CURRICULUM VITAE

CHARLES STUART HOFFMAN

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EDUCATION

1980- S.B. in Life Sciences, Massachusetts Institute of Technology
Department of Biology, Research Advisor- Charles E. Holt III
Differentiation in *Physarum polycephalum*

1986- Ph.D. in Molecular Biology and Microbiology
Tufts University Sackler School of Graduate Biomedical Sciences
Department of Molecular Biology and Microbiology
Research Advisor- Dr. Andrew Wright
Protein secretion in *Escherichia coli* using alkaline phosphatase fusions

RESEARCH EXPERIENCE

1978-1980	Undergraduate researcher, Massachusetts Institute of Technology Department of Biology, PI- Charles E. Holt III
1980-1986	Graduate researcher, Tufts University Sackler School of Graduate Biomedical Sciences, Department of Molecular Biology and Microbiology, PI- Dr. Andrew Wright
1986-1990	Postdoctoral fellow, Harvard Medical School Department of Genetics, PI- Dr. Fred Winston
1990-1996	Assistant Professor, Boston College, Biology Department
1996-2002	Associate Professor, Boston College, Biology Department
2002-present	Professor, Boston College, Biology Department
2017-2024	Visiting Scientist, NIH/NCATS
2024-present	Department Chair, Boston College, Biology Department

PROFESSIONAL AFFILIATIONS

Genetics Society of America
American Society for Microbiology
American Association for the Advancement of Science

PATENTS

4,914,025 Issue date: 4-3-1990 "Export of intracellular substances"
C. Manoil, J. Beckwith, M. Syvanen, R.R. Isberg, C.S. Hoffman, and A. Wright

14/361,979- Issue date: 11-03-2015- Inhibitors of phosphodiesterase 11 (Pde11) and methods of use to elevate cortisol production - Ozge Ceyhan, Charles Hoffman

