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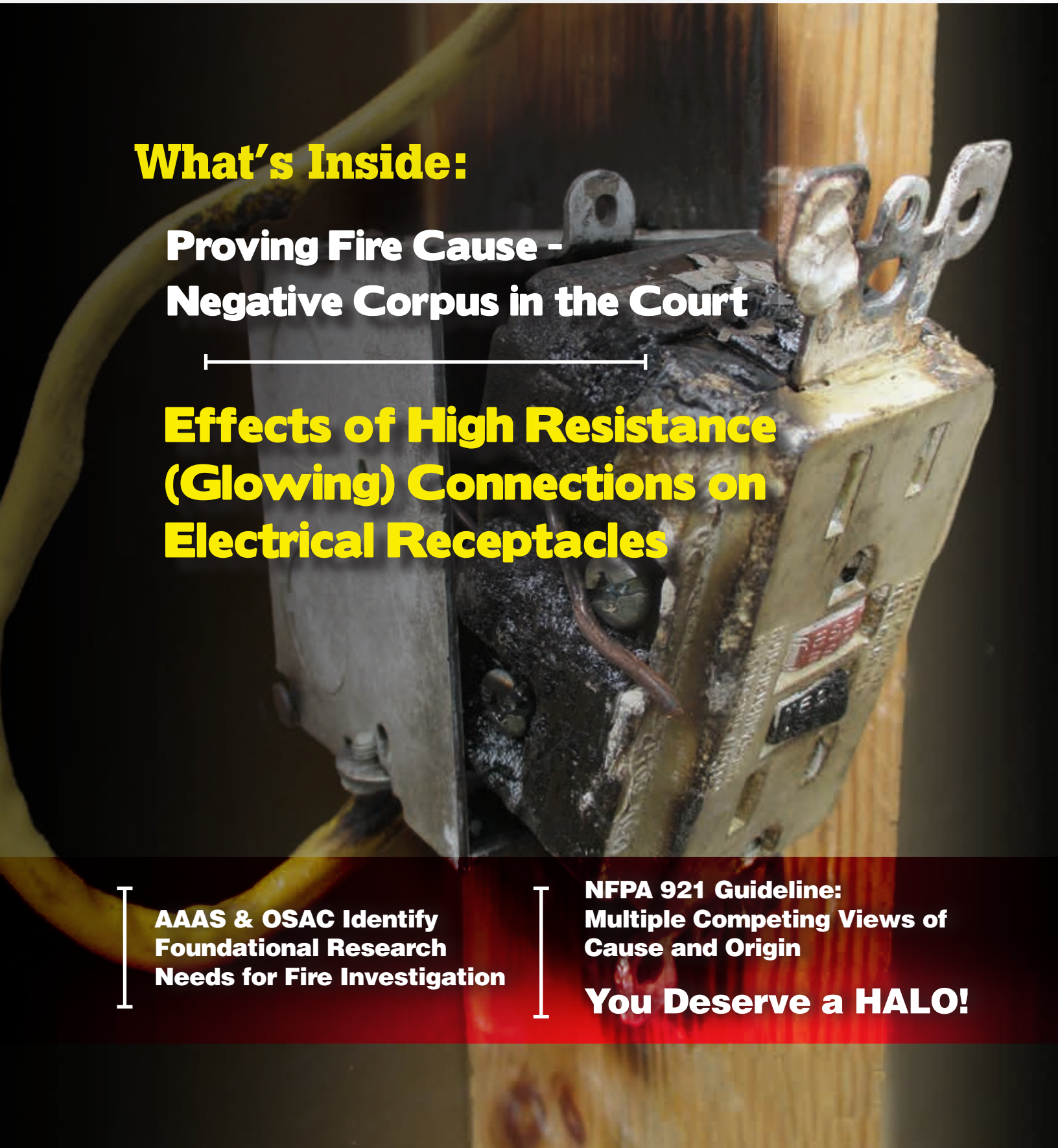

What's Inside:

IAAI leaders FOUNDATION, INC. update

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Director

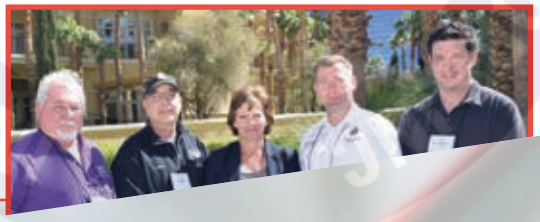
Just a short time ago, we left Las Vegas looking forward to a new year and new challenges. Since April, the Foundation has worked diligently to improve the operations of the Foundation to better serve the IAAI membership. These efforts include a new investment strategy for the Foundation accounts along with improvements of the Foundation Scholarship program.

