Johan Harmen Gibcus, Ph.D.
Program in Systems Biology
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Education

Ph.D., Medical Sciences, Pathology and Laboratory Medicine, University Medical Center Groningen, The Netherlands Thesis Title: *Characterization of the 11q13.3 amplicon in head and neck squamous* cell carcinoma Advisor: Dr. E.M.D.Schuuring, Dr. J.E.J. van der Wal and Prof. Dr. Ph.M. Kluin	2008
M.Sc. Medical Biology at the Faculty of Mathematics and Natural Sciences, University of Groningen, Groningen	2001

Postdoctoral Training

Postdoctoral fellow in Medical Sciences Supervisor: Prof. Dr. J. Dekker Program in Systems Biology, University of Massachusetts Medical School Worcester, MA	2010-2015
Postdoctoral fellow in Medical Sciences Supervisor: Prof. Dr. A. van den Berg and Dr. B.J. Kroesen Pathology and laboratory medicine, University Medical Center Groningen, The Netherlands	2006-2010

Academic Appointments

Research Instructor, Biochemistry and Molecular Pharmacology University of Massachusetts Medical School Worcester, MA	2015-Present

Honors and Awards

Stellar Abstract Award PQG conference, Boston MA	2017
Keystone Travel Award for Abstract	2007
Best Oral Presentation, Dutch Pathology Conference	2005

Educational Activities

Teaching Activities

Instructor laboratory techniques collaborators	2015-Present
Teacher at Van Hall College, Leeuwarden, The Netherlands	2008

Updated: Date

Grants

Completed

Dutch Cancer Society Grant Number: BUIT-2010-4652 J.H. Gibcus 2011-2014
Fellowship
The role of non-coding RNA in gene expression regulation
$220,000
Role: principal postdoctoral fellow (100% effort)

NWO (Dutch Science Foundation) Dossier Number: 825.09.036 J.H. Gibcus 2010-2011
Rubicon Grant
The role of non-coding RNA in gene expression regulation
$105,000
Role: principal postdoctoral fellow (100% effort)

J.K. de Cock Foundation E.M.D. Schuuring / J.H. Gibcus 2006
The role of FADD in sensitivity for radiotherapy of laryngeal carcinoma
$12,000
Role: grad student (100% effort)

Invited Presentations

International

Speaker Dept. of Genetics seminar, Groningen, The Netherlands Oct 2017
Speaker EMBO Nuclear Structure and Dynamics, Isle sur Sorgue, France Oct 2017
Speaker miRNA profiling in HL, MicroRNAs Europe 2008 Meeting, Cambridge UK Nov 2008

National

4D nucleome annual meeting Bethesda, MD. Sept 2017
Keystone Non-Coding RNAs & Eukaryotic Transcription, Salt Lake City, Utah Apr 2012

Regional

BAMM 2018, Whitehead institute, Cambridge MA May 2018

Hi-C Data Analysis Bootcamp, Harvard Medical School, Boston, MA May 2018

Center for Cancer Systems Biology (CCSB) retreat Gloucester, MA Sept 2016

Local

UMass Epigenetics club Worcester, MA May 2017

Other Presentations, Posters & Abstracts

International

Amplification results in higher protein expression of amplified genes: discerning drivers from hitchhikers in the 11q13 amplicon in laryngeal cancer, Dutch Pathology Conference 2005

Comprehensive Characterization of cell lines and laryngeal carcinomas containing genomic amplifications in the chromosome 11q13 region by use of high density array CGH, ICAG 2003 Amsterdam (oral presentation and publication in Analytical Cellular Pathology) 2002

