

Giacomo Buscemi

List of Publications

◇ **SCIENTIFIC PAPERS:**

1. Magni M., **Buscemi G.**, Maita L., Peng L., Chan S.Y., Montecucco A., Delia D., Zannini L. (2019) TSPYL2 is a novel regulator of SIRT1 and p300 activity in response to DNA damage. *Cell Death Differ.* 26(5):918-931.
2. Magni M., Buscemi G., Zannini L. (2018) Cell cycle and apoptosis regulator 2 at the interface between DNA damage response and cell physiology. *Mutation Research/Reviews in Mutation Research*, 776:1-9
3. Restelli M., Magni M., Ruscica V., Pincioli P., De Cecco L., **Buscemi G.**, Delia D., Zannini L. (2016) A novel crosstalk between CCAR2 and AKT pathway in the regulation of cancer cell proliferation. *Cell Death and Disease* 7(11):e2453.
4. Fiorino A., Manenti G., Gamba B., Bucci G., De Cecco L., Sardella M., **Buscemi G.**, Ciceri S., Radice M.T., Radice P., Perotti D. (2016) Characterization of RPF-1 transcription factor unveils a function in coordinating developmental genes expression. *The Int. Journal of Biochemistry & Cell Biology* 78:162-172.
5. Magni M., Ruscica V., Restelli M., Fontanella E., **Buscemi G.** and Zannini L. (2015) CCAR2/DBC1 is required for Chk2-dependent KAP1 phosphorylation and repair of DNA damages. *Oncotarget* 6(19):17817-17831.
6. Zannini L., Delia D., **Buscemi G.** * (2014) CHK2 kinase in the DNA damage response and beyond. *J. Mol. Cell Biol.* 6(6):442-457. ***Last and Corresponding author**
7. Magni M., Ruscica V., **Buscemi G.**, Kim J.E., Nachimuthu B.T., Fontanella E., Delia D., Zannini L. (2014) Chk2 and REGγ-dependent DBC1 regulation in DNA damage induced apoptosis. *Nucleic Acids Research* 42(21):13150–13160.
8. **Buscemi G.** *, Ricci C., Zannini L., Fontanella E., Plevani P., Delia D. (2014) Bimodal regulation of p21^{waf1} protein as function of DNA damage levels. *Cell Cycle.* 13(18):2901-12. ***Co-corresponding author**
9. Zannini L., **Buscemi G.***, Kim J.E., Fontanella E., Delia D. (2012) DBC1 phosphorylation by ATM/ATR inhibits SIRT1 deacetylase in response to DNA damage. *J. Mol. Cell Biol.* 4(5):294-303. ***Co-first author**
10. Carlessi L., **Buscemi G.**, Fontanella E., Delia D. (2010) A protein phosphatase feedback mechanism regulates the basal phosphorylation of Chk2 kinase in the absence of DNA damage. *Biochim. Biophys. Acta. Mol. Cell Res.* 1803(10):1213-1223.
11. Zannini L., **Buscemi G.**, Fontanella E., Lisanti S., Delia D. (2009) REGγ/PA28γ proteasome activator interacts with PML and Chk2 and affects PML nuclear bodies number. *Cell Cycle.* 8(15):2399-407.
12. **Buscemi G.***, Zannini L., Lecis D., Lisanti S., Delia D. (2009) The shelterin protein TRF2 inhibits Chk2 activity at telomeres in the absence of DNA damage. *Current Biology* 19(10):874-879. ***First author**

