FRANCESCO FERRINI
CURRICULUM VITAE

Dipartimento di Scienze Veterinarie
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(an English version and publications follow)

Posizione attuale:
2016 - Professore Associato, SSD Vet/01, Dipartimento di Scienze Veterinarie (Università di Torino)

Altre affiliazioni:
2019- Adjunct Professor, Department of Psychiatry & Neurosciences, Université Laval (Québec, Canada)

Educazione:
2007 Dottorato in Neuroscienze, Dipartimento di Morfofisiologia Veterinaria, Università di Torino.
Titolo della tesi: "Study of peptidergic neurotransmission in the dorsal horn of the spinal cord"
2002 Laurea in medicina veterinaria (DVM), Facoltà di Medicina Veterinaria, Università di Torino

Precendenti esperienze professionali:
2015 – 2018 Visiting Scientist
Centre de recherche CERVO, Québec (QC), Canada
2010 – 2016 Ricercatore
Department of Veterinary Sciences, University of Turin
2008 – 2010 Studente post-dottorato
Centre de Recherche Unversité Laval-Robert-Giffard. Supervisor: Prof. Yves De Koninck, Quebec (QC), Canada
2006 – 2010 Assegnista di Ricerca
Dipartimento di Morfofisiologia Veterinaria, Supervisor: Prof. Adalberto Merighi, Università di Torino
2002 – 2006 Studente di dottorato in Neuroscience
Dipartimento di Morfofisiologia Veterinaria, Supervisor: Prof. Adalberto Merighi, Università di Torino

Borse di studio, riconoscimenti e premi

2015 Mobility grant funded by the People Programme (Marie Curie Actions) of the European Union's Seventh Framework Programme (FP7/2007-2013) under REA grant agreement n°318 997

2014 **Brain Star Award**, CHIR, Canada (1,500 CAN)

2014 Riconoscimento "miglior pubblicazione", Commissione Ricerca del Dipartimento di Scienze Veterinarie (Università di Torino).

2009 **Young Neuroscientist Award**, Eli Lilly/CAN-CAN, Canada (400 CAN)

2009 Student Travel Award, FRSQ/Quebec Pain Research Network, Canada (1,000 CAN)

2008–2010 Assegno di ricerca, cofinanziato Università di Torino e Regione Piemonte, titolo del progetto: "Nervous circuits of spinal nociceptive pathways"

2006–2008 Assegno di ricerca, Università di Torino, titolo del progetto: "Role of somatostatin and its synthetic analogue octreotide in the control of inhibitory neurotransmission in spinal nociceptive pathways"

2002–2006 Borsa del dottorato di ricerca in Neuroscienze. Università di Torino

2001 Borsa Socrates-Erasmus presso: Veterinary High School of Oslo

Relatore su invito:

2022 “Spinal inhibition gating pain modalities: if hot lasts more than hit”. 3rd Pain Mechanisms and Therapeutics Conference, Verona, 3 June 2022.

2021 “Plasticity of inhibition in the dorsal horn: how chloride homeostasis shapes sensory modalities in normal and pathological conditions”, Gulf Coast Consortia, #pain2021 TPR Workshop, 20 August 2021

2019 “Uneven chloride homeostasis across the spinal dorsal horn shapes synaptic plasticity and nociceptive behavior”, Montreal conference on pain circuits, Montreal (Canada), 2 August 2019

2018 “Spinal microglia drives morphine hyperalgesia by disinhibiting nociceptive pathways". 2ndedition “More than neurons – Toward a less neurocentric view of brain disorders", University of Eastern Piedmont, Turin (Italy), 30 November 2018.

2018 “Functional impact of uneven chloride homeostasis across the spinal dorsal horn”. 2nd Pain Mechanisms and Therapeutics Conference, Taormina (Italy), 8 June 2018.