BIBLIOGRAPHY

1. Truitt, C.L., Hoffman, C.S., and Holt, C.E. (1982). A gene, *alcA*, affecting the life cycle form expressed in *Physarum polycephalum*. Genetics 101: 35-55. (3 citations)
2. Malamy, M.H., Rahaim, P.T., Hoffman, C.S., Bagdoyan, D., O'Connor, M.B., and Miller, J.F. (1985). A frameshift mutation at the junction of an IS1 insertion within lacZ restores b-galactosidase activity via formation of an active lacZ-IS1 fusion protein. J. Mol.Biol. 181: 551-555. (10 citations)
3. Hoffman, C.S. and Wright, A. (1985). Fusions of secreted proteins to alkaline phosphatase: An approach for studying protein secretion. Proc. Natl. Acad. Sci. USA 82: 5107-5111. (343 citations)
4. Hoffman, C.S., Fishman, Y., and Wright, A. (1987). Alkaline phosphatase as a tool for analysis of protein secretion. In Phosphate Metabolism and Regulation in Micoorganisms, A. Torriani-Gorini, F.G. Rothman, S. Silver, A. Wright, E. Yagil eds. pp. 78-82. (5 citations)
5. Hoffman, C.S. and Winston, F. (1987). A ten-minute DNA preparation from yeast efficiently releases autonomous plasmids for transformation of Escherichia coli. Gene 57: 267-272. (3,268 citations)
6. Hoffman, C.S. and Winston, F. (1989). A transcriptionally regulated expression vector for the fission yeast *Schizosaccharomyces pombe*. Gene 84: 473-479. (89 citations)
7. Hoffman, C.S. and Winston, F. (1990). Isolation and characterization of mutants constitutive for expression of the fbp1 gene of *Schizosaccharomyces pombe*. Genetics 124: 807-816. (137 citations)
8. Hoffman, C.S. and Winston, F. (1991). Glucose repression of transcription of the *Schizosaccharomyces pombe fbp1* gene occurs by a cAMP signaling pathway. Genes and Development 5: 561-571. (198 citations)
9. Ottilie, S., Chernoff, J., Hannig, G., Hoffman, C.S., and Erikson, R.L. (1991). A fission yeast gene encoding a protein with features of protein-tyrosine-phosphatases. Proc. Natl. Acad. Sci. USA 88: 3455-3459. (65 citations)
10. Ottilie, S., Chernoff, J., Hannig, G., Hoffman, C.S., and Erikson, R.L. (1992). The fission yeast genes $pyp1^{+}$ and $pyp2^{+}$ encode protein tyrosine phosphatases that negatively regulate mitosis. Mol. Cell. Biol. 12: 5571-5580. (66 citations)
11. Byrne, S.M. and Hoffman, C.S. (1993). Six *git* genes encode a glucose-induced adenylate cyclase activation pathway in the fission yeast *Schizosaccharomyces pombe*. J. Cell Sci. 105: 1095-1100. (104 citations)
12. Apolinario, E., Nocero, M., Jin, M. and Hoffman, C.S. (1993). Cloning and manipulation of the *Schizosaccharomyces pombe his7*+ gene as a new selectable marker for molecular genetic studies. Curr. Genet. 24: 491-495. (81 citations)
13. Nocero, M., Isshiki, T., Yamamoto, M. and Hoffman C.S. (1994). Glucose repression of *fbp1* transcription in *Schizosaccharomyces pombe* is partially regulated by adenylate cyclase activation by a G protein a subunit encoded by *gpa2/git8*. Genetics 138: 39-45. (79 citations)
14. Jin, M., Fujita, M., Culley, B.M., Apolinario, E., Yamamoto, M., Maundrell, K., and Hoffman, C.S. (1995). *sck1*, a high copy number suppressor of defects in the cAMP-dependent protein kinase pathway in fission yeast, encodes a protein homologous to the *Saccharomyces cerevisiae* SCH9 kinase. Genetics 140: 457-467. (104 citations)
15. Hoffman, C.S. (1995). Preparation of Yeast DNA. in Current Protocols in Molecular Biology Ausubel, F. M., R. Brent, R. E. Kingston, D. D. Moore, J. G. Seidman, J. A. Smith, and K. Struhl (ed.). 1995.Wiley Interscience, New York. pages 13.11.1- 13.11.4 (167 citations)
16. Dal Santo, P., Blanchard, B., and Hoffman, C.S. (1996). The *Schizosaccharomyces pombe* pyp1 protein tyrosine phosphatase negatively regulates nutrient monitoring pathways. J. Cell Sci. 109: 1919-1925. (51 citations)
17. Hoffman, C.S. and Welton, R. (2000). Mutagenesis and gene cloning in *Schizosaccharomyces pombe* via nonhomologous plasmid integration and rescue. BioTechniques, 28:532-6, 538, 540. (11 citations)
18. Landry, S., Pettit, M.T., Apolinario, E., and Hoffman, C.S. (2000). The fission yeast *git5* gene encodes a Gb subunit required for glucose-triggered adenylate cyclase activation. Genetics 154:1463-1471. (67 citations)
19. Neely, L.A., and Hoffman, C.S. (2000). PKA and MAPK pathways antagonistically regulate fission yeast *fbp1* transcription by employing different modes of action at two upstream activation sites. Mol. Cell. Biol. 20:6426-6434. (89 citations)
20. Welton, R.M. and Hoffman, C.S. (2000). Glucose monitoring in fission yeast via the gpa2 Ga, the git5 Gb, and the git3 putative glucose receptor. Genetics 156: 513-521. (176 citations)
21. Landry, S. and Hoffman, C.S. (2001). The git5 Gb and git11 Gg form an atypical Gbg dimer acting in the fission yeast glucose/cAMP pathway. Genetics 157: 1159-1168. (79 citations)
22. Janoo, R.T.K., Neely, L.A., Braun, B.R., Whitehall, S.K. and Hoffman, C.S. (2001). Transcriptional regulators of the *Schizosaccharomyces pombe fbp1* gene include two redundant Tup1p-like corepressors and the CCAAT binding factor activation complex. Genetics 157: 1205-1215. (72 citations)

