

**AIRFoundry**

Artificial Intelligence-driven RNA BioFoundry

[Download Agenda](#)

# 2025 Annual Meeting

*Date*

31 March 2025

*Time*

1.00 PM - 8.00 PM

*Location*

University of Pennsylvania

## Time

## Agenda

1.00 - 1.15 Towne Room 225	<ul style="list-style-type: none"><li>• Welcome</li><li>• Daeyeon Lee, Director, AIRFoundry</li></ul>
1.15 - 1.30	<ul style="list-style-type: none"><li>• Opening Remarks</li><li>• Vijay Kumar, Nemirovsky Family Dean, SEAS</li></ul>
1.35 - 2.20	<ul style="list-style-type: none"><li>• Keynote Speaker: Brian Gregory, Professor of Biology, Penn</li><li>• Advances in Plant RNA Biology</li></ul>
2.25 - 2.55	<ul style="list-style-type: none"><li>• Working Group 1 Research Updates</li><li>• Yoseph Barash, Haydn Jones (Gardner Lab), Lijun Zhou</li></ul>
2.55 - 3.10	<ul style="list-style-type: none"><li>• Break</li></ul>
3.10 - 3.40	<ul style="list-style-type: none"><li>• Working Group 2 Research Updates</li><li>• Camilo Mora, Ori Chalom (Mitchell Lab)</li></ul>
3.45 - 4.15	<ul style="list-style-type: none"><li>• Working Group 3 Research Updates</li><li>• Zachary Ives, Masoud Soroush</li></ul>
4.20 - 5.05	<ul style="list-style-type: none"><li>• Keynote Speaker: Chris Callison-Burch, Professor of CIS, Penn</li><li>• Harnessing Artificial Intelligence and Language Modeling for Enhancing Innovation and Evaluating Research Claims</li></ul>
5.05 - 5.10	<ul style="list-style-type: none"><li>• Closing Remarks, Daeyeon Lee</li></ul>
5.10 - 5.20	<ul style="list-style-type: none"><li>• Group Photo</li></ul>
5.30 - 6.30 UCity // Two Locals Brewery	<ul style="list-style-type: none"><li>• External Advisory Board Meeting (UCity)</li><li>• Trainee Happy Hour (Two Locals Brewery)</li></ul>
6.30 - 8.00 Two Locals Brewery	<ul style="list-style-type: none"><li>• Dinner</li></ul>



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## Keynote Speakers:



Dr. Brian Gregory is a Professor of Biology at the University of Pennsylvania. He was recently the Deputy Editor of the top plant sciences journal, *The Plant Cell*, and is also a Fellow of the American Association for the Advancement of Science (AAAS). He has been working on plant RNA biology since his postdoctoral studies at the Salk Institute for Biological Studies, and has developed and pioneered numerous approaches for studying the secondary structure, RBP interactions, and covalent modifications to plant RNAs.

### **Title: Advances in Plant RNA Biology**

**Abstract:** Dr. Gregory will present recent methodological advances from his lab that enable transcriptome-wide views of sub-cellular RNA degradation intermediates. These analyses provide important new insights into RNA processing, cleavage, and degradation that occurs in specific eukaryotic cellular compartments.



Chris Callison-Burch is an expert in artificial intelligence who has been in the field for 20 years and has been using language models in his research for much of that time. His more than 100 publications have been cited over 25,000 times. Language models are at the heart of generative AI, which had its breakthrough moment in November 2022 with the release of OpenAI's ChatGPT. In 2023, Prof. Callison-Burch testified before Congress about generative AI. At Penn, his course on artificial intelligence has one of the highest enrollments at the university, with over 500 students taking the class each Fall. He is the PI for a team of researchers working on the DARPA Scientific Feasibility program.

### **Title: Harnessing Artificial Intelligence and Language Modeling for Enhancing Innovation and Evaluating Research Claims.**

**Abstract:** In this talk, I will present our preliminary work on developing AI systems to assess and validate scientific claims. Our DARPA team brings together experts from the University of Pennsylvania, University of Washington, and University of Arizona. I will discuss how we're combining advanced language models, automated reasoning, and interactive simulations to help program managers, domain experts, and science writers evaluate the feasibility of scientific claims. Key innovations include our OpenScholar system for literature synthesis, novel datasets of retracted papers and funded research proposals, the development of specialized language models trained on scientific literature, and in multimodal understanding of scientific figures through systems like MOLMO. This DARPA project aims to be a stepping stone towards using AI to accelerate scientific discovery.