2017 “KCC2: a pharmacological target for morphine-induced hyperalgesia”. 2nd International Neuronline Conference – Turin (Italy) - 24 November 2017

2016 “Investigations on chloride homeostasis in the spinal dorsal horn”. University of Strasbourg (France), 16 September 2016

2016 “Targeting KCC2 to counteract morphine hyperalgesia”. 1st Pain Mechanisms and Therapeutics Conference, Taormina (Italy), 9 June 2016.

2014 “Microglia-mediated alteration of Cl^- homeostasis underlies morphine hyperalgesia”. 8th Annual Canadian Neuroscience Meeting, Montreal (Canada), Brain Star Talks, 27 May 2014.

2013 “Microglia-mediated alteration of Cl^- homeostasis in spinal dorsal horn underlies morphine hyperalgesia”. FENS Featured Regional Meeting, satellite symposium “Neuroinflammation", Prague (Czech Republic), 11 September 2013.

Organizzazione congressi:

2023 Organizzazione Symposium “Spinal mechanisms of pain modulation” (proponente). 20th National Congress of the Italian Society for Neuroscienc Torino 2023 (15 settembre 2023).

2018 72° Congresso SISVet, Torino, 20-22 Giugno 2018 (comitato organizzatore)

2014 XXI Congresso AISAL (Italian Association for Laboratory Animal Sciences), Grugliasco (To) 23-25 Ottobre 2014 (segreteria organizzativa)

Finanziamenti:

Come coordinatore:

2018 - 2019 Funding for basic research activities (FFABR) – Italian Ministry of Health (3000 euro)

2015 - 2016 “Contributo per studio dei meccanismi biologici coinvolti nella neuropatia diabetica”. Richieste Ordinarie CRT 2015 (24 months – 50.000 euro)

2011 - 2013 "Role of ghrelin gene-derived peptides in endocrine, vascular and sensory alterations associated with diabetes mellitus". Progetti di Ricerca di Ateneo - Compagnia San Paolo 2011 (36 months – 223.122 euro)

Come partecipante:

2022 BE-ARCHEO, Horizon 2020, EXCELLENT SCIENCE - Marie Skłodowska-Curie Actions, 823,400 euro

2022 "Alterazioni della sensibilità meccanica dovute a neuropatia diabetica" Richieste Ordinarie CRT 2021 (24 mesi)

2017 “Mesenchymal stem/stromal cell (MSC) regulation of neuroinflammation and nociception”. NC3Rs - (CRACK IT solutions) (UK, 12 mesi – 57,000 euro)

2016 "Identificazione di biomarcatori associati alla morte neuronale indotta da alcol". Ricerca locale – Università di Torino (euro 10,942)

2014 “Circuiti nervosi e meccanismi cellulari associati a disordini neurologici in modelli animali di autismo”. Ricerca locale – Università di Torino (8,348 euro).

2014 NEUREN (Neuroscience Research Exchange Network), 7° FP IRSES (International Research Staff Exchange Scheme) (48 mesi; 304,200 euro).

2013 “BDNF e molecole correlate in modelli animali murini: effetti biologici sulle cellule nervose”. Ricerca locale – Università di Torino (6,750euro).

2012 "Circuiti nervosi e meccanismi cellulari associati allo sviluppo di disordini del sistema nervoso centrale di topi normali e transgenici". Ricerca locale – Università di Torino (11,461euro)

Membro di società scientifiche:

2013 – Membro, Associazione Italiana Morfologi Veterinari (AIMV)

2009 – Membro, International Association for the Study of Pain (IASP)

2006 – Membro, Società Italiana di Neuroscienze (SINS)

2006 – Membro, Federation of European Neuroscience Societies (FENS)

Revisore e attività editoriale:

2023 Revisore per Bando di Ateneo per la ricerca 2023 dell’Università di Parma

2021-2022 Guest Associate Editor per Frontiers in Neural Circuits; Research Topic “CNS Pain Circuits in Health and Disease”

