

Curriculum vitae, Camilla Bean

Nationality: Italian

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Institution: UniCamillus - Saint Camillus International University of Health and Medical Sciences

Education

20/01/2004 **Ph.D. in Genetics and Molecular Biology**, University of Padua, Italy

10/07/2000 **Master of Science in Molecular Biology**, University of Padua, Italy

Professional history

From 07/2025 to present Assistant professor (RTT, Unicamillus)

From 07/2022 to 06/2025 Assistant professor (RTDA, University of Udine)

From 07/2020 to 06/2022 Senior Researcher VIMM-Venetian Institute of Molecular Medicine, Padova

From 07/2018 to 06/2020 Senior Researcher University of Padua

From 03/2016 to 06/2018 Senior Researcher University of Padua

From 06/2014 to 02/2016 Telethon Senior Researcher Telethon

From 03/2012 to 05/2014 Senior Researcher University of Padua

From 03/2009 to 03/2012 FIRB-Senior Researcher University of Milan

From 04/2004 to 03/2008 Junior Researcher University of Padua

Teaching/supervising experience

From 2022 to present Teaching of "Biochemistry" and "Propedeutical Biochemistry", University of Udine

2009/2010 AY Teaching of "Methods in Functional Genomics", University of Padua.

From 2002/2003 AY to present: Teaching assistant in the courses "Genetic engineering", "Genetics" and "Biochemistry" at the University of Padua.

From 2003 to present: supervising many MSc student's dissertations at the University of Padua.

Grants

PNRR SPOKE 4 National Center for Gene Therapy and Drugs based on RNA Technology (CN RNA & GENE THERAPY): “Exploring the potential of miRNA-based therapeutics to target mitochondria in spinal muscular atrophy”

LEO FUNDATION LF-SE-23-800010 “Exploring the serendipitous connection between a mitochondrial fusion protein and melanosomes maturation”, as responsible in charge for Milestone 1, SA”

PRIN PNRR 2022 “Exploring macrophage mitochondrial (dys)function in tissue-specific and systemic aging”

Trampoline Grant AFM2013/Project 16662 entitled "Single fiber transcriptomics to reveal the contribution of skeletal muscle to the SMA pathogenesis".

Bando Giovani Studiosi per il sostegno di ricerche di carattere innovative e di eccellenza 2011 “Exploring the adaptative potential of skeletal muscle fibers at the transcriptional and functional level”

Publications

1. Scantamburlo, F., Rubini, A., Toffanin, M., Castorina, ME., Ciscato, F., Tomasoni, S., Finotti, P., Verin, R., Zappulli, V., Fantuz, M., **Bean, C.**, Rasola, A., Masgras, I. TRAP1 expression elicits pro-tumoral functions in macrophages associated to malignant peripheral nerve sheath tumor cells. *J Exp Clin Cancer Res* (2025). 44, 257 DOI: 10.1186/s13046-025-03525-1
2. Djalalvandi, A., Takeda, K., Grespi, F., Fonseca, T.B., Fan, H., Nogara, L., Barison, C., Sharifi, S., Semenzato, M., Omori, A., Cerutti, R., Steffan, D., Tsansizi, L., Balmaceda, V., Alan, L., **Bean, C.**, Blaauw, B., Viscomi, C., Scorrano, L. Opantimirs: A Class of Antagonizing microRNAs that Upregulate Opa1 and Improve Mitochondrial and Disuse Myopathies *Cell Rep. Med* (2025). Available online 24 July 2025, 102248, DOI: 10.1016/j.xcrm.2025.102248
3. **Bean, C.[§]**, Dal Bello, F., Vianello, C., Persano, L., Rampazzo, E., Knedlík, T., Norouzi Esfahani, E., Ramesh, S., Gianelle, A.[§], Giacomello, G.[§] High-Content Microscopy Quantification of Mitochondrial Membrane Potential. *Methods in Cell Biology*. Book Chapter (2025). DOI: 10.1016/bs.mcb.2025.03.019. §Co-corresponding Authors
4. Norouzi Esfahani, E., Knedlik, T., Shin, S.H., Magalhaes Rebelo, A.P., De Mario, A., Vianello, C., Persano, L., Rampazzo, E., Edomi, P., **Bean, C.**, Brunetti, D., Scorrano, L., Greco, S., Gerdol, M., Giacomello, M. Remodeling of Mitochondria–Endoplasmic Reticulum Contact Sites Accompanies LUHMES Differentiation. *Biomolecules* (2025), 15 (1). DOI: 10.3390/biom15010126

