PERSONAL INFORMATION

Family name, First name: BLAAUW, BERT
Researcher unique identifier: ORCID 0000-0002-4167-5106

Date of birth: 30-10-1978

Nationality: dutch – married, two children (2014 and 2016)
URL for web site: https://www.vimm.it/scientific-board/bert-blaauw/
Google scholar page: https://scholar.google.com/citations?user=irYFoJ4AAAAJ&hl=it

• • EDUCATION

2008 PhD in Neurobiology, University of Padova, Italy. Supervisor: Stefano Schiaffino
2004 Master degree in Applied Physics, University of Groningen, Netherlands

• • EMPLOYMENT

2024 – now Full Professor, Department of Biomedical Sciences, University of Padova, Italy
2012 – now Principal Investigator, Venetian Institute of Molecular Medicine (VIMM), Padova, Italy
2016 – 2024 Associate Professor, Department of Biomedical Sciences, University of Padova, Italy
2011 – 2016 Assistant Professor, Department of Biomedical Sciences, University of Padova, Italy
2008 – 2011 Post doc, Venetian Institute of Molecular Medicine, Padova, Italy. Advisor prof. S. Schiaffino

• • FELLOWSHIPS AND AWARDS

2014 Young (under 40) Italian Physiologist of the year 2014 – premio SIF (2000€)
2011 Best oral presentation at the meeting of the Italian physiology society (SIF) - June 2011
2008 Manzin-award for the best oral presentation at the retreat of the VIMM (2000€) Oct. 2008

• • ACTIVE GRANTS AS SCIENTIFIC COORDINATOR

Telethon-Cariparo	2025-2030 - 5.000.000€	co-PI
PRIN-PNNR	2023-2026 – 236.000€	co-PI
PRIN	2023-2026 – 286.845€	co-PI
AIRC	2023-2028 – 767.000€	PI
Telethon	2023-2025 – 160.000€	PI
AFM Telethon	2022-2025 – 141.000€	PI

• • TEACHING ACTIVITIES

2009 – now Teaching 'Human Physiology' at the University of Padova, Italy, for 100-150 hours a year mainly to medical students, but also to nurses, and biomedical engineers

• • SELECTED PRESENTATIONS & INVITED SEMINARS

1. EMBO meeting; Skeletal Muscle Development, Metabolism & Repair during Homeostasis and Disease – Catania 15-10-2024 - *Nerve activity inhibits mTORC1-dependent protein synthesis in skeletal muscle*
2. 6th European Workshop on AMPK – Lyon, France 30-09-2024 - *Nerve activity inhibits mTORC1-dependent protein synthesis in skeletal muscle*
3. Cancer Cachexia meeting - Edinburgh, Schotland, 29-09-2023 - *Muscle-tumor crosstalk during cancer cachexia*
4. Skeletal muscle metabolism and growth – Copenhagen, Denmark 27-06-2023 - *Molecular mechanisms of muscle growth and function*
5. Advances in Muscle Biology– Gainesville Florida, USA, 26-03-2023 - *The Role of Akt-mTORC1 Signaling in Regulating Muscle Mass and Function*
6. Molecular mechanisms of muscle wasting during aging and disease – Ascona, Switzerland, 14-9-2022 - *Activation of Akt-mTORC1 signaling reverts cancer-dependent muscle wasting*
7. Sarcopenia, Cachexia & Wasting Disorders – Lisbon, Portugal, 24-6-2022 - *Activation of Akt-mTORC1 signaling reverts cancer-dependent muscle wasting*

• • ORGANISATION OF SCIENTIFIC MEETINGS

2014-2019 Annual meeting of Myology meeting (IIM) - Italy

• • INSTITUTIONAL RESPONSIBILITIES

2014-2018 Coordinator of an international research agreement between the VIMM (Padova) and the University of São Paulo in Brasil (ICB USP)
Organizer of the Internal Seminar, Name of University/ Institution/ Country
2012 – now Member of the PhD course in Neurobiology at the University of Padova

• • REVIEWING ACTIVITIES

2017 – Associate editor of Frontiers in Physiology, section skeletal muscle
I have done the review of several manuscripts/Grant applications for the following journals/institutions: Journal of Muscle Cell Research and Motility, Journal of Cellular Physiology, *Biochimica et Biophysica Acta (BBA)*, American Journal of Physiology, Journal of Applied Physiology, Skeletal Muscle, FASEB Journal, Human Molecular Genetics, Cell Reports, Nature Communications, EMBO Reports, JCSM.
Grant reviewing for: French Muscular Dystrophy Association (AFM), Telethon, ANR (French CNR), Dunhill Medical Trust

