

## List of publications (as it appeared in Pure on 29/08/2024)

### 2024

Soto-Gamez A, Gunawan JP, **Barazzuol L**, Pringle S, Coppes RP. Organoid-based personalized medicine: from tumor outcome prediction to autologous transplantation. *Stem Cells* 2024;42:499-508.

Prasad K, de Vries EFJ, van der Meiden E, Moraga-Amaro R, Vazquez-Matias DA, **Barazzuol L**, Dierckx R, van Waerde A. Effects of the adenosine A(2A) receptor antagonist KW6002 on the dopaminergic system, motor performance, and neuroinflammation in a rat model of Parkinson's disease. *Neuropharmacology* 2024;247:109862.

Voshart DC, Klaver M, Jiang Y, van Weering HRJ, van Buuren-Broek F, van der Linden GP, Cinat D, Kiewiet HH, Malimban J, Vazquez-Matias DA, Reali Nazario L, Scholma AC, Sewdihal J, van Goethem MJ, van Luijk P, Coppes RP, **Barazzuol L\***. Proton therapy induces a local microglial neuroimmune response. *Radiother Oncol* 2024;193:110117.

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Ainslie AP, Klaver M, Voshart DC, Gerrits E, den Dunnen WFA, Eggen BJL, Bergink S\*, **Barazzuol L\***. Glioblastoma and its treatment are associated with extensive accelerated brain aging. *Aging Cell* 2024;23:e14066. \*corresponding author

Voshart DC, Oshima T, Jiang Y, van der Linden GP, Ainslie AP, Reali Nazario L, van Buuren-Broek F, Scholma AC, van Weering HRJ, Brouwer N, Sewdihal J, Brouwer U, Coppes RP, Holtman IR, Eggen BJL, Kooistra SM, **Barazzuol L\***. Radiotherapy induces persistent innate immune reprogramming of microglia into a primed state. *Cell Rep* 2024;43:113764. \*corresponding author

Cinat D, Souza AL, Soto-Gamez A, Jellema-de Bruin AL, Coppes RP, **Barazzuol L\***. Mitophagy induction improves salivary gland stem/progenitor cell function by reducing senescence after irradiation. *Radiother Oncol* 2024;190:110028. \*corresponding author

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Guerrin CGJ, Prasad K, Vazquez-Matias DA, Zheng J, Franquesa-Mullerat M, **Barazzuol L**, Doorduin J, de Vries EFJ. Prenatal infection and adolescent social adversity affect microglia, synaptic density, and behavior in male rats. *Neurobiol Stress* 2023;27:100580.

Arif WM, Elsinga PH, Steenbakkers R, Noordzij W, **Barazzuol L**, Siang K, Brouwer CL, Giacobbo BL, Dierckx R, Borra RJH, Luurtsema G. Effects of proton therapy on regional [(18)F]FDG uptake in non-tumor brain regions of patients treated for head and neck cancer. *Clin Transl Radiat Oncol* 2023;42:100652.

Guerrin CGJ, de Vries EFJ, Prasad K, Vazquez-Matias DA, Manusiwa LE, **Barazzuol L**, Doorduin J. Maternal infection during pregnancy aggravates the behavioral response to an immune challenge during adolescence in female rats. *Behav Brain Res* 2023;452:114566.

Guerrin CGJ, Doorduin J, Prasad K, Vazquez-Matias DA, **Barazzuol L**, de Vries EFJ. Social adversity during juvenile age but not adulthood increases susceptibility to an immune challenge later in life. *Neurobiol Stress* 2023;23:100526.

### 2022

Gerbershagen A, **Barazzuol L**, Brandenburg S, Coppes RP, Dendooven P, van Goethem M-J, van der Graaf ER, Jones BN, van Luijk P, Schippers JM, Both S. Establishment of the New Particle Therapy Research Center (PARTREC) at UMCG Groningen. HIAT 2022 - International Conference on Heavy Ion Accelerator Technology 2022. p. 20-23 4 p.

Liang Y, Voshart D, Paridaen J, Oosterhof N, Liang D, Thiruvalluvan A, Zuhorn IS, den Dunnen WFA, Zhang G, Lin H, **Barazzuol L**, Kruyt FAE. CD146 increases stemness and aggressiveness in glioblastoma and activates YAP signaling. *Cell Mol Life Sci* 2022;79:398.

Gerbershagen A, **Barazzuol L**, Both S, Brandenburg S, Coppes RP, Dendooven P, van Goethem M-J, van der Graaf ER, Jones BN, van Luijk P. The New Particle Therapy Research Center (PARTREC) at the University Medical Center Groningen. 23-May-2022.