2020- Review associate editor per Frontier in Pain Research

2019- Membro del “Fellowships, Grants, and Awards Working Group” dell’International Association for the Study of Pain (IASP)

2019- Review associate editor per Frontier in Cellular Neurophsyiology

2018 Revisore per VQR 2011-2014 (ANVUR)

2013 Revisore per Agence Nationale de la Recherche (ANR, Francia)

2013 - Revisore di oltre 30 articoli in riviste internazionali, tra cui: *Pain*, *The Journal of Neuroscience*, *Scientific Reports*, *Frontiers in Cellular Neuroscience*, *Molecular Pain*, *PlosOne*, *Neuroscience*, *European Journal of Pharmacology*, *Brain Behavior and Immunity*, *and others*.

Attività didattica

2021- Corso di “anatomia del sistema linfonodale” per la scuola di specialità in ispezione degli alimenti di origine animale, Università di Torino

2018- Corso di “anatomia chirurgica” per la scuola di specialità in patologia e clinica degli animali da compagnia, Università di Torino

2013 - Tutor del Dottorato in Neuroscience, Università di Torino

2010 - Corso di “Anatomia Veterinaria I”(SVE0009), “Anatomia Veterinaria II” (SVE0015) e “Anatomia Applicata” (VET0027) nel Corso di Laurea Magistrale in Medicina Veterinaria, Università di Torino.

Attività di supervisione

2007- Supervisore di 2 Assegnisti (*Dr. Matthew Bradman*, *Dr. Elena Boggio*), co-supervisore of 2 Assegnisti (*Dr. Sangu Muthuraju*, *Dr. Esri Juarez*), 3 studenti di dottorato (*Dr. Ileana Bencivinni*, *Dr. Elisa Ciglieri*, *Dr.ssa Emma Merlin*) e 3 tesisti di laurea (*Arianna Russo*, *Paola Arena*, *Emma Merlin*, *Francesca Crivelli*) presso il Dipartimento di Scienze Veterinarie, Università di Torino. Supervisore di 1 studente di Dottorato (*Emma Merlin*)
Co-mentore di uno studente post-dottorato (*Dr. Martin Cottet*), 3 studenti di dottorato (*Dr. Jimena Perez-Sanchez*, *Ms Isabel Plasencia*) e co-direttore di dottorato di *Samuel Ferland* at Laval University.

Attività di gestionali

2021- Referente/Delegato per l’assicurazione della qualità del Dipartimento di Scienze Veterinarie

2021- *Ambasciatore* Butterlfy Area

2021- Membro della Commissione Didattica del Dipartimento di Scienze veterinarie

2019- Membro della Commissione Biosicurezza del Dipartimento di Scienze Vererinarie

2015-2021 Membro della Commissione Ricerca del Dipartimento di Scienze Veterinarie

Attivita' di terza missione

2023 Fi(na)lmente. Comunicare le scienza. Pillole di Storytelling & Filmmaking (in Cinemambiente).

2019 Notte dei Ricercatori 2019

2017- Premio “Aldo Fasolo” per la divulgazione in Neuroscienze: organizzato dal Dottorato in Neuroscienze. Membro del Comitato scientifico.

2015 - Bambine e Bambini all'Università: organizzato da Città di Torino presso il Dipartimento di Scienze Veterinarie (Grugliasco, TO).

English Version

Current position:

2016 - Associate Professor, Department of Veterinary Sciences (University of Turin)

Other affiliations:

2019- Adjunct Professor, Department of Psychiatry & Neurosciences, Université Laval (Québec, Canada)

Education:

2007 PhD in Neuroscience, Department of Veterinary Morphophysiology, University of Turin
Thesis title: "Study of peptidergic neurotransmission in the dorsal horn of the spinal cord"

2002 Degree in Veterinary Medicine (DVM), Faculty of Veterinary Medicine, University of Turin

Previous professional and academic appointments:

