GTD Scientific predicts human injury in any environment

In GTD Scientific, principal Geoffrey Desmoulin has found a way to combine his twin passions for the human body and mechanical engineering, creating a firm that has become an internationally renowned leader in the field of complex injury analysis.

The company provides forensic investigation services in injury biomechanics, incident reconstruction, and product safety, all geared towards determining injury causation and prevention.

“We pride ourselves on our ability to predict human injury in any environment,” Desmoulin tells AdvocateDaily.com.

While GTD now helps personal injury lawyers, prosecutors, police forces and many other clients to bolster their cases in court, Desmoulin’s road to becoming a respected and experienced expert witness has been a long and winding one.

After starting out his working life as a firefighter and paramedic, Desmoulin was forced to rethink his future direction following a medical diagnosis that ruled him out of that career at an early age.

“They told me if I continued, I’d be dead by the time I was 50, so I switched focus,” he says.

Building on his first-responder background, Desmoulin enrolled as a student of kinesiology, completing undergraduate and master’s degrees in the field.

“I wanted to get into injury biomechanics, but I realized the people who are good in that area have some sort of mechanical engineering background,” he adds.

Desmoulin filled that hole in his resume by completing a master’s in biomechanical engineering, followed by a PhD in mechanical engineering.

And it was during his research for the PhD that Desmoulin took the call that would change his life. Tim Prokop, the showrunner of a new series named *Deadliest Warrior,* got in touch after struggling to cast an expert with the ability to comment on the engineering aspects, injury potential, and overall battlefield effectiveness of weapons used throughout history.

“He asked me to break down a fight between a ninja and a Spartan,” Desmoulin says. “It sounded a bit crazy, but I put together a tape for them, and they later told me they knew instantly, ‘This is our guy.’

“The stars aligned for me,” he adds.

VIDEO: https://www.youtube.com/watch?v=PqPBMCky8S4

When the pilot aired in 2007, it went down in the *Spike* channel’s history as the highest-rated ever.

Almost immediately, consulting requests began coming in, prompting Desmoulin to incorporate GTD.

More than a decade later, calls are still coming in thanks to reruns and referrals originating with his appearances on the show, Desmoulin says.

The firm has since expanded its forensic investigation services to incorporate injury biomechanics, incident reconstruction, and what Desmoulin calls “The Science of Violence,” which involves the application of measurements to a variety of factors at play during violent encounters.

Members of the GTD team regularly prepare reports for use in court and have been qualified as experts to testify before judges.

For example, in one recent U.S. case, GTD’s advanced incident reconstruction techniques challenged the prevailing public narrative surrounding a suspect’s shooting by a police officer.

While the incident triggered rioting in the city by outraged citizens, Desmoulin found the officer’s version of events was consistent with his reconstruction, which was created relying on techniques including statement quantification videos, static and dynamic shooting tests, as well as a number of independently verifiable facts.

“The judge accepted our methodology, and the jury was able to use our findings to help them come to their decision,” Desmoulin says.

In addition, Desmoulin runs continuing education sessions with legal professionals seeking to deepen their knowledge of the physics of human injuries, and has also been an adjunct professor with the University of British Columbia, where he taught injury biomechanics and helped with the development of a program for entrepreneurial students.