

## **C.E. “TED” BAIN, BENG, MD, CCFP (EM)**

### **CURRICULUM VITAE**

#### **EDUCATION**

|           |   |           |
|-----------|---|-----------|
| CCFP (EM) | Certificant<br>Special Competence in Emergency Medicine<br>College of Family Physicians of Canada | 1996      |
| CCFP      | Certificant<br>College of Family Physicians of Canada   | 1995      |
|           | Rotating Internship<br>Scarborough General Hospital<br>Scarborough, Ontario                       | 1983-1984 |
| MD        | Queen’s University<br>Kingston, Ontario   | 1979-1983 |
| BEng      | Royal Military College<br>Kingston, Ontario   | 1970-1974 |

#### **SELECTED CONTINUING EDUCATION COURSES**

|   |      |
|---|------|
| Traffic Accident Reconstruction I & II<br>Northwestern University Traffic Institute, Evanston, Illinois | 2003 |
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#### **AVIATION EXPERIENCE AND APPOINTMENTS**

|  |              |
|--|--------------|
| Clinical Adjunct Professor, USAF School of<br>Aerospace Medicine | 2008-Present |
| US Federal Aviation Authority – Private Pilot’s License          | 2003-Present |
| Civil Aviation Medical Examiner, Transport Canada                | 1986-1992    |
| Transport Canada – Commercial Pilot’s License                    | 1980-Present |
| Pilot (Kiowa), Canadian Armed Forces Reserves                    | 1983-1985    |
| Pilot (CF-104), Canadian Armed Forces                            | 1974-1979    |

## **PROFESSIONAL EXPERIENCE**

|  |              |
|--|--------------|
| Consultant<br>Biodynamic Research Corporation<br>San Antonio, Texas                      | 2003-Present |
| Emergency Medicine<br>Prince George Regional Hospital<br>Prince George, British Columbia | 2000-2003    |
| Emergency Medicine<br>Surrey Memorial Hospital<br>Surrey, British Columbia               | 1993-2003    |
| Emergency Medicine<br>Dufferin Area Hospital<br>Orangeville, Ontario                     | 1984-1992    |
| Emergency Medicine<br>Georgetown & District Hospital<br>Georgetown, Ontario              | 1984-1986    |
| Family Medicine, Private Practice<br>Surrey, British Columbia                            | 1992-2000    |
| Family Medicine, Private Practice<br>Caledon, Ontario                                    | 1984-1992    |

## **APPOINTMENTS**

|  |              |
|--|--------------|
| Clinical Adjunct Professor, USAF School of<br>Aerospace Medicine                                 | 2008-Present |
| Inspector, Medical Services Commission<br>Province of British Columbia                           | 2000-2005    |
| Emergency Department Locum<br>Prince George Regional Hospital<br>Prince George, British Columbia | 2000-2003    |
| President, Whistler Mountain Medical Associates<br>Whistler, British Columbia                    | 1999-2003    |

|  |           |
|--|-----------|
| Instructor, Advanced Cardiac Life Support  | 1996-2004 |
| Instructor, Advanced Trauma Life Support   | 1996-2004 |
| Chief, Department of General Practice<br>Surrey Memorial Hospital<br>Surrey, British Columbia            | 1996-2000 |
| Medical Advisor, City of Surrey Fire Department<br>Surrey, British Columbia                              | 1996-2003 |
| Chairman, Medical Resource Committee<br>Surrey Memorial Hospital<br>Surrey, British Columbia             | 1994-1996 |
| Medical Advisor, Hilton Villa Nursing Home<br>Surrey, British Columbia                                   | 1992-1996 |
| Active Staff, Surrey Memorial Hospital<br>Surrey, British Columbia                                       | 1992-2003 |
| Occupational Health Physician, Dufferin Area Hospital  | 1989-1992 |
| Occupational Medicine<br>(Plant Physician for four manufacturing<br>facilities in Orangeville, Ontario). | 1987-1992 |
| Civil Aviation Medical Examiner, Transport Canada  | 1986-1992 |
| Member, Medical Advisory Committee<br>Avalon Care Centre, Orangeville, Ontario                           | 1986-1992 |
| Associate Staff, Georgetown & District Hospital<br>Georgetown, Ontario                                   | 1984-1986 |
| Active Staff, Dufferin Area Hospital<br>Orangeville, Ontario   | 1984-1992 |

