Curriculum Vitae

Andrew Holland, Ph.D.

Assistant Professor
Dept. of Molecular Biology and Genetics
Johns Hopkins University School of Medicine
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Education

Sept 1999 – June 2002	**First Class**, MA (Hons) Natural Sciences University of Cambridge, UK
Oct 2002 – Sept 2003	**Distinction**, Research Masters (M.Res.) School of Biological Sciences, The University of Manchester, UK
Oct 2003 – Dec 2006	Ph.D. student Faculty of Life Sciences, The University of Manchester, UK

Professional Experience

Oct 2002 – Aug 2003	M.Res. graduate student The University of Manchester, UK
Oct 2003 – Dec 2006	Ph.D. student with Prof. Stephen Taylor The University of Manchester, UK
Mar 2007 – Jan 2013	Postdoctoral fellow with Prof. Don Cleveland The Ludwig Institute for Cancer Research, CA
Feb 2013 – Present	Assistant Professor, Dep. of Mol. Biol. and Genetics Secondary appointment in Oncology
Oct 2013 – Present	Member, Cancer Biology Program Sidney Kimmel Comprehensive Cancer Centre The Johns Hopkins University School of Medicine, MD

Awards and Honors

Sept- 2000 – Sept 2001	John Bowyer Buckley natural science scholarship
Sept- 2000 – Sept 2001	Delf-Smith prize, University of Cambridge, UK
Sept- 2001 – Sept 2002	John Bowyer Buckley natural science scholarship
Sept- 2001 – Sept 2002	Neal prize, University of Cambridge, UK
Oct 2002 – Sept 2003	Full MRC scholarship
Oct 2003 – Sept 2006	Full MRC scholarship
2005	Faculty of Life Science graduate student poster prize
Oct 2006 – Dec 2006	Wellcome Trust VIP award
Mar 2007 – Mar 2009	EMBO long-term fellowship
July 2011 – July 2014	Leukemia and Lymphoma Society senior fellowship
June 2011	Associate Chair, Gordon Research Seminar on Cell Growth and Proliferation
Dec 2012 – Present	Membership Committee, American Society for Cell Biology

Jan 2013	Basil O'Connor Starter Scholar Award, March of Dimes
May 2014	Kimmel Scholar
May 2014	Pew Scholar in the Biomedical Sciences
July 2015	Johns Hopkins Discovery Innovation Award

Professional membership

Mar 2005 –	Member, American Society for Cell Biology
Dec 2009 – Dec 2012	Member, American Association for Cancer Research
Dec 2012 –	Membership Committee, American Society for Cell Biology
Jul 2013 –	American Association for Advancement of Science

Oral presentations (* = job talk)

June 2009	Cell Cycle meeting, Salk Institute for Biological Studies, CA
June 2010	Aneuploidy meeting, Edinburgh University, UK
Sept 2011	Seminar, University College London, UK
Oct 2011	Seminar, Gulbenkian Science Institute, Portugal
Oct 2011	Seminar, The University of Manchester, UK
Oct 2011	Seminar, The University of Oxford, UK
Oct 2011	Seminar, School of Pathology, University of Oxford, UK
Oct 2011	Seminar, Wellcome Trust Sanger Institute, Cambridge, UK
Oct 2011	Seminar, Gurdon Institute, University of Cambridge, UK
Oct 2011	Seminar, Harvard Medical School, MA
Jan 2012	Seminar, University of Pittsburgh, PA*
Jan 2012	Seminar, The Johns Hopkins Uni. School of Medicine, MD*
Feb 2012	Seminar, Mount Sinai School of Medicine, NY*
Feb 2012	Seminar, University College London, UK*
Feb 2012	Seminar, London Research Institute, UK*
Feb 2012	Seminar, The University of Oxford, UK*
Feb 2013	Seminar, Hopkins Bloomberg School of Pub. Health, MD
Feb 2013	Seminar, National Institutes of Health, MD
Jun 2013	EMBO Aneuploidy meeting, Amsterdam, Netherlands
Sept 2013	Seminar, University of Torronto, Canada
Oct 2013	Aneuploidy meeting, Titisee Conference, Germany
Oct 2013	Seminar, Curie Institute, Paris, France
Nov 2013	Seminar, Carnegie Institution for Science, MD
June 2015	FASEB mitosis and spindle assembly meeting, Montanna

