

## **CURRICULUM VITAE**

Barbara BARDONI

Born in Montebello della Battaglia (Italy), June 20, 1963.

Married – Two children

### PRESENT POSITION:

Research Director INSERM Institute of Cellular and Molecular Pharmacology - CNRS UMR7275, Valbonne (France) [bardoni@ipmc.cnrs.fr](mailto:bardoni@ipmc.cnrs.fr)

### EDUCATION

**1986** Faculty of Science-University of Pavia (Italy) - Ph.D. in Biology (Cum Laude).

**1987-88** Specialization School of Genetics - Faculty of Science-University of Pavia (Italy)

**2004** Habilitation à Diriger la Recherche (HDR) Université Louis Pasteur (Strasbourg)

### PROFESSIONAL ACTIVITY

**1988-90** Research fellow at the Dep. of Human and Hereditary Pathology, Faculty of Medicine, University of Pavia (Italy).

**1991-2002** Researcher at the Department of Human and Hereditary Pathology, Faculty of Medicine, University of Pavia (Italy)

**1997-2002** Visiting scientist at IGBMC - Illkirch (France), in Prof. J-L Mandel's laboratory

**2002-2004** Researcher (CR1) INSERM at IGBMC - Illkirch (France)

**2005 - December 2007** Group leader at the CNRS UMR6543- Faculty of Medicine, Nice, (France)

**January 2008 to present** Group leader at the CNRS UMR7275 - Valbonne (France)

### HONORS AND GRANTS

#### **Award and Fellowship**

**1988:** Price “Rino Minoprio” for the Excellence in Human Genetics; **1988-90:** Fellowship “AnnaVilla Rusconi”; **1994:** EMBO Short-Term Fellowship; **1996-98:** Italian Telethon Fellowship; **1998-99:** FRM Fellowship; **2004:** ATIP; **2007:** ATIP PLUS; **2014:** 6ème Prix du Conseil General06.

#### **GRANTS:**

**PI: NIMH/NICHD/FRAXA cofunding** (2001-04), **ATIP** (2004-07); **FRM New laboratory** (2005) **GIS Maladies Rares** (2005-08); **ANR-Neurosci** (2006-09; 2013-17); **ATIP Plus** (2007-09); **BQR** (2009); **MRT Thèse Flechée** (2009-12); **FRM TEAM** (2010-13; 2014-17); **FRAXA Foundation** (2000; 2006); **Jerôme Lejeune Foundation** (2004/10; 2014/16; 2018-20); **IngFRM** (2014); **FRC** (2019-20); **AFM** (2014-16); **Prematuration UCA-SATT** (2019)

**Co-Investigator: EEC** (1995-96); **HFSP** (2002-2005); **ULP** (2002); **ANR Blanc** (2006-09); **Marie Curie-RI** (2009-12); **ANR E-RARE** (2010-13); **LabEX “Signalife** (2012-19); **Fondation Maladies Rares** (2014-16); **ANR-AAP** (2015-19); **FRAXA Foundation** (2016-18).

**Exchanging grants: France-Canada cooperation grant.** PI: E.W. Khandjian (2004); « **Ambassade de Canada** » Québec, Prof. E. Khandjian (2008); « **G. Galilei** » (Italy) Dr. M.V. Catania (2007-08); **FAST (Australia)** Prof. J. Gez (2009-10); **Ulysse** (Ireland) Prof. D. Tropea (2019).

**Fellowship for members of the Team :** **2007-09:** «Marie Curie –Post doc» L. Davidovic ; **2007:** «Telecom Autisme- Post doc» M. Bensaïd; **2007:** « **Boehringer Ingelheim Fonds**» M. Melko; **2007:** «FRM –Fin thèse» E. Bechara; **2008:** «FRM – Fin thèse» M. Melko; **2009:** «La Ligue contre le cancer – Fin thèse» M. Melko; **2010-11:** «Ville de Nice - Post doc» O. Khalfallah; **2010:** «Embo Short Term»

M. Melko; **2012** «Boehringer Ingelheim Fonds» 2 months stage - D. Masini; «ARC – Fin thèse» S. Abekhoukh; **2013-15**: AFM post-doc: S. Zongaro.