As most are aware the August 01, deadline for applications for the 2017 IAAI Foundation Scholarship program has passed. This year the Foundation received 42 individual applications for the 2017 scholarship program. Upon closing of the application window, the Board has embarked on an aggressive evaluation of each application received. When the evaluation process is complete, the successful applicants will be notified and the winners information will be published.

For those not familiar with the IAAI Foundation Scholarship program, the Foundation may award up to five individual $1000.00 scholarships to offset the costs of registration and hotel for attendance of the IAAI Annual Training Conference each year. The scholarships are available to any IAAI and/or IAAI Chapter member upon successful application.

This year, the Foundation initiated a new fund raiser raffle with expanded prizes. This year's raffle includes a 2018 Indian "Scout" motorcycle, a 2018 Can Am Commander 900cc ATV or cash prize of $10,000. Detailed information on the raffle, prizes and tickets are available on line at the IAAI or IAAI Foundation web sites. The raffle will run through May of 2018 and the winning tickets will be drawn at the 2018 ITC in Frisco, Texas.

David R. Sneed
IAAI Foundation President



2017 Scholarship Winner Comments

"The Scholarship offered a
not only

EFFECTS OF HIGH RESISTAN
ON ELECTRICAL RECEPTACL

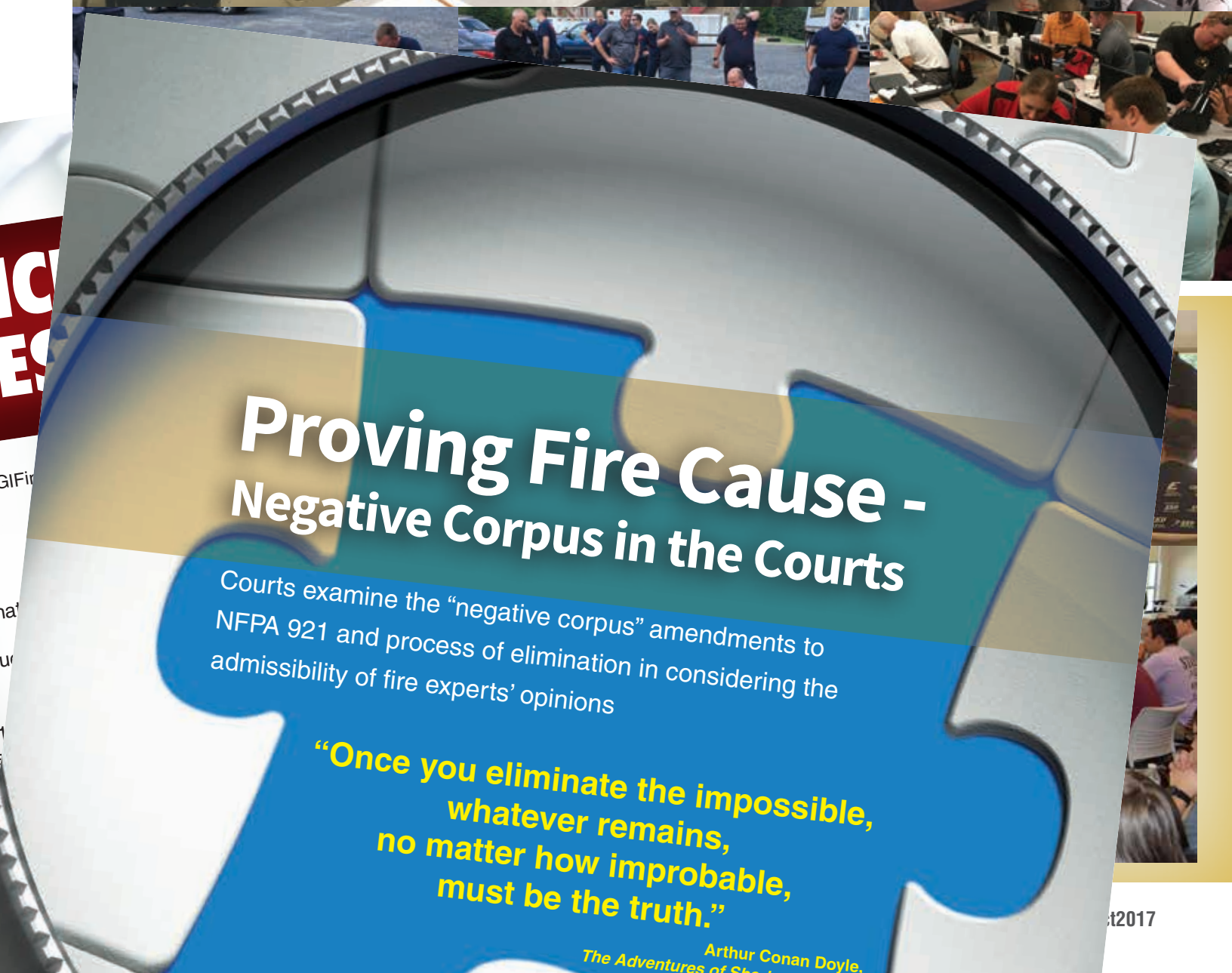
By Joe Sesniak, IAAI-CFI, IAAI-CI, CFEI,

