Prof. Marco Durante, Ph.D.
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Marco Durante was appointed as the Director of the Trento Institute for Fundamental Physics and Applications (TIFPA), of the Italian National Institute for Nuclear Physics (INFN), in April 2015. He previously served as Director of the Biophysics Department at GSI Helmholtz Center for Heavy Ion Research (Darmstadt, Germany) since 2007. He is also Professor of Physics at the University of Naples Federico II in Italy, Adjunct Professor at the Temple University in Philadelphia (USA) and at the Gunma College of Medicine in Japan.

Dr. Durante got his Ph.D. in physics in 1992 and has dedicated his research efforts to the biophysics of high-energy charged particles, with applications in cancer therapy and space radiation protection. He is generally recognized as world leader in the field of particle radiobiology and medical physics and is co-author of over 300 papers in peer-reviewed scientific journals (*h*-index=40) and one patent on proton therapy (*EU patent* WO2013083333). He is currently chair of the ESA Life Sciences Advisory group and of the ESA Topical Team on Space Radiation, vice-chair of the Particle Therapy Co-Operative Group (PTCOG), member of the technical-scientific Committee of the Italian Hadrontherapy Center (CNAO) and of the Program Advisory Committee of the GANIL (Caen, France), KVI (Groningen, The Netherlands), iThemba (South Africa), Rez (Czech Republic) and LNS (Catania, Italy) accelerators. Dr. Durante was President of the International Association for Radiation Research (IARR) 2011-15, and is Associate Editor in several International scientific journals (*Br. J. Radiol., Int. J. Particle Ther., Phys. Med., Radiat. Environ. Biophys., J. Radiat. Res., Life Sci. Space Res., JINST*).

He has been awarded several prizes for his contributions to charged particle biophysics, including the 2004 Galileo Galilei Award in Medical Physics, the 60th Timofeeff-Ressovsky medal by the Russian Academy of Sciences, the 8th Warren K. Sinclair Award of the US National Academy of Sciences, the 2013 IBA-Europhysics Award for Applied Nuclear Science and Nuclear Methods in Medicine (European Physics Society) and the 2013 Bacq & Alexander award of the European Radiation Research Society (ERRS).

Ten selected Publications

1. Jakob B, Splinter J, **Durante M**, Taucher-Scholz G. Live cell microscopy analysis of radiation-induced DNA double-strand break motion. *Proc. Natl. Acad. Sci. USA* **106** (2009) 3172-3177.
2. **Durante M**, Loeffler JS. Charged particles in radiation oncology. *Nat. Rev. Clin. Oncol.* **7** (2010) 37-43.
3. Newhauser WD, **Durante M.** Assessing the risk of second malignancies after modern radiotherapy. *Nat. Rev. Cancer* **11** (2011) 438-448.
4. **Durante M**, Cucinotta FA. Physical basis of radiation protection in space travel. *Rev. Mod. Phys*. **83** (2011) 1245-1281.
5. Mirsch J, Tommasino F, Frohns A, Conrad S, **Durante** M, Scholz M, Friedrich T, Löbrich M. Direct measurement of the 3-dimensional DNA lesion distribution induced by energetic charged particles in a mouse model tissue. *Proc. Natl. Acad. Sci. USA* **112** (2015) 12396-12401.
6. **M. Durante** and H. Paganetti, Nuclear physics in particle therapy: a review. *Rep. Prog. Phys*. **79** (2016) 096702.
7. Lehmann HI, Graeff C, Simoniello P, Constantinescu A, Takami M, Lugenbiel P, Richter D, Eichhorn A, Prall M, Kaderka R, Fiedler F, Helmbrecht S, Fournier C, Erbeldinger N, Rahm AK, Rivinius R, Thomas D, Katus HA, Johnson SB, Parker KD, Debus J, Asirvatham SJ, Bert C, **Durante M**, Packer DL., Feasibility Study on Cardiac Arrhythmia Ablation Using High-Energy Heavy Ion Beams. *Sci. Rep.* **6** (2016) 38895.
8. **M.Durante**, R. Orecchia and J.S. Loeffler, Charged-particle therapy in cancer: clinical uses and future perspectives. *Nat. Rev. Clin. Oncol.* **14** (2017) 483-95.
9. R.L. Hughson, A.Helm and **M.Durante**, Heart in space: effect of the extraterrestrial environment on the cardiovascular system. *Nat. Rev. Cardiol*. 2017 Oct 20.
10. F.Natale, A. Rapp, W. Yu, A. Maiser, H. Harz, A. Scholl, S. Grulich, T.Anton, D. Hörl, W. Chen, **M. Durante,** G. Taucher-Scholz, H. Leonhardt and M.C. Cardoso, Identification of the elementary structural units of the DNA damage response. *Nat. Commun*. **8** (2017) 15760.