

Publikační a pedagogická činnost prof. Jiřího Bártka

Publikační činnost

Počet prací: více než 500

Počet citací: více než 60 000

H-index: 123

30 nejvýznamnějších prací

1. Jackson SP and Bartek J. The DNA damage response in human biology and disease. *Nature*, 461, 1071-78, 2009. (3168 citací)
2. Bartkova J, Horejsi Z, Koed K, Kramer A, Tort F, Zieger K, Guldborg P, Sehested M, Nesland JM, Lukas C, Orntoft T, Lukas J, Bartek J. DNA damage response as a candidate anti-cancer barrier in early human tumorigenesis. *Nature*, 434, 864-70, 2005. (2038 citací)
3. Kastan MB, Bartek J. Cell-cycle checkpoints and cancer. *Nature*, 432, 316-23, 2004. (1935 citací)
4. Bartkova J, Rezaei N, Liontos M, Karakaidos P, Kletsas D, Issaeva N, Vassiliou LV, Kolettas E, Niforou K, Zoumpourlis VC, Takaoka M, Nakagawa H, Tort F, Fugger K, Johansson F, Sehested M, Andersen CL, Dyrskjot L, Orntoft T, Lukas J, Kittas C, Helleday T, Halazonetis TD, Bartek J, Gorgoulis VG. Oncogene-induced senescence is part of the tumorigenesis barrier imposed by DNA damage checkpoints. *Nature*, 444, 633-7, 2006. (1358 citací)
5. Halazonetis TD, Gorgoulis VG, Bartek J. An oncogene-induced DNA damage model for cancer development. *Science*, 319, 1352-55, 2008. (1267 citací)
6. Burrell RA, McGranahan N, Bartek J and Swanton C. Inter- and Intra-tumour genetic and functional heterogeneity. (Insight Review) *Nature*, 501, 338-45 2013. (1223 citací)
7. Iggo R, Gatter K, Bartek J, Lane DP, Harris AL, Increased expression of mutant forms of p53 oncogene in primary lung cancer. *Lancet*, 335, 675-79, 1990. (1164 citací)
8. Bartek J, Lukas J. The Chk1 and Chk2 kinases in cancer. *Cancer Cell*, 3, 421-9, 2003. (1094 citací)
9. Sartori A, Lukas C, Coates J, Mistrik M, Fu S, Bartek J, Baer R, Lukas J, and Jackson, S.P. Human CtIP promotes DNA end resection. *Nature*, 450, 509-514, 2007. (907 citací)
10. Lukas J, Parry D, Aagaard L, Mann DJ, Bartkova J, Strauss M, Peters G, Bartek J. Retinoblastoma-protein-dependent cell-cycle inhibition by the tumour suppressor p16. *Nature*, 375, 503-506, 1995. (855 citací)
11. Mailand N, Bekker-Jensen S, Fastrup H, Melander F, Bartek J, Lukas C and Lukas, J. RNF8 ubiquitylates histones at DNA double-strand breaks and promotes assembly of repair proteins. *Cell*, 131, 887-900, 2007. (850 citací)
12. Jazayeri A, Falck J, Lukas C, Bartek J, Smith GC, Lukas J, Jackson SP. ATM- and cell cycle-dependent regulation of ATR in response to DNA double-strand breaks. *Nature Cell Biol*, 8, 37-45, 2006. (814 citací)
13. Falck J, Mailand N, Syljuåsen RG, Bartek J, Lukas J: The ATM-Chk2-Cdc25A checkpoint pathway guards against radioresistant DNA synthesis. *Nature*, 410, 842-47, 2001. (793 citací)
14. Bartek J, Iggo R, Gannon J, Lane DP. Genetic and immunochemical analysis of mutant p53 in human breast cancer cell lines. *Oncogene*, 5, 893-99, 1990. (711 citací)
15. Gillett C, Fantl V, Smith R, Fisher C, Bartek J, Dickson C, Barnes D, Peters G: Amplification and over-expression of cyclin D1 in breast cancer detected by immunohistochemical staining. *Cancer Res*, 54, 1812-17, 1994. (642 citací)