13. Zannini L., Lecis D., **Buscemi G.**, Carlessi L., Gasparini P., Fontanella E., Lisanti S., Barton L., Delia D. (2008) REGγ proteasome activator is involved in the maintenance of chromosomal stability. *Cell Cycle* 7(4):504-512.
14. Carlessi L., **Buscemi G.**, Larson G., Hong Z., Wu J.Z., Delia D. (2007) Biochemical and cellular characterization of VRX0466617, a novel and selective inhibitor for the checkpoint kinase Chk2. *Molecular Cancer Therapeutics* 6(3):935-944.
15. **Buscemi G.***, Carlessi L., Zannini L., Lisanti S., Fontanella E., Canevari S., Delia D. (2006) DNA damage-induced cell cycle regulation and function of novel Chk2 phosphoresidues. *Molecular and Cellular Biology* 26(21):7832-7845. ***First author**
16. Pereg Y., Lam S., Teunisse A., Biton S., Meulmeester E., Mittelman L., **Buscemi G.**, Okamoto K., Taya Y., Shiloh Y., Jochemsen A.G. (2006) Differential roles of ATM- and Chk2-mediated phosphorylations of Hdmx in response to DNA damage. *Molecular and Cellular Biology* 26(18):6819-6831.
17. **Buscemi G.***, Pereg P., Carenini N., Nakanishi M., Chessa L., Chen J., Khanna K.K., Delia D. (2004) Activation of ATM and Chk2 kinases in relation to the amount of DNA strand breaks. *Oncogene* 23(46):7691-7700. ***First author**
18. Delia D., Piane M., **Buscemi G.**, Savio C., Palmeri S., Lulli P., Carlessi L., Fontanella E., Chessa L. (2004) MRE11 mutations and impaired ATM-dependent responses in an Italian family with ataxia-telangiectasia-like disorder. *Human Molecular Genetics*. 13(18):2155-2163.
19. Zannini L., Lecis D., Lisanti S., Benetti R., **Buscemi G.**, Schneider C., Delia D. (2003) Karyopherin-α2 protein interacts with Chk2 and contributes to its nuclear import. *J Biol Chem*. 278(43):42346-51.
20. Monte M., Benetti R., **Buscemi G.**, Sandy P., Del Sal G., Schneider C. (2003) The cell cycle-regulated protein human GTSE-1 controls DNA damage-induced apoptosis by affecting p53 function. *Journal of Biological Chemistry* 278(32):30356-30364.
21. **Buscemi G.***, Savio C., Zannini L., Miccichè F., Masnada D., Nakanishi M., Tauchi H., Komatsu K., Mizutani S., Khanna K.K., Chen P., Concannon P., Chessa L., Delia D. (2001) Chk2 activation dependence on Nbs1 after DNA damage. *Molecular and Cellular Biology*. 21(15):5214-22. ***First author**
22. **Buscemi G.***, Saracino F., Masnada D., Carbone M.L. (2000) The *Saccharomyces cerevisiae* SDA1 gene is required for actin cytoskeleton organization and cell cycle progression. *Journal of Cell Science*. 113(Pt 7):1199-211. ***First author**
23. Mancini R., Saracino F., **Buscemi G.**, Fischer M., Schramek N., Bracher A., Bacher A., Gülich M., Carbone M.L. (1999) Complementation of the fol2 deletion in *Saccharomyces cerevisiae* by human and *Escherichia coli* genes encoding GTP cyclohydrolase I. *Biochem Biophys Res Commun*. 1999 Feb 16;255(2):521-527.

◇ **BOOK CHAPTERS:**

1. **Buscemi G.** "DNA repairs and genome integrity" for the *Oxford Textbook of Cancer Biology*, (Oxford University Press) Responsabili editoriali Prof. D. Kerr, Prof. F. Pezzella and Prof. M. Tavassoli.

2. Zannini L., **Buscemi G.** “CHK2” for the *Encyclopedia of Signaling Molecules, 2nd Edition (Springer Nature)*
Responsabile editoriale Prof. Sangdun Choi (commissioned by the Editor to Dr. Buscemi).

3. Delia D. and **Buscemi G.** “Regulation of the Cell Cycle, cell cycle checkpoints and cancer” for “*The cancer Handbook, second edition*” (2007) Ed. J. Wiley & Sons. Responsabile editoriale Malcolm R. Alison