## PROFESSIONAL REGISTRATIONS

|   |                          |                |
|---|--------------------------|----------------|
| Medical Licensures:   | Texas, USA               | 2004 - Present |
|   | British Columbia, Canada | 1992 - Present |
|   | Ontario, Canada          | 1983 - 1992    |
| The Accreditation Commission for Traffic<br>Accident Reconstruction (ACTAR #1699) |                          | 2006 - 2016    |

## PROFESSIONAL AFFILIATIONS

|   |              |
|---|--------------|
| Member, Canadian Medical Association                              | 1984-Present |
| Member, British Columbia Medical Association                      | 1992-Present |
| Member, Canadian Association of Emergency Physicians              | 1994-Present |
| Member, College of Family Physicians of Canada                    | 1995-Present |
| Member, Aerospace Medical Association                             | 2003 - 2010  |
| Member, Society of Automotive Engineers                           | 2003-Present |
| Member, Association for the Advancement<br>of Automotive Medicine | 2004-Present |

## PUBLICATIONS

Funk, J.R., Cormier, J.M., Bain, C.E., “Analytical Model for Investigating Sideswipe Collisions”, SAE 2004-01-1185, *2004 Society of Automotive Engineers (SAE) Congress*, Detroit, MI, March 2004.

Funk, J.R., Cormier, J.M., Bain, C.E., Guzman, H., Bonugli, E., “An Evaluation of Various Neck Injury Criteria in Vigorous Activities”, *2007 International IRCOBI Conference On The Biomechanics Of Impacts*, Maastricht, Netherlands, October 2007.

Funk, J.R., Cormier, J.M., Bain, C.E., Guzman, H., Bonugli, E., “Relationship between Linear and Rotational Head Acceleration in Various Activities”, *45<sup>th</sup> International ISA Biomedical Sciences Instrumentation Symposium*, Copper Mountain, CO., April 2008.

Funk, J.R., Cormier, J.M., Bain, C.E., Guzman, H., Bonugli, E., “Validation and Application of a Methodology to Calculate Head Accelerations and Neck Loading in Soccer Ball Impacts”, SAE 2009-01-0251, *2009 Society of Automotive Engineers (SAE) Congress*, Detroit, MI, April 2009.

Manoogian S.J., Funk J.R., Cormier J.M., Bain, C.E., Guzman H., Bonugli E., “Evaluation of Thoracic and Lumbar Accelerations of Volunteers in Vertical and Horizontal Loading Scenarios”, SAE 2010-01-0146, *2010 Society of Automotive Engineers (SAE) Congress*, Detroit, MI, April 2010.

Scott W.R., Bain C.E., Manoogian S.J., Cormier J.M., Funk J.R., “Simulation Model for Low-Speed Bumper-to-Bumper Crashes”, SAE 2010-01-0084, *2010 Society of Automotive Engineers (SAE) Congress*, Detroit, MI, April 2010.

Funk J.R., Cormier J.M., Bain C.E., Guzman H., Bonugli E., Manoogian S.J.: Head and Neck Loading in Everyday Vigorous Activities, *Annals of Biomedical Engineering*, 2010.

Funk J.R., Cormier J.M., Bain, C.E., Wirth J.L., Bonugli E.B., Watson R.A., “Factors affecting ejection risk in rollover crashes”. *56<sup>th</sup> Annual Scientific Conference of the Association for the Advancement of Automotive Medicine*. October 14-17, Seattle, Washington. 2012.

Germane A.G.; Freund M.A., Gwin L.P., McNish T.M., Scott W.R., Day C.M., and Bain C.E. Technology in the courtroom. Curran J. and Meaders K., eds. IN: *Expert Witnesses: Motor Vehicle and Accident Reconstruction Cases, 2016-2017 Edition*. Thomson Reuters; 2016; pp. 1073-1094.

Cormier J., Gwin L., Reinhart L., Wood R., and Bain C. A comprehensive review of low-speed rear impact volunteer studies and a comparison to real-world outcomes. *Spine*. 2018; 43(18):1250-1258.

Wood R.L., Greenston M.J., Bain C.E., and Brooks C.N. Do Low-Speed Vehicle Collisions Cause Intervertebral Disc Degeneration or Herniation? *AMA Guides Newsletter*. 2018; Nov/Dec: 3-8.