Loose electrical connections at screw terminals can create an increase in resistance, which promotes development of oxide layer(s) on the affected metals and localized heating. While the oxides are conductive (meaning the circuit will still "work") its resistance is higher than th of the original metals involved (NFPA 921, 2014)[1]. The nature of the heating results in a locally high "watt density" and creates a potentially competent ignition source for proximal f (DeHaan, J., Icove, D., 2012)[2].

Recent literature, including works by Benfer and Gottuk (2013)[3], Korinek and Lopez (201 [4] and Shea (2006)[5], provide detailed explanation of the chemical and physical process of oxidation (copper I and copper II oxides) and corrosion associated with high resistance or "glowing" electrical connections. It is the visible effects of such localized high resistan heating on the receptacle terminals, and the persistence of these effects in a post-flash fire environment, that are the subject of this paper.

INTRODUCTION

Electrical Aspects class
in Reading, PA, August 16–18



Proving Fire Cause - Negative Corpus in the Courts

Courts examine the "negative corpus" amendments to NFPA 921 and process of elimination in considering the admissibility of fire experts' opinions

"Once you eliminate the impossible, whatever remains, no matter how improbable, must be the truth."

Arthur Conan Doyle, *The Adventures of Sh*

FISC Bulletin
IAAI Fire Investigation (FISC)

AAAS & OSAC Ident Research Needs for

1. Introduction

And so, it begins – again: the start of a new era for the fire investigations. The last one began in the 1980s, w NFPA issued the first of its science-based document for fire investigations, *NFPA 1033 Standard for Profe Qualifications for Fire Investigator*,[1] and began worl second: *NFPA 921 Guide for Fire and Explosion In* In 1992 the publication of the first edition of *NFPA* the beginning of the process of recording the colle experts from diverse fields, all contributing to the k for fire investigations.

However, it was not until lawyers began to use th aspects of *NFPA 921* to challenge the reliability opinions in court that investigators began to app impact that these industry standards would hav The fire investigation community has spent the then experimenting, documenting, and refining we know about the science in this field, and th *921* to reflect these advances. *NFPA 1033* ha tandem, revising the minimum requirements qualifications to keep step with the evolution reflected in *NFPA 921*.

