



René L Warren

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I am a scientist 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 (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 – **BC Cancer Agency – Genome Sciences Centre**, Vancouver
present

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

- 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 – **NRC – CNRC – Biotechnology Research Institute**, Montréal
2001

- 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 – 2001	Certificate Computer Science	Concordia University
1997 – 1999	MSc Biochemistry & Molecular Biology	UBC
1994 – 1997	BSc Biochemistry <i>Dean's Honours List</i>	Université de Montréal

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 <i>SSAKE</i>
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 <i>Endeavour</i>

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