



# René L Warren

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**I am a researcher with 20 years experience in biotechnology, genomics, informatics**

I have played a central role in managing the bioinformatics of large international collaborations to decrypt the genomes of *Rhodococcus*, *Cryptococcus*, Bullfrog and Spruce

I developed the first software for *de novo* genome assembly with then emerging short DNA sequences and pioneered the development of technologies that enabled the discovery of *Fusobacterium* in colon cancer, one of *Time Magazine's* top ten medical breakthrough of 2011

I am group leader with the BC Genome Sciences Centre's bioinformatics technology lab  
In that role, I have conceptualized/led the development of genome scaffolders for long read data  
I mentored over half a dozen undergraduate students, their work has led to first authorship

**I am eager to take on additional challenges and leadership**

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## PROFESSIONAL EXPERIENCE

Feb 2017 –  
Present

### ***Group Leader***

**BC Cancer Agency – Genome Sciences Centre, Vancouver BC**

- Provide project leadership, expertise, guidance
- Plan / coordinate group activities
- Supervise / mentor biologists and programmers
- Conceptualize development of bioinformatics technologies
- Write research proposals
- Interview candidates / teach and train personnel
- Recruit and mentor undergraduate students

Jan 2002 –  
Jan 2017

### ***Coordinator***

**BC Cancer Agency – Genome Sciences Centre, Vancouver BC**

- Lead bioinformatics software R&D
- Published research in reputed journals / international conferences
- Developed marketing (web portals / news release)
- Supervised a team of biologists and programmers
- Interviewed job candidates, taught and trained employees

Jan 2000 –  
Dec 2001

### ***Officer***

**NRC-CNRC - Biotechnology Research Institute, Montréal QC**

- Co-engineered a system for regulating gene expression in cells
- Designed, fabricated and tested components of the DNA “gene switch”
- Work led to a patent, technology sold to company

## EDUCATION

- Sep 2000 – **Cert. Courses, Computer Science**  
Dec 2001 Concordia University, Montréal, Canada
- Jun 1997 – **MSc Biochemistry & Molecular Biology**  
Aug 1999 University of British Columbia, Vancouver, Canada
- Sep 1994 – **BSc Biochemistry** Dean's Honours List  
May 1997 Université de Montréal, Montréal, Canada

## ADDITIONAL INFORMATION

- 2015, 16 Recipient of the *John Jambor Knowledge Fund* travel award
- 2011 Interviewed by *NTN24* channel for *Fusobacterium* discovery colon cancer
- 2009 Interviewed by *Genome Technology* to discuss next-generation sequencing
- 2007 Interviewed by *GenomeWeb* for the development of SSAKE
- 1998 UBC Graduate Fellowship awarded for MSc
- 1997 *Fonds de la Recherche en Santé Québec* (FRSQ) awarded for BSc
- 1996 Bursary from FRSQ for BSc honour's research project
- 1995 Worked at NASA to coordinate the crystallization of proteins under microgravity : CMIX-4 payload, space shuttle *Endeavour*

## PRESENTATIONS

(selected from 16)

- 2017, 18 Research in Computational Molecular Biology, Hong Kong / Paris – **talk**
- 2015, 16 Intelligent Systems for Molecular Biology, Dublin UK / Orlando USA - **talks**
- 2008, 12, 15 Pacific Symposium on Biocomputing, Kona, Hawaii USA – **posters**
- 2010 Sequencing, Finishing and Analysis in the Future, Santa Fe USA – **talk**
- 2007 Synthetic Biology 3.0 conference, Zürich, Switzerland – **talk**

## PUBLICATIONS

(selected from 56 \*co-first authors)

- Warren RL, et al.** (2015) LINKS: Scalable, alignment-free scaffolding of draft genomes with long reads. *GigaScience* 4:35
- Warren RL, et al.** (2012) Derivation of HLA types from shotgun sequence datasets. *Genome Med.* 4:95
- Castellarin M\*, **Warren RL\***, et al. (2012) *Fusobacterium nucleatum* infection is prevalent in human colorectal carcinoma. *Genome Research.* 22:299-306
- Warren RL, et al.** (2007) Assembling millions of short DNA sequences using SSAKE. *Bioinformatics.* 23:500
- E Allen-Vercoe, R Holt, R Moore, **R Warren.** Detection of fusobacterium in a gastrointestinal sample to diagnose gastrointestinal cancer. US Patent App. 13/877,421 / WO Patent 2,012,045,150
- Warren R,** Hsiao WW et al. (2004) Functional characterization of a catabolic plasmid from polychlorinated-biphenyl degrading *Rhodococcus* sp. strain RHA1. *J. Bacteriol.* 186:7783-7795

## REFERENCES

Available upon request