Cigliola Valentina, Ph.D

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- **PERSONAL INFORMATION**

Researcher unique identifier ORCID: 0000-0002-1596-7332
Nationality: Italian
Languages: Italian, English, French (fluent)
URL for web site: https://scholar.google.com/citations?user=XTdRI4sAAAAJ&hl=en
URL for Lab web site: https://www.cigliola-lab.com/

- **EDUCATION**

2016 **Ph.D. in Science**, University of Geneva, Switzerland
2010 **M.S. in Molecular and Cellular Biology**, University of Bari Aldo Moro, Italy, *Magna Cum Laude*
2008 **B.S. in Biology**, University of Bari Aldo Moro, Italy

- **POSITIONS**

2024 – **Assistant Professor**, Dept. of Pharmacology, Vanderbilt University, Nashville, TE, USA
Research topic: Innate mechanisms of spinal cord regeneration

2023 – 2024 **Junior Research Investigator**, INSERM, Inst. of Biology Valrose, Nice, France
Research topic: Innate mechanisms of spinal cord regeneration

2017 – 2023 **Postdoctoral Scholar,** Dept. of Cell Biology, Duke University Medical Center, Durham, NC, USA
Advisor: Prof. Kenneth D. Poss
Project: Mechanisms of spinal cord and heart regeneration using zebrafish and mouse models

2011 – 2017 **Graduate Student,** Dept. of Genetic Medicine and Development, University of Geneva, Switzerland
Advisor: Prof. Pedro L. Herrera
Project: Pancreatic islet cell signaling in homeostasis and in regeneration during diabetes

2010 – 2011 **Research Internship**, Mitochondrial Biology Unit, Cambridge, UK
Advisor: Dr. Antonella Spinazzola
Project: Mitochondrial Mpv17 dysfunction and associated diseases

2009 – 2010 **Master Internship**, Dept. of Biochemistry, University of Bari "Aldo Moro", Italy.
Advisor: Prof. Ferdinando Palmieri
Project: Mitochondrial transport and metabolism via the pyrimidine nucleotide transporters SLC25A33 and SLC25A36

- **SCIENTIFIC APPOINTMENTS**

2024 – Present Editorial Board Member, Acta Physiologica
2023 – Present Member, ALBA Network (diversity, equity and inclusion in brain sciences)
2023 – Present Member, Club de la Moelle Epinière et ses pathologies
2023 – Present Member, Swedish Developmental Biology Organization (SWEDBO)
2023 – Present Member, International Society of Developmental Biology (ISDB)
2021 – Present *Ad hoc* reviewer, EMBO Reports, EMBO Journal, Comm. Biology, Stem Cells, Stem Cells and Development, Development, Brain Behavior and Immunity
2021 - Present Reviewer for Wings for Life Spinal Cord Foundation, DFG German Science Foundation
2021 – Present Member, International Society for Regenerative Biology (ISRB)
2019 – Present Member, Society for Developmental Biology (SDB)
2018 – Present Member, International Zebrafish Society (IZS)
2017 – Present Member, Zebrafish Information Network (ZFIN)

- **HONORS AND AWARDS**

2023 10th Strategic Conference of Zebrafish Investigators, Pacific Grove, CA, USA Travel Award
2023 International Society for Regenerative Biology, Vienna, AU Poster Award
2022 Labex SIGNALIFE Chairs of Excellence, University of Côte d'Azur, France
2022 Travel Award to attend the 3rd Nordic Meeting on Developm. and Regener., Copenhagen
2022 Gordon Conference CNS Injury and Repair, Oxnard, CA, (USA) Poster Award
2020 Swiss National Science Foundation Postdoc Mobility Fellowship
2017 Swiss National Science Foundation Early Postdoc Mobility Fellowship

2017 Regeneration Next Postdoctoral Fellowship
2017 Dpt. of Cell Biology, Duke University, Durham, NC USA Best Microscopy Image Award
2017 PhD School University of Geneva, Switzerland, Best Thesis Award 2016
2015 Scholarship to attend The Islet Study Group & Beta Cell Workshop, Israel
2014 PhD Retreat, University of Geneva, Villars-sur-Ollon, Switzerland Poster Prize
2013 G2L2 meeting, Geneva, Switzerland, Poster Prize

- **TEACHING ACTIVITIES**

2022 Lecture "Mechanisms of spinal cord regeneration" to medical residents and fellows, Dept. of Neurosurgery, Duke University Medical Center, USA
2023/24 Master classes in Cognitive neurosciences, Neurophysiology of aging, Molecular and Developmental genetics, Tissue regeneration, Univ. Côte d'Azur, France

- **MENTORING**

Since 2023 1 Postdoc
Since 2017 4 PhD students (2 defended, 2 ongoing)
Since 2016 6 undergraduate students (3 now doing a PhD, 1 in medical school, 1 in industry)
Since 2013 6 technicians

