# CURRICULUM VITAE

## Personal data


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| Name | **Andrea Vettori** |
| Place and Birth date | 05-08-1974, Marostica (VI) |
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## Education

**2005**: PhD degree in “Genetics and Developmental Molecular Biology” at the University of Padova

**2002**: Official State Qualification as a Professional Biologist, Univ. of PD.

**1999**: Graduation on Biological Sciences (Biomolecular Course), Univ. of PD

**Research activity**

2022-today: Associate Professor (SSD BIO-06) at the Department of Biotechnology, University of Verona

2018-2021: Assistant Professor (RtdB) (SSD BIO-06) at the Department of Biotechnology, University of Verona

2014-2018: senior post-Doctoral fellowship at the University of Padua

2011-2014: post-Doctoral fellowship in Developmental Genetics and Dynamics Lab of Padua

2004-2011: post-Doctoral fellowship in the Human Genetics Lab. at the Dep. of Biology of Padua

2003: visiting researcher in the Genetics Lab. of the Wellcome Trust Centre for Human Genetics, Oxford (UK).

2002: one-year fellowship in the Human Genetics Lab at the Dep. of Biology of Padua

**Grant**

1) **2022-2024: Cariplo and Telethon Joint Call** (research grant 2022-0581)**.** Role of quality control in the early secretory compartment in Autosomal Dominant Tubulointerstitial Kidney Disease. 87.000 Euro. Role: P.I of Verona's Unit.
2) **2021-2022: ARISLA research grant n° PG_63/2020.** Juvenile amyotrophic lateral sclerosis: in search for innovative pharmacological targets using new in-vivo models. 60.000 Euro. Rore: Principal Investigatori.
3) **2020-2022:** AFM-telethon research grant (#23315). Budget grant: 50.000,00 Euro. Role: Principal Investigator
4) **2015-2018:** Italian NIH grant (Ricerca Finalizzata (N°Gr-2011-02346749) titled. "Identification of new genes for rare neurodevelopmental disorders by homozygosity mapping/next generation sequencing and functional studies in zebrafish". Budget grant: 144.035,00 Euro. Role: P.I of Padova's Unit.
5) **2014-2016** "Young researcher" GRANT from 'University of Padova. Budget grant: 52.000,00 Euro. Role: Principal investigator

**Training**

2017: Course: "Advanced cellular assay technologies: high content imaging and label-free DMR"

2013: Course: "Imaris. 3D Quantitative Imaging Analysis", University of Padua

2011: Course on "CGH and sequencing: theory and practice", BioPD, University of Padua

2010: Course on "RefWorks and bibliographic analysis", CIV, University of Padua

2009: Nikon Scientific Workshop on Confocal Microscopy, Department of Biology, University of Padua

2006: Course A-Day, Adobe Systems, Padova, Italy. Adobe Systems, Padua 2003: Applied Biosystems Course: Real-Time PCR and Genomic Assays, Padua

**RESEARCH INTEREST**

Dr. Vettori's research activity in the field of Human Genetics was initially focused on the localization and the characterization of human disease genes by linkage analysis, positional cloning, mutation screening and protein interaction studies. In particular, Dr. Vettori worked on different genetic diseases affecting the peripheral and/or the central nervous system such as CMT migraine and Hereditary Spastic Paraplegia. More recently, Dr. Vettori worked in the field of developmental Genetics, using the teleost zebrafish (Danio rerio) as a vertebrate model to study genetics human pathologies and cancer genetics. In particular, the current research activity is focused on the use of zebrafish i) to study neuromuscular diseases like CMT and dHMN or neurodegenerative disorders ii) to characterize the role of specific signaling pathways (i.a STAT3, BMP, Wnt, Hif-1, Tgf-beta) during the onset and progression of neurodegenerative processes associated to genetic disorders. From 2016 Dr. Vettori supervises and direct a research team that studies in zebrafish the role of different disease-genes associated with epilepsy, HSP and kidney diseases. The specific purpose of this field of research is to generate and characterize new animal models able to reproduce the phenotype detected in patients affected by genetic forms of different disorders. Dr. Vettori is currently employed as Associate at Professor the Department of Biotechnology of the University of Verona, where he is pursuing his studies on zebrafish. At present, Dr. Vettori is the author of more than 30 articles in peer-reviewed journals among which Circulation, American Journal of Human Genetics, Molecular Psychiatry, Neurology and PNAS, with more than 1100 citations and an H-index=20.

**HONOURS**

Winner in 2002 of the award for "young researcher" at the V Congress of the Italian Society of Human genetics for his studies on the molecular genetics of migraine.

