



# René L Warren

**warrenlr@gmail.com    778 . 386 . 4192    <http://renewarren.ca>**

---

**scientist with 20+ years experience in biotechnology, genomics, bioinformatics**

---

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 (SSAKE) 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 the BC Genome Sciences Centre's bioinformatics technology lab **Group Leader**  
In that role, I have conceptualized & led the development of genome analysis technologies  
I mentored over half a dozen undergraduate students, their work has led to first authorship

---

**seeking additional challenges and leadership**

---

## PROFESSIONAL EXPERIENCE

### *Group Leader*

2017 – now    **BC Cancer Agency – Genome Sciences Centre**, Vancouver

- Project leadership, expertise, guidance
- Coordinate research activities
- Interview, supervise, mentor COOP students and staff
- Conceptualize development of bioinformatics technologies
- Write research proposals and scientific articles

### *Coordinator*

2002 – 17    **BC Cancer Agency – Genome Sciences Centre**, Vancouver

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

### *Officer*

2000 – 01    **NRC – CNRC – Biotechnology Research Institute**, Montréal

- Engineered gene expression regulation technology (molec/cell biology)
- Designed, fabricated, tested components of the DNA “gene switch”
- Work led to a patent, technology sold to company

## EDUCATION

- 2000 – 01     **Certificate Computer Science**     | Concordia University
- 1997 – 99     **MSc Biochemistry & Molecular Biology** | UBC
- 1994 – 97     **BSc Biochemistry** *Dean's Honours List*     | Université de Montréal

## 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     – **talks**
- 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 58     \*co-first authors)

- Warren RL.** (2018) Visualizing genome synteny with xmatchview. *Journal of Open Source Software*. 3:497
- 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