Gamez AS, Wu Y, Peng X, Pringle S, Vissink A, **Barazzuol L**, Coppes RP. A 3D-organoid drug screening method for the elimination of radiation- induced senescent cells. May-2022, In: *Radiotherapy and Oncology*. 170, p. S1619-S1620 2 p.

Huiting W, Dekker SL, van der Lienden JCJ, Mergener R, Musskopf MK, Furtado GV, Gerrits E, Coit D, Oghbaie M, Di Stefano LH, Schepers H, van Waarde-Verhagen M, Couzijn S, **Barazzuol L**, LaCava J, Kampinga HH, Bergink S. Targeting DNA topoisomerases or checkpoint kinases results in an overload of chaperone systems, triggering aggregation of a metastable subproteome. *Elife* 2022;11.

## 2021

Rocchi C, Cinat D, Serrano Martinez P, Bruin ALJ, Baanstra M, Brouwer U, Del Angel Zuivre C, Schepers H, van Os R, **Barazzuol L\***, Coppes RP\*. The Hippo signaling pathway effector YAP promotes salivary gland regeneration after injury. *Sci Signal* 2021;14:eabk0599.

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Rocchi C, **Barazzuol L\***, Coppes RP\*. The evolving definition of salivary gland stem cells. *NPJ Regen Med* 2021;6:4. \*equally contributed

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Voshart D, van Buuren-Broek F, Klaver M, Scholma A, van Luijk P, Coppes R, **Barazzuol L**. Differential neurocognitive response after partial brain proton irradiation. Aug-2021, In: *Radiotherapy and Oncology*. 161, p. S193-S194 2 p.

Cinat D, **Barazzuol L**, Coppes R. Effects of proton vs photon irradiation on inflammation and senescence in salivary gland organoids. Aug-2021, In: *Radiotherapy and Oncology*. 161, p. S117-S117 1 p.

Wu Y, Pringle S, Brouwer U, Peng X, Vissink A, **Barazzuol L**, Coppes RP. Role of microenvironment on the post-irradiation regenerative potential of salivary gland stem cells. Aug-2021, In: *Radiotherapy and Oncology*. 161, p. S38-S39 2 p.

Ainslie A, Huiting W, **Barazzuol L\***, Bergink S\*. Genome instability and loss of protein homeostasis: converging paths to neurodegeneration? *Open Biol* 2021;11:200296.

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Voshart DC, Wiedemann J, van Luijk P\*, **Barazzuol L\***. Regional Responses in Radiation-Induced Normal Tissue Damage. *Cancers (Basel)* 2021;13. \*corresponding author

## 2020

Villar-Vesga J, Henao-Restrepo J, Voshart DC, Aguillon D, Villegas A, Castano D, Arias-Londono JD, Zuhorn IS, Ribovski L, **Barazzuol L**, Cardona-Gomez GP, Posada-Duque R. Differential Profile of Systemic Extracellular Vesicles From Sporadic and Familial Alzheimer's Disease Leads to Neuroglial and Endothelial Cell Degeneration. *Front Aging Neurosci* 2020;12:587989.

Peng X, Wu Y, Brouwer U, van Vliet T, Wang B, Demaria M, **Barazzuol L\***, Copes RP\*. Cellular senescence contributes to radiation-induced hyposalivation by affecting the stem/progenitor cell niche. *Cell Death Dis* 2020;11:854. \*corresponding author

Henthorn NT, Sokol O, Durante M, De Marzi L, Pouzoulet F, Miszczyk J, Olko P, Brandenburg S, van Goethem MJ, **Barazzuol L**, Tambas M, Langendijk JA, Davidkova M, Vondracek V, Bodenstein E, Pawelke J, Lomax AJ, Weber DC, Dasu A, Stenerlow B & 10 others. Mapping the Future of Particle Radiobiology in Europe: The INSPIRE Project. *Frontiers of Physics* 2020;8:565055.

**Barazzuol L**, Copes RP, van Luijk P. Prevention and treatment of radiotherapy-induced side effects. *Mol Oncol* 2020;14:1538-54.

Thiruvalluvan A, de Mattos EP, Brunsting JF, Bakels R, Serlidaki D, **Barazzuol L**, Conforti P, Fatima A, Koyuncu S, Cattaneo E, Vilchez D, Bergink S, Boddeke E, Copray S, Kampinga HH. DNAJB6, a Key Factor in Neuronal Sensitivity to Amyloidogenesis. *Mol Cell* 2020;78:346-58 e9.

## 2019

Liang Y-K, Voshart D, den Dunnen W, **Barazzuol L**, Kruyt F. Cd146/mcam regulates mesenchymal properties, stemness, radio -resistance and yap activity in glioblastoma. Nov-2019, In: *Neuro-Oncology*. 21, p. 236 1 p.