Publications (in chronological order)

1. Taylor SS, Scott MI, **Holland AJ**. The spindle checkpoint: a quality control mechanism which ensures accurate chromosome segregation. **Chromosome Res**. 2004;12(6):599-616. PMID: 15289666

2. Swanton E, **Holland A**J, High S, Woodman P. Disease-associated mutations cause premature oligomerization of myelin proteolipid protein in the endoplasmic reticulum. **Proc Natl Acad Sci U S A**. 2005 Mar 22;102(12):4342-7. PMID: 15753308

3. **Holland AJ**, Taylor SS. Cyclin-B1-mediated inhibition of excess separase is required for timely chromosome disjunction. **J Cell Sci.** 2006 Aug 15;119(Pt 16):3325-36. PMID: 16868023

4. **Holland AJ**, Bottger F, Stemmann O, Taylor SS. Protein phosphatase 2A and separase form a complex regulated by separase autocleavage. **J Biol Chem**. 2007 Aug 24;282(34):24623-32. PMID: 17604273

5. **Holland AJ**, Taylor SS. Many faces of separase regulation. **SEB Exp Biol Ser**. 2008;59:99-112. PMID: 18368920

6. **Holland AJ**, Cleveland DW. Beyond genetics: surprising determinants of cell fate in antitumor drugs. **Cancer Cell**. 2008 Aug 12;14(2):103-5. PMID: 18691543

7. Silk AD, **Holland AJ**, Cleveland DW. Requirements for NuMA in maintenance and establishment of mammalian spindle poles. **J Cell Biol**. 2009 Mar 9;184(5):677-90. PMID: 19255246

8. **Holland AJ**, Cleveland DW. Boveri revisited: chromosomal instability, aneuploidy and tumorigenesis. **Nat Rev Mol Cell Biol**. 2009 Jul;10(7):478-87. PMID: 19546858

9. **Holland AJ**, Lan W, Niessen S, Hoover H, Cleveland DW. Polo-like kinase 4 kinase activity limits centrosome overduplication by autoregulating its own stability. **J Cell Biol.** 2010 Jan 25;188(2):191-8. PMID: 20100909

10. Gurden MD, **Holland AJ**, van Zon W, Tighe A, Vergnolle MA, Andres DA, Spielmann HP, Malumbres M, Wolthuis RM, Cleveland DW, Taylor SS. Cdc20 is required for the post-anaphase, KEN-dependent degradation of centromere protein F. **J Cell Sci**. 2010 Feb 1;123(Pt 3):321-30. PMID: 20053638

11. Gassmann R, **Holland AJ**, Varma D, Wan X, Civril F, Cleveland DW, Oegema K, Salmon ED, Desai A. Removal of Spindly from microtubule-attached kinetochores controls spindle checkpoint silencing in human cells. **Genes and Develpoment.** 2010 May;24(9):957-71. PMID: 20439434

12. **Holland AJ**, Lan W, Cleveland DW. Centriole duplication: A lesson in self-control. **Cell Cycle.** 2010 Jul 15;9(14):2731-6. PMID: 20647763

13. Kim Y*****, **Holland AJ***, Lan W, Cleveland DW. Aurora kinases and protein phosphatase 1 mediate chromosome congression through regulation of CENP-E. **Cell.** 2010 Aug 6;142(3):444-55. *****equal contribution. PMID: 20691903

14. Hatch EM, Kulukian A, **Holland AJ**, Cleveland DW, Stearns T. Cep152 interacts with Plk4 and is required for centriole duplication. **J Cell Biol**. 2010 Nov 15;191(4):721-9. PMID: 21059850

15. **Holland AJ**, Fachinetti D, Da Cruz S, Zhu Q, Vitre B, Lince-Faria M, Chen D, Parish N, Verma IM, Bettencourt-Dias M, Cleveland DW. Polo-like kinase 4 controls centriole duplication but does not directly regulate cytokinesis. **Mol Biol Cell**. 2012 May;23(10):1838-45. PMID: 22456511

