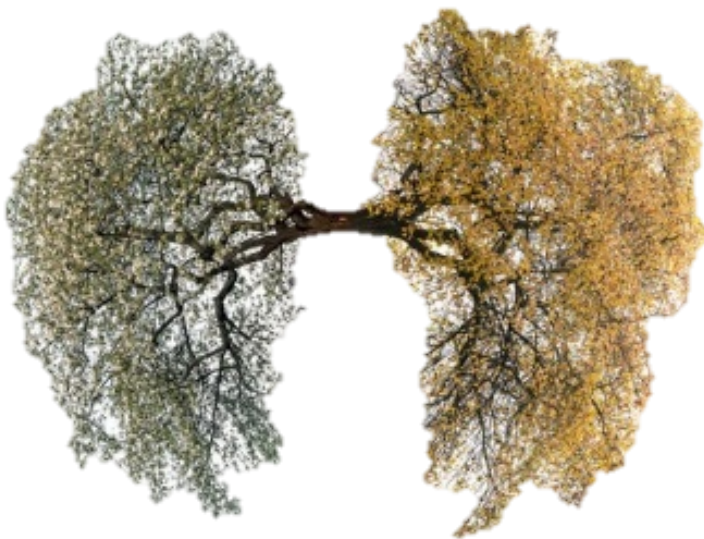
Dr. Aulakh, Fedoruk Chair in Imaging Science | Assistant Professor, Department of Small Animal Clinical Sciences, WCVN was funded for her published work, "Modulation of low-dose ozone and LPS exposed acute mouse lung inflammation by ATPIF1 mediated ATP hydrolysis inhibitor, BTB06584" which was published in *Frontiers*.

**frontiers**Frontiers in **Immunology**

# ACKNOWLEDGEMENTS

The RRC would like to acknowledge and express our gratitude to our members for your engagement over another academic year. We would also like to thank the Office of the Vice Dean of Research and College of Medicine for their continued support in helping us to provide our membership with funding/academic opportunities.

We also look forward to another year advancing our mission of building an understanding of respiratory health and well being across the life span.





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