16. Bouwman P, Aly A, Escandell JM, Pieterse M, Bartkova J, van der GH, Hiddingh, S, Thanasoula M, Kulkarni A, Yang Q, Haffty BG, Tommiska J, Blomqvist C, Drapkin R, Adams DJ, Nevanlinna H, Bartek J, Tarsounas M, Ganesan S, Jonkers J. 53BP1 loss rescues BRCA1 deficiency and is associated with triple-negative and BRCA-mutated breast cancers. *Nat Struct Mol Biol*, 17, 688-95, 2010. (629 citací)
17. Doil C, Mailand N, Bekker-Jensen S, Menard P, Larsen DH, Pepperkok R, Ellenberg J, Panier S, Durocher D, Bartek J, Lukas J, Lukas C. RNF168 binds ubiquitin on damaged chromosomes and couples RNF8 recruitment with accumulation of repair proteins. *Cell*, 136, 435-46, 2009. (629 citací)
18. Mailand N, Falck J, Lukas C, Syljuåsen R, Welcker M, Bartek J, Lukas J. Rapid destruction of human cdc25A in response to DNA damage. *Science*, 288, 1425-29, 2000. (619 citací)
19. Vojtesek B, Bartek J, Midgley CA, Lane DP. An immunochemical analysis of human p53: New monoclonal antibodies and epitope mapping using recombinant p53. *J Immunol Meth*, 151, 237-44, 1992. (581 citací)
20. Bartek J, Bartkova J, Vojtesek B, Staskova Z, Lukas J, Rejthar A, Kovarik J, Midgley CM, Gannon JV, Lane DP. Aberrant expression of the p53 oncoprotein is a common feature of a wide spectrum of human malignancies. *Oncogene*, 61699-703, 1991. (578 citací)
21. Bartek J. and Lukas J. DNA damage checkpoints: From initiation to recovery or adaptation. *Curr Opin Cell Biol*, 19, 238-45, 2007. (556 citací)
22. Bartek J, Lukas C, Lukas J. Checking on DNA damage in S phase. *Nature Rev Mol Cell Biol* 51, 792-804, 2004. (539 citací)
23. Reed AL, Califano J, Cairns P, Westra WH, Jones RM, Koch W, Ahrendt S, Eby Y, Sewell D, Nawroz H, Bartek J, Sindrinsky D. High frequency of p16 (CDKN2/MTS-1/INK4A) inactivation in head and neck squamous cell carcinoma. *Cancer Res*, 56, 3630-33, 1996. (533 citací)
24. Ziv Y, Bielopolski D, Galanty Y, Lukas C, Taya Y, Schultz DC, Lukas J, Bekker-Jensen S, Bartek J, Shiloh Y. Chromatin relaxation in response to DNA double-strand breaks is modulated by a novel ATM- and KAP-1 dependent pathway. *Nature Cell Biol*, 8, 870-6, 2006. (519 citací)
25. Bekker-Jensen S, Lukas C, Kitagawa R, Melander F, Kastan MB, Bartek J, Lukas J. Spatial organization of the mammalian genome surveillance machinery in response to DNA strand breaks. *J Cell Biol*, 173,195-206, 2006 (480 citací)
26. Burrell RA, McClelland SE, Endesfelder D, Groth P, Weller MC, Shaikh N, Domingo E, Kanu N, Dewhurst SM, Gronroos E, Chew SK, Rowan AJ, Schenk A, Sheffer M, Howell M, Kschischo M, Behrens A, Helleday T, Bartek J, Tomlinson IP, Swanton C. Replication stress links structural and numerical cancer chromosomal instability. *Nature*, 494, 492-6, 2013 (463 citací)
27. Sorensen CS, Hansen LT, Dziegielewska J, Syljuasen RG, Lundin C, Bartek J, Helleday T. The cell-cycle checkpoint kinase Chk1 is required for mammalian homologous recombination repair. *Nature Cell Biol*, 7, 195-201, 2005. (463 citací)
28. Bartkova J, Lukas J, Müller H, Lützhøft D, Strauss M, Bartek J: Cyclin D1 protein expression and function in human breast cancer. *Int J Cancer*, 57, 353-61, 1994. (462 citací)
29. Lukas J., Lukas C, Bartek J. More than just a focus: The Chromatin response to DNA damage and its role in genome integrity maintenance. *Nature Cell Biol*, 13,1161-9, 2011 (443 citací)
30. Lukas C, Savic V, Bekker-Jensen S, Doil C, Neumann B, Pedersen RS, Grøfte M, Chan KL, Hickson ID, Bartek J, Lukas J. 53BP1 nuclear bodies form around DNA lesions generated by mitotic transmission of chromosomes under replication stress. *Nature Cell Biol*, 13, 243-53, 2011. (430 citací)