National

The dynamics of chromosome folding in mitosis, 2017 PQG Conference, Boston MA	2017
*The role of miR-106b seed family members in Hodgkin Lymphoma cell line*s, Keystone MicroRNA and Cancer (E1) 2009, Keystone Resort, Colorado	2009
The identification of mir-155 targets in b-cell hodgkin lymphoma, Keystone MicroRNA and Cancer (E1) 2007, Keystone Resort, Colorado	2007
FADD is amplified and overexpressed in laryngeal carcinomas, and overexpression is correlated with the presence of lymph node metastasis, The proceedings of the AACR Washington, USA 2006 (#2851)	2006
Identification of amplified and overexpressed genes with prognostic relevance in laryngeal carcinoma, The proceedings of the AACR Orlando, USA 2004 (#1614)	2004

Publications

Selected peer-reviewed publications

1. **Johan H. Gibcus**, Kumiko Samejima, Anton Goloborodko, Itaru Samejima, Natalia Naumova, Masato Kanemaki, Linfeng Xie, James R. Paulson, William C. Earnshaw, Leonid A. Mirny, Job Dekker Mitotic chromosomes fold by condensin-dependent helical winding of chromatin loop arrays. Science. 2018 Feb 9;359(6376); PMID: 29348367
2. Elphege P Nora, Anton Goloborodko, Anne-Laure Valton, **Johan Harmen Gibcus**, Alec Uebersohn, Nezar Abdennur, Job Dekker, Leonid Mirny, Benoit Bruneau. Targeted degradation of CTCF decouples local insulation of chromosome domains from higher-order genomic compartmentalization Cell. 2017 May 18;169(5):930-944.e22. PMID: 28525758
3. Belaghzal H, Dekker J and **Gibcus JH**. Hi-C 2.0: An optimized Hi-C procedure for high-resolution genome-wide mapping of chromosome conformation. Methods. 2017 Jul 1;123:56-65. PMID: 28435001
4. **Gibcus JH**, Dekker J. The hierarchy of the 3D genome. Mol Cell. 2013 Mar 7;49(5):773-82. PMID : 23473598
5. Belton JM, McCord RP, **Gibcus JH**, Naumova N, Zhan Y, Dekker J. Hi-C: A comprehensive technique to capture the conformation of genomes. Methods. 2012 May 29. PMID: 22652625
6. **Gibcus JH**, Dekker J. The context of gene expression regulation. F1000 Biol Rep. 2012;4:8. PMID: 22500194
7. **Gibcus JH**, Kroesen BJ, Koster R, Halsema N, de Jong D, de Jong S, Poppema S, Kluiver J, Diepstra A, van den Berg A. J Pathol. MiR-17/106b seed family regulates p21 in Hodgkin's lymphoma. 2011 Dec;225(4):609-17. PMID: 21953646
8. **Gibcus JH**, Tan LP, Harms G, Schakel RN, de Jong D, Blokzijl T, Möller P, Poppema S, Kroesen BJ, van den Berg A. Hodgkin lymphoma cell lines are characterized by a specific miRNA expression profile. Neoplasia. 2009 Feb;11(2):167-76. PMID: 19177201
9. **Gibcus JH**, Mastik MF, Menkema L, de Bock GH, Kluin PM, Schuuring E, van der Wal JE. Cortactin expression predicts poor survival in laryngeal carcinoma. Br J Cancer. 2008 Mar 11;98(5):950-5. PMID: 18268491
10. **Gibcus JH**, Menkema L, Mastik MF, Hermsen MA, de Bock GH, van Velthuysen ML, Takes RP, Kok K, Alvarez Marcos CA, van der Laan BF, van den Brekel MW, Langendijk JA, Kluin PM, van der Wal JE, Schuuring E. Amplicon mapping and expression profiling identify the Fas-associated death domain gene as a new driver in the 11q13.3 amplicon in laryngeal/pharyngeal cancer. Clin Cancer Res. 2007 Nov 1;13(21):6257-66. PMID: 17975136

Professional Development

Radiation Safety, University of Massachusetts Medical School, Worcester, MA	2011
Radiation Safety, University of Greningen, accredited by the Ministry of Public Health, The Netherlands	2001
Advanced Array of CGH, University of Nijmegen, The Netherlands	2001