23. Takagi, T., Cho, E.-J., Janoo, R.T.K., Polodny, V., Takase, Y., Keogh, M.-C., Woo, S., Fresco-Cohen, L.D., Hoffman, C.S. and Buratowski, S. (2002). Divergent subunit interactions among fungal mRNA 5'-capping machineries. Eukaryotic Cell 1: 448-457. (28 citations)
24. Schadick, K., Fourcade, H.M., Boumenot, P., Seitz, J.J., Morrell, J.L., Chang, L., Gould, K.L., Partridge, J.F., Allshire, R.C., Kitagawa, K., Hieter, P. and Hoffman, C.S. (2002). *Schizosaccharomyces pombe* Git7p, a member of the *Saccharomyces cerevisiae* Sgt1p family, is required for glucose and cAMP signaling, cell wall integrity, and septation. Eukaryotic Cell 1: 558-567. (43 citations)
25. Greenall A., Hadcroft A.P., Malakasi P., Jones N., Morgan B.A., Hoffman C.S., and Whitehall S.K. (2002). Role of Fission Yeast Tup1-like Repressors and Prr1 Transcription Factor in Response to Salt Stress. Mol. Biol. Cell. 13: 2977-89. (51 citations)
26. Ivey, F.D. and Hoffman C.S. (2002). Preview: Pseudostructural inhibitors of G protein signaling during development. Dev. Cell 3: 154-155. (3 citations)
27. Kelly, D.A. and Hoffman, C.S. (2002). Gap repair transformation in fission yeast to exchange plasmid selectable markers. Biotechniques 33: 978-982. (15 citations)
28. Yang P., Du H., Hoffman C.S., and Marcus S (2003). The Phospholipase B Homolog, Plb1, Is a Mediator of Osmotic Stress Response and Nutrient-Dependent Repression of Sexual Differentiation in the Fission Yeast, *Schizosaccharomyces pombe* Mol. Gen. Genomics 269:116-25 (37 citations)
29. Hirota K., Hoffman C.S., Shibata T., and Ohta K. (2003). Fission yeast Tup1-like repressors suppress chromatin remodeling at the *fbp1*$^{+}$ promoter and the *ade6-M26* recombination hotspot. Genetics 165: 505-515 (55 citations)
30. Hirota K., Hasemi T., Yamada T., Mizuno K., Hoffman C.S., Shibata T., and Ohta K. (2004). Fission yeast global repressors regulate the specificity of chromatin alteration in response to distinct environmental stresses. Nucleic Acids Res., 32:855-62. (57 citations)
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32. Stiefel, J., Wang, L., Kelly, D.A., Janoo, R.T.K., Seitz, J., Whitehall, S.K., and Hoffman C.S. (2004). Suppressors of an adenylate cyclase deletion in the fission yeast *Schizosaccharomyces pombe*. Eukaryotic Cell 3: 610-619. (55 citations)
33. Hoffman, C.S. (2005). Glucose sensing via the PKA pathway in *Schizosaccharomyces pombe*. Biochem. Soc. Transactions 33:257-260. (140 citations)
34. Hoffman, C.S. (2005). Except in Every Detail: Comparing and Contrasting G Protein Signaling in *Saccharomyces cerevisiae* and *Schizosaccharomyces pombe*. Eukaryotic Cell 4: 495-503. (92 citations)
35. Ivey, F.D. and Hoffman, C.S. (2005). Direct activation of fission yeast adenylate cyclase by the Gpa2 Ga of the glucose signaling pathway. Proc. Natl. Acad. Sci USA 102: 6108-6113. (62 citations)
36. Wang L., Griffiths Jr. K., Zhang Y.Z., Ivey F.D., and Hoffman C.S. (2005). *Schizosaccharomyces pombe* adenylate cyclase suppressor mutations suggest a role for cAMP phosphodiesterase regulation in feedback control of glucose/cAMP signaling. Genetics 171:1523-33. (40 citations)
37. Hoffman, R.L. and Hoffman C.S. (2006). Cloning the *Schizosaccharomyces pombe lys2*$^{+}$ gene and construction of new molecular genetic tools. Current Genetics 49:414-20. (11 citations)
38. Kao R.S., Morreale E., Wang L., Ivey F.D., and Hoffman C.S. (2006). *Schizosaccharomyces pombe* Git1 is a C2-domain protein required for glucose activation of adenylate cyclase. Genetics 173:49-61. (18 citations)
39. Hirota K., Hoffman C.S., and Ohta K. (2006) Reciprocal nuclear shuttling of two antagonizing Zn-finger proteins that modulates the Tup-family co-repressors function to repress chromatin remodeling. Eukaryotic Cell 5: 1980-9. (44 citations)
40. Hoffman, C.S. (2007). Propping up our knowledge of G protein signaling pathways: diverse functions of putative noncanonical Gb subunits in fungi. Sci STKE. Jan 23;2007(370):pe3. (14 citations)
41. Benson L.J., Phillips J.A., Gu Y., Parthun M.R., Hoffman C.S., and Annunziato A.T. (2007) Properties of the Type B Histone Acetyltransferase Hat1: H4 Tail Interaction, Site Preference, and Involvement in DNA Repair. JBC 282: 836-42. (82 citations)
42. Ivey F.D., Wang L., Demirbas D., Allain C., and Hoffman C.S. (2008) Development of a fission yeast-based high throughput screen to identify chemical regulators of cAMP phosphodiesterases J. Biomol. Screening 13: 62-71. (42 citations)
43. Leem Y.-E., Ripmaster T., Kelly F., Ebina H., Heincelman M., Zhang K., Grewal S.I.S., Hoffman C. S., and Levin H.L. (2008). The pol II promoters of *Schizosaccharomyces pombe* are targeted by an LTR retrotransposon that is capable of repairing the promoters it disrupts. Molecular Cell 30:98-107. (61 citations)
44. Alaamery M.A., and Hoffman C.S. (2008). *Schizosaccharomyces pombe* Hsp90/Git10 is required for glucose/cAMP signaling. Genetics 178:1927-36. (28 citations)