10 vybraných publikací z roku 2021

1. AMBRA1 regulates cyclin D to guard S-phase entry and genomic integrity. Maiani E, Milletti G, Nazio F, Holdgaard SG, Bartkova J, Rizza S, Cianfanelli V, Lorente M, Simoneschi D, Di Marco M, D'Acunzo P, Di Leo L, Rasmussen R, Montagna C, Raciti M, De

Stefanis C, Gabicagogeascoa E, Rona G, Salvador N, Pupo E, Merchut-Maya JM, Daniel CJ, Carinci M, Cesarini V, O'sullivan A, Jeong YT, Bordi M, Russo F, Campello S, Gallo A, Filomeni G, Lanzetti L, Sears RC, Hamerlik P, Bartolazzi A, Hynds RE, Pearce DR, Swanton C, Pagano M, Velasco G, Papaleo E, De Zio D, Maya-Mendoza A, Locatelli F, **Bartek J**, Cecconi F. *Nature*. 2021 Apr;592(7856):799-803. doi: 10.1038/s41586-021-03422-5. Epub 2021 Apr 14. (impact factor: IF=49,96)

2. Induction of APOBEC3 Exacerbates DNA Replication Stress and Chromosomal Instability in Early Breast and Lung Cancer Evolution. Venkatesan S, Angelova M, Puttick C, Zhai H, Caswell DR, Lu WT, Dietzen M, Galanos P, Evangelou K, Bellelli R, Lim EL, Watkins TBK, Rowan A, Teixeira VH, Zhao Y, Chen H, Ngo B, Zalmas LP, Al Bakir M, Hobor S, Grönroos E, Pennycuik A, Nigro E, Campbell BB, Brown WL, Akarca AU, Marafioti T, Wu MY, Howell M, Boulton SJ, Bertoli C, Fenton TR, de Bruin RAM, Maya-Mendoza A, Santoni-Rugiu E, Hynds RE, Gorgoulis VG, Jamal-Hanjani M, McGranahan N, Harris RS, Janes SM, Bartkova J, Bakhoun SF, **Bartek J**, Kanu N, Swanton C; TRACERx Consortium. *Cancer Discovery*. 2021 Oct;11(10):2456-2473. doi: 10.1158/2159-8290.CD-20-0725. Epub 2021 May 4. (IF=39.4)
3. Loss of nuclear DNA ligase III reverts PARP inhibitor resistance in BRCA1/53BP1 double-deficient cells by exposing ssDNA gaps. Paes Dias M, Tripathi V, van der Heijden I, Cong K, Manolika EM, Bhin J, Gogola E, Galanos P, Annunziato S, Lieftink C, Andújar-Sánchez M, Chakrabarty S, Smith GCM, van de Ven M, Beijersbergen RL, Bartkova J, Rottenberg S, Cantor S, **Bartek J**, Ray Chaudhuri A, Jonkers J. *Molecular Cell*. 2021 Sep 18:S1097-2765(21)00739-5. doi: 10.1016/j.molcel.2021.09.005. Online ahead of print. (IF=17.97)
4. Microthermal-induced subcellular-targeted protein damage in cells on plasmonic nanosilver-modified surfaces evokes a two-phase HSP-p97/VCP response. Mistrik M, Skrott Z, Muller P, Panacek A, Hochvaldova L, Chroma K, Buchtova T, Vandova V, Kvitek L, **Bartek J**. *Nature Communications*. 2021 Jan 29;12(1):713. doi: 10.1038/s41467-021-20989-9. (IF =14.9)
5. The human nucleoporin Tpr protects cells from RNA-mediated replication stress. Kosar M, Giannattasio M, Piccini D, Maya-Mendoza A, García-Benítez F, Bartkova J, Barroso SI, Gaillard H, Martini E, Restuccia U, Ramirez-Otero MA, Garre M, Verga E, Andújar-Sánchez M, Maynard S, Hodny Z, Costanzo V, Kumar A, Bachi A, Aguilera A, **Bartek J**, Foiani M. *Nature Communications*. 2021 Jun 24;12(1):3937. doi: 10.1038/s41467-021-24224-3. (IF=14.9)
6. eIF4A3 regulates the TFEB-mediated transcriptional response via GSK3B to control autophagy. Sakellariou D, Tiberti M, Kleiber TH, Blazquez L, López AR, Abildgaard MH, Lubas M, **Bartek J**, Papaleo E, Frankel LB. *Cell Death & Differentiation*. 2021 Jun 22. doi: 10.1038/s41418-021-00822-y. Online ahead of print. (IF =15.8)
7. The exon-junction complex helicase eIF4A3 controls cell fate via coordinated regulation of ribosome biogenesis and translational output. Kanellis DC, Espinoza JA, Zisi A, Sakkas E, Bartkova J, Katsori AM, Boström J, Dyrskjøt L, Broholm H, Altun M, Elsässer SJ, Lindström MS, **Bartek J**. *Science Advances*. 2021 Aug 4;7(32):eabf7561. doi: 10.1126/sciadv.abf7561. Print 2021 (IF= 14.1)
8. A recurrent chromosomal inversion suffices for driving escape from oncogene-induced senescence via subTAD reorganization. Zampetidis C, Galanos P, Angelopoulou A, Zhu Y, Karamitros T, Polyzou A, Mourkioti I, Lagopati N, Mirzazadeh R, Polyzos A, Garnerone S, Gusmao EG, Sofiadis K, Pefani DE,