- **SELECTED PRESENTATIONS**

Invited Speaker: **1.** University of Minnesota, Dept. of Biochemistry, Molecular Biology and Biophysics, Minneapolis, USA, Jan. 2024; **2.** Vanderbilt University, Dept. of Pharmacology, Nashville, USA Jan. 2024; **3.** Boston University, Dept. of Biochemistry and Cell Biology, Boston, USA Jan. 2024; **4.** Fralin Biomedical Research Institute at Virginia Tech, Roanoke, USA Nov. 2023; **5.** Society for Neuroscience (SfN), Washington DC, USA, Nov. 2023; **6.** International Society for Regenerative Biology (ISRB) Webinar, June 2023; **7.** ICM Institute for Brain and Spinal Cord (Institut du Cerveau), Paris, France, June 2023; **8.** iBV-IPMC Neurobiology Meeting, Nice, France, Mar. 2023; **9.** Winter School Biology of Ageing, Nice, France, Dec. 2023; **10.** Triangle Regeneration Biology Symposium, Durham, USA, Oct. 2022; **11.** European Drosophila Neurobiology Conference, Virtual, Spain, May 2021.
Talks: **1.** 1st French Zebrafish Meeting, Montpellier, France Oct. 2023; **2.** Gordon Conference Central Nervous System Injury and Repair, Lucca, July 2023; **3.** 3rd Nordic Meeting on Development Stem Cells and Regeneration, Copenhagen, Denmark, Oct. 2022; **4.** EMBO Workshop The Molecular and Cellular Basis of Regeneration and Tissue Repair, Barcelona, Spain, Sept. 2022; **5.** Human Islets Research Network (HIRN) Meeting, Bethesda, USA, Oct. 2016; **6.** European Association for the Study of Diabetes (EASD) Workshop, Oxford, UK, Aug. 2016.
Posters: **1.** International Society for Regenerative Biology, Vienna, AU, September 2023, ***Poster Award;*** **2.** Gordon Conference Central Nervous System Injury and Repair, Oxnard, USA, March 2022, ***Poster Award***; **3.** European Developmental Biology Congress (EDBC), Alicante, Spain, Oct. 2019; **4.** EMBO Workshop The Molecular and Cellular Basis of Regeneration and Tissue Repair, Malta, Sep. 2018; **5.** International Zebrafish Society (IZSF) Conference, Madison, Wisconsin, USA, June 2018; **6.** International Society for Stem Cell Research (ISSCR) Meeting, Stockholm, Sweden, June 2015.

- **PATENTS**

2024 Compositions for and Methods of Enhancing Spinal Cord Tissue Regeneration
Appln No. US20240050593A1
Poss K, **Cigliola V**, Shoffner A.
2022 Compositions and Methods for Enhancing Tissue Regeneration
Appln No. WO2022132984A1
Poss K, Yan R, Kang J, Goldman A, **Cigliola V**.

- **PUBLICATIONS**

Google Scholar Citations: 1162; h-index: 15; i10-index:18. *Equal contribution
https://pubmed.ncbi.nlm.nih.gov/?term=cigliola+v&sort=date

(1) Becker C. J., **Cigliola V.**, Gillotay P., Rich A., De Simone A., Han Y., Di Talia S., Poss K. D., *In toto* imaging of glial JNK signaling during larval zebrafish spinal cord regeneration, ***Development, 2023*** (DOI: 10.1242/dev.202076)

(2) Cigliola V, Shoffner A, Lee N, Ou J, Gonzalez TJ, Hoque J, Becker CJ, Han Y, Shen G, Faw TD, Abd-El-Barr MM, Varghese S., Asokan A., and Poss K. D., Spinal cord repair is modulated by the neurogenic factor

Hb-egf under direction of a regeneration-associated enhancer, ***Nature Communications, 2023*** (DOI: 10.1038/s41467-023-40486-5)

(3) Yan R*, **Cigliola V***, Oonk K, Petrover Z, Vekstein A, Pla MM, Devlin G, Bunnell S, Bishawi M, Gemberling M, Sinha T, Sargent MA, York AJ, Shakked A, DeBenedittis P, Wendell DC, Kang J, Goldman JA, Baht JS, Karra R, Williams A, Bowles D, Asokan A, Tzahor E, Gersbach CA, Molkentin JD, Bursac N, Black BL, Poss KD, An enhancer-based gene therapy strategy for spatiotemporal control of cargoes during tissue repair, ***Cell Stem Cell, 2023*** (DOI: 10.1016/j.stem.2022.11.012)

(4) Gemberling M, Siklenka K, Rodriguez E, Tonn-Eisinger KR, Barrera A, Liu F, Kantor A, **Cigliola V**, Hazlett MF, Bartelt LC, Madigan VJ, Castellanos Rivera RM, Bodle J, Daniels H, Rouse DC, Hilton IB, Asokan A, Ciofani M, Poss KD, Reddy T, West AE, Gersbach CA, Transgenic mice for *in vivo* epigenome editing with CRISPR-based systems, ***Nature Methods***, ***2021*** (DOI: 10.1038/s41592-021-01207-2)

(5) Perez Frances M, van Gurp L, Abate MV, **Cigliola V**, Furuyama K, Brú-Tarí E, Oropeza D, Carreaux T, Fujitani Y, Fabrizio T, Herrera PL Pancreatic islet Ppy-expressing γ-cells display mixed phenotypic traits and have the adaptive plasticity to engage insulin production, ***Nature Communications, 2021*** (DOI: 10.1038/s41467-021-24788-0)