5. Coluccino, G., Negro, A., Filippi, A., **Bean, C.**, Muraca, V. P., Gissi, C., Canetti, D., Mimmi, M.C., Zamprogno, E., Ciscato, F., Acquasaliente, L., De Filippis, V., Comelli, M., Carraro, M., Rasola, A., Gerle, C., Bernardi, P., Corazza, A., Lippe, G. N-terminal cleavage of cyclophilin D boosts its ability to bind F-ATP synthase. *Commun. Biol.* (2024), 7 (1). DOI: 10.1038/s42003-024-07172-8
6. Pozzobon, M., **Bean, C.**, Mitochondria replacement from transplanted amniotic fluid stem cells: a promising therapy for non-neuronal defects in spinal muscular atrophy (2024) *Neural Regeneration Research* 19(5), 971-972
7. Zaninello, M., **Bean, C.**, Highly Specialized Mechanisms for Mitochondrial Transport in Neurons: From Intracellular Mobility to Intercellular Transfer of Mitochondria (2023) *Biomolecules*, 13(6), 938
8. Semenzato, M., Zambello, L., Fumarola, S., Motta, E., Piroli, L., Scorrano, L., **Bean, C.** A Novel Benchtop Device for Efficient and Simple Purification of Cytokines, Growth Factors and Stem Cells from Adipose Tissue (2023) *Biomedicines*, 2023, 11(4), 1006
9. Vianello, C., Dal Bello, F., Shin, S.H., Schiavon, S., **Bean, C.**, Magalhães Rebelo, A.P., Knedlík, T., Esfahani, E.N., Costiniti, V., Lacruz, R.S., Covello, G., Munari, F., Scolaro, T., Viola, A., Rampazzo, E., Persano, L., Zumerle, S., Scorrano, L., Gianelle, A., Giacomello, M. High-Throughput Microscopy Analysis of Mitochondrial Membrane Potential in 2D and 3D Models. *Cells* (2023) 12(7), 1089
10. Chemello, F., Pozzobon, M., Tsansizi, L.I., Varanita, T., Quintana-Cabrera, R., Bonesso, D., Piccoli, M., Lanfranchi, G., Giacomello, M., Scorrano, L., **Bean, C.** Dysfunctional mitochondria accumulate in a skeletal muscle knockout model of *Smn1*, the causal gene of spinal muscular atrophy. *Cell Death Dis* (2023) 14 (2), 162
11. **Bean, C.**, Audano, M., Varanita, T., Favaretto, F., Medaglia, M., Gerdol, M., Pernas, L., Stasi, F., Giacomello, M., Herkenne, S., Muniandy, M., Heinonen, S., Cazaly, E., Ollikainen, M., Milan, G., Pallavicini, A., Pietiläinen, KH., Vettor, R., Mitro, N., Scorrano, L. The mitochondrial protein Opa1 promotes adipocyte browning that is dependent on urea cycle metabolites. *Nat Metab.* (2021) 12:1633-1647.
12. Audano, M., Pedretti, S., Ligorio, S., Gualdrini, F., Polletti, S., Russo, M., Ghisletti, S., **Bean, C.**, Crestani, M., Caruso, D., De Fabiani, E., Mitro, N. Zc3h10 regulates adipogenesis by controlling translation and F-actin/mitochondria interaction. *J Cell Biol.* (2021). 220(3): e202003173.
13. Herkenne, S., Ek, O., Zamberlan, M., Pellattiero, A., Chergova, M., Chivite, I., Novotná, E., Rigoni, G., Fonseca, TB., Samardzic, D., Agnellini, A., **Bean, C.**, Di Benedetto, G., Tiso, N., Argenton, F., Viola, A., Soriano, MA., Giacomello, M., Ziviani, E., Sales, G., Claret, M.,