• • PUBBLICATIONS OVERVIEW (2006-2025)

Total number of publications	93
Publications as corresponding author	19
Total citations according to Google Scholar (17-01-25)	13803
H-index	48

• • PUBBLICATIONS AS CORRESPONDING AUTHOR

1. De Napoli C, Schmidt L, Montesel M, Cussonneau L, Sanniti S, Marcucci L, Germinario E, Kindberg J, Evans AL, Gauquelin-Koch G, Narici M, Bertile F, Lefai E, Krüger M, Nogara L, Blaauw B. Reduced ATP turnover during hibernation in relaxed skeletal muscle. *Nat Commun*. 2025 Jan 2;16(1):80.
2. Gasparella F, Nogara N, Germinario E, Tibaudo L, Ciciliot S, Piccoli G, Venegas F, Fontana F, Sales G, Sabbatini D, Foot J, Jarolimek W, **Blaauw B**, Canton M, Vitiello L. A Novel MAO-B/SSAO Inhibitor Improves Multiple Aspects of Dystrophic Phenotype in mdx Mice. *Antioxidants*, 2024 May 21;13(6):622.
3. Germani S, Van Ho AT, Cherubini A, Varone E, Chernorudskiy A, Renna GM, Fumagalli S, Gobbi M, Lucchetti J, Bolis M, Guarrera L, Craparotta I, Rastelli G, Piccoli G, de Napoli C, Nogara L, Poggio E, Brini M, Cattaneo A, Bachi A, Simmen T, Calì T, Quijano-Roy S, Boncompagni S, **Blaauw B**, Ferreiro A, Zito E. SEPN1-related myopathy depends on the oxidoreductase ERO1A and is druggable with the chemical chaperone TUDCA. *Cell Rep Med*. 2024 Feb 19:101439.
4. Mahnic N, Geremia A, Straub T, Zorzato S, Schönfelder M, von Lüttichau I, Steiger K, Saller MM, **Blaauw B**, Wackerhage H. One bout of endurance exercise does not change gene expression or proliferation in a C26 colon carcinoma in immunocompetent mice. *J Cancer Res Clin Oncol.* 2023 Oct 16.
5. Baraldo M, Tchampda Dondjang AH, Geremia A, Nogara L, Dumitras GA, Zorzato S, Canato M, Marcucci L, Nolte H, **Blaauw B**. Inducible deletion of Raptor and mTOR from adult skeletal muscle impairs muscle contractility and relaxation. *Journal of Physiology*, 2022, 600 (23), 5055-5075
6. Geremia A, Sartori R, Baraldo M, Nogara L, Balmaceda V, Dumitras GA, Ciciliot S, Scalabrin M, Nolte H, **Blaauw B.** Activation of Akt-mTORC1 signaling reverts cancer-dependent muscle wasting. *Journal of Cachexia, Sarcopenia and Muscle*, 2022 Feb;13(1):648-661
7. Baraldo M, Nogara L, Dumitras GA, Tchampda Dondjang AH, Geremia A, Scalabrin M, Türk C, Telkamp F, Zentilin F, Giacca M, Krüger M, **Blaauw B**. Raptor is critical for increasing the mitochondrial proteome and skeletal muscle force during hypertrophy. *FASEB Journal,* 2021 Dec 35(12)