(6) Oropeza D*, **Cigliola V***, Romero A*, Rodriguez S, Chera S, Herrera PL, Stage-specific transcriptomic changes in pancreatic α-cell after massive β-cell loss, ***BMC Genomics***, ***2021*** (DOI: 10.1186/s12864-021-07812-x)

(7) Cigliola V, Becker CJ, Poss KD, Building bridges, not walls: Spinal cord regeneration in zebrafish, ***Disease Models and Mechanisms, 2020*** (DOI: 10.1242/dmm.044131)

(8) Shoffner A*, **Cigliola V***, Lee N, Ou J, Poss KD, Tp53 suppression promotes cardiomyocyte proliferation during zebrafish heart regeneration, ***Cell Reports, 2020*** (DOI*:* 10.1016/j.celrep.2020.108089)

(9) Thompson JD, Ou J, Lee N, Shin K, **Cigliola V**, Song L, Crawford GE, Kang J, Poss KD, Identification and requirements of enhancers that direct gene expression during zebrafish fin regeneration, ***Development, 2020*** (DOI: 10.1242/dev.191262)

(10) Cigliola V, Ghila L, Chera S, Herrera PL, Tissue repair brakes: A common paradigm in the biology of regeneration, ***Stem Cells, 2020*** (DOI: 10.1002/stem.3118)

(11) Han Y, Chen A, Umansky KB, Oonk K, Choi WY, Dickson AL, Ou J, **Cigliola V**, Cao J, Tornini VA, Cox BD, Tzahor E and Poss KD., Vitamin D is a broad-spectrum mitogenic hormone that accelerates growth and regeneration in zebrafish, ***Developmental Cell, 2019*** (DOI**:** 10.1016/j.devcel.2019.01.001)

(12) Cigliola V*, Ghila L*, Thorel F*, van Gurp L, Baronnier D, Oropeza D, Gupta S, Miyatsuka T, Kaneto H, Magnuson MA, Osipovich AB, Sander M, Wright CEV, Thomas MK, Furuyama K, Chera S, Herrera PL., Pancreatic Islet-Autonomous Signals Modulate the Adaptive Identity Changes of Glucagon-Producing α-Cells, ***Nature Cell Biology****, 2018* (DOI: 10.1038/s41556-018-0216-y)

(13) Berchtold LA, Miani M, Diep TA , Madsen AN, **Cigliola V**, Krivokapic JM, Pociot F, Eizirik DL, Meda P, Holst B, Billestrup N, Størling J., Pannexin-2-deficiency sensitizes pancreatic β-cells to cytokine-induced apoptosis *in vitro* and impairs glucose tolerance *in vivo,* ***Mol Cell Endocrinol.****, 2017* (DOI: 10.1016/j.mce.2017.04.001)

(14) Cigliola V, Populaire C, Pierri CL, Deutsch S, Haefliger JA, Fadista J, Lyssenko V, Groop L, Rueedi R, Thorel F, Herrera PL and Meda P., A Variant of GJD2, Encoding for Connexin 36, Alters the Function of Insulin Producing β-Cells, ***PLoS One, 2016*** (DOI: 10.1371/journal.pone.0150880)

(15) Cigliola V, Thorel F, Chera S and Herrera PL., Stress Induced Islet Cell Identity Changes, ***Diabetes Obesity Metabolism***, 18 Suppl. 1, 87-96, ***2016*** *(*DOI*:*10.1111/dom.12726*)*

(16) Cigliola V, Allagnat F, Berchtold LA, Lamprianou S, Haefliger JA and Meda P., Role of Connexins and Pannexins in the Pancreas, ***Pancreas***, ***2015*** (DOI:10.1097/MPA.0000000000000378)

(17) Chera S, Baronnier D, Ghila L, **Cigliola V**, Jensen JN, Gu G, Furuyama K, Thorel F, Gribble FM, Reimann F and Herrera PL., Diabetes recovery by age-dependent conversion of pancreatic δ-cells into insulin producers, ***Nature***, ***2014*** (DOI:10.1038/nature13633)

(18) Nlend RN, Aït-Lounis A, Allagnat F, **Cigliola V**, Charollais A, Reith W, Haefliger JA and Meda P., Cx36 is a target of Beta2/NeuroD1, which associates with prenatal differentiation of insulin-producing β cells, ***J Membr Biol., 2012*** (DOI:10.1007/s00232-012-9447-1)

(19) Cigliola V, Chellakudam V, Arabieter W and Meda P., Connexins and β-cell functions, ***Diabetes Res Clin Pract., 2012*** (DOI:10.1016/j.diabres.2012.10.016)

(20) Potolicchio I, **Cigliola V**, Velazquez-Garcia S, Klee P, Valjevac A, Kapic D, Cosovic E, Lepara O, Hadzovic-Dzuvo A, Mornjacovic Z, Meda P., Connexin-dependent signaling in neuro-hormonal systems, ***Biochim Biophys Acta, 2011*** (DOI:10.1016/j.bbamem.2011.09.022)