- Graupera,M., and Scorrano,L. Developmental and Tumor Angiogenesis Requires the Mitochondria-Shaping Protein Opa1. *Cell Metab.* (2020) 31:987-1003.
14. Chemello,F., Grespi,F., Zulian,A., Cancellara,P., Hebert-Chatelain,E., Martini,P., **Bean,C.**, Alessio,E., Buson,L., Bazzega,M., Armani,A., Sandri,M., Ferrazza,R., Laveder,P., Guella,G., Reggiani,C., Romualdi,C., Bernardi,P., Scorrano,L., Cagnin,S., and Lanfranchi, G. Transcriptomic analysis of single isolated myofibers identifies miR-27a-3p and miR-142-3p as regulators of metabolism in skeletal muscle. *Cell Reports* (2019) 26: 3784-3797.
15. Burtscher,J., **Bean,C.**, Zangrandi,L., Kmiec,I., Agostinho,A., Scorrano,L., Gnaiger,E., and Schwarzer C. Proenkephalin Derived Peptides Are Involved in the Modulation of Mitochondrial Respiratory Control During Epileptogenesis. *Front Mol Neurosci.* (2018) 11:351.
16. Pernas, L., **Bean, C.**, Boothroyd, J., and Scorrano, L. Mitochondria restrict growth of the intracellular parasite *Toxoplasma gondii* by limiting its uptake of fatty acids. *Cell Metab.* (2018) 27: 886-897.
17. Angori, S., Capanni, C., Faulkner, G., **Bean, C.**, Boriani, G., Lattanzi, G., and Cenni, V. Emery-Dreifuss Muscular Dystrophy-Associated Mutant Forms of Lamin A Recruit the Stress Responsive Protein Ankrd2 into the Nucleus, Affecting the Cellular Response to Oxidative Stress. *Cell Physiol Biochem.* (2017) 42(1):169-184.
18. **Bean, C.**[§], Verma, N.K.*[§], Yamamoto, D., Chemello, F., Cenni, V., Filomena, M.C., Chen, J., Bang, L.[§] and Lanfranchi, G.[§]. Ankrd2 is a modulator of NF-κB mediated inflammatory responses during muscle differentiation. *Cell Death Dis.* (2014) 5:e1002. * **Co-First Authors**,[§]**Co-corresponding Authors**
19. Chemello, F.*[§], **Bean, C.***[§], Cancellara, P., Laveder, P., Reggiani, C., and Lanfranchi, G. Microgenomic Analysis in Skeletal Muscle: Expression Signatures of Individual Fast and Slow Myofibers *PLoS One.* (2011) 6 (2): e16807. * **Co-First Authors**
20. **Bean, C.**, Facchinello, N., Faulkner, G., and Lanfranchi, G. The effects of Ankrd2 alteration indicate its involvement in cell cycle regulation during muscle differentiation. *Biochim Biophys Acta-Molecular Cell Research.* (2008) 1783(6):1023-35.
21. Raffaello, A., Laveder, P., Romualdi, C., **Bean, C.**, Toniolo, L., Germinarlo, E., Megighian, A., Danieli-Betto, D., Reggiani, C., and Lanfranchi, G. Denervation in Murine Fast-Twitch Muscle: Short Term Physiological Changes and Temporal Expression Profiling. *Physiol Genomics.* (2006) 25 (1): 60-74.
22. **Bean, C.**, Salamon, M.,Raffaello, A., Campanaro, S.,Pallavicini, A.,and Lanfranchi, G. The Ankrd2, Cdkn1c and Calcyclin Genes are Under the Control of MyoD During Myogenic Differentiation. *J Mol Biol.* (2005) 349 (2): 349-66.

23. Salamon, M., Millino, C., Raffaello, A., Mongillo, M., Sandri, C., **Bean, C.**, Negrisolo, E., Pallavicini, A., Valle, G., Zaccolo, M., Schiaffino, S., and Lanfranchi, G. Human MYO18B, a Novel Unconventional Myosin Heavy Chain Expressed in Striated Muscles Moves into the Myonuclei upon Differentiation. *J Mol Biol.* (2003) 326 (1): 137-49.
24. Pallavicini, A., Kojic, S., **Bean, C.**, Vainzof, M., Salamon, M., Ievolella, C., Bortoletto, G., Pacchioni, B., Zatz, M., Lanfranchi, G., Faulkner, G. and Valle, G. Characterization of human skeletal muscle Ankrd2. *Biochem. Biophys. Res. Commun.* (2001) 285 (2): 378-86.

Editorial activity

Member of the Editorial Board, *Molecular Diagnostics and Therapeutics (Frontiers in Molecular Biosciences)*. Member of the Editorial Board, *Biology Open*. Guest Editor for *Biomolecules (Special Issues "Mitochondria and Central Nervous System Disorders II" and "Mitochondria and Central Nervous System Disorders III")*.

Reviewer for scientific journals including *Cell Death & Differentiation (CDD)*, *Journal of Clinical Investigation (JCI)*, *Biochimica et Biophysica Acta (BBA)*, *Journal of Molecular Biology (JMB)*, and *PLOS ONE*, among others.

Honors or Awards

01/05/2017 Poster Award at the Conference on Translational and Therapeutic Perspectives of Brown Adipose.