16. **Holland AJ**, Cleveland DW. Losing balance: the origin and impact of aneuploidy in cancer. **EMBO Rep**. 2012 Jun;13(6):501-14. PMID: 22565320

17. **Holland AJ**, Cleveland DW. Chromoanagenesis and cancer: mechanisms and consequences of localized, complex chromosomal rearrangements. **Nat Med**. 2012 Nov;18(11):1630-8. PMID: 23135524

18. **Holland AJ**, Cleveland DW. The deubiquitinase USP44 is a tumor suppressor that protects against chromosome missegregation. **J Clin Invest**. 2012 Dec 3;122(12):4325-8. PMID: 23187131

19. **Holland AJ***, Fachinetti D*, Han JS, Cleveland DW. Inducible, reversible system for the rapid and complete degradation of proteins in mammalian cells. **Proc Natl Acad Sci U S A**. 2012 Dec 4;109(49):E3350-7. PMID: 23150568. ***equal contribution.**

20. **Holland AJ#**, Fachinetti D, Zhu Q, Bauer M, Verma IM, Nigg EA, Cleveland DW. The autoregulated instability of Polo-like kinase 4 limits centrosome duplication to once per cell cycle. **Genes and Development**. 2012 Dec 15;26(24):2684-9. PMID: 23249732. **#corresponding author.**

21. Han JS, **Holland AJ**, Fachinetti D, Kulukian A, Cetin B, Cleveland DW. Catalytic assembly of the mitotic checkpoint inhibitor BubR1-Cdc20 by a Mad2-induced functional switch in Cdc20. **Mol Cell**. 2013 Jul 11;51(1):92-104. PMID: 23791783

22. Fachinetti D, Diego Folco H, Nechemia-Arbely Y, Valente LP, Nguyen K, Wong AJ, Zhu Q, **Holland AJ**, Desai A, Jansen LE, Cleveland DW. A two-step mechanism for epigenetic specification of centromere identity and function. **Nat Cell Biol**. 2013 Sep;15(9):1056-66. PMID: 23873148

23. Silk AD*, Zasadil LM*, **Holland AJ**, Vitre B, Cleveland DW, and Weaver BA. The rate of chromosome missegregation determines whether aneuploidy promotes or suppresses tumors. **Proc Natl Acad Sci U S A**. 2013 Oct 29;110(44):E4134-41. *equal contribution.

24. **Holland AJ#**, Cleveland DW. Polo-like kinase 4 inhibition: a strategy for cancer therapy? **Cancer Cell**. 2014 Aug 11;26(2):151-3. **#Corresponding author.**

25. Levine MS, **Holland AJ#**. Polo-like kinase 4 shapes up. **Structure**. 2014 Aug 5;22(8):1071-3. **#Corresponding author.**

26. **Holland AJ**, Reis RM, Niessen S, Pereira C, Andres DA, Spielmann HP, Cleveland DW, Desai A, Gassmann R. Preventing farnesylation of the dynein adaptor spindly contributes to the mitotic defects caused by farnesyltransferase inhibitors. **Mol Biol Cell.** 2015. May 15;26(10):1845-56. PMID: 25808490

27. Moyer TC, Clutario KM, Lambrus BG, Daggubati V, **Holland AJ[#].** Binding to Plk4 activated kinase activity to promote centriole duplication. **J Cell Biol.** 2015. Jun 22;209(6):863-78. PMID: 26101219. **[#]Corresponding author.**

28. Lambrus BG, Clutario, KM, Daggubati V, Snyder M, **Holland AJ[#].** Reversible depletion of centrioles uncovers a p53-dependent pathway that protects against genome instability following centriole duplication failure. **J Cell Biol.** 2015. Jul 6;210(1):63-77. PMID: 26150389. **[#]Corresponding author.**

29. Moyer TC, **Holland AJ[#].** 2015. Generation of a conditional analog-sensitive kinase in human cells using CRISPR/Cas9-mediated genome engineering. **Methods Cell Biol.** 2015;129:19-36. PMID: 26175431. **[#]Corresponding author.**