45. Hirota K., Miyoshi T., Kugou K., Hoffman C.S., Shibata T., and Ohta K. (2008). Stepwise chromatin remodeling by a cascade of transcription initiation of non-coding RNAs. Nature 456: 130-134. (318 citations)
46. Roux A., Alaamery M., Hoffman C.S., Chartrand P., Ferbeyre G., and Rokeach L. (2009). Pro-aging effects of glucose signalling through a G protein-coupled glucose receptor in fission yeast Plos Genetics, Mar;5(3):e1000408. Epub 2009 Mar 6. (111 citations)
47. Alaamery M.A., Wyman A.R., Ivey F.D., Allain C., Demirbas D., Wang L., Ceyhan O. and Hoffman C.S. (2010). New classes of PDE7 inhibitors identified by a fission yeast-based HTS. J. Biomol. Screening 15:359-67 (38 citations)
48. Ivey F.D., Taglia F.X., Yang F., Lander M.M., Kelly D.A. and Hoffman C.S. (2010). Activated alleles of the *Schizosaccharomyces pombe gpa2*$^{+}$ Ga gene identify residues involved in GDP-GTP exchange. Eukaryotic Cell 9: 626-33. (13 citations)
49. Demirbas, D. Ceyhan, O., Wyman, A.R. and Hoffman, C.S. (2011). A Fission Yeast-based Platform for Phosphodiesterase Inhibitor HTSs and Analyses of Phosphodiesterase Activity, Handbook of Experimental Pharmacology (Houslay, Francis, and Conti eds.) Phosphodiesterases as Drug Targets 2011 (204): 135-149. (17 citations)
50. Demirbas D., Ceyhan O., Wyman A.R., Ivey F.D., Allain C., Wang L., Sharuk M.N., Francis S.H. and Hoffman C.S. (2011). Use of a *Schizosaccharomyces pombe* PKA-repressible reporter to study cGMP metabolising phosphodiesterases Cellular Signalling, 23: 594-601. (20 citations)
51. Mudge D.K., Hoffman C.A., Lubinski T.J., and Hoffman C.S. (2012). Use of a *ura5*$^{+}$-*lys7*$^{+}$ cassette to construct unmarked gene knock-ins in *Schizosaccharomyces pombe*, Current Genetics, 58: 59-64. (22 citations)
52. Ceyhan O., Birsoy K., and Hoffman C.S. (2012). Identification of biologically active PDE11-selective inhibitors using a yeast-based high throughput screen, Chemistry & Biology, 19:155-163. (64 citations)
53. Tong, K., Keller, T., Hoffman, C.S., and Annunziato, A.T. (2012). *Schizosaccharomyces pombe* Hat1 (Kat1) is associated with Mis16, and is required for telomeric silencing. Eukaryotic Cell, 11: 1095-1103. (27 citations)
54. Demirbas, D., Wyman, A.R., Shimizu-Albergine, M., Cakici, O., Beavo, J.A., and Hoffman, C.S. (2013). A Yeast-Based High-Throughput Screen Identifies A Phosphodiesterase Inhibitor That Elevates Steroidogenesis In Mouse Leydig Cells Via PDE8 And PDE4 Inhibition. PLoS One. 2013;8(8):e71279. doi: 10.1371/journal.pone.0071279. (33 citations)
55. de Medeiros, A.S., Magee, A., Nelson, K., Friedberg, L., Trocka, K., and Hoffman, C.S. (2013). Use of PKA-mediated phenotypes for genetic and small molecule screens in *Schizosaccharomyces pombe*. Biochem. Soc. Transactions, 41 (6): 1692-1695. (7 citations)
56. Mudge, D.K., Yang, F., Currie, B.M., Kim, J.M., Yeda, K., Bashyakarla, V.K., Ivey, F.D., and Hoffman, C.S. (2014). Sck1 negatively-regulates Gpa2-mediated glucose signaling in *Schizosaccharomyces pombe*. Eukaryot Cell, 13: 202-208. (8 citations)
57. Asada, R., Takemata, N., Hoffman, C.S., Ohta, K., and Hirota, K. (2015). Antagonistic controls of chromatin and mRNA start site selection by Tup family corepressors and the CCAAT-binding factor. Mol. Cell. Biol., 35:847-855. (32 citations)
58. de Medeiros, A.S., Kwak, G., Vanderhooft, J., Rivera, S., Gottlieb, R., and Hoffman C.S. (2015). Fission yeast-based high-throughput screens for PKA pathway inhibitors and activators. Methods Mol Biol. 1263:77-91. (6 citations)
59. de Medeiros, A.S., and Hoffman C.S. (2015). A yeast-based high-throughput screen for modulators of phosphodiesterase activity. Methods in Molecular Biology: cAMP Signaling. Springer Humana Press (3 citations)
60. Hoffman, C.S., Wood, V. and Fantes, P.A. (2015) An Ancient Yeast for Young Geneticists: A Primer on the *Schizosaccharomyces pombe* Model System. Genetics, 201: 403-423. (282 citations)
61. Fantes P.A. and Hoffman C.S. (2016). A Brief History of *Schizosaccharomyces pombe* Research: A Perspective Over the Past 70 Years. Genetics, 203:621-9. doi: 10.1534/genetics.116.189407. (65 citations)
62. Takemata N, Oda A, Yamada T, Galipon J, Miyoshi T, Suzuki Y, Sugano S, Hoffman CS, Hirota K, Ohta K. (2016). Local potentiation of stress-responsive genes by upstream noncoding transcription. Nucleic Acids Res. 44:5174-89. doi: 10.1093/nar/gkw142. (38 citations)
63. Xu C, Wyman AR, Alaamery MA, Argueta SA, Ivey FD, Meyers JA, Lerner A, Burdo TH, Connolly T, Hoffman CS, Chiles TC. (2016). Anti-inflammatory effects of novel barbituric acid derivatives in T lymphocytes. Int Immunopharmacol. 2016 Sep;38:223-32. doi: 10.1016/j.intimp.2016.06.004. (26 citations)
64. Asada, R, Umeda, M, Adachi, A, Senmatsu, S, Abe, T, Iwasaki, H, Ohta, K, Hoffman, C, Hirota, K. (2017). Recruitment and delivery of the fission yeast Rst2 transcription factor via a local genome structure counteracts repression by Tup1-family corepressors. Nucleic Acids Res. 2017 Sep 19;45(16):9361-9371. doi: 10.1093/nar/gkx555. (18 citations)
65. Adachi A, Senmatsu S, Asada R, Abe T, Hoffman CS, Ohta K, Hirota K. (2017). Interplay between chromatin modulators and histone acetylation regulates the formation of accessible chromatin in the upstream regulatory region of fission yeast *fbp1*. Genes Genet Syst. 2017 Jun 30. doi: 10.1266/ggs.17-00018. (15 citations)-Awarded GGS Prize 2018