**Barazzuol L\***, Hopkins SR, Ju L, Jeggo PA. Distinct response of adult neural stem cells to low versus high dose ionising radiation. *DNA Repair (Amst)* 2019;76:70-5. \*corresponding author

**Barazzuol L**. Mechanisms of radiotherapy-induced neurocognitive decline. Apr-2019, In: *Radiotherapy and Oncology*. 133, p. S172 1 p.

## 2018

Nagle PW, Hosper NA, **Barazzuol L**, Jellema AL, Baanstra M, van Goethem MJ, Brandenburg S, Giesen U, Langendijk JA, van Luijk P, Copes RP. Lack of DNA Damage Response at Low Radiation Doses in Adult Stem Cells Contributes to Organ Dysfunction. *Clin Cancer Res* 2018;24:6583-93.

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**Barazzuol L**, Ju L, Jeggo PA. A coordinated DNA damage response promotes adult quiescent neural stem cell activation. *PLoS Biol* 2017;15:e2001264.

**Barazzuol L**, Ju L, Jeggo PA. Response of adult neural stem cells to radiation-induced DNA damage. 1-May-2017, In: *Radiotherapy and Oncology*. 123, p. S55 1 p.

## 2016

**Barazzuol L**, Jeggo PA. In vivo sensitivity of the embryonic and adult neural stem cell compartments to low-dose radiation. *J Radiat Res* 2016;57 Suppl 1:i2-i10.

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**Barazzuol L**, Rickett N, Ju L, Jeggo PA. Low levels of endogenous or X-ray-induced DNA double-strand breaks activate apoptosis in adult neural stem cells. *J Cell Sci* 2015;128:3597-606.

Woodbine L, Haines J, Coster M, **Barazzuol L**, Ainsbury E, Sienkiewicz Z, Jeggo P. The rate of X-ray-induced DNA double-strand break repair in the embryonic mouse brain is unaffected by exposure to 50 Hz magnetic fields. *Int J Radiat Biol* 2015;91:495-9.

**Barazzuol L\***, Jeynes JC, Merchant MJ, Wera AC, Barry MA, Kirkby KJ, Suzuki M. Radiosensitization of glioblastoma cells using a histone deacetylase inhibitor (SAHA) comparing carbon ions with X-rays. *Int J Radiat Biol* 2015;91:90-8. \*corresponding author

## 2014

Saha S, Woodbine L, Haines J, Coster M, Ricket N, **Barazzuol L**, Ainsbury E, Sienkiewicz Z, Jeggo P. Increased apoptosis and DNA double-strand breaks in the embryonic mouse brain in response to very low-dose X-rays but not 50 Hz magnetic fields. *J R Soc Interface* 2014;11:20140783.

Wera AC, **Barazzuol L**, Jeynes JC, Merchant MJ, Suzuki M, Kirkby KJ. Influence of the nucleus area distribution on the survival fraction after charged particles broad beam irradiation. *Phys Med Biol* 2014;59:4197-211.

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Jeynes JC, Merchant MJ, **Barazzuol L**, Barry M, Guest D, Palitsin VV, Grime GW, Tullis ID, Barber PR, Vojnovic B, Kirkby KJ. "Broadbeam" irradiation of mammalian cells using a vertical microbeam facility. *Radiat Environ Biophys* 2013;52:513-21.

**Barazzuol L\***, Jena R, Burnet NG, Meira LB, Jeynes JC, Kirkby KJ, Kirkby NF. Evaluation of poly (ADP-ribose) polymerase inhibitor ABT-888 combined with radiotherapy and temozolomide in glioblastoma. *Radiat Oncol* 2013;8:65. \*corresponding author

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**Barazzuol L\***, Jena R, Burnet NG, Jeynes JC, Merchant MJ, Kirkby KJ, Kirkby NF. In vitro evaluation of combined temozolomide and radiotherapy using X rays and high-linear energy transfer radiation for glioblastoma. *Radiat Res* 2012;177:651-62. \*corresponding author

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**Barazzuol L**, Burnet N, Jena R, Jeynes J, Merchant M, Kirkby K, Kirkby N. Evaluation of combined temozolomide and high linear energy transfer radiation in glioblastoma cell lines. May-2011, In: Radiotherapy and Oncology. 99, p. S360 1 p.

## 2010

**Barazzuol L**, Burnet NG, Jena R, Jones B, Jefferies SJ, Kirkby NF. A mathematical model of brain tumour response to radiotherapy and chemotherapy considering radiobiological aspects. *J Theor Biol* 2010;262:553-65.