

ASU Origins Project: Our Purpose

“Somewhere, something incredible is waiting to be known.” Carl Sagan, Astronomer

The Origins Project at ASU

Arizona State University (ASU) is proud to present The Origins Project, a transdisciplinary initiative that nurtures research, energizes teaching, and builds partnerships, offering new possibilities for exploring the most fundamental of questions: the origins of the universe, life, consciousness, culture, and human existence. Led by Dr. Lawrence M. Krauss, an internationally renowned theoretical physicist and Foundation Professor in the ASU School of Earth and Space Exploration, The Origins Project focuses on deep, foundational questions, dynamically linking scholarship and expertise from across the academic and scientific spectrum.

Much of the most exciting research being done today involves, in one way or another, exploring questions of origins. ASU currently houses an exceptional set of research centers, each of which have an origins component and a reputation for excellence. The Origins Project fosters the work of these groups, recruiting distinguished faculty, and supporting new, symbiotic relationships that seek answers to the most complex, profound questions facing humankind today — questions that provoke fascination and debate because they explore and inform so directly what it means to be human.

ASU has already recruited key international scholars whose research explores origins questions, including physicist and astrobiologist Paul Davies, renowned virologist George Poste, anthropologist and “Lucy” discoverer Donald Johanson, and behavioral biologist Bert Holldobler. Nobel Laureates Frank Wilczek and Sidney Altman have recently signed on as Origins Distinguished Visiting Professors. And the most celebrated researchers and science journalists around, from J. Craig Venter, Lee Hartwell, Steven Pinker, Baruch Blumberg and Stephen Hawking, to Mariette DiChristina of *Scientific American* and Ira Flatow of *Science Friday*, have invested their time and skills in serving on our External Advisory Committee and participating in Origins Project events. These leading researchers, scholars, and writers, responsible in large part for guiding the direction of modern scientific inquiry, are at the center of The Origins Project.

At the Forefront: The Origins Project and the New American University

Arizona State University is addressing the major challenges of our age, using our strengths and expertise to generate new understanding and find solutions. ASU tackles big issues where our wealth of resources, expertise, and partnerships make a difference. No other institution in the country has committed itself to as broad and clear a vision of the utility of transdisciplinary approaches to fundamental questions. Transcending the traditional and limiting method of working within isolated departments or schools, ASU’s new Origins Project cuts across every school and college at the University, a reality that has already resulted in unprecedented collaborative activities between the world’s best scientists and scholars. Its commitment to combining cutting edge research with a focus on teaching and outreach makes The Origins Project unique and singularly ambitious. We intend to literally transform the undergraduate curriculum, energize and renew middle and high school science teaching, and serve as a vital center for public discourse and understanding of science.

Positioned at the forefront of research and education, The Origins Project explores profound, fundamentally human questions ranging from the origins of life, species, consciousness and disease, to the origins of our planet and the universe in which it resides. Extending ASU's tradition of interdisciplinary research excellence, The Origins Project creates new intra-and inter-institutional partnerships to advance synergetic explorations of origins in fields as diverse as medicine, biology, anthropology, cognitive science, geology, astronomy, and physics. It will train young scholars, bringing them together with world-class researchers and experts to explore new and exciting avenues of research at the forefront of human knowledge.

At the same time, The Origins Project focuses on our human cultural response to understanding our own origins. For most people, questions of origins hold personal significance and are best explored in multifaceted ways. The Origins Project nurtures collaborations with writers, historians, dramatists, artists, and dancers as we explore precisely how both scholars and members of the general public can better appreciate our evolving place within the cosmos.

The Origins Project is poised to transform scientific debate, change minds, and speed discovery. Our efforts have already been hailed in publications ranging from the *Chronicle of Higher Education* to *Scientific American*. An essential part of ASU's evolution as the "New American University," The Origins Project advances ASU's quest to reinvent higher education. Harnessing shared curiosity, we foster exploration of the past and the future, modeling along the way the value of collaboration, transdisciplinary research and relevant knowledge production. We aim to increase public engagement, excitement, and understanding of key issues and ultimately impact how we collectively respond to the challenges of the 21st century.

"These are among the most exciting ideas we humans can come up with."