66. de Medeiros AS, Wyman AR, Alaamery MA, Allain C, Ivey F.D., Wang L, Le H, Morken JP, Habara A, Le C, Cui S, Lerner A, Hoffman C.S. (2017). Identification and characterization of a potent and biologically-active PDE4/7 inhibitor via fission yeast-based assays. Cell Signal. 2017 40:73-80. doi: 10.1016/j.cellsig.2017.08.011 (15 citations)
67. Umeda M, Tsunekawa C, Senmatsu S, Asada R, Abe T, Ohta K, Hoffman CS, Hirota K. (2018). Histone-chaperone Asf1 is required for the establishment of repressive chromatin in *Schizosaccharomyces pombe fbp1* gene repression. Mol Cell Biol. 2018 Jul 2. pii: MCB.00194-18. doi: 10.1128/MCB.00194-18. (4 citations)
68. Senmatsu S, Asada R, Abe T, Hoffman CS, Ohta K, Hirota K. (2019). lncRNA transcriptional initiation induces chromatin remodeling within a limited range in the fission yeast *fbp1* promoter. Sci Rep. 2019 Jan 22;9(1):299. doi: 10.1038/s41598-018-36049-0. (12 citations)
69. Getz RA, Kwak G, Cornell S, Mbugua S, Eberhard J, Huang SX, Abbasi Z, de Medeiros AS, Thomas R, Bukowski B, Dranchak PK, Inglese J, Hoffman CS. (2019). A fission yeast platform for heterologous expression of mammalian adenylyl cyclases and high throughput screening. Cell Signal. Apr 24;60:114-121. doi: 10.1016/j.cellsig.2019.04.010. (5 citations)
70. Gabriele VR, Shvonski A, Hoffman CS, Giersig M, Herczynski A, Naughton MJ, Kempa K. (2020). Towards spectrally selective catastrophic response. *Phys. Rev. B* Jun;101(6-1):062415. doi: 10.1103/PhysRevE.101.062415. (2 citations)
71. Munday JC, Kunz S, Kalejaiye TD, Siderius M, Schroeder S, Paape D, Alghamdi AH, Abbasi Z, Huang SX, Donachie AM, William S, Sabra AN, Sterk GJ, Botros SS, Brown DG, Hoffman CS, Leurs R, de Koning HP. (2020). Cloning and functional complementation of ten *Schistosoma mansoni* phosphodiesterases expressed in the mammalian host stages. *PLoS* Negl Trop Dis. 2020 Jul 30;14(7):e0008447. doi: 10.1371/journal.pntd.0008447. eCollection 2020 Jul. (2 citations)
72. Eberhard, J, and Hoffman, CS (2021). cAMP export by the fission yeast Schizosaccharomyces pombe. microPublication Biology. 10.17912/micropub.biology.000384.
73. Senmatsu, S, Asada, R, Oda, A, Hoffman, CS, Ohta, K, Hirota, K (2021). lncRNA transcription induces meiotic recombination through chromatin remodelling in fission yeast. Commun Biol Mar 5;4(1):295. doi: 10.1038/s42003-021-01798-8. (7 citations)
74. Koda W, Senmatsu S, Abe T, Hoffman CS, Hirota K. (2021). Reciprocal stabilization of transcription factor binding integrates two signaling pathways to regulate fission yeast fbp1 transcription. Nucleic Acids Res. 2021 Sep 6:gkab758. doi: 10.1093/nar/gkab758. (7 citations)
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76. Hoffman C.S. (2022) Use of a fission yeast platform to identify and characterize small molecule PDE inhibitors *Front. Pharmacol*. 12:833156. doi: 10.3389/fphar.2021.833156 (1 citation)
77. Lera-Ramírez M, Bähler J, Mata J, Rutherford K, Hoffman CS, Lambert S, Oliferenko S, Martin SG, Gould KL, Du LL, Sabatinos SA, Forsburg SL, Nielsen O, Nurse P, Wood V. (2023). Revised fission yeast gene and allele nomenclature guidelines for machine readability Genetics. 2023 Sep 27:iyad143.doi: 10.1093/genetics/iyad143. (1 citation)
78. Mahmood SU, Lozano Gonzalez M, Tummalapalli S, Eberhard J, Ly J, Hoffman CS, Kelly MP, Gordon J, Colussi D, Childers W, Rotella DP. (2023). First Optimization of Novel, Potent, Selective PDE11A4 Inhibitors for Age-Related Cognitive Decline. J Med Chem2023 Nov 9;66(21):14597-14608. doi: 10.1021/acs.jmedchem.3c01088. Epub 2023 Oct 20
79. Tsuruta Y, Senmatsu S, Hana Oe H, Hoffman CS, Hirota K (2024). Metabolic stress-induced long ncRNA transcription governs the formation of meiotic DNA breaks in the fission yeast *fbp1* gene. PLoS One. 2024. 2024 Jan 22;19(1):e0294191. doi: 10.1371/journal.pone.0294191.