#### INVITED SPEAKER IN INTERNATIONAL MEETINGS (A selection)

1. Banbury Meeting – Fragile X Syndrome: Basic mechanisms and Treatment Implications - New York (USA) April 9-12, 2006
2. FRAXA Research Foundation/Investigators Meeting - Durham NH (USA), September 21-24, 2008
3. FRAXA Research Foundation -Investigators Meeting, Durham NH (USA), Mai 2-5, 2010.
4. Jacques Monod Conference «Mental Retardation: from genes to synapses, functions and dysfunctions ». Roscoff (France), October 15-19, 2010.
7. Jacques Monod Conference “ Mechanism of Intellectual disability: from genes to treatment”, – Roscoff (France) October 4-7, 2012.
6. 16th International Workshop on Fragile X and Other Early-Onset Cognitive Disorders, Adelaide (Australia) September 17-20, 2013
7. Dynamics of synaptic signaling: from molecular to integrated levels - Société Française de Neurosciences, Montpellier, May 19- 22, 2015.
8. ECNP Targeted Network Meeting (TNM) on "Common mechanisms and therapeutic avenues for Down syndrome and other genetic developmental disorders" September 2016, Vienna, (Austria)
9. ECNP Targeted Network Meeting (TNM) on "Common mechanisms and therapeutic avenues for Down syndrome and other genetic developmental disorders" September 2017, Paris (France)
10. XVI Workshop on Fragile X and other early-onset neurodevelopmental disorders, 12-16 October, 2017 – Montreal (Canada)
11. Spring Hippocampus Research Conference, 2-6 June, 2019 – Taormina (Italy).

#### EDITORIAL ACTIVITY :

**Board member:** *PLOS ONE*; *Frontiers in Molecular Neuroscience*; *Frontiers in Synaptic Neuroscience*; *Frontiers in Molecular Bioscience* section *RNA Proteins Network*.

**2013 Guest Editor:** *Neuroscience and Biobehavioural Reviews*: «Common Mechanisms in Intellectual Disabilities: A Challenge for Translational Outlooks »

#### OTHER PROFESSIONAL EXPERIENCES

Referee «ad hoc» for the following journals: *Cell Rep* ; *E.J. Hum. Genet.*; *E.J. Neurosci.*; *HMG*; *J. Mol. Biol.*, *JMG*; *J. Neurosci.*; *Mol. Psychiatry*; *Nature*; *MCB*; *Neuroscience*; *Neurobiol. Dis.*; *NAR*; *PLOS Genet*; *PLOS One*; *PNAS*; *Science*, *Trends Genet*; *PNAS*.

Referee «ad hoc» for *AFM (Association Française contre les Myopathies)*; *ANR (Agence Nationale de la Recherche)*; *Horizon Program (Netherland Genomics Initiative)*; *ISF (Israel Science Foundation)*; *Italian Telethon*; *Italian Ministry of Health*; *NWO Division for Earth and Life Sciences (The Netherlands)*; *European Science Foundation*; *Health Research Council of NZ*

**2008** Member of the evaluation committee for Life Science Master of University of Nice

**2010** Member of a visiting committee of AERES

Member of an evaluation committee for a researcher position (MCU) at the University of Nice

**2012-17** Member of Laboratory Council of Institute of Molecular and Cellular Pharmacology

**2014-2016** Member of the Selection committee of LabEx Signallife PhD Program

**2015- to present:** Member of Scientific Committee of « Fondation J. Lejeune »

**2016-19** Member of Scientific Committee of LabEx « Signallife »

**2016** Member of Evaluation Committee ATIP –AVIESAN

**2016-21** Member of Evaluation Committee CSS2-INSERM

**2018** Member HCERES visiting committee of Imagine Institute – Paris

Teacher at the Big@UCA Summer School “*Social Cognition*”, Nice (France), August 27/31.

## CONFERENCE & WORKSHOP ORGANIZATION

**2010** Chair of the Jacques Monod Conference «*Mental Retardation: from genes to synapses, functions and dysfunctions* » Roscoff (France), October 7/11.

**2013** Chair of «*G-Quadruplex Day*», Nice (France), March 22

Member of the Scientific Board of the Meeting «*XVI Workshop on Fragile X and other early-onset neurodevelopmental disorders* » Adelaide (Australia), 17/20 September.

Chair of the conference «*RNA metabolism: Cancer, development & disease* » Nice (France), December 4/6

**2016** Chair of the Workshop «*RNA Metabolism from transcription to Degradation*», Valbonne (France), May 26

**2018** Chair of the conference «*The multiple facets of RNA in development and in disease*», Nice (France), February 7/8

Member of Scientific Board of *SIFRARN Meeting*, Nancy (France), November 22

**2019** Member of Scientific Board of «*XIX Workshop on Fragile X and other early-onset neurodevelopmental disorders* » Sorrento (Italy), September 18/21