Lawrence Krauss, Director of The Origins Project

A Broader Perspective

Questions of origins resonate across all disciplines and among the general public because they directly confront the mysteries associated with our existence, our past, and our future. The Origins Project explores these vital questions by bringing ASU's extensive disciplinary expertise into dialogue with a critical mass of influential scholars and experts from beyond the University's walls. Every year we host a number of international workshops which gather the world's top researchers, including Nobel Laureates and MacArthur Fellows, from a variety of fields. Recent workshops have explored themes such as the origins of morality, unsolved problems in gravity, the origins of human uniqueness, and the origin of life on Earth. At the same time, through its commitments to graduate and postgraduate research, community engagement, and building science literacy, The Origins Project promises to raise the profile of origins-related issues in critical areas such as health care, technology and innovation, law, and the arts. Our efforts aim to create knowledge, improve education, and raise public awareness on key issues with the ultimate goals of helping solve pressing global problems, improving quality of life, and informing the development of sound public policy.

Interdisciplinarity is at the core of our identity and mission. By gathering scholars from different disciplines and partnering with those outside the university, The Origins Project acknowledges the importance of examining elemental questions from multiple perspectives. Such a process results in better research programs, new insights, and a more nuanced understanding of the complexity of human existence.

Better Public Understanding

So many of the issues and challenges we face today demand a clearer understanding of the natural world. To solve global problems we need to understand their context and the different tools that may be applied to address them. The Origins Project helps position ASU as an international leader in the struggle to promote better public understanding of science and technology and the policy implications of our current understanding.

Improving public understanding of science and technology must begin in schools. Cooperating with in-service teachers, teacher-training professionals, and educational researchers, The Origins Project proudly serves as an advocate for K-12 science education and a force for energizing kids about science. Our curricular efforts are focused on teaching science using the very foundational questions that animate the most fascinating scientific research today—questions of beginnings. The Origins Project will help develop new pedagogical tools and online resources for teachers, even as it brings its Nobel Laureates face-to-face with Arizona's middle school and high school students. Such curricular and outreach efforts are absolutely critical if we hope to grow a new generation of scientific and technological innovators.

Our educational efforts, however, do not stop at the classroom door. Concerns about issues from evolution to global warming to stem cell research require journalists and policymakers to have the capacity to explain complex scientific data to the public in clear, cogent terms. The Origins Project is partnering with ASU's renowned Walter Cronkite School of Journalism and Mass Communication to develop ways to better train journalists and inform policymakers about scientific issues. Such efforts aim to deepen public understanding, strengthen public policy, and improve knowledge management.

“If we focus our energies on sharing ideas, finding solutions and using what is right to remedy what is wrong, we can make a difference.”

Sandra Day O'Connor, Associate Justice, US Supreme Court, 1991-2006

Join the Origins Project

The Origins Project at Arizona State University offers a unique opportunity to participate in one of the most innovative approaches to foundational research available today. This collaborative, interdisciplinary initiative draws upon the strength, breadth, and intellectual diversity of ASU's resources, even as it strengthens ASU's international reach. We represent a powerful application of world-class research and outreach focused on building public appreciation for and understanding of science, fostering innovative thinking, and meeting global challenges.

The Origins Project:

- Fosters new interdisciplinary research and dialogue.
 - ✓ Hosts a regular series of high profile, transdisciplinary symposia and international conferences that foster dialogue and stimulate new thinking.
 - ✓ Sponsors long-term workshops focused on exploring questions and generating solutions for unresolved problems at the edge of knowledge.
 - ✓ Supports leading postdoctoral researchers exploring at the edge of human knowledge.
- Partners with scholars across campus to transform university and K-12 education.
 - ✓ Places outstanding faculty in Origins professorships across the academic spectrum, including establishing permanent visiting appointments for some of the world's most respected

scholars, who will help lead new programs and link the expertise of ASU researchers with that of scholars throughout the world.

- ✓ Links schoolchildren with world-class scientists to create enthusiasm for science and nurture the next generation of scientific innovators
- ✓ Collaborates to develop new curricular materials for use in K-12 and university education.
- Acts as an advocate for science education and public engagement of science issues.
- ✓ Develops new tools to improve public understanding of science and journalistic coverage of science issues.
- ✓ Builds community through public symposia, television and digital co-productions, cultural initiatives, and other outreach initiatives.

A variety of opportunities exist for you to become part of The Origins Project. To find out how you can contribute, please contact:

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Gifts to the Origins Initiative are deposited with the ASU Foundation, a private, non-profit 501(c)(3) organization that supports Arizona State University and its units. Under current tax law, your gift may be eligible for a tax deduction. Please consult your financial advisor regarding the deductibility of charitable contributions.

“The universe is full of magical things patiently waiting for our wits to grow sharper.”

Eden Phillpotts, A Shadow Passes