



for the Improvement of Mine Safety and Health, Inc.

The Alpha Foundation is pleased to present its 2025 Annual Report.

The report provides a summary of activities directed toward the realization of the Foundation's mission to improve mine health and safety through funding research and development projects by qualified academic institutions and other not-for-profit organizations.

Grantmaking Summary

Grant activity is maintained on the Alpha Foundation website (<https://www.alpha-foundation.org>). The following 4 grants completed their research efforts this year.

- ACRFP20-130 - Demonstration of an Intrinsically Safe Drone Propulsion System for Underground Coal Mining Applications (New Mexico Institute of Mining and Technology)
- AFCTG22R2-158 - Mental Illness in U.S. Coal Miners: A Collaborative Approach to Understand Risk Factors and Prevalence, While Ensuring Those Suffering Get the Care They Need (University of Illinois Chicago)
- AFCTG22R2-159 - Design Guidelines for Assessment of Pillar Stability in Underground Room & Pillar Mines from Autonomous Robotic Inspections (West Virginia University)
- AFCTG22R2-160 - Development of A Stability Mapping Platform for Stone Mines That Will Combine Numerical Modeling and Empirical Criteria (University of Kentucky)

As the Foundation is nearing the end of its grant funding, no new grants were initiated in 2025. There were 7 active grants in 2025. Currently all remaining grants are scheduled to complete research efforts by the end of 2026.

Since its beginning in 2011, the Alpha Foundation has supported a portfolio of research that comprises 118 projects awarded to 35 institutions totaling 46.8 million dollars. Overall, the grant portfolio addresses the four major focus areas of the Foundation, with award percentages as indicated:

- Safety and Health Interventions - 56%
- Mine Escape, Rescue & Training - 7%
- Safety & Health Management & Training - 8%
- Injury & Disease Exposure & Risk Factors - 29%

Future Considerations and Planning

In the coming year, the Foundation plans to reexamine our remaining funding and potential closeout costs and begin preparations for legacy reporting of our accomplishments.

Alpha Foundation Board of Directors

Dr. Michael Karmis, Director and President

Dr. Keith Heasley, Director and Secretary

Dr. David Wegman, Director and Treasurer

Alpha Foundation Staff

Dr. Thomas Barczak, Executive and Technical Director