## **List of Publication**

Profile URL : <http://www.researcherid.com/rid/F-9918-2013>

**H INDEX 38**

**\*corresponding author**

- 1.** Raimondi E, **Bardoni B**, Rinaldi E, Camerino G. (1987) - A TaqI RFLP detecting single copy fragment (G80) from chromosome 7 p13-p15 (D7S373). *Nucleic Acid Res.*, 15, 7653
- 2.** **Bardoni B**, Sampietro M, Romano M, Crapanzano M, Mannucci PM, Camerino G. (1988) - Characterization of a partial deletion of the factor VIII gene in one hemophilic with inhibitor. *Hum. Genet.*, 79, 86-88.
- 3.** **Bardoni B**, Guioli S, Raimondi E, Heilig R, Mandel JL, Ottolenghi S, Camerino G. (1988) - Isolation and characterization of a family of sequences dispersed on the human X chromosome. *Genomics*, 3, 32-38.
- 4.** **Bardoni B**, Guioli S, Maserati E, Maraschio P, Camerino G. (1988) - A highly conserved sequence on the short arm of chromosome 7 detects multiple polymorphisms. *Hum. Genet.*, 81, 23-25
- 5.** Guioli S, Arveiler B, **Bardoni B**, Notarangelo LD, Panina P, Duse M, Ugazio A, Oberlé I, de Saint Basile B, Mandel JL, Camerino G. (1989) - Close linkage of probe p212 (DXS178) to X-linked agammaglobulinemia. *Hum. Genet.*, 84, 19-21.

6. Caiulo A, **Bardoni B**, Camerino G, Guioli S, Minelli A, Piantanida M, Crosato F, Dalla Fior T, Maraschio P. (1989) - Cytogenetic and molecular analysis of an unbalanced translocation (X;7)(q28;p15) in a dysmorphic girl. *Hum. Genet.*, 84, 51-54.
7. Ballabio A, **Bardoni B**, Carozzo R, Andria G., Persico G, Bick D, Campbell L, Ropers HH, Ferguson-Smith MA, Gimelli G, Fraccaro M, Maraschio P, Zuffardi O, Guioli S, Camerino G. (1989) - Contiguous gene syndromes due to deletions in the distal short arm of the human X chromosome. *Proc. Nat. Acad. Sci. USA*, 86, 10001-10010.
8. Ballabio A, **Bardoni B**, Guioli S, Basler E, Camerino G. (1990) -Two families of low copy number repeats are interspersed on Xp22.3: implication for the high frequency of deletions in this region. *Genomics*, 8, 263-270.
9. Caiulo A, Nicolis S, Bianchi P, Zuffardi O, **Bardoni B**, Maraschio P, Ottolenghi S, Camerino G, Giglioni B. (1991) - Mapping the gene encoding the human erythroid transcriptional factor NFE1-GF1 to Xp11.23. *Hum. Genet.*, 86, 388-390.
10. Mostacciolo ML, Mueller E, Fardin P, Micaglio GF, **Bardoni B**, Guioli S, Camerino G, Danieli GA. (1991)- X-linked Charcot-Marie-Tooth disease. A linkage study in a large family by using 12 probes of the pericentromeric region. *Hum. Genet.*, 87, 23-27.
11. **Bardoni B**, Zuffardi O, Guioli S, Ballabio A, Simi P, Cavalli P, Grimoldi MG, Fraccaro M, Camerino G. (1991) - A deletion map of the human Yq11 region: implications for the evolution of the Y chromosome and tentative mapping of a locus involved in spermatogenesis. *Genomics*, 11, 443-451.
12. Franco B, Guioli S, Pragliola A, Incerti B, **Bardoni B**, Tonlorenzi R, Carozzo R, Maestrini E, Pieretti M, Taillon-Miller P, Brown C, Willard HF, Lawrence C, Persico G, Camerino G, Ballabio A. (1991) - A gene deleted in Kallmann's syndrome shares homology with neural cell adhesion and axonal pathfinding molecules. *Nature*, 353, 529-533.
13. Guioli S, Incerti B, Zanaria E, **Bardoni B**, Franco B, Taylor K, Ballabio A, Camerino G (1992) - Kallmann syndrome due to a translocation producing an X/Y fusion gene. *Nature Genet.*, 1, 337-340.
14. Incerti B, Guioli S, Pragliola A, Zanaria E, Borsani G, Tonlorenzi R, **Bardoni B**, Franco B, Ballabio A, Camerino G. (1992) - The Kallmann syndrome gene on the X and Y chromosomes: implications for the evolutionary divergence of human sex chromosomes. *Nature Genet.*, 2, 311-314.
15. **Bardoni B**, Florida G, Guioli S, Peverali G, Anichini C, Cisternino M, Casalone R, Danesino C, Fraccaro M, Zuffardi O, Camerino G. (1993) - Functional disomy of Xp22-pter in three males carrying a portion of Xp22 translocated to Yq11. *Hum. Genet.*, 91, 333-338.
16. **Bardoni B**, Zanaria E, Guioli S, Florida G, Worley K.C, Tonini G, Ferrante E, Chiumello G, McCabe E.R.B, Fraccaro M, Zuffardi O, Camerino G (1994) - A dosage sensitive locus at chromosome Xp21 is involved in male to female sex reversal. *Nature Genet.*, 7, 497- 501