Demaria M Crosetto N· Maya-Mendoza A, Evangelou K, **Bartek J**, Papantonis A, Gorgoulis VG. *Molecular Cell*, 2021, in press (IF=17.97)

9. A RNA-interference screen for p53 regulators unveils a role for WDR75 in ribosome biogenesis.
Pavel Moudry, Katarina Chroma, Sladana Bursac, Sinisa Volarevic, Jiri **Bartek**. *Cell Death & Differentiation* 2021, in press (IF=15.8)
10. The ubiquitin-dependent ATPase p97 removes cytotoxic trapped PARP1 from chromatin
DB. Krastev, S Li, Y Sun, A Wicks, G Hoslett, D Weekes, L M. Badder, EG. Knight, R Marlow, M Pardo Calvo, L Yu, T T. Talele, **J Bartek**, J Choudhary, Y Pommier, S J. Pettitt, A N.J. Tutt, K Ramadan, CJ. Lord *Nature Cell Biology*, 2021, in press (IF=28.8)

Pedagogická činnost

Profesor Jiří Bártek má rozsáhlou pedagogickou činnost v zahraničí, především v Dánsku a Švédsku.

Co se týká České republiky, zasloužil se o vědeckou výchovu studentů a mladých vědeckých pracovníků, a to jak z Univerzity Karlovy v Praze a Hradci Králové, tak také z Univerzity Palackého v Olomouci a z Masarykovy Univerzity v Brně. Jednalo se jednak o dlouhodobé stáže českých vědců v laboratořích Jiřího Bártka v Kodani a ve Stockholmu (ať už jako Ph.D. stipendia nebo formou například Erasmus projektu), a jednak přímo v laboratořích Jiřího Bártka v České republice v letech 2007-2021 (sesterské laboratoře genomové integrity na Lékařské fakultě Univerzity Palackého v Olomouci a na Ústavu molekulární genetiky AVČR v Praze). Jiří Bártek jezdí pravidelně už řadu let (s výjimkou pandemického roku) přednášet do Prahy na Functional Organization of the Cell Symposium, které organizuje prof. Ivan Raška. Symposia se zúčastňují Ph.D. studenti, mladí vědci a i zájemci z řad studentů magisterského studia.