Winner of the VII award "Accademia Olimpica" in 2000 with the scientific thesis: "Microsatellite linkage analysis to map a new form of autosomal recessive HMSN (hereditary motor and sensory neuropathy)

## Publications

**Peer-reviewed articles**

1) Facchinello N, Laquatra C, Locatello L, Beffagna G, Brañas Casas R, Fornetto C, Dinarello A, Martorano L, **Vettori A**, Risato G, Celeghin R, Meneghetti G, Santoro MM, Delahodde A, Vanzi F, Rasola A, Dalla Valle L, Rasotto MB, Lodi T, Baruffini E, Argenton F, Tiso N. Efficient clofilium tosylate-mediated rescue of POLG-related disease phenotypes in zebrafish. Cell Death Dis. 2021;12(1):100. doi: 10.1038/s41419-020-03359-z. PMID: 33469036;

2) **Vettori A**, Paolacci S, Maltese PE, Herbst KL, Cestari M, Michelini S, Michelini S, Samaja M, Bertelli M. Genetic Determinants of the Effects of Training on Muscle and Adipose Tissue Homeostasis in Obesity Associated with Lymphedema. Lymphat Res Biol. 2020 Dec 29. doi: 10.1089/lrb.2020.0057. Epub ahead of print. PMID: 33373545.

3) Ambrosini G, Dalla Pozza E, Fanelli G, Di Carlo C, **Vettori A**, Cannino G, Cavallini C, Carmona CA, Brandi J, Rinalducci S, Scupoli MT, Rasola A, Cecconi D, Palmieri M, Dando I. Progressively de-differentiated pancreatic cancer cells shift from glycolysis to oxidative metabolism and gain a quiescent stem state. Cells. 2020 Jun 9;1-24, doi: 10.3390/cells9071572

4) Peron M, Dinarello A, Meneghetti G, Martorano L, Facchinello N, **Vettori A**, Licciardello G, Tiso N, Argenton F. The stem-like Stat3-responsive cells of zebrafish intestine are Wnt/β-catenin dependent. Development. 2020 Jun 19;147(12): dev188987.doi: 10.1242/dev.188987.

5) Yuniati L, Lauriola A, Gerritsen M, Abreu S, Ni E, Tesoriero C, Onireti JO, Low TY, Heck AJR, **Vettori A**, Cardozo T, Guardavaccaro D. Ubiquitylation of the ER-Shaping Protein Lunapark via the $CRL3^{KLHL12}$ Ubiquitin Ligase Complex. Cell Rep. 2020 May 19;31(7):107664. doi: 10.1016/j.celrep.2020.107664..

6) Schaeffer C, Izzi C, **Vettori A**, Pasqualetto E, Cittaro D, Lazarevic D, Caridi G, Gnutti B, Mazza C, Jovine L, Scolari F, Rampoldi L. Autosomal Dominant Tubulointerstitial Kidney Disease with Adult Onset due to a Novel Renin Mutation Mapping in the Mature Protein. Sci Rep. 2019 Aug 12;9(1):11601.

7) **Vettori A**, Pompucci G, Paolini B, Del Ciondolo I, Bressan S, Dundar M, Kenanoğlu S, Unfer V, Bertelli M; Geneob Project. Genetic background, nutrition and obesity: a review. Eur Rev Med Pharmacol Sci. 2019 Feb;23(4):1751-1761.

8) Astone M, Lai JKL, Dupont S, Stainier DYR, Argenton F, **Vettori A**. Zebrafish mutants and TEAD reporters reveal essential functions for Yap and Taz in posterior cardinal vein development. *Sci Rep*. 2018 8(1):10189. doi: 10.1038/s41598-018-27657-x. I.F 5.47.

9) Diquigiovanni C, Bergamini C, Evangelisti C, Isidori F, **Vettori A**, Tiso N, Argenton F, Costanzini A, Iommarini L, Anbunathan H, Pagotto U, Repaci A, Babbi G, Casadio R, Lenaz G, Rhoden KJ, Porcelli AM, Fato R, Bowcock A, Seri M, Romeo G, Bonora E. Mutant MYO1F alters the mitochondrial network and induces tumor proliferation in thyroid cancer. Int J Cancer. 2018. doi:10.1002/ijc.31548.

10) Giuliodori A, Beffagna G, Marchetto G, Fornetto C, Vanzi F, Toppo S,Facchinello N, Santimaria M, **Vettori A**, Rizzo S, Della Barbera M, Pilichou K, Argenton F, Thiene G, Tiso N, Basso C. Loss of cardiac Wnt/β-catenin signalling in Desmoplakin-deficient AC8 zebrafish models is rescuable by genetic and pharmacological intervention. Cardiovasc Res. 2018 Mar 7 114(8):1082-1097.

