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Professional Experience

Dr. Donelson studies the use and effects of alcohol and other drugs, both alone and in combination. In areas of pharmacology and toxicology, he has examined relationships between the presence, concentration, and actions of psychoactive drugs; the effects of drugs on human behavior, especially driving motor vehicles; and the consequences of drug-influenced behavior. Dr. Donelson has researched the dual role of alcohol as a crash-risk factor as well as an injury-aggravating factor, especially spinal cord injury.

Dr. Donelson has also engaged the statistical study of motor vehicle crashes, their causes and consequences. He specializes in solving complex problems involving multiple variables, for example, to estimate the relative importance of risk factors – human, vehicular, and environmental. In the area of motor vehicle risk analysis, Dr. Donelson’s investigations have focused on vehicle rollover, post-collision fire, occupant injury, and vehicle crashworthiness.

In July 2006, Dr. Donelson joined the staff of Principia™ Engineering Services, LLC (<http://www.principia-eng.com/index.html>). Principia focuses on the fundamental practice of failure analysis and accident reconstruction. Because most accident and failure investigations involve multi-disciplinary efforts, the firm’s work encompasses many disciplines of engineering and science.

Dr. Donelson served as a Visiting Scholar with the Traffic Safety Center (TSC), University of California, Berkeley (2006-2008). Until April 2005, he was a Principal Scientist with the engineering and scientific consulting firm Exponent Failure Analysis Associates, Inc. (Exponent). Before joining Exponent in 1989, he had years of research experience with the Traffic Injury Research Foundation of Canada (1981–1989), the Highway Safety Research Institute (now, the Transportation Research Institute) at the University of Michigan (1976–1981), and the University of Michigan School of Medicine, Department of Pharmacology (1975–1976).

Credentials and Professional Honors

Ph.D. (Pharmacology), Indiana University, 1976
B.A. (Chemistry), Earlham College, with Honors, 1969

Phi Beta Kappa; Sigma Xi

Past member, National Safety Council, Committee on Alcohol and Other Drugs and the International Council on Alcohol, Other Drugs, and Traffic Safety; Transportation Research Board, Committee on Statistical Methodology and Statistical Computer Software (member, 1998–2000). Current member, The Society for Risk Analysis; The Society of Forensic Engineers and Scientists.

Alan C. Donelson, Ph.D.

Publications and Selected Presentations

Alcohol, Other Drugs, and Safety

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- Donelson, A.C. (with Simpson, H.M., Mayhew, D.R., et al.). 1989. **The Incidence and Role of Alcohol and Other Drugs in Fatal Transportation Accidents in Canada.** Ottawa, Ontario: Transport Canada, Strategic Policy Development, Policy and Coordination.
- Donelson, A.C. 1988. The alcohol-crash problem. In: **The Social Control of Drinking and Driving**, eds. M. Lawrence, J. Snortum, and F. Zimring, pp. 3-40. Chicago: The University of Chicago Press.
- Walsh, P.J.; Beirness, D.J.; Haas, G.C.; and Donelson, A.C. 1988. **Alcohol Use by Persons Fatally Injured in Motor Vehicle Accidents: 1986.** Report No. TP-8156E-86. Ottawa, Ontario: Transport Canada, Road Safety and Motor Vehicle Regulation Directorate.
- Donelson, A.C.; Beirness, D.J.; and Simpson, H.M. 1988. **Beverage Alcohol Concentration and Traffic Safety.** Ottawa, Ontario: Traffic Injury Research Foundation of Canada.
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- Veldkamp, M.B.; Donelson, A.C.; and Joscelyn, K.B., eds. 1980. **Drugs and Driving: A Selected Bibliography. Supplement Two.** National Highway Traffic Safety Administration contract no. DOT-HS-7-01530. National Technical Information Service: Springfield, Virginia.
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