8. **Blaauw B**. Activity-dependent increases of protein synthesis in skeletal muscle: Sensing the energy levels? *J Physiol,* 2020 May 16
9. Solagna F, Nogara L, Dyar KA, Greulich F, Mir AA, Türk C, Geremia A, Baraldo M, Sartori R, Farup J, Uhlenhaut H, Vissing K, Kruger M, **Blaauw B**. Exercise-dependent increases in protein synthesis are accompanied by chromatin modifications and increased MRTF-SRF signalling. *Acta Physiologica*, 2020 Sep; 230 (1)
10. Baraldo M, Geremia A, Pirazzini M, Nogara L, Solagna F, Türk C, Nolte H, Romanello V, Megighian A, Boncompagni S, Kruger M, Sandri M, **Blaauw B**. Skeletal muscle mTORC1 regulates neuromuscular junction stability. *Journal of Cachexia, Sarcopenia and Muscle*, 2020 Feb;11(1):208-225.
11. Pozzer D, Varone E, Chernorudskiy A, Schiarea S, Missiroli S, Giorgi C, Pinton P, Canato M, Germinario E, Nogara L, **Blaauw B**, Zito E. A maladaptive ER stress response triggers dysfunction in highly active muscles of mice with SELENON loss. *Redox Biology*, Jan 2019; 20:354-366
12. Pereira MG, Dyar KA, Nogara L, Solagna F, Marabita M, Baraldo M, Chemello F, Germinario E, Romanello V, Nolte H and **Blaauw B**. Comparative Analysis of Muscle Hypertrophy Models Reveals Divergent Gene Transcription Profiles and Points to Translational Regulation of Muscle Growth through Increased mTOR Signaling. *Front Physiol*. 2017 Dec 4;8:968. doi: 10.3389/fphys.2017.00968
13. **Blaauw B.** Platelet-Derived Growth Factor signaling and the role of cellular crosstalk in functional muscle growth. *FEBS Lett*. 2017 Mar;591(5):690-692.
14. Marabita M, Baraldo M, Solagna F, Ceelen JJM, Sartori R, Nolte H, Nemazanyy I, Pyronnet S, Kruger M, Pende M, **Blaauw B**. S6K1 is required for increasing skeletal muscle force during hypertrophy, *Cell Reports*, 2016 Oct 4;17(2):501-513.
15. Dyar KA, Schiaffino S, **Blaauw B**. Inactivation of the intrinsic muscle clock does not cause sarcopenia. *Journal of Physiology* Jun 1, 2016; 594(11):3161-2
16. Dyar KA, Ciciliot S, Malagoli Tagliazucchi G, Pallafacchina G, Tothova J, Argentini C, Agatea L, Abraham R, Ahdesmäki M, Forcato M, Bicciato S, Schiaffino S, **Blaauw B.** The calcineurin-NFAT pathway controls activity-dependent circadian gene expression in slow skeletal muscle. *Molecular Metabolism* 2015 Sep 25;4(11):823-33
17. **Blaauw B**[*], Reggiani C. The role of satellite cells in muscle hypertrophy. *J Muscle Res Cell Motil.* 2014 Feb 7. [Epub ahead of print]
18. **Blaauw B**[*], Agatea L, Toniolo L, Canato M, Quarta M, Dyar KA, Danieli-Betto D, Betto R, Schiaffino S, Reggiani C. Eccentric contractions lead to myofibrillar dysfunction in muscular dystrophy. *J Appl Physiol*. 2010 Jan;108(1):105-11.
19. **Blaauw B**[*], Canato M, Agatea L, Toniolo L, Mammucari C, Masiero E, Abraham R, Sandri M, Schiaffino S, Reggiani C. Inducible activation of Akt increases skeletal muscle mass and force without satellite cell activation. *FASEB J.* 2009 Nov;23(11):3896-905.

- • **PUBBLICATIONS AS CONTRIBUTING AUTHOR LAST 4 YEARS (2021-2024)**

2024

1. Gherardi G, Weiser A, Bermont F, Migliavacca E, Brinon B, Jacot GE, Hermant A, Sturlese M, Nogara L, Vascon F, De Mario A, Mattarei A, Garratt E, Burton M, Lillycrop K, Godfrey KM, Cendron L, Barron D, Moro S, **Blaauw B**, Rizzuto R, Feige JN, Mammucari C, De Marchi U. Mitochondrial calcium uptake declines during aging and is directly activated by oleuropein to boost energy metabolism and skeletal muscle performance. *Cell Metab.* 2024 Nov 23:S1550-4131(24)00417-0.
2. Calabrò S, Nogara L, Jian Y, Valentin M, Bizzotto D, Braghetta P, Russo L, Gambarotto L, **Blaauw B**, Hashemolhosseini S, Bonaldo P, Cescon M. Salbutamol repurposing ameliorates neuromuscular junction defects and muscle atrophy in Col6a1$^{-/-}$ mouse model of collagen VI-related myopathies. *Clin Transl Med*. 2024 Jul;14(7):e1688. doi: 10.1002/ctm2.1688.
3. Di Marco G, Gherardi G, De Mario A, Piazza I, Baraldo M, Mattarei A, **Blaauw B**, Rizzuto R, De Stefani D, Mammucari C. The mitochondrial ATP-dependent potassium channel (mitoK$_{ATP}$) controls skeletal muscle structure and function. Cell Death Dis. 2024 Jan 17;15(1):58.
4. Jaime D, Fish LA, Madigan LA, Xi C, Piccoli G, Ewing MD, **Blaauw B**, Fallon JR. The MuSK-BMP pathway maintains myofiber size in slow muscle through regulation of Akt-mTOR signaling. Skelet Muscle. 2024 Jan 3;14(1):1.