Speaker at International and National congresses

- 5th International Scientific Congress on Spinal Muscular Atrophy, Budapest, 11-14 March, 2026 Mitochondrial dysfunction in Spinal Muscular Atrophy: emerging insights from disease mechanisms to therapeutic targets. Oral presentation
- 2nd Symposium tra le Università di Lione, Padova, Ginevra, Losanna e il Nestlé Institute of Health Science; Losanna, 1-2 July 2024 Exploring mitochondrial adaptation and metabolic flexibility in the pathophysiology of spinal muscular atrophy. Oral presentation
- 11th Scientific days on Autophagy, Lyon 8-10 November, 2023. A novel pathogenic mutation in the ATP5C3 gene of ATP synthase is associated with lysosomal-autophagosomal alterations. Oral presentation.
- 1st Symposia between the universities of Lyon, Padua, Lausanne and the Nestlé institute of health sciences, Padua 27-28 April, 2023. Dysfunctional mitochondria accumulate in a skeletal muscle knockout model of *Smn1*, the causal gene of spinal muscular atrophy. Oral presentation.
- 13th World Congress on Targeting Mitochondria, Berlin 26-28 October, 2022. Invited Speaker.
- Institute of Biochemistry I, Faculty of Medicine, Goethe University Frankfurt. 8 May 2019. The mitochondria and cristae shaping protein Opa1 controls fat browning. Seminar. Invited by Prof. Dmitry Namgaladze.
- 15th NuGOweek 2018 "Mitochondria, nutrition and health". Newcastle upon Tyne 3-6 September 2018. Keeping mitochondria in shape: a matter of life, death and metabolism. Invited Speaker.
- Conference on Translational and Therapeutic Perspectives of Brown Adipose. Chopenagen 2-4 May 2017. The mitochondria and cristae shaping protein Opa1 controls fat browning. Poster Presentation.

- 13th International Congress on Obesity. Vancouver 1-4 May 2016. The mitochondria and cristae shaping protein Opa1 impinges on fat browning to control insulin sensitivity. Invited Speaker.
- Cold Spring Harbor Conferences Asia Shozou, China 12-16 October 2015. The mitochondria and cristae shaping protein Opa1 impinges on fat browning to control insulin sensitivity. Oral presentation.
- Conference on Myofibrillar Z-disk Structure and Dynamics EMBL Hamburg, Germany 14-17 October 2013 . Ankrd2 is a modulator of NF-kB mediated inflammatory responses in muscle.
- European Muscle Conference (EMC) Rhodes, Greece 1-5 September 2012. Interplay between Ankrd2, Akt/Gsk3b and NFkB pathways during myogenic differentiation. Abstract Presentation
- European Muscle Conference 2012, Rhodes, Greece 1-5 September 2012. A novel approach for transcriptional fibre typing in mouse hind limb muscles. Oral presentation.
- European Muscle Conference 2011, Berlin 14-18 September 2011. Transcriptional signatures of skeletal muscle fiber types. Oral presentation.
- European Muscle Conference 2009, Lille 12-16 September 2009. A genomic approach to study the gene expression of skeletal muscles at single-fibre level. Oral presentation. Published in: J Muscle Res Cell Motil. (2009) 30:332.
- European Muscle Conference 2007,Stockholm 8-12 September 2007.The effects of Ankrd2 alteration suggest an important role in cell cycle regulation during muscle differentiation. Abstract presentation.
- European Muscle Conference 2005, Hortobagy 17-21 September 2005. Characterization of gene networks regulating skeletal muscle development through gene silencing-overexpression and transcriptome analysis. Abstract presentation.
- Congresso Nazionale della Società Italiana di Neuroscienze, CNR di Pisa 26-28 September 2003. Identification of two novel putative targets downstream the MyoD myogenic pathway. Abstract presentation.
- European Muscle Conference 2003, Montpellier 7-10 September 2003. Identification of two novel putative targets downstream the MyoD myogenic pathway. Abstract Presentation. Published in: J Muscle Res Cell Motil. (2003) 24 (4-6):365.
- IV Convegno Federazione Italiana Scienze della Vita (FISV), Riva del Garda - TN, 20-23 September 2002. Human MYO18B, A Novel Unconventional Myosin Heavy Chain Expressed In Striated Muscles Moves Into The Myonuclei Upon Differentiation. Abstract Presentation.
- Terzo Incontro dell'Istituto di Neuroscienze, Abano Terme – Padova, 3 - 4 July 2002.Human MYO18B, a novel unconventional MYOSIN HEAVY CHAIN expressed in cardiac and skeletal muscle. Abstract Presentation.
- X Convention Scientifica Telethon, Riva del Garda, 18-20 November 2001.Functional genomics of skeletal muscle. Abstract Presentation
- Secondo incontro dell'Istituto di Neuroscienze, ISU – Milano, 18-19 June 2001.An archive of skeletal muscle cDNAs for functional and expression studies. Abstract Presentation
- IX Convention Scientifica Telethon, Rimini12-14 November 2000.From ESTs to gene function: analysis of novel human muscle mRNAs. Abstract Presentation

According to law 679/2016 of the Regulation of the European Parliament of 27th April 2016, I hereby express my consent to process and use my data provided in this CV