17. Zanaria E, Muscatelli F, **Bardoni B**, Strom T, Guioli S, Guo W, Lalli E, Moser C, Walker A.P, McCabe E.R.B, Meitinger T, Monaco A.P, Sassone-Corsi P, Camerino G. (1994) - An unusual member of the nuclear hormone receptor superfamily is responsible for X-linked adrenal hypoplasia congenita. *Nature*, 372, 635-641.
18. Muscatelli F, Strom T.M, Walker A. P, Zanaria E, Recan D, Meindl A, **Bardoni B**, Guioli S, Zehetner G, Rabl W, Schwarz H.P, Kaplan J, Camerino G, Meitinger T, Monaco A.P. (1994) - Mutations in the DAX-1 gene give rise to both X-linked adrenal hypoplasia congenita and hypogonadotropic hypogonadism. *Nature*, 372, 672-676.
19. Schmitt-Ney M, Thiele H, Kaltwasser P, **Bardoni B**, Cisternino M, Scherer G. (1995) - Two novel SRY missense mutations reducing DNA binding identified in XY females and their mosaic fathers. *Am.J.Hum.Genet.*, 56, 862-869.
20. Genuardi M, **Bardoni B**, Florida G, Chiurazzi P, Scarano G, Zollino M, Garcea M, Martini-Neri M.E, Neri G. (1995) - A dicentric chromosome Yp in a pseudohermaphrodite subject with Leydig cell agenesis. *Clin. Genet.*, 47, 38-41.
21. Dabovic B, Zanaria E, **Bardoni B**, Lisa A, Bordignon C, Matessi C, Traversari C, Camerino G. (1995) - A family of rapidly evolving genes from the sex reversal critical region in Xp 21. *Mammalian Genome*, 6, 571-580.
22. Carozzo R, Arrigo G, Rossi E, **Bardoni B**, Cammarata M, Gandullia P, Gatti R, Zuffardi O. (1997) - Multiple congenital anomalies, brain hypomyelination, and ocular albinism in a female with dup (X) (pter-->q24: :q21.32-->qter) and random X inactivation. *Am. J. Med. Genet.*, 72, 329-334.
23. Lalli E, **Bardoni B**, Zazopoulos E, Wurtz JM, Strom T, Moras D, Sassone-Corsi P. (1997) - A transcriptional silencing domain in DAX-1 whose mutation causes Adrenal Hypoplasia Congenita. *Mol. Endocrinol.*, 11, 1950-1960.
24. **Bardoni B**, Sittler A, Shen Y, Mandel J.L. (1997) - Analysis of domains affecting intracellular localization of FMRP protein. *Neurobiology of Disease*, 4, 329-336.
25. Khandjian EW, **Bardoni B**, Corbin F, Sittler A, Giroux S, Heitz D, Tremblay S, Pinset C, Montarras D, Rousseau F, Mandel JL (1998) - Novel isoforms of the fragile X related protein FXR1P are expressed during myogenesis. *Hum. Mol. Genet.*, 7, 2121-2128
26. **Bardoni B\***, Schenck A, Mandel JL (1999) - A novel RNA binding nuclear protein that interacts with the fragile X mental retardation (FMR1) protein. *Hum. Mol. Genet.*, 8, 2557-2566.
27. Parigi GB, **Bardoni B**, Avoltini V, Caputo MA, Bragheri R (1999) - Is bilateral congenital anorchia genetically determined? *Eur. J. Pediatr. Surg.*, 19, 312-315
28. Giglio S, Pirola B, Arrigo G, Dagrada P, **Bardoni B**, Bernardi F, Russo G, Argentiero L, Forabosco A, Carozzo R, Zuffardi O. (2000) Opposite deletions/duplications of the X chromosome: two novel reciprocal rearrangements. *Eur. J. Hum. Genet.*, 8, 63-70.