11) **Vettori A**, Greenald G, Wilson G.K, Peron M, Facchinello N, Markham E, Sinnakaruppan M, Matthews L.C, McKeating J.A, Argenton A, and van Eeden F.J. M. Glucocorticoids promote Von Hippel Lindau (pVHL) degradation and Hif1a stabilization. Proc Natl Acad Sci U S A. 2017 Sep 12;114(37):9948-9953

12) Turrini L, Fornetto C, Marchetto G, Mallenbroich MC, Tiso N, **Vettori A**, Resta F, Masi A, Mannaioni G, Pavone FS, Vanzi F. Optical mapping of neuronal activity during seizures in zebrafish. *Sci Rep*. 2017 Jun 8;7(1):3025 I.F 5.47.

13) Kim HR, Greenald D, **Vettori A**, Markham E, Santhakumar K, Argenton F, van Eeden F. Zebrafish as a model for von Hippel Lindau and hypoxia-inducible factor signaling. *Methods Cell Biol*. 2017; 138:497-523 I.F. 1.42.

14) Michelini S,* **Vettori A***, Maltese P, Cardone M, Bruson A, Fiorentino A, Cappellino F, Sainato V, Guerri G, Marceddu G, Tezzele S, Bertelli M. Genetic screening in a large cohort of Italian patients affected by primary lymphedema using a next generation sequencing (NGS) approach. *Lymphology* 2016 Sep 49(2): 57-72. I.F. 1.92. ***These two authors contributed equally to this article**

15) Facchinello N, Schiavone M, **Vettori A**, Argenton F, Tiso N. Monitoring Wnt Signaling in Zebrafish Using Fluorescent Biosensors. *Methods Mol Biol.* 2016;1481:81-94 (I.F 1.09).

16) G Gregianin E, Pallafacchina G, Zanin S, Crippa V, Rusmini P, Poletti A, Fang M, Li Z, Diano L, Petrucci A, Lispi L, Cavallaro T, Fabrizi GM, Muglia M, Boaretto F, **Vettori A**, Rizzuto R, Mostacciuolo ML, Vazza G. Loss-of-function mutations in the SIGMAR1 gene cause distal hereditary motor neuropathy by impairing ER-mitochondria tethering and Ca2+ signalling. Hum Mol Genet. 2016 Jul. pii:ddw220. PMID: 27402882. IF 5.6

17) Astone M, Pizzi M, Peron M, Domenichini A, Guzzardo V, Tochterle S, Tiso N, Rugge M, Meyer D, Argenton F, **Vettori A**. A GFP-Tagged Gross Deletion on Chromosome 1 Causes Malignant Peripheral Nerve Sheath Tumors and Carcinomas in Zebrafish. *PLoS One*. 2015 Dec 22;10(12):e0145178. IF 3.2

18) Casari A, Schiavone M, Facchinello N, **Vettori A**, Mayer D, Tiso N, Moro E, Argenton F. A Smad3 transgenic reporter reveals TGFbeta control of zebrafish spinal cord development. *Developmental Biology.* Dev Biol. 2014 Dec 1;396(1):81-93. IF 3,63

19) Bergamin G, Boaretto F, Briani C, Pegoraro E, Cacciavillani M, Martinuzzi A, Muglia M, **Vettori A**, Vazza G, Mostacciuolo ML. Mutation Analysis of MFN2, GJB1, MPZ and PMP22 in Italian Patients with Axonal Charcot-Marie-Tooth Disease. *Neuromolecular Med.* 2014 Sep;16(3):540-50. IF 3,88

20) Moro E, **Vettori A**, Porazzi P, Schiavone M, Rampazzo E, Casari A, Ek O, Facchinello N, Astone M, Zancan I, Milanetto M, Tiso N, Argenton F. Generation and application of signaling pathway reporter lines in zebrafish. *Mol Genet Genomics. 2013 Jun;288(5-6):231-42*. IF 2,63

21) Gregianin E, Vazza G, Scaramel E, Boaretto F, **Vettori A**, Leonardi E, Tosatto S, Manara R, Pegoraro E, Mostacciuolo ML. A novel SACS mutation results in non-ataxic spastic paraplegia and peripheral neuropathy. *Eur J Neurol. 2013 Nov; 20(11):1486-91.* IF 3,69

22) Bertolin C, Magri C, Barlati S, **Vettori A**, Perini GI, Peruzzi P, Mostacciuolo ML, and Vazza G. Analysis of the complete mt-DNA sequence in patients with schizophrenia and bipolar disorder. *J Hum Genet.* 2011 Dec;56(12):869-72. IF 2,57

23) **Vettori A**, Bergamin G, Moro E, Vazza G, Polo G, Tiso N, Argenton F, Mostacciuolo ML. Developmental defects and neuromuscular alterations due to mitofusin 2 gene (MFN2) silencing in zebrafish: A new model for Charcot-Marie-Tooth type 2A neuropathy. *Neuromuscul Disord.* 2011 Jan;21(1):58-67. IF 2,79

24) Rigon L, **Vettori A**, Busolin G, Egeo G, Pulitano P, Santulli L, Pasini E, Striano P, la Neve A, Vianello Dri V, Boniver C, Gambardella A, Banfi P, Binelli S, Di Bonaventura C, Striano S, de Falco F, Giallonardo AT, Mecarelli O, Michelucci R, Nobile C. ADAM23, a Gene Related to LGI1, Is Not Linked to Autosomal Dominant Lateral Temporal Epilepsy. *Epilepsy Res Treat.* 2011;2011:258365. doi: 10.1155/2011/258365.