Now, motivated by a big push from the Nati Science report, *Strengthening Forensic Sc States: A Path Forward*[3] (the *NRC/NAS R* accountability that it has inspired, leaders evaluating the reliability and validity of me investigations and developing a research gaps. It has now come time to reinforce t field: taking stock of the limitations of wh identifying what we do not yet know (bu context, significant headway has been

1. The American Association for Science (AAAS) Fire Investigatio July 2017 report: Forensic Scier and Gap Analysis Report 1—Fi Bibliography.[4] (hereafter referre *Analysis Report on Fire Investi*

2. The Organization of Scientif Subcommittee on Fire and Ex Needs Assessments, summa *Development Needs* webpag in Fire and Explosion Investi

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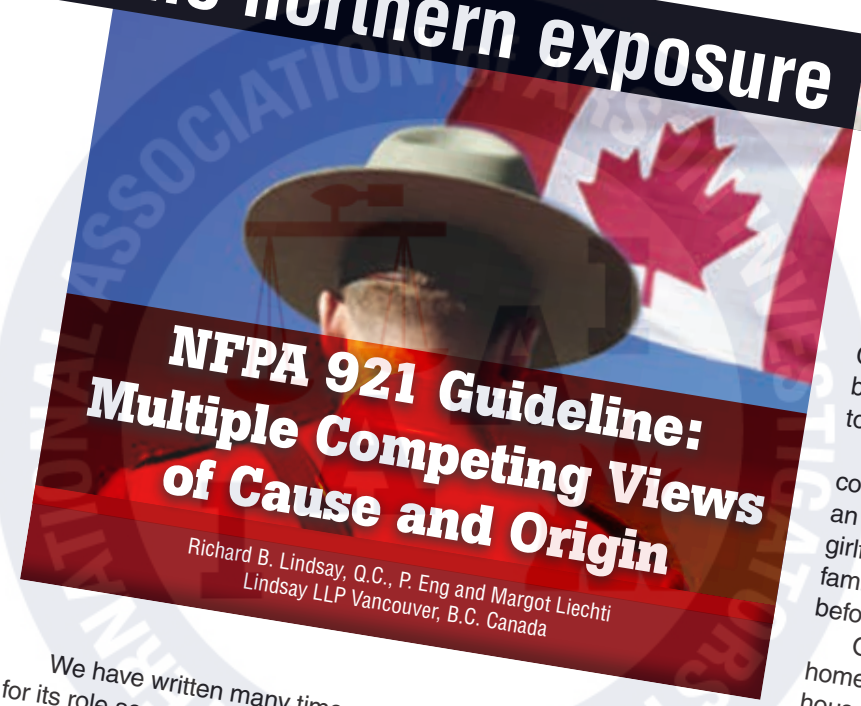

NFPA 921 Guideline: Multiple Competing Views of Cause and Origin

Richard B. Lindsay, Q.C., P. Eng and Margot Liechti
Lindsay LLP Vancouver, B.C. Canada

We have written many times praising the NFPA 921 guideline for its role as a peer-reviewed, consensus document that addresses the science of fire investigation and the methodology for performing such investigations. We have also written about how NFPA 921 is considered the "gold standard" for fire investigation science in the Canadian judicial system.[1] To this point, we have written about how Canadian courts have found that a failure to revise a report written under an older version of NFPA 921 can detrimentally affect the weight the court will give that expert report.[2]

So, given our appreciation of NFPA, we find the following case peculiar in that 4 different experts identified 4 different causes and origins, presumably using the same investigative principles as set out in NFPA 921. In this case, *Bidart v. The Portage La Prairie Mutual Insurance Company* 2017 NSSC 126, Mr. Justice Gogan of the Supreme Court of Nova Scotia had this to say, at paragraph 112, about the investigation:

> In my view, on a relative basis, this was not a complex fire investigation. Nevertheless, four experts examined the scene and came to differing conclusions on both origin and cause. All of the experts agreed that the standard for their investigations was the National Fire Protection Association, NFPA 921, "*Guide for Fire and Explosive Investigations*" as it existed at the time of their work. All purported to carry out their investigations in accordance with this standard, albeit with different interpretations as to how the standard applied to their investigations.

We found this case is instructive on two points: (1) illustrating how even a relatively straightforward fire can lead to different scientific hypotheses as to the cause and origin, which provides insight on the difficulties of the fire investigator's role in much more complex cases, and (2) identifying the strategies used by the court to determine the which of competing theories should prevail, which provides insight on the types of strategies are most effectively employed by the investigators.

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Investigations

Cause & Origin Expert

Initial investigations