29. **Bardoni B**, Giglio S, Schenck A, Rocchi M, Mandel J.L. (2000). Assignment of the *NUFIP* (Nuclear FMRP Interacting Protein) gene to chromosome 13q13-14 and assignment of a pseudogene to chromosome 6q12-q13. *Cytogen. Cell Genet.*, 89, 11-13.
30. Salat U, **Bardoni B**, Wörle D, Steinbach P. (2000) - Increase of FMRP expression, raised levels of *FMR1* mRNA, and clonal selection in proliferating cells with unmethylated fragile X repeat expansions: a clue to the sex bias in the transmission of full mutations? *J. Med. Genet.*, 37, 842-850.
31. Schenck A, **Bardoni B**, Moro A, Bagni C, Mandel JL. (2001) - A highly conserved protein family interacting with the fragile X mental retardation protein (FMRP) and displaying selective interactions with FMRP-related proteins FXR1P and FXR2P. *Proc. Natl. Acad. Sci. U S A*, 98, 8844-8849.
32. Schaeffer C, **Bardoni B**, Mandel J.L., Ehresmann B, Ehresmann C, Moine H. (2001) - The fragile X mental retardation protein binds specifically to its mRNA via a purine quartet motif. *EMBO J.*, 20, 4803-4813.
33. Larizza D, Maraschio P, **Bardoni B**, Calcaterra V, Manfredi P, Gemma A. (2002) - Two sisters with 45,X karyotype: influence of genomic imprinting of phenotype and cognitive profile. *Eur. J. Pediatr.*, 161, 224-225.
34. Schenck A, Van de Bor V, **Bardoni B**, Giangrande A (2002) - Novel features of dFMR1, the *Drosophila* orthologue of the Fragile X Mental Retardation Protein (FMRP). *Neurobiology of Disease*, 11, 53-63.
35. Schenck A, **Bardoni B\***, Langmann C, Harden N, Mandel J-L, Giangrande A. (2003) - CYFIP/Sra-1 controls neuronal connectivity in *Drosophila* and links the Rac1 GTPase pathway to the Fragile X protein. *Neuron*, 38, 887-898.
36. **Bardoni B\***, Castets M, Huot M-T, Schenck A, Adinolfi A, Corbin F, Pastore A, Khandjian EW, Mandel J-L. (2003) - 82-FIP, a novel FMRP (Fragile X Mental retardation Protein) interacting protein, shows a cell-cycle dependent intracellular localization. *Hum. Mol. Genet.*, 12, 1689-1698. COVER
37. **Bardoni B\***, Willemsen R, Weiler IJ, Schenck A, Severijnen L-A, Lalli E, Mandel J-L. (2003) - NUFIP1 (Nuclear FMRP Interacting Protein 1) is a nucleo-cytoplasmic shuttling protein associated with active synaptoneuroosomes. *Exp. Cell Res.*, 289, 95-107.
38. Adinolfi S, Ramos A, Martin S.R., Dal Piaz F., Pucci P, **Bardoni B**, Mandel JL, Pastore A. (2003) -The N-terminus of the fragile X mental retardation protein contains a novel domain involved in dimerisation and RNA-binding. *Biochemistry*, 42, 10437-10444.
39. Mayne M, Moffatt T, Kong H, McLaren PJ, Fowke KR, Becker KG, Namaka M, Schenck A, **Bardoni B**, Bernstein CN, Melanson M. (2004) - CYFIP2 is highly abundant in CD4+ cells from multiple sclerosis patients and is involved in T cell adhesion. *Eur J Immunol.*, 34, 1217-1227.
40. Mientjes E.J., Willemsen R., Kirkpatrick L.L., Nieuwenhuizen I.M., Hoogeveen-Westerveld M., Verweij M., Reis S., **Bardoni B**, Hoogeveen A.T., Oostra B.A., Nelson D.L. (2004) - Fxr1

knockout mice show a striated muscle phenotype: implications for Fxr1p function *in vivo*. *Hum. Mol. Genet.*, 13, 1291-1302.

41. Khandjian EW, Huot M-E, Tremblay S, Davidovic L, Mazroui R, **Bardoni B.** (2004) - Biochemical evidence for the association of fragile X mental retardation protein with brain polyribosomal ribonucleoproteins. *Proc. Nat. Acad. Sci. U.S.A.*, 101, 13357-13362.
42. Schenck A, Qurashi AA, **Bardoni B.** Schejter ED, Mandel J-L, Giangrande A. (2004) - WAVE/SCAR, a multifunctional complex required in fly neuronal connectivity. *Dev. Biol.*, 274, 260-270.
43. Castets M, Schaeffer C, Bechara E, Schenck A, Khandjian EW, Luche S, Moine H, Rabilloud T, Mandel J-L and **Bardoni B.**\*(2005) - FMRP interferes with the Rac1 pathway and controls actin cytoskeleton dynamics in murine fibroblasts. *Hum. Mol. Genet.*, 14, 835-844.
44. Ramos A, Hollingworth D, Adinolfi S, Castets M, Kelly G, Frenkiel TA, **Bardoni B.** Pastore A. (2006) - The N-terminal domain of the Fragile X Mental retardation Protein forms a novel platform for protein-protein interaction. *Structure*, 14, 21-31
45. Davidovic L., Bechara E, Gravel M, Jaglin XH, Tremblay S, Sik A, **Bardoni B.** Khandjian EW (2006). - The nuclear MicroSpherule protein 58 is a novel RNA-binding protein that interacts with fragile X mental retardation protein in polyribosomal mRNPs from neurons. *Hum. Mol. Genet.*, 15, 1525-1538
46. Kim Y, Sung JY, Ceglia I, Lee K-W, Ah J-H, Halford JM, Kim AM, Kwak SP, Park JB, Ryu SH, Schenck A, **Bardoni B.** Scott JD, Nairn AC, Greengard, P. (2006) - Phosphorylation of WAVE1 regulates actin polymerization and dendritic spine morphology. *Nature*, 442, 814-817.
47. Bechara E., Davidovic L., Melko M., Bensaid M., Grosgeorge J., Tremblay S., Khandjian E.W., Lalli E., **Bardoni B.\*** (2007) – Fragile X Related Protein 1 isoforms differentially modulate the affinity of Fragile X Mental Retardation Protein for G-quartet mRNA structure. *Nuc. Acid Res.*, 35, 299-306.
48. Davidovic L., Jaglin X.H., Lespagnol-Bestel A.M., Tremblay S., Simonneau M., **Bardoni B.**, Khandjian E.W. (2007) - The Fragile X Mental Retardation Protein is a molecular adaptor between the neurospecific KIF3C kinesin and dendritic RNA granules. *Hum. Mol. Genet.*, 16, 3047-3058.COVER
49. Boulon S, Marmier-Gourrier N, Pradet-Balade B, Wurth L, Verheggen C, Jády B, Rothé J, Pescia C, Robert M-C, Kiss T, **Bardoni B.** Krol A, Branlant C, Allmang C, Bertrand E, and Charpentier B. (2008) - The HSP90 chaperone controls the biogenesis of L7Ae RNPs through a conserved machinery. *J.Cell Biol.*, 180, 579-595
50. Davidovic L, Sacconi S, Bechara E, Delplace S, Allegra M, Desnuelle C and **Bardoni B\*** (2008) - Alteration of expression of muscle-specific isoforms of the Fragile X Related Protein 1 (FXR1P) in facio-scapulothoracic muscular dystrophy patients. *J. Med. Genet.*, 45, 679-85

