

# Meet the Authors



**Luca Belmonte** was born in the south of Italy and earned his bachelor's and master's degrees in engineering from the University "Magna Graecia" of Catanzaro. He then worked at Accenture, before completing his doctoral studies at the University of Genoa (Italy) with Prof. Claudio Nicolini. His PhD work was on radiation damage to protein crystals. Luca joined the National Research Council of Italy, under Dr. Oscar

Moran, to work on the characterization of cystic fibrosis transmembrane conductance regulator (CFTR) domains. He is now a postdoctoral fellow at the University of Trento (Italy). His work exploits computational tools to gain insight into the origins of life.



**Punam Dalai** received her master's degree in chemistry from the Indian Institute of Technology at Roorkee (India) and her PhD from the University of Hohenheim (Germany). Her doctorate focused on the thermal behavior of amino acids in the presence of various inorganic matrices. She then became a post-doctoral researcher at the University of Akron (Ohio, USA) where she is currently working on the potential role

of mineral surfaces in the evolution of protocells which could perform proto-metabolism. She is also investigating the effect of metal ions on the stability of lipid bilayers, in peptide chemistry, and what are life's biosignatures.



**Hussein Kaddour** is a postdoctoral researcher in the Department of Polymer Science at the University of Akron (USA) where he is exploring the role of minerals in the origins of life. Previously, he was a lecturer and research assistant at the Université de Lorraine in Nancy (France). In 2011, he earned his PhD in molecular biology and biochemistry from the Université Pierre et Marie Curie Paris (France) where he investi-

gated the structure–function relationships of ribozymes. Hussein also earned an MBA in 2012 from Université Panthéon-Assas Paris. Hussein's research interests include the origin of life, RNA chemistry, RNA therapeutics, and synthetic biology.



**Terence Kee** obtained his BSc (1985) and PhD (1989) degrees in organometallic chemistry at Durham University (UK) and then was awarded a SERC (NATO) postdoctoral fellowship for the Massachusetts Institute of Technology (USA), where he worked with Nobel Laureate Professor Richard Schrock. Kee is a Reader at the University of Leeds (UK), where he has worked since 1990. Kee has been Visiting Professor at the

Université de Cergy-Pontoise (France) since 1999 and at the CNRS Centre Biophysique Moléculaire (France) since 2016. He holds affiliate faculty membership in the Department of Astronomy at the University of Florida (USA), received the Research Award from the Astrobiology Society of Britain in 2008, and has been president of the Astrobiology Society of Britain since 2010.



**Fabrice Leclerc** is a CNRS investigator at the Institute for Integrative Biology of the Cell in University Paris Sud (France). He researches RNA bioinformatics and modeling and has contributed to the field of RNA biology through studying the RNA guide machinery that is responsible for the pseudo-uridylation of RNAs in archaea and on the RNA catalysis in the hammer-head ribozymes derived from viroids. Leclerc has provided reliable 2D and 3D structure–function models on RNA or RNA–protein complexes from archaea, viruses, and viroids.



**Sherif Mansy** completed his PhD on iron–sulfur cluster biosynthesis with Prof. J. A. Cowan at Ohio State University (USA) and a post-doc on protocell studies with J. W. Szostak at Massachusetts General Hospital (USA). After winning an Armenise-Harvard career development award, he setup a laboratory at the

University of Trento (Italy). His laboratory builds artificial cells and model prebiotic metallopeptides to gain insight into the boundaries and emergence of life. He is currently an associate professor of biochemistry.



**Marie-Christine Maurel** is a professor of biochemistry at University Pierre and Marie Curie and at the Museum National d'Histoire Naturelle, both in Paris (France). Her research is on the RNA world, including the discovery of the catalytic activity of a nucleoside analog: N6-ribosyl-adenine synthesized under prebiotic conditions. Her laboratory also discovered a co-ribozyme selected in vitro, the adenine-dependent hairpin ribo-

zyme, and she applied, for the first time, baro-biochemistry to ribozymes, in so doing, revealing their extraordinary plasticity.



**Pierre-Alain Monnard** is an associate professor in the Institute of Physics, Chemistry and Pharmacy at the University of Southern Denmark (Odense). He obtained his PhD in Chemistry at the ETH Zurich (Switzerland). After working at the University of California Santa Cruz (USA) and Harvard Medical School (USA), he was appointed Technical Staff Member at Los Alamos National Laboratory (USA) in the Division of Earth and Environmental Sciences. He joined the University of Southern Denmark in 2008. His research is on chemical catalysis in complex chemical systems/networks supported by soft-matter structures and heterogeneous media. He has been involved in the development of chemical systems that model cellular precursors, or protocells, to understand the emergence of life on Earth, with additional applications to modern medicine and synthetic biology (delivery systems and nanoscale bioreactors).



**Nita Sahai** researches the biomolecule–mineral interface and processes that are relevant to the origins of life and to biomineralization. She is currently at the University of Akron (USA); prior to 2011, she was a professor for 11 years at University of Wisconsin-Madison (USA). She is the Ohio Research Scholar in Biomaterials, a Fellow of the Mineralogical Society of America (MSA), MSA Distinguished Lecturer (2013–2014), Romnes Faculty Fellow at University of Wisconsin-Madison (2009), and has received the National Science Foundation (NSF) CAREER award and an NSF Post-Doctoral Fellowship. Nita has been interviewed on radio (US National Public Radio) and appeared on television (US Public Broadcasting Service) to discuss her work on the origins of life.



**Martin A. Schoonen** is Associate Laboratory Director at Brookhaven National Laboratory (USA) and Professor of Geochemistry at Stony Brook University (USA). He joined Stony Brook University in 1989 after receiving a PhD in geochemistry and mineralogy from Pennsylvania State University (USA) and an MS at the University of Utrecht (The Netherlands). He has been interested in mineral surfaces and their reactivities and

used experimental and theoretical approaches to explore electron transfer reactions involving metal sulfides.



**Alexander Smirnov** is an associate professor of geology at Lone Star College–Kingwood (USA), having previously worked at Dowling College (USA). He received his Diploma in geology from Comenius University (Slovakia) and a PhD in geosciences from Stony Brook University (USA). His PhD and post-doctoral research focused on mineral-mediated nitrogen reduction on the Hadean Earth. More recently, he has become interested in environmental geology, specifically in the effects of dust inhalation on human health.