2023

5. Tezze C, Amendolagine FI, Nogara L, Baraldo M, Ciciliot S, Arcidiacono D, Zaramella A, Masiero G, Ferrarese G, Realdon S, **Blaauw B**, Detienne G, Beliën ATJ, Sandri M, Mercken EM. A combination of metformin and galantamine exhibits synergistic benefits in the treatment of sarcopenia. *JCI Insights*, 2023 aug
6. Gambarotto L, Metti S, Corpetti M, Baraldo M, Sabatelli P, Castagnaro S, Cescon M, **Blaauw B**, Bonaldo P. Sustained oral spermidine supplementation rescues functional and structural defects in COL6-deficient myopathic mice. *Autophagy*. 2023 Aug
7. Marchioretti C, Zanetti G, Pirazzini M, Gherardi G, Nogara L, Andreotti R, Martini P, Marcucci L, Canato M, Nath SR, Zuccaro E, Chivet M, Mammucari C, Pacifici M, Raffaello A, Rizzuto R, Mattarei A, Desbats MA, Salviati L, Megighian A, Sorarù G, Pegoraro E, Belluzzi E, Pozzuoli A, Biz C, Ruggieri P, Romualdi C, Lieberman AP, Babu GJ, Sandri M, **Blaauw B**, Basso M, Pennuto M. Defective excitation-contraction coupling and mitochondrial respiration precede mitochondrial Ca^{2+} accumulation in spinobulbar muscular atrophy skeletal muscle. *Nat Commun*. 2023 Feb 6;14(1):602.

2022

8. Murgia M, Ciciliot S, Nagaraj N, Reggiani C, Schiaffino S, Franchi MV, Pišot R, Šimunič B, Toniolo L, Blaauw B, Sandri M, Biolo G, Flueck M, Narici MV and Mann M. Signatures of muscle disuse in spaceflight and bed rest revealed by single muscle fiber proteomics. *PNAS Nexus*, in press
9. Scano M, Benetollo A, Nogara L, Bondì M, Barba FD, Soardi M, Furlan S, Akyurek EE, Caccin P, Carotti M, Sacchetto R, **Blaauw B**, Sandonà D. CFTR corrector C17 is effective in muscular dystrophy, in vivo proof of concept in LGMDR3. Hum Mol Genet. 2022 Feb 21;31(4):499-509

2021

10. Bock T, Türk C, Aravamudhan S, Keufgens L, Bloch W, Rozsivalova DH, Romanello V, Nogara L, **Blaauw B**, Trifunovic A, Braun T, Krüger M. PERM1 interacts with the MICOS-MIB complex to connect the mitochondria and sarcolemma via ankyrin B. Nat Commun. 2021 Aug 12;12(1):4900.
11. Tokarz J, Möller G, Artati A, Huber S, Zeigerer A, **Blaauw B**, Adamski J, Dyar KA. Common Muscle Metabolic Signatures Highlight Arginine and Lysine Metabolism as Potential Therapeutic Targets to Combat Unhealthy Aging. Int J Mol Sci. 2021 Jul 26;22(15):7958.
12. Costantini M, Testa S, Fornetti E, Fuoco C, Sanchez Riera C, Nie M, Bernardini S, Rainer A, Baldi J, Zoccali C, Biagini R, Castagnoli L, Vitiello L, **Blaauw B**, Seliktar D, Święszkowski W, Garstecki P, Takeuchi S, Cesareni G, Cannata S, Gargioli C. Biofabricating murine and human myo-substitutes for rapid volumetric muscle loss restoration. *EMBO Mol Med*. 2021 Feb 15:e12778. doi: 10.15252/emmm.202012778
13. Magarotto F, Sgrò A, Dorigo Hochuli AH, Andreetta M, Grassi M, Saggioro M, Nogara L, Tolomeo AM, Francescato R, Collino F, Germano G, Caicci F, Maghin E, Piccoli M, Jurga M, **Blaauw B**, Gamba P, Muraca M, Pozzobon M. Muscle functional recovery is driven by extracellular vesicles combined with muscle extracellular matrix in a volumetric muscle loss murine model. *Biomaterials*. 2021 Jan 7;269:120653.
14. Schiaffino S, Reggiani C, Akimoto T, **Blaauw B**. Molecular Mechanisms of Skeletal Muscle Hypertrophy. J Neuromuscul Dis. 2021;8(2):169-183.
15. Rindom E, Herskind J, **Blaauw B**, Overgaard K, Vissing K, de Paoli FV. Concomitant excitation and tension development are required for myocellular gene expression and protein synthesis in rat skeletal muscle. ***Acta Physiologica,*** 2021 Jan;231(1):e13540.