RESEARCH FUNDING

Current support
National Institutes of Health- 1R01AG0678361-01 (Hoffman co-PI)
Title: Pharmacologic Inhibition of PDE11A for Age-related Memory Disorders
Dates: 10-1-2020- 4-30-2025
$3,633,808 total cost for entire grant
$835,158 total costs for Boston College subcontract of entire grant

Orphan Disease Center – MDBR grant
Title: Testing the specificity and efficacy of compounds that inhibit cAMP signaling, for the development of potential therapeutics for FD/MAS
Dates: 02-01-24 to 01-31-25
$38,401 total costs for subaward to Boston College

Boston College 2024 Ignite Award
$25,000 total costs

Previous support

American Cancer Society Postdoctoral Fellowship- PF-2853.
Dates: 1986-1989 Direct costs: $48,000

National Institutes of Health- R29-GM46226-01 to -05
Title: Characterization of the *S. pombe* cAMP signal pathway.
Dates: 7-1-91 to 6-30-96.
$350,000 direct, $546,677 total costs

National Institutes of Health- R01-GM46226-06 to -09
Title: Characterization of the *S. pombe* cAMP signal pathway.
Dates: 7-1-96 to 6-30-01.
$489,430 direct, $778,194 total costs

National Institutes of Health- R01-GM54177*
Transcriptional regulation of the *S. pombe fbp1* gene.
Dates: 3-01-98 to 6-30-01
$167,061 direct, $265,643 total costs
* Consolidated with grant GM46226-07 to -09

Boston College Research Expense grants- Six grants totaling $6,600 direct costs
Material transfer agreement- Plasmid and strains to Immunex-$2,000 direct costs
1995-1996 Boston College Research Incentive Grant- $5,000 direct costs
1996 Burroughs Wellcome Fund- Wellcome Research Travel Grant- $12,300 direct costs
2006-2007 Boston College Research Incentive Grant- $10,300 direct costs
2011-12 Boston College Research Incentive Grant- $15,000 direct costs

National Institutes of Health- R01-GM46226-10 to -13s1
Title: Characterization of the *S. pombe* cAMP signal pathway.
Dates: 4-1-01 to 3-31-06.
$866,667 direct, $1,327,001 total costs

Boston College Executive Committee Invention Award-
Title: A cell-based high throughput drug screen for compounds that target cAMP phosphodiesterases
Dates: 6-01-06 to 5-31-08
$316,000 direct costs

1R21GM079662-01-National Institutes of Health
An *in vivo* screen for biological and chemical regulators of mammalian PDEs
Dates: 01-01-07 to 3-31-09
$275, 000 direct, $422,717 total costs

Boston College Ignite Award
Cyclic Adenosine Monophosphate (cAMP) Signaling in Mammals
Dates: 06-14 to 05-15
$30,000 direct costs

Boston College Ignite Award
Chemical and Genetics Analyses of the *Pseudomonas aeruginosa* ExoY Virulence Factor
Dates: 12-15 to 05-16
$30,000 direct costs

Contract 4234399- National Institutes of Health
Characterization of candidate GNAS1 modulators
Dates: 09-01-16 to 05-30-17
$25, 000 direct, $39,125 total costs