25) Boaretto F*, **Vettori A***, Casarin A,Vazza G, Muglia M, Rossetto MG, Cavallaro T, Rizzuto N, Carelli V, Salviati L, Mostacciuolo ML, Martinuzzi A. Severe CMT type 2 with fatal encephalopathy associated with a novel mfn2 splicing mutation. *Neurology*. 2010 Jun 8;74(23):1919-21. ***These two authors contributed equally to this article.** IF 8,31

26) Millino C, Fanin M, **Vettori A**, Laveder P, Mostacciuolo ML, Angelini C, Lanfranchi G. Different atrophy-hypertrophy transcription pathways in muscles affected by severe and mild spinal muscular atrophy. *BMC Med*. 2009 Apr 7;7:14. IF 6,03

27) Bovo G, Diani E, Bisulli F, Di Bonaventura C, Striano P, Gambardella A, Ferlazzo E, Egeo G, Mecarelli O, Elia M, Bianchi A, Bortoluzzi S, **Vettori A**, Aguglia U, Binelli S, De Falco A, Coppola G, Gobbi G, Sofia V, Striano S, Tinuper P, Giallonardo AT, Michelucci R, Nobile C. Analysis of LGI1 promoter sequence, PDYN and GABBR1 polymorphisms in sporadic and familial lateral temporal lobe epilepsy. *Neurosci Lett.* 2008 May 2;436(1):23-6. IF 2,10

28) Vazza G, Bertolin C, Scudellaro E, **Vettori A**, Boaretto F, Rampinelli S, De Sanctis G, Perini G, Peruzzi P, Mostacciuolo ML. Genome-wide scan supports the existence of a susceptibility locus for schizophrenia and bipolar disorder on chromosome 15q26. *Mol Psychiatry*. 2007 Jan;12(1):87-93. IF 13,66

29) Simonati A, Boaretto F, **Vettori A**, Dabrilli P, Criscuolo L, Rizzuto N, Mostacciuolo ML. A novel missense mutation in the l1cam gene in a boy with L1 disease. *Neurol Sci*. 2006 Jun;27(2):114-7. IF 1,31

30) Pilichou K, Nava A, Basso A, Beffagna A, Bauce B, Lorenzon A, Frigo G, **Vettori A**, Valente M, Towbin J, Thiene G, Danieli GA, Ramazzo A. Mutations in desmoglein-2 gene cause arrhythmogenic right ventricular cardiomyopathy. *Circulation*. 2006 Mar 7;113(9):1171-9. IF 14,7

31) Velayos-Baeza A* **Vettori A*** Copley RR, Dobson-Stone C, Monaco AP. Analysis of the human VSP13 gene family. *Genomics*. 2004 Sep; 84(3):536-49. IF 3,01 * **These two authors contributed equally to this article**

32) Opocher G, Schiavi F, **Vettori A**, Pampinella F, Vitiello L, Murgia A, Martella M, Taccaliti A, Mantero F, Mostacciuolo M.L. Fine analysis of the short arm of chromosome 1 in sporadic and familial pheochromocytoma. *Clin Endocrino (Oxf).* 2003 Dec; 59(6): 707-715. IF 3,16

33) Pegoraro E, **Vettori A**, Valentino ML, Molon A, Mostacciuolo ML, Howell N, Carelli V. X-Inactivation pattern in multiple tissues from two leber's hereditary optic neuropathy (LHON) patients. *Am J Med Genet*. 2003 May; 15,119A(1):37-40. IF 2,39

34) Soragna D*, **Vettori A***, Carraro G, Marchioni E, Vazza G, Bellini S, Tupler R, Savoldi F, Mostacciuolo ML. A locus for migraine without aura maps on chromosome 14q21.2-q22.3. *Am J Hum Genet*. 2003 Jan; 72(1):161-167. IF 10,6 * **These two authors contributed equally to this article**

35) Zortea M, **Vettori A**, Trevisan CP, Bellini S, Vazza G, Armani M, Simonati A, Mostacciuolo ML. Genetic mapping of a susceptibility locus for disc herniation and spastic paraplegia on 6q23.3-q24.1. *J Med Genet*. 2002 Jun; 39(6):387-90. IF 6,36