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Small viral RNAs as determinants of influenza A virus pathogenesis

Project Number
5R01AI145882-02

Contact PI/Project Leader
TENOEVER, BENJAMIN R.

Awardee Organization
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI

Description

Abstract Text

With just ten major proteins, influenza A **virus** (IAV) must gain entry to both cell and nucleus, transcribe and replicate its genome, and then perform the inverse of the entry process in order to egress and spread. To achieve this, the **virus** must introduce new components that change viral biology as the infection progresses. We believe one major component that orchestrates these changes derives from small **virus**-encoded RNAs (svRNAs) that engage and modulate the viral RNA dependent RNA polymerase (RdRp). This grant focuses on defining how svRNAs change the function of the viral RdRp during the course of infection. The knowledge gained from these studies will significantly contribute to our understanding of IAV biology and may provide an entirely new direction towards the future development of **novel** therapeutics.

Public Health Relevance Statement

A comprehensive understanding of influenza A virus (IAV) biology is imperative should we wish to develop an effective long-term solution to this global burden. This proposal focuses on the biology of the RNA dependent RNA polymerase and its interaction with small virus-derived RNAs (svRNAs). The research outlined here will enable a greater understanding of how IAV coordinates infection of the cell and effectively replicates.

Project Terms

Antiviral Agents | Binding | Binding Sites | Biology | Cell Nucleus | Cells | Code | Complex | Conflict (Psychology) | Data | Detection | Development | Ensure | Epidemic | Future | Generations | Genes | Genome | Grant | Immune response | Infection | Influenza A **virus** | Knowledge | Length | Life Cycle Stages | Mediating | Nature | Nucleotides | Pathogenesis | Phenotype | Play | Polymerase | Population | Positioning Attribute | Process | Production | Proteins | RNA | RNA Interference | RNA-Directed RNA Polymerase | Recombinants | Recording of previous events | Research | Role | Small RNA

Read More

Details

Contact PI/ Project Leader

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Thank you for your feedback!

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Contact PI/Project Leader
TENOEVER, BENJAMIN R.

Awardee Organization
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI

NEW YORK
Country
UNITED STATES (US)

Other Information

FOA
PA-18-859
Study Section
Virology - A Study Section[VIRA]

Fiscal Year
2021
Award Notice Date
01-February-2021

Administering Institutes or Centers
NATIONAL INSTITUTE OF ALLERGY AND INFECTIOUS DISEASES

DUNS Number
078861598
CFDA Code
855

Project Start Date
04-February-2020
Project End Date
31-January-2025
Budget Start Date
01-February-2021
Budget End Date
31-January-2022

Project Funding Information for 2021

Total Funding
$423,750
Direct Costs
$250,000
Indirect Costs
$173,750

Year	Funding IC	
2021	NATIONAL INSTITUTE OF ALLERGY AND INFECTIOUS DISEASES	$423,750

Sub Projects

No Sub Projects information available for 5R01AI145882-02

Publications

No Publications available for 5R01AI145882-02

Patents

No Patents information available for 5R01AI145882-02

Outcomes

The Project Outcomes shown here are displayed verbatim as submitted by the Principal Investigator (PI) for this award. Any opinions, findings, and conclusions or recommendations expressed are those of the PI and do not necessarily reflect the views of the National Institutes of Health. NIH has not endorsed the content below.

No Outcomes available for 5R01AI145882-02

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News and More

Related News Releases

No news release information available for 5R01AI145882-02

History

No Historical information available for 5R01AI145882-02

Similar Projects

No Similar Projects information available for 5R01AI145882-02

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