Contract H5106841 - National Institutes of Health/NHLBI
Small molecule HTSs for AC and GNAS inhibitors
Dates: 09-15-18 to 09-14-19
$26,381 direct, $33,241 total costs

NSF Award Number:1748906 (Hoffman co-PI)
EAGER: Selective Biodamage with Shaped THz Light Fields
Dates: 01-15-18 to 08-31-20
$300,000 total costs

Orphan Disease Center - MDBR-19-112-FD/MAS
Identification and characterization of novel cell-permeable, small molecule adenylyl cyclase inhibitors for future development as drugs to treat FD/MAS
Dates: 02-01-19 to 01-31-20 No cost extension to 07-31-2020
$68,185 total costs

Orphan Disease Center - MDBR-22-102-FDMAS
Structure-activity relationship studies of compounds to treat FD/MAS
Dates: 02-01-22 to 01-31-23 No cost extension to 07-31-2023
$53,791 total costs (BC portion $23,300)
$25,630 subaward to Boston College

INVITED SPEAKER

1991- Cold Spring Harbor Fission Yeast Course- 11-2-1991
M.I.T./Whitehead Cell and Molecular Biology Seminar Series 12-13-1991
1992- Cold Spring Harbor Fission Yeast Course- 11-6-1992
1993- Mitotix Inc., Cambridge, MA - 5-27-1993
Cold Spring Harbor Fission Yeast Course- 11-3-1993
1994- Cold Spring Harbor Fission Yeast Course- 11-5-1994
1995- Boston College/Dept. of Chemistry- Biochemistry seminar series- 1-14-95
1996- Boston Area Yeast Meeting- 3-13-96
Fission Yeast Workshop- GSA Yeast Genetics Meeting- Madison, WI- 8-9-96
GSA Yeast Genetics Meeting- Madison, WI- 8-96
University of Edinburgh (Scotland) - Institute of Cell and Molecular Biology-10-4-96
University of Bern (Switzerland)- Department of General Microbiology- 10-21-96
Imperial Cancer Research Foundation (London)- 11-20-96
1997- University of Connecticut Health Center- Dept. of Microbiology- 2-12-97
Tufts University Sackler School- Dept. of Mol. Biol. and Microbiology-2-19-97
Queen's University (Kingston, Ontario)- Dept. of Biology and Pathology- 5-30-97
1998- Boston Area Yeast Meeting- 6-10-98
Fission Yeast Workshop- GSA Yeast Genetics Meeting- College Park, MD- 7-29-98
1999- Signal Transduction Workshop (U. of Copenhagen, Denmark)- 5-19-99
Metabolism Workshop/XIX International Conference on Yeast Genetics and Molecular Biology (Rimini, Italy)- 5-27-99
First International Fission Yeast Meeting (Edinburgh, Scotland)- 9-30-99
2000- Proteome Inc., Beverly, MA- 3-21-00
University of Texas San Antonio-Institute of Biotechnology- 6-6-00
Purely Pathogens and *pombe* Workshop - Yeast Genetics Meeting- Seattle, WA- 7-26-00
"Sugar Sensing and Signaling in Plants and Other Organisms" Banbury Center Meeting, Cold Spring Harbor, NY-10-00
2001- Duke University Medical Center- Dept. of Genetics- 5-15-01
Cold Spring Harbor Yeast Cell Biology Meeting- 8-19-01
Boston University Biomolecular Seminar Series- 11-05-01
2002- Second International Fission Yeast Meeting (Kyoto, Japan)- 3-25-02
SUNY Brooklyn Health Science Center- 4-10-02
U. Mass Medical School- Dept. of Mole. Genetics and Micro.- 6-14-02
2004- Third International Fission Yeast Meeting, San Diego, CA
Biochemical Society's "Nutrient Sensing through the Plasma Membrane of Eukaryotic Cells" Meeting (Cirencester England)
Department of Biochemistry, Universite de Montreal
2005- Katholieke Universiteit Leuven-12-09-05
2006- Gordon Research Conference on Cyclic Nucleotide Phosphodiesterases
2007- Fourth International Fission Yeast Meeting (Copenhagen, Denmark)
West Virginia University-9-17-07 and 9-18-07
2008- San Antonio Health Science Center Biochemistry Department
Nutrient Sensing In Plants. What Can Other Model Organisms Tell Us? Cold Spring Harbor Banbury Center Meeting.
Wright Symposium on Gene Expression in Bacteria, Yeast, and Mice, Jackson Labs, Bar Harbor, Maine
2009- Fifth International Fission Yeast Meeting (Tokyo, Japan)
2010- Gordon Research Conference on Cyclic Nucleotide Phosphodiesterases 6-16-10
Stonehill College Biology Department 10-22-10
University of Glasgow Department of Neuroscience and Molecular Pharmacology 11-12-10
University of Edinburgh School of Biological Sciences 11-19-10
2011- St. Louis University Department of Biology- 3-25-11
Queens University Biology Department (Kingston, Ontario)- 6-15-11
Sixth International Fission Yeast Meeting (Boston, MA)- 6-26-11
2012- Yeast Genetics and Molecular Biology Meeting (Princeton, NJ)- 8-2-12

