35TH ANNUAL
VIRGINIA STATE
SCIENCE AND
ENGINEERING FAIR

Pictured above: scenes from VSSEF 2018 and 2019

Hosted by:

Virginia Tech Carilion
School of Medicine
Hello Virginia State Science and Engineering Fair students, parents, teachers, advisors, and others who had hopes of attending the event in Roanoke on April 17 and 18. We were sorry to have to cancel the live event this year, but we hope this website will serve as a comprehensive listing of the results of the judging that took place virtually earlier this month.

There is no question we are in extraordinary times with the COVID-19 virus reaching pandemic proportions. We at the Virginia Tech Carilion School of Medicine have been extremely vigilant about following the recommendations put forth by Gov. Northam, the administration at Virginia Tech, and guidelines from Carilion Clinic regarding gatherings for classes and events as a way of helping to flatten the curve of the virus spread.

I invite each of you to visit Roanoke at a future date. If medical school might be in your future, we invite you to make plans to come by for a tour. Our school is part of the Roanoke Innovation Corridor, a unique partnership that attracts top neuroscience and biomedical researchers, tech entrepreneurs, physicians, and medical students from across the world.

Congratulations to all of the student participants in this year’s science fair. It is a huge achievement to have your hard work accepted at the state level, and you should be proud of your accomplishments.

Lee A. Learman, M.D., Ph.D.
Dean, Virginia Tech Carilion School of Medicine
On January 3, 2007, Virginia Tech President Charles Steger and Carilion Clinic President and CEO Edward Murphy, along with Virginia Governor Tim Kaine, joined to announce the creation of a public-private partnership in the form of a new medical school and research institute. The Virginia Tech Carilion School of Medicine and Research Institute’s doors opened in September of 2010, near downtown Roanoke, Va., adjacent to Carilion Roanoke Memorial Hospital. In December 2018, the Horace G. Fralin Charitable Trust and Heywood and Cynthia Fralin donated a record $50 million to Virginia Tech to support research at the newly renamed Fralin Biomedical Research Institute within the evolving Virginia Tech Carilion Academic Health Center in Roanoke.

**UNIQUE PUBLIC-PRIVATE PARTNERSHIP**

Collectively called Virginia Tech Carilion (VTC), the Virginia Tech Carilion School of Medicine and the Fralin Biomedical Research Institute leverage Virginia Tech’s world-class strength in basic sciences, bioinformatics, and engineering with Carilion Clinic’s highly experienced medical staff and rich history in medical education. Virginia Tech Carilion improves human health and quality of life by providing leadership in medical education and biomedical and clinical research.

**EDUCATING TODAY’S SCIENTIST PHYSICIAN**

Utilizing an innovative patient-centered curriculum, the Virginia Tech Carilion School of Medicine (VTCSOM) addresses the increasing need for research-competent physicians who can translate research from the bench to the bedside and into the community. Virginia Tech Carilion School of Medicine continues to ameliorate some of the physician shortages that have been identified as a priority by the American Association of Medical Colleges and the American Medical Association.

**CONDUCTING TODAY’S RESEARCH**

Research conducted at the Fralin Biomedical Research Institute expands the basic and applied science research portfolio of Virginia Tech, while also linking to the clinical expertise at Carilion Clinic. As a result of the partnership between Virginia Tech and Carilion Clinic, there are several opportunities for translational research. Research conducted by scientists at the institute is aimed at understanding the molecular basis for health and disease, and development of diagnostic tools, treatments, and therapies that will contribute to the prevention and solution of existing and emerging problems in contemporary medicine.

**AREAS OF STRENGTH AT FRALIN BIOMEDICAL**

- cancer
- cardiovascular science
- immunity & infection
- neuroscience
- regeneration & rehabilitation
ACKNOWLEDGMENTS

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Hal Irvin, Associate Vice President, Fralin Biomedical Research Institute
David Trinkle, M.D., Associate Dean, Virginia Tech Carilion School of Medicine
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Thomas Taetzsch, Ph.D., Investigator, Brown University
Kristofer Rau, Ph.D., Assistant Professor, Virginia Tech Carilion School of Medicine
Offices of Communications & Marketing, Virginia Tech Carilion
Faculty, Employees, and Students of Virginia Tech Carilion

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Thank you to all of our judges and most of all, thanks to all of the students who submitted projects!