Preface

Some might say that even if you were equipped with a crystal ball, a Ouija board, and Stephen Hawking, it would still be impossible to predict the future of scientific evidence. We have been navigating the shoals of the intersection of law and science for decades. There are sirens and reefs (and most recently oil spills). We need buoys, navigational equipment, bumpers and a well-lit channel to see what the future holds for us. If we examine recent events and cases, we can see the future of evidence emerging in many ways.

There is no ignoring the impact of science on law today. New developments in both science and technology are proceeding at a rapid pace. New areas include digital and multimedia sciences, canine scent detection, touch DNA, and neuroscience, to name a few. Each one requires new statutes or rules of evidence as the law attempts to keep up with the advancements in science and technology. Notably science and technology are not just local but global: as our transactions and litigation span the world, we must also be knowledgeable of laws worldwide.

The issuance of the National Academy of Sciences report, *Strengthening Forensic Science in the United States: A Path Forward*, was a watershed moment for evidence and forensic science. It was released on February 18, 2008, while Professor Henderson was president of the American Academy of Forensic Sciences. The findings and recommendations of the NAS Committee have great

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1. Cal. [EVID.] Code 1552–53; see Lorraine v. Markel Am. Ins. Co., 241 F.R.D. 534 (D. Md. 2007), in which the court ruled that admissibility of electronically stored information depends on determining whether the evidence is relevant, authentic, the best evidence available, not unduly prejudicial, and not hearsay. Judge Grimm provides extensive guidelines for using the existing Federal Rules of Evidence to authenticate a variety of types of digital evidence, including e-mail, Internet website postings, text messages and chat room content, computer-stored records and data, computer animation and computer simulations, and digital photographs.

implications for the future of evidence. Along with specifically addressing the admission of evidence in litigation, the report contains recommendations, including establishment of best practices and standards in scientific disciplines; more research tools for validation and reliability in the sciences accreditation of institutions; certification of individuals; and education for scientists, law students, lawyers, and the judiciary. At the time of the writing of this publication, federal legislation is being drafted, and the White House Office of Science and Technology Policy has established a National Science and Technology Council that will address these many issues that have evidentiary implications.

As lawyers we are required to be competent and diligent; therefore, we must be aware of emerging areas of science and their evidentiary implications on our practices. Several resources will assist us in fulfilling our ethical obligations of competence and diligence in the science, technology, and evidence areas. The American Bar Association’s Science & Technology Law Section is a great resource on the cutting edge of science and the law. The section produces books, monographs, the SciTech Lawyer magazine, and Jurimetrics (published by Arizona State University Law School with section support) and collaborates with the American Association for the Advancement of Science (www.aaas.org) through the National Conference of Lawyers and Scientists. Another resource for our evidentiary arsenal is the National Clearinghouse for Science, Technology and the Law (NCSTL, a program of the National Institute of Justice) located at Stetson University College of Law (www.ncstl.org). NCSTL provides comprehensive scientific, technological, and legal information, assembling relevant resources into a comprehensive “one-stop” searchable database with free access for all. The database contains bibliographic information from court decisions and commentary, scholarly publications, commercial applications, professional associations and institutions, and other resources about both traditional and cutting-edge scientific evidence topics. It is the only database of its kind in the world.

NCSTL supports its database by collecting hardcopy books and journals that correspond to its database records. These books and journals are made available to the public and can easily be borrowed through the interlibrary loan system by visiting Stetson Law Library’s website by going to http://www.law.stetson.edu and choosing “Library” from the menu.

This book could have had hundreds of chapters as the future of evidence covers incredibly broad terrain. Recognizing the breadth and depth of this topic, the editors cast a wide net in both the legal and scientific communities

3. Id. at 9, 85.
where law, science, and technology intersect—and at times may collide. Some of our authors were our colleagues who we knew worked at the nexus of science and law, and others responded to our invitations on various Listserves. Each author selected is an expert in his or her field, which will be evident upon reading their chapters. The responses we received to our call for chapters reflected that the future is upon us, with many in this interdisciplinary community realizing the need for such a publication due to the rapid changes in science, technology, and the law.

There is an amazing diversity in the topics covered in this book as illustrated in the following chapters:

- Chapter 5, “The Future of Neuroscientific Evidence,” which discusses the current state of neuroscientific evidence, including both its foreseeable potential and whether “revolutionary” claims about this science have merit in the adjudicative process.
- Chapter 1, “The Social Construction of the Admissibility of the Most Frequently Proffered Varieties of Expert Testimony,” is more law-focused, discussing the gatekeeping role and how judges have used a variety of factors to arrive at decisions about the admissibility of expert evidence and testimony.
- Chapter 4, “The Juror and Courtroom of the Future,” discusses the electronic transformation of the courtroom, both in terms of the increasing use of multimedia presentations of evidence and the transformation of the courtroom from a “landlocked” institution to one with an online or virtual aspect as proceedings are teleconferenced or otherwise conducted in multiple locations. In each of these settings, the chapter explores the needs and demands of the fact finders: the jurors.

This book is where our survey of these issues begin, although we recognize there is more to come in these areas. We anticipate more developments for the future in the future. We are providing a glimpse into the horizon of a new dawn of the future of evidence—an exciting, interesting, and challenging time for lawyers (many of whom are not well versed in science) as well as for scientists (who are not well versed in law). These fields intersect in both the civil and criminal areas. We are at an interdisciplinary crossroads. At every turn, all of us will be confronted with new theories, policies, laws, and rules. It is our ethical duty as lawyers and scientists to be prepared to meet all these challenges. This book will assist us in achieving that goal.

We want to thank (from the base pairs of our DNA and the membranes of our mitochondria) for all their efforts ABA editor Sarah Orwig, the ABA Science & Technology Law Publications Committee, and the Science...
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& Technology Law staff members Shawn Taylor Kaminski, Julia Passamani, and Maria Gamboa, all the authors of the chapters, and guest editor Deborah Runkle from AAAS, without whom we could not have produced this thought-provoking book.

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