2015 – 2018 Visiting Scientist
Centre de recherche CERVO, Québec (QC), Canada

2010 – 2016 Assistant Professor
Department of Veterinary Sciences, University of Turin

2008 – 2010 Post-Doctoral Fellow
Centre de Recherche Unversité Laval-Robert-Giffard. Supervisor: Prof. Yves De Koninck, Quebec (QC), Canada

2006 – 2010 Research Fellow
Department of Veterinary Morphophysiology, Supervisor: Prof. Adalberto Merighi, University of Turin

2002 – 2006 PhD Student in Neuroscience
Department of Veterinary Morphophysiology, Supervisor: Prof. Adalberto Merighi, University of Turin

Research awards, fellowships and honours

2022 Mobility grant funded by Excellent Science - Marie Skłodowska-Curie Actions of the European H2020 under REA Grant agreement n° 823826

2021 Delegate for the Department of Veterinary Science for Butterfly Area

2021 Delegate for the Department of Veterinary Science for Quality Assurance

2015 Mobility grant funded by the People Programme (Marie Curie Actions) of the European Union's Seventh Framework Programme (FP7/2007-2013) under REA grant agreement n°318 997(11700 Euro)

2014 **Brain Star Award**, CHIR, Canada (1,500 CAN)

2014 Best Publication Award, Research Commission of the Dept of Veterinary Sciences.

2009 **Young Neuroscientist Award**, Eli Lilly/CAN-CAN, Canada (400 CAN)

2009 Student Travel Award, FRSQ/Quebec Pain Research Network, Canada (1,000 CAN)

2008–2010 Research Fellowship, Agency: University of Turin and Regione Piemonte, project title: "Role of somatostatin and its synthetic analogue octreotide in the control of inhibitory neurotransmission in spinal nociceptive pathways" (38,404 Euro)

2006–2008 Research Fellowship, project title: "Nervous circuits of spinal nociceptive pathways", Agency: University of Turin, Department of Veterinary Morphophysiology, (21,517 Euro)

2002–2006 PhD Studentship grant. Agency: University of Turin (42,246 Euro)

2001 Socrates-Erasmus scholarship at Veterinary High School of Oslo (900,000 Lire)

Invited speaker:

2022 "Spinal inhibition gating pain modalities: if hot lasts more than hit". 3rd Pain Mechanisms and Therapeutics Conference, Verona, 3 June 2022.

2021 “Plasticity of inhibition in the dorsal horn: how chloride homeostasis shapes sensory modalities in normal and pathological conditions”, Gulf Coast Consortia, #pain2021 TPR Workshop, 20 August 2021

2019 “Uneven chloride homeostasis across the spinal dorsal horn shapes synaptic plasticity and nociceptive behavior”, Montreal conference on pain circuits, Montreal (Canada), 2 August 2019

2018 “Spinal microglia drives morphine hyperalgesia by disinhibiting nociceptive pathways". 2nd edition “More than neurons – Toward a less neurocentric view of brain disorders", University of Eastern Piedmont, Turin (Italy), 30 November 2018.

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2017 “KCC2: a pharmacological target for morphine-induced hyperalgesia”. 2nd International Neuronline Conference – Turin (Italy) - 24 November 2017

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2014 “Microglia-mediated alteration of Cl^- homeostasis underlies morphine hyperalgesia”. 8th Annual Canadian Neuroscience Meeting, Montreal (Canada), Brain Star Talks, 27 May 2014.

2013 “Microglia-mediated alteration of Cl^- homeostasis in spinal dorsal horn underlies morphine hyperalgesia”. FENS Featured Regional Meeting, satellite symposium “Neuroinflammation", Prague (Czech Republic), 11 September 2013.

Conference organization:

2023 Symposium “Spinal mechanisms of pain modulation” (proponente). 20th National Congress of the Italian Society for Neuroscience Torino 2023 (15 settembre 2023).