51. Bensaid M, Melko M, Bechara E, Davidovic L, Beretta A, Catania MV, Gecz J, Lalli E, **Bardoni B\*** (2009) - FRAXE-associated mental retardation protein (FMR2) is an RNA-binding protein with high affinity for G-quartet RNA forming structure. *Nucleic Acids Res.*, 37,1269-79
52. Bechara E, Didiot, MC, Melko M, Davidovic L, Bensaid M, Martin P, Castets M, Pognonec P, Khandjian E, Moine H, **Bardoni B\*** (2009) - A Novel Function of Fragile X Mental Retardation Protein in translational activation. *PLoS Biology*, Jan 20;7(1):e16
53. Khalfallah O, Rouleau M, Barbry P, **Bardoni B**, Lalli E. (2009) - Dax-1 knockdown in mouse embryonic stem cells induces loss of pluripotency and multilineage differentiation. *Stem Cells*, 27, 1529-37.
54. Melko M, Douguet D., Bensaid M, Zongaro S, Verheggen C, Gecz J, **Bardoni B\*** (2011) - Functional characterization of the AFF (AF4/FMR2) family of RNA binding proteins: insights into the molecular pathology of FRAXE intellectual disability. *Hum. Mol. Genet.* 20,1873-85. COVER
55. Davidovic L, Navratil V, Bonaccorso C.M., post-transcriptional RNA-metabolism and RNA-binding proteins: 3 actors for a complex scenario. Catania M.V., **Bardoni B**, Dumas M. (2011) – A metabolomic and system biology perspective on the brain of the Fragile X syndrome mouse model. *Genome Res.* 21, 2190- 2202.
56. Zongaro S, Hukema R, D'Antoni S, Davidovic L, Barbry P, Catania M.V., Willemsen R, Mari B, **Bardoni B\*** (2013) - The 3' UTR of FMR1 mRNA is a target of miR-101, miR-221 and miR-129-5p:implications for the molecular pathology of FXTAS at the synapse. *Hum Mol Genet.*, 22,1971-1982.
57. Davidovic L, Durand N, Khalfallah O, Tabet R, Barbry P, Mari B, Sacconi s, Moine H, **Bardoni B\*** (2013) - A novel role for the RNA-binding protein FXR1P in myoblasts cell-cycle progression by modulating *p21/Cdkn1a/Cip1/Waf1* mRNA stability. *PLoS Genet.*, 9(3):e1003367.
58. Melko M, Nguyen LS, Shaw M, Jolly L, **Bardoni B\***, Gecz J (2013) - Loss of FMR2 further emphasizes the link between deregulation of immediate early response genes FOS and JUN and intellectual disability. *Hum Mol Genet.*, 22, 2984-91
59. Ugolotti R, Mesejo P, Zongaro S, **Bardoni B**, Berto G, Bianchi F, Molineris I, Giacobini M, Cagnoni S, Di Cunto F. (2013) - Visual search of neuropil-enriched RNAs from brain in situ hybridization data through the image analysis pipeline hippo-ATESC. *PLoS One*, 8(9):e74481.
60. Matik K, Eninger T, **Bardoni B**, Davidovic L, Macek B. (2014) - Quantitative phosphoproteomics of murine Fmr1-Ko cell lines provides new insights into FMRP-dependent signal transduction mechanisms. *J Proteome Res*, [Epub ahead of print]
61. Schertzer M, Jouravleva K, Perderiset M, Dingli F, Loew D, Le Guen T, **Bardoni B**, de Villartay JP, Revy P, Londoño-Vallejo A. (2015) - Human regulator of télomère élongation helicase 1 (RTEL1) is required for the nuclear and cytoplasmic trafic of pre-U2 RNA. *Nuc. Acids Res.*, 43, 1834-47.
62. Bonaccorso CM, Spatuzza M, Di Marco B, Gloria A, Barrancotto G, Cupo A, Musumeci SA, D'Antoni S, **Bardoni B**, Catania MV. (2015) Fragile X Mental Retardation Protein (FMRP)



interacting proteins exhibit different expression patterns during development. *Int J Dev Neurosci*, 42, 15-23.