2013- University of Western Ontario Biology Seminar- 3-8-13
Seventh International Fission Yeast Meeting (London)- 6-25-13
Third International Workshop on cAMP signaling, Protein kinase A, and phosphodiesterases: from genetics to function and human diseases" (Paris)- 7-12-13
2015- Dartmouth College Geisel School of Medicine- 4-24-15
Eighth International Fission Yeast Meeting (Kobe, Japan)- 6-24-15
Hunter College- 11-02-15
2017- Ninth International Fission Yeast Meeting (Banff, Canada)- 5-15-17
Washington DC Area Yeast Meeting- 12-13-17
2018- University of Maryland- 1-5-18
National Institutes of Health/NICHD- 1-10-18
National Institutes of Health/NIDCR- 3-9-18
GRC on Cyclic Nucleotide Phosphodiesterases- 6-15-18
2019- Tenth International Fission Yeast Meeting (Barcelona Spain)- 7-15-19
2021- FD/MAS Research Update (online seminar for FD/MAS Community) 4-26-21
2023- Eleventh International Fission Yeast Meeting (Hiroshima Japan)- 5-31-23
FD/MAS Community Meeting (Washington DC)- 9-10-23

PROFESSIONAL DUTIES AND HONORS

YGM Program Committee (Metabolism subcommittee)-Genetics Society of America's Yeast Genetics and Molecular Biology Meetings for years 2000, 2002, and 2004

Scientific Organizing Committee and Session Chair for First East Coast Regional Fission Yeast Meeting. 2003

Co-chair (with Paul Young and Susan Forsburg)-Fission Yeast Workshop at 1996 Yeast Genetics and Molecular Biology Meeting. Madison, WI

Co-chair (with Paul Young)-Fission Yeast Workshop at 1998 Yeast Genetics and Molecular Biology Meeting. College Park, MD

Session chair- Mitosis and Cytokinesis- 1999 Kingston Yeast Meeting. Kingston, Ontario

Co-chair (with Judith Berman)-Purely Pathogens and *pombe* Workshop at 2000 Yeast Genetics and Molecular Biology Meeting. Seattle, WA

Outstanding Mentor of 2003/2004 Siemens Westinghouse Competition in Math, Science & Technology

Workshop Chair- (Methods)- Sixth International Fission Yeast Meeting (2011)-Boston, MA

Workshop Chair- (Research Tools and Methods)- Seventh International Fission Yeast Meeting (2013)-London, England

Organizing Committee and Session Chair for the Eighth International Fission Yeast Meeting (2015) Kobe, Japan

Organizing Committee and Workshop Chair for Ninth International Fission Yeast Meeting (2017) Banff, Canada

Organizing Committee and Session Chair for the Tenth International Fission Yeast Meeting (2019) Barcelona, Spain

Organizing Committee and Session Chair for the Eleventh International Fission Yeast Meeting (2023) Hiroshima, Japan

Meeting Organizer for the Twelfth International Fission Yeasts Meeting (2025) Boston, USA

2024 Graduate School Teaching/Mentoring Award

Ad hoc grant reviewer
National Institutes of Health
American Cancer Society
National Science Foundation
The Israel Science Foundation
Vanderbilt University Intramural Discovery Grants Program

Junior Faculty Promotions Committee- Katholieke Universiteit, Leuven, Belgium
Alberta Heritage Foundation for Medical Research
Canadian Institutes of Health Research
Marsden Fund-Royal Society of New Zealand

Referee manuscripts for professional journals

Proc. Natl. Acad. Sci USA	Genes and Development	Genetics
Molecular and Cellular Biology	Molecular Microbiology	Journal of Cell Science
Journal of Biological Chemistry	Biotechniques	Appl. and Envir. Microbiology
Nucleic Acids Research	Journal of Bacteriology	Bioorg & Med Chem Letters
Canadian Journal of Microbiology	Gene	Fungal Genetics and Biology
Current Genetics	Yeast	Mol. Biol. of the Cell
Eukaryotic Cell	Nature Methods	Microbiology
Genes to Cells	Differentiation	PloS One
PloS Genetics	Cellular Signalling	Science Signaling
Open Biology	Int. J. for Parasitology	

Editorial Boards

Eukaryotic Cell -2004 to 2015
Current Genetics- 2005 to present (Associate Editor)
G3: Genes, Genomes, Genetics- 2011 to present (Associate Editor)
microPublications- 2020-present (Senior Science Officer)

Scientific Advisory Board
Proteome Inc. 2000-2002 (Pombe PD database)