2018 72° SISVet meeting, Torino, 20-22 Giugno 2018 (organizzative board)

2014 XXI AISAL meeting (Italian Association for Laboratory Animal Sciences), Grugliasco (To) 23-25 Ottobre 2014 (organizzative secretariat)

Grants:

As PI:

2018 - 2019 Funding for basic research activities (FFABR) – Italian Ministry of Health (3000 euro)

2015 - 2016 “Contributo per studio dei meccanismi biologici coinvolti nella neuropatia diabetica”. Richieste Ordinarie CRT 2015 (24 months – 50,000 euro)

2011 - 2013 "Role of ghrelin gene-derived peptides in endocrine, vascular and sensory alterations associated with diabetes mellitus". Progetti di Ricerca di Ateneo - Compagnia San Paolo 2011 (36 months – 223,122 euro)

As participant:

2022 "Alterazioni della sensibilità meccanica dovute a neuropatia diabetica". CRT 2022 (Co-PI; 24 months, 30,000 euro)

2022 “BeArcheo” MSCA-RISE-2018 - Research and Innovation Staff Exchange, H2020 (54 months; 823,400 euro).

2017 "Regolazione della Neuroinfiammazione e della nocicezione da parte di cellule mesenchimali staminali o stromali" Local grants – University of Turin (euro 15,418)

2017 “Mesenchymal stem/stromal cell (MSC) regulation of neuroinflammation and nociception”. NC3Rs - (CRACK IT solutions) (UK, 12 mesi – 57,000 euro)

2016 "Identificazione di biomarcatori associati alla morte neuronale indotta da alcol". Local grants – University of Turin (euro 10,942)

2014 “Circuiti nervosi e meccanismi cellulari associati a disordini neurologici in modelli animali di autismo”. Local grants – University of Turin(8,348 euro).

2014 NEUREN (Neuroscience Research Exchange Network), 7° FP IRSES (International Research Staff Exchange Scheme) (48 months; 304,200 euro).

2013 “BDNF e molecole correlate in modelli animali murini: effetti biologici sulle cellule nervose”. Local grants – University of Turin (6,750euro).

2012 "Circuiti nervosi e meccanismi cellulari associati allo sviluppo di disordini del sistema nervoso centrale di topi normali e transgenici". Local grants – University of Turin (11,461euro)

Memberships:

2021- Member of the Teaching Commission at the Department of Veterinary Science
2013 – Member, Associazione Italiana Morfologi Veterinari (AIMV)
2009 – Member, International Association for the Study of Pain (IASP)
2006 – Member, Società Italiana di Neuroscienze (SINS)
2006 – Member, Federation of European Neuroscience Societies (FENS)

Reviewer and Editorial activity:

2023 Reviewer for the research grant of the University of Parma
2021-2022 Guest Associate Editor per Frontiers in Neural Circuits; Research Topic "CNS Pain Circuits in Health and Disease"
2020 - Review associate editor for Frontiers in Pain Research
2019 - Member of the "Fellowships, Grants, and Awards Working Group" of International Association for the Study of Pain (IASP)
2019 Review associate editor for Frontier in Cellular Neurophsyiology
2018 Reviewer for the Italian agency for research evaluation (ANVUR)
2013 Reviewer for the french National Research Agency (ANR)
2013 - Reviewer for over 20 articles in different international journal including : *Pain*, *The Journal of Neuroscience*, *Scientific Reports*, *Frontiers in Cellular Neuroscience*, *Molecular Pain*, *PlosOne*, *Neuroscience*, *European Journal of Pharmacology*, *Brain Behavior and Immunity*, *and others*.