**63.** Maurin T, Melko M, Abekhoukh S, Khalfallah O, Davidovic L, Jarjat M, D'Antoni S, Catania MV, Moine H, Bechara E, **Bardoni B\*** (2015) The FMRP/GRK4 mRNA interaction uncovers a new mode of binding of the Fragile X mental retardation protein in cerebellum. *Nucleic Acids Res*, 43:8540-50.

**64.** Vicario A, Colliva A, Ratti A, Davidovic L, Baj G, Gricman L, Colombrita C, Pallavicini A, Jones KR, **Bardoni B**, Tongiorgi E. (2015) Dendritic targeting of short and long 3' UTR BDNF mRNA is regulated by BDNF or NT-3 and distinct sets of RNA-binding proteins. *Front Mol Neurosci*. 8:62.

**65.** Tabet R, Moutin E, Becker JA, Heintz D, Fouillen L, Flatter E, Krężel W, Alunni V, Koebel P, Dembélé D, Tassone F, **Bardoni B**, Mandel JL, Vitale N, Muller D, Le Merrer J, Moine H. (2016) Fragile X Mental Retardation Protein (FMRP) controls diacylglycerol kinase activity in neurons. *Proc Nat Acad Sci USA* 113:E3619-28.

**66.** Khalfallah O, Jarjat M, Davidovic L, Nottet N, Cestele S, Mantegazza M, **Bardoni B\*** (2017) Depletion of the Fragile X mental retardation protein in embryonic stem cells alters the kinetics of neurogenesis. *Stem Cells*, 35: 374-385.

**67.** Abekhoukh S, Sahin BH, Grossi M, Zongaro S, Madrigal I, Kazue-Sugioka D, Raas-Rothschild A, Doulazmi M, Carrera P, Stachon A, Scherer S, Drula do Nascimento MR, Trembleau A, Arroyo I, Szatmari P, Smith IM, Milà M, Smith AC, Giangrande A, Caillé I, **Bardoni B\*** (2017) New insights into the regulatory function of CYFIP1 in the context of WAVE- and FMRP-containing complexes. *Dis. Model Mech.*, 10:463-474.

**68.** Rihan K, Antoine E, Maurin T, **Bardoni B**, Bordonné R, Soret J, Rage F. (2017) A new cis-acting motif is required for the axonal SMN-dependent Anxa2 mRNA localization. *RNA*, 23:899-909

**69.** Khayachi A, Gwizdek C, Poupon G, Alcor D, Chafai M, Cassé, Maurin T, Prieto M, Folci A, De Graeve F, Castagnola S, Gautier R, Schorova L, Loriol C, Pronot M, Besse F, Brau F, Deval E, **Bardoni B**, Martin S. (2018) Sumoylation regulates FMRP-mediated dendritic spine elimination and maturation. *Nat. Comm.*, 9:757.

**70.** Maurin T, Lebrigand K, Castagnola S, Paqut A, Jarjat M, Grossi M, Rage F, **Bardoni B\*** (2018) HITS-CLIP of various brain regions highlight new targets and new modalities of RNA binding of Fragile X Mental Retardation Protein. *Nucl. Acids Res.*, 46: 6344-6355.

**71.** Fernandez A, Dor E, Maurin T, Laure G, Menard ML, Drozd M, Poinso F, **Bardoni B**, Askenazy F, Thümmel S. (2018) Exploration and characterisation of the phenotypic and genetic profiles of patients with early onset schizophrenia associated with autism spectrum disorder and their first-degree relatives: a French multicentre case series study protocol (GenAuDiss). *BMJ Open*, 8(7):e023330.

**72.** Maurin T, Melancia F, Jarjat M, Castro L, Costa L., Khayachi A, Delhaye S, Castagnola S, Mota E, Di Giorgio A, Servadio M, Drozd M, Poupon G, Schiavi S, Sardone L M, Azoulay S,

Ciranna L, Martin S, Vincent P, Trezza V, **Bardoni B\*** (2018) Involvement of Phosphodiesterase 2A activity in the pathophysiology of Fragile X Syndrome. *Cerebral Cortex*, In press.

73. Castagnola S, Delhaye S, Folci A, Paquet A, Brau F, Duprat F, Jarjat M, Grossi M, Béal M, Martin S, Mantegazza M, **Bardoni B**, Maurin T. (2018) New Insights Into the Role of Ca<sub>v</sub>2 Protein Family in Calcium Flux Deregulation in *Fmr1*-KO Neurons. *Front Mol Neurosci*, 11:342.

