

# René L Warren



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## About me:

I am a **Researcher** with over 20 years experience in biotechnology, genomics and computing research. I have played a central role in managing the bioinformatics of large international collaborations to decrypt the genomes of *Rhodococcus*, *Cryptococcus*, spruce and bullfrog. I developed the first program for genome assembly with then emerging short DNA sequences (SSAKE) and pioneered the development of genomics technologies that enabled the discovery of *Fusobacterium* in colon cancer, one of *Time Magazine's* top ten medical breakthrough of 2011.

I currently lead the BC Genome Sciences Centre's bioinformatics technology lab high-performance computing group. In that role, I have conceptualized and developed/led the development of genome scaffolders for Oxford nanopore (LINKS) and 10XG data (ARCS).

I am eager to take on additional challenges and leadership.

***Language spoken and written: French & English***

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## PROFESSIONAL EXPERIENCE

Sep 2010 –  
Present

### ***Coordinator***

BC Cancer Agency – Genome Sciences Centre, Vancouver BC

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

Jan 2002 –  
Mar 2010

### ***Bioinformatician***

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***

National Research Council - Biotechnology Research Institute, Montreal 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
- Integrated technology in viral and cell systems

## EDUCATION

Sep 2005 – Jun 2006	<b>People and Project Management Courses</b> Provincial Health Services Authority of British Columbia, Canada
Sep 2000 – Dec 2001	<b>Computer Science Courses</b> Concordia University, Montréal, Canada
Jun 1997 – Aug 1999	<b>MSc Biochemistry &amp; Molecular Biology</b> University of British Columbia, Vancouver, Canada <i>Studies of the regulation of rod photoreceptors cGMP-gated channels</i>
Sep 1994 – May 1997	<b>BSc Biochemistry</b> , dean Honour list mention in 1995 and 1996 Université de Montréal, Montréal, Canada <i>Structure-function studies of the transcription factor Nkx2-5</i>

## ADDITIONAL INFORMATION

2015, 16	Recipient of the <i>John Jambor Knowledge Fund</i> travel award
2011	Interviewed by <i>NTN24</i> channel for <i>Fusobacterium</i> discovery colon cancer
2009	Interviewed by <i>Genome Technology</i> to discuss next-generation sequencing
2007	Interviewed by <i>GenomeWeb</i> for the development of SSAKE
1998	UBC Graduate Fellowship awarded for MSc
1997	<i>Fonds de la Recherche en Santé Québec</i> (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 (International conferences, selected from 14)

2015, 16	Intelligent Systems for Molecular Biology, Dublin UK / Orlando USA - <b>talks</b>
2008, 12, 15	Pacific Symposium on Biocomputing, Kona, Hawaii, USA – <b>posters</b>
2010	Sequencing, Finishing and Analysis in the Future, Santa Fe USA – <b>talk</b>
2009	Advances in Genome Biology and Technology, Marco Island USA – <b>poster</b>
2007	Synthetic Biology 3.0 conference, Zürich, Switzerland – <b>talk</b>

## PUBLICATIONS (selected from ~50)

\*co-first authors

- Yeo S\*, Coombe L\*, Chu J, **Warren RL\***, Birol I. (2016) ARCS: Assembly Roundup by Chromium Scaffolding. TBD
- Coombe L\*, **Warren RL\***, et al. (2016) Assembly of the complete Sitka spruce chloroplast genome using 10X Genomics' GemCode sequencing data. *PLoS ONE*. 11(9): e0163059
- 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

## REFERENCES

Available upon request