Teaching activity

2021- Course of "Lymphatic system anatomy" in the postgraduate specialization school of "Inspection of food of animal origin", University of Turin
2019- PhD Course in Neuroscience "From neural cell excitability to brain circuit recording, visualization and manipulation"
2018- Course of "Surgical Anatomy" in the postgraduate specialization school of "Pathology and Clinics of Companion Animals", University of Turin
2012 - Tutor of the PhD programme in Neuroscience, University of Turin
2010 - Courses of "Veterinary Anatomy" and "Applied Anatomy" in the Veterinary Medicine Degree Programme, University of Turin

Mentorship

2007- Supervisor of 2 Postdocs (*Dr. Matthew Bradman*, *Dr. Elena Boggio*), and co-supervisor of 2 Postdocs (*Dr. Sangu Muthuraju*, *Dr. Esri Juarez*), 2 PhD students (*Dr. Ileana Bencivinni*, *Dr. Elisa Ciglieri*) and 4 Master students (*Dr. Arianna Russo*, *Ms Emma Merlin*, *Ms Paola Arena*, *Ms Francesca Crivelli*) at the Department of Veterinary Sciences, University of Turin.
Co-mentor of 1 Postdoc (*Dr. Martin Cottet*), 3 PhD students (*Dr. Jimena Perez-Sanchez*, *Ms Isabel Plasencia*, *Samuel Ferland*) at Laval University.

Publications

Articles:

1) Salio C, Lossi L, **Ferrini F**, Merighi A. Ultrastructural Evidence for a Pre- and Postsynaptic Localization of Full-Length TrkB Receptors in Substantia Gelatinosa (Lamina II) of Rat and Mouse Spinal Cord. Eur J Neurosci 2005; 22(8): 1951-66.

2) Salio C, Lossi L, **Ferrini F**, Merighi A. Neuropeptides As Synaptic Transmitters. Cell Tissue Res 2006; 326(2): 583-98.

3) **Ferrini F**, Salio C, Vergnano AM, Merighi A. Vanilloid Receptor-1 (TRPV1)-Dependent Activation of Inhibitory Neurotransmission in Spinal Substantia Gelatinosa Neurons of Mouse. Pain 2007, 129(1-2):195-209. (Cover Picture)

4) Merighi A, Bardoni R, Salio C, Lossi L, **Ferrini F**, Prandini M, Zonta M, Gustincich S, Carmignoto G. Presynaptic functional trkB receptors mediate the release of excitatory neurotransmitters from primary afferent terminals in lamina II (substantia gelatinosa) of postnatal rat spinal cord. Developmental Neurobiology. 2008, Mar;68(4):457-75.

5) Vergnano AM, **Ferrini F**, Salio C, Lossi L, Baratta M, Merighi A. The gastrointestinal hormone ghrelin modulates inhibitory neurotransmission in deep laminae of mouse spinal cord dorsal horn. Endocrinology. 2008, May;149(5):2306-12.

6) Merighi A, Salio C, Ghirri A, Lossi L, **Ferrini F**, Betelli C, Bardoni R. BDNF as a pain modulator. Progress in Neurobiology 2008, Jul;85(3):297-317. (Cover picture)

7) **Ferrini F**, Salio C, Lossi L and Merighi A. Ghrelin in Central Neurons. Current Neuropharmacology. 2009, Aug; 7: 37-49.

8) Lossi L, Gambino G , **Ferrini F**, Alasia S, Merighi A. Posttranslational regulation of BCL2 levels in cerebellar granule cells: A mechanism of neuronal survival. Developmental Neurobiology. 2009, Nov; 69(13):855-70.

9) **Ferrini F**, Salio C, Lossi L, Gambino G, Merighi A. Modulation of inhibitory neurotransmission by the vanilloid receptor type 1 (TRPV1) in organotypically cultured mouse *substantia gelatinosa* neurons. Pain. 2010 Jul;150(1):128-40.

10) Bencivinni I, **Ferrini F**, Salio C, Beltramo M, Merighi A. The somatostatin analogue octreotide inhibits capsaicin-mediated activation of nociceptive primary afferent fibres in spinal cord lamina II (substantia gelatinosa). European Journal of Pain. 2011 Jul;15(6):591-9.