74. Maurin T, **Bardoni B\*** (2018) Fragile X Mental Retardation Protein: To Be or Not to Be a Translational Enhancer. *Front Mol Biosci*, 5, 113.

#### List of reviews

1. Zanaria E, **Bardoni B**, Dabovic B, Calvari V, Fraccaro M, Zuffardi O, Camerino G. (1995) - Xp duplications and sex reversal. *Phil. Trans. R. Soc. Lond. B.*, 350, 291-296.

2. **Bardoni B**, Mandel JL, Fisch G.(2000) - FMR1 gene and Fragile X Syndrome. *Am. J. Med. Genet. (Semin.Med.Genet.)*, 97, 153-163.

3. **Bardoni B\***, Schenck A, Mandel J.L. (2001) - The fragile X mental retardation protein. *Brain Res. Bull.*, 56, 375-382.

4. **Bardoni B**, Mandel J.L. (2002) - Advances in understanding of fragile X pathogenesis and FMRP function, and identification of X linked mental retardation genes. *Curr. Opin. Genet. Devel.*, 12, 284-293.

5. Khandjian E.W., Bechara E., Davidovic L., **Bardoni B\*** (2005) – Fragile X Mental retardation Protein: many partners and multiple targets for a promiscuous function? *Current Genomics*, 6, 515-522.

6. **Bardoni B**, Davidovic L, Bensaid M, Khandjian EW. (2006) - The Fragile X Syndrome: exploring its molecular basis and seeking a treatment. *Expert Reviews in Molecular Medicine*. <http://www.expertreviews.org>

7. Melko, M, **Bardoni B\*** (2010) – The role of G<sub>4</sub> quadruplex in RNA metabolism: involvement of FMRP and FMR2P. *Biochimie*, 92, 919-925.

8. **Bardoni B**, Abekhouk A, Zongaro S, Melko M – Intellectual disabilities, neuronal post-transcriptional RNA-metabolism and RNA-binding proteins: 3 actors for a complex scenario. *Progress in Brain Research.*, 197, 29-51.

9. Maurin T, Zongaro S, **Bardoni B\*** Fragile X syndrome: From Molecular pathology to therapy. (2014) *Neuroscience and Biobehaviour Review*. 2:242-55

10. Abekhouk S, **Bardoni B\*** (2014) – CYFIP family proteins between autism and intellectual disability: links with Fragile X syndrome. *Front Cell Neurosci*, 8:81.

11. Ricceri L, Catania MV, **Bardoni B**. (2014) Editorial: Neural and behavioural biology of intellectual disability. *Neurosci Biobehav Rev.*, Pt 2:159-60.

12. **Bardoni B\***, Capovilla M, Lalli E. (2017) Modeling Fragile X Syndrome in neurogenesis: an unexpected phenotype and a novel tool for future therapies. *Neurogenesis*. 4:e1270384.
13. Castagnola S, **Bardoni B\***, Maurin T. (2017) The search for an effective therapy to treat Fragile X syndrome: dream or reality? *Front Synaptic Neurosci*, 9:15.
14. Drozd M, **Bardoni B**, Capovilla M. (2018) Modeling Fragile X Syndrome in Drosophila. *Front Mol Neurosci*.11,124.
15. Faundez V, De Toma I, **Bardoni B**, Bartesaghi R, Nizetic D, de la Torre R, Cohen Kadosh R, Herault Y, Dierssen M, Potier MC; Down Syndrome and Other Genetic Developmental Disorders ECNP Network (2018) Translating molecular advances in Down syndrome and Fragile X syndrome into therapies. *Eur Neuropsychopharmacol*. 28: 675-690.

#### List of Book Chapters

1. **Bardoni B**, Zanaria E, Dabovic B, Calvari V, Fraccaro M, Zuffardi O, Camerino G. (1995) - Xp duplications and sex reversal. In: Turner Syndrome in a life-span perspective: research and clinical aspects. K. Albertsson-Wikland and M. Ranke, (eds), Elsevier.
2. **Bardoni B**, Zanaria E, Dabovic B, Calvari V, Fraccaro M, Zuffardi O, Camerino G. (1995) - Duplications de Xp et inversion sexuelle. In: J-L Chaussain & M. Roger (eds) LES AMBIGUITES SEXUELLES - vol. 2 Publi Fusion Cahors. pp. 87-94.
3. Dabovic B, Calvari V, **Bardoni B**, Zanaria E, Fraccaro M, Zuffardi O, Camerino G. (1996) - A genetic link between adrenal and gonadal development?-In: I.A. Hughes (eds) Frontiers in Endocrinology, vol. 20, 13-20.
4. Castets M, Mandel JL, **Bardoni B**. (2005) - FMRP (Fragile X Mental Retardation Protein)-Interacting Proteins: from a complex to a pathway". In "The molecular basis of Fragile X syndrome", Sung Y-J. and Denman R.B. editors. pp117-127.