11) Merighi A, Salio C, **Ferrini F**, Lossi L. Neuromodulatory function of neuropeptides in the normal CNS. J Chem Neuroanat. 2011 Dec;42(4):276-87.

12) **Ferrini F,** Trang T, Mattioli TA, Laffray S, Del'guidice T, Lorenzo LE, Castonguay A, Doyon N, Zhang W, Godin AG, Mohr D, Beggs S, Vandal K, Beaulieu JM, Cahill CM, Salter MW, De Koninck Y. Morphine hyperalgesia gated through microglia-mediated disruption of neuronal Cl(-) homeostasis. Nat Neurosci. 2013 Feb;16(2):183-92.

13) Doyon N, **Ferrini** F, Gagnon M, De Koninck Y. Treating pathological pain: is KCC2 the key to the gate? Expert Rev Neurother. 2013 May;13(5):469-71.

14) **Ferrini F**, De Koninck Y. Microglia control neuronal network excitability via BDNF signalling. Neural Plast. 2013; 2013:429815.

15) **Ferrini F**, De Koninck Y. Role of spinal microglia in the development of morphine-induced hyperalgesia. Targeting Trends. 2013; 14(4), p.1,6.

16) **Ferrini F**, Russo A, Salio C. Fos and pERK immunoreactivity in spinal cord slices: Comparative analysis of in vitro models for testing putative antinociceptive molecules. Ann Anat. 2014 Jul;196(4):217-23.

17) Salio C, **Ferrini F,** Muthuraju S, Merighi A. Presynaptic Modulation of Spinal Nociceptive Transmission by Glial Cell Line-Derived Neurotrophic Factor (GDNF). J Neurosci. 2014 Oct 8;34(41):13819-33.

18) Bradman MJG, **Ferrini F**, Salio C, Merighi A. Practical mechanical threshold estimation in rodents using von Frey hairs/Semmes-Weinstein monofilaments: Towards a rational method. J Neurosci Methods. 2015 Nov 30;255:92-103.

19) Salio C, **Ferrini F**. BDNF and GDNF expression in discrete populations of nociceptors. Ann Anat. 2016 Sep;207:55-61

20) Ciglieri E**, Ferrini F**, Boggio E, Salio C. An improved method for in vitro morphofunctional analysis of mouse dorsal root ganglia. Ann Anat. 2016 Sep;207:62-7.

21) Juif PE, Salio C, Zell V, Melchior M, Lacaud A, Petit-Demouliere N, **Ferrini F**,Darbon P, Hanesch U, Anton F, Merighi A, Lelièvre V, Poisbeau P. Peripheral and central alterations affecting spinal nociceptive processing and pain at adulthood in rats exposed to neonatal maternal deprivation. Eur J Neurosci. 2016 Aug;44(3):1952-62**.**

22) **Ferrini F**, Lorenzo LE, Godin AG, Quang ML, De Koninck Y. Enhancing KCC2 function counteracts morphine-induced hyperalgesia. Sci Rep. 2017 Jun 20;7(1):3870.

23) **Ferrini F**, Dering B, De Giorgio A, Lossi L, Granato A. Effects of Acute Alcohol Exposure on Layer 5 Pyramidal Neurons of Juvenile Mice. Cell Mol Neurobiol. 2018 May;38(4):955-963.

24) Lorenzo LE*, Godin AG*, **Ferrini F**, Bachand K, Plasencia-Fernandez I, Labrecque S, Girard A, Boudreau D, Kianicka I, Gagnon M, Doyon N, Ribeiro-da-Silva A, De Koninck Y. Enhancing neuronal chloride extrusion rescues α2/α3GABAA-mediated analgesia in neuropathic pain. Nature Communications 2020. 11 (1), 1-23.). * Co-first authors

25) **Ferrini F***, Perez-Sanchez J*, Ferland S, Lorenzo LE, Godin AG, Plasencia-Fernandez I, Cottet M, Castonguay A, Wang F, Salio C, Doyon N, Merighi A, De Koninck Y. Differential chloride homeostasis in the spinal dorsal horn locally shapes synaptic metaplasticity and modality-specific sensitization. Nat Commun. 2020 Aug 7;11(1):3935. * Co-first authors

26) Ciglieri E, Vacca M, **Ferrini F**, Atteya MA, Aimar P, Ficarra E, Di Cataldo S, Merighi A, Salio C. Cytoarchitectural analysis of the neuron-to-glia association in the dorsal root ganglia of normal and diabetic mice. J Anat. 2020 237 (5), 988-997.

27) Carozzi VA, Salio C, Rodriguez-Menendez V, Ciglieri E, **Ferrini F**. 2D vs 3D morphological analysis of dorsal root ganglia in health and painful neuropathy. Eur J Histochem. 2021 Oct 19;65(s1):3276.

28) Wood CR, Juárez EH, **Ferrini F**, Myint P, Innes J, Lossi L, Merighi A, Johnson WEB. Mesenchymal stem cell conditioned medium increases glial reactivity and decreases neuronal survival in spinal cord slice cultures. Biochem Biophys Rep. 2021 26:100976. doi: 10.1016/j.bbrep.2021.100976.

29) **Ferrini F**, Salio C, Boggio EM, Merighi A. Interplay of BDNF and GDNF in the Mature Spinal Somatosensory System and Its Potential Therapeutic Relevance. Curr Neuropharmacol. 2021;19(8):1225-1245.

30) Paige C, Plasencia-Fernandez I, Kume M, Papalampropoulou-Tsiridou M, Lorenzo LE, David ET, He L, Mejia GL, Driskill C, **Ferrini F**, Feldhaus AL, Garcia-Martinez LF, Akopian AN, De Koninck Y, Dussor G, Price TJ. A Female-Specific Role for Calcitonin Gene-Related Peptide (CGRP) in Rodent Pain Models. J Neurosci. 2022 Mar 9;42(10):1930-1944. (Cover Picture).

31) **Ferrini F**, Goldstein PA, Labrakakis C. Editorial: CNS pain circuits in health and disease. Front Neural Circuits. 2022 Aug 12;16:977404.

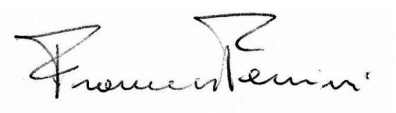
32) Juárez EH, Wood CR, Davies R, Kehoe O, Johnson WEB, Merighi A, **Ferrini F**. ST2-conditioned medium fosters dorsal horn cell excitability and synaptic transmission in cultured mouse spinal cord. Stem Cell Reviews and Reports.

33) Ferland S, Wang, F, De Koninck Y, **Ferrini F**. An improved conflict avoidance assay reveals modality-specific differences in pain hypersensitivity across sexes. Pain. In Press

34) **Ferrini F**; Juárez EH; Adalberto, Merighi. Does mesenchymal stem cell's secretome affect spinal sensory circuits? Implication for pain therapies. Neural Regeneration Research. Accepted

Book chapters:

1) Labrakakis C, **Ferrini F**, De Koninck Y. Mechanisms of plasticity of inhibition in chronic pain conditions. Chapter book in: Inhibitory Synaptic Plasticity. Woodin MA, Maffei A (eds). Springer (2010).

2) **Ferrini F**, Salio C, Merighi A. Microglia-to-neuron communication in spinal nociceptive pathways. Chapter book in: Microglia: Biology, Functions and Roles in Disease. Kaur C, Ling EA (eds). Nova Publisher (2012).

3) **Ferrini F**, De Koninck Y. ini, F; De Koninck, Y. Rôle des mécanismes de désinhibition dans l'expression douloureuse. Melchior M, Poisbeau, P. Manuel de médecine de la douleur. Submitted, Editions DUNOD, France. *Submitted*