UNIVERSITÀ LUM GIUSEPPE DEGENNARO

Prof.ssa Maria Cristina D'ADAMO *Pharm.D., Ph.D.*

Professore Associato di Fisiologia, S.S.D. BIO/09

Dipartimento di Medicina e Chirurgia

UNIVERSITÀ LUM GIUSEPPE DEGENNARO

S.S. 100 KM 18 – 70010, CASAMASSIMA (BA), ITALIA

Telefono: +393925645119
E-mail: dadamo@lum.it; coordinatore.med@lum.it
ORCID: https://orcid.org/0000-0002-6758-6064
Google Scholar:
https://scholar.google.com/citations?user=rpmZnHgAAAAJ&hl=en

POSIZIONE ATTUALE

PROFESSORE ASSOCIATO DI FISIOLOGIA, S.S.D. BIO/09

DIPARTIMENTO DI MEDICINA E CHIRURGIA

UNIVERSITÀ LUM GIUSEPPE DEGENNARO

COORDINATORE DEL CORSO DI LAUREA MAGISTRALE A CICLO UNICO IN MEDICINA E CHIRURGIA-LM-41;

COORDINATORE DELL`ATTIVITA` DIDATTICA DEL CORSO DI LAUREA MAGISTRALE A CICLO UNICO IN MEDICINA E CHIRURGIA-LM-41 COORTE 2022-23;

COORDINATORE DELL`ATTIVITA` DIDATTICA DI TIROCINIO I, CORSO DI LAUREA MAGISTRALE A CICLO UNICO IN MEDICINA E CHIRURGIA-LM-41 COORTE 2021-22 E 2022-23.

Scientific collaborator of Tommy Fuss Center for Neuropsychiatric Disease Research

Department of Psychiatry, Boston Children's Hospital
Harvard Medical School
300 Longwood Avenue, Boston, MA 02115-5724, USA.
http://www.childrenshospital.org/research-and-innovation/research/centers/tommy-fuss-center/investigators-collaborators

ESPERIENZA LAVORATIVA

1.09.2016 - 31.08.2021 — **Ricercatore a tempo determinato**
Department of Physiology & Biochemistry
Faculty of Medicine & Surgery, University of Malta,Msida, MALTA.

AA 2019/2020 — **Professore a Contratto di Fisiologia**
Corso di Laurea in Ostetricia e Ginecologia, Facolta' di Medicina e Chirurgia
Universita' di Perugia, Italia.

01.12.2014 - 31.08.2016 — **Telethon Scientist e Group Leader,**
Sezione di Fisiologia e Biochimica, Dipartimento di Medicina Sperimentale, Facolta' di Medicina e Chirurgia, Universita' di Perugia, Italia.

24.11.2009 - 30.11.2014 — **Post-Doctoral Fellow,**
Dipartimento di Medicina Sperimentale, Facolta' di Medicina e Chirurgia, Universita' di Perugia, Italia.

Luglio 2011 — **Visiting Scientist**, (Prof. Mario Valentino, adviser)
Department of Physiology & Biochemistry
Faculty of Medicine & Surgery, University of Malta, Msida, MALTA.

01.07.1997-30.09.1997 — **Visiting Fellow**, (Prof. John P. Adelman, supervisor)
Vollum Institute for Advanced Biomedical Research
Oregon Health & Science University Portland, OR, U.S.A.

1991-2003 — **Research Fellow** (Prof. Maria Benedetta Donati, supervisor)
Istituto di ricerche farmacologiche e Biomediche "Mario Negri", CMNS, S. Maria Imbaro (CH) ITALY.

ISTRUZIONE E FORMAZIONE

2022 — **Abiblitazione Scientifica Nazionale come Professore di I fascia S.S.D. Bio/09 (Fisiologia)** (https://asn21.cineca.it/pubblico/miur/esito-abilitato/05%252FD1/1/2).

2017 — **Abiblitazione Scientifica Nazionale come Professore di II fascia S.S.D. Bio/09 (Fisiologia)** (https://asn16.cineca.it/pubblico/miur/esito-abilitato/05%252FD1/2/2).

2011 — **Titolo di "Cultore della Materia" in Fisiologia**. Facolta' di Medicina e Chirurgia, Universita' di Perugia, Italia.

2011 — **Membro della commissione d`esame di Fisiologia** per la Facolta' di Medicina e Chirurgia, Universita' di Perugia, Italia.

2010 **Dottorato di Ricerca in Neurofisiologia ed Elettrofisiologia**. Titolo della tesi: *"Role of delayed-rectifying and inwardly-rectifying K^+ channels in channelopathies"*. Relatore Prof. Vito Enrico Pettorossi. Facolta' di Medicina e Chirurgia, Universita' di Perugia, Italia.

2006 **Laurea Magistrale in Farmacia.** Titolo della tesi: *"Pathophysiological role of Kv1.1 potassium channels in the development of Episodic Ataxia type 1"*. Relatore Prof. Stefania Fulle. Universita' "Gabriele D'Annunzio" di Chieti, Facolta` di Farmacia, ITALIA.

APPARTENENZA A SOCIETA` SCIENTIFICHE

Membro della Societa` Italiana di Fisiologia

Member of the Mediterranean Neuroscience Society

Member of the Malta Neuroscience Network, Faculty of Medicine and Surgery, University of Malta

ATTIVITA` DIDATTICA

2021-2023

Insegnamenti Universita` LUM Giuseppe Degennaro

Corso di laurea magistrale a ciclo unico in Medicina e chirurgia
1° Anno: Metodologia della Ricerca *(a.a. 2021/2022)*
2° Anno: Neurofisiologia
2° Anno:Fisiologia Umana

Corso di laurea in Infermieristica *a.a. 2022/2023*
1° Anno:Fisiologia

2019-2020

Lezioni teoriche di Fisiologia *tenute in qualita` di Professore a contratto per il corso di laurea in Ostetricia e Ginecologia, Facolta` di Medicina e Chirurgia, Universita' di Perugia, Italia.*

2018-2021

Insegnamenti Universita` di Malta:
Faculty of Medicine & Surgery

1. Doctor of Medicine and Surgery
    - Study-Unit CODE MDS1013, Organisation of the Body (https://www.um.edu.mt/courses/studyunit/MDS1013)
2. Bachelor of Science (Honours) in Medical Biochemistry
    - Study-Unit CODE PHB1504, Model Organisms in Biological Research (https://www.um.edu.mt/courses/studyunit/PHB1504)
    - Study-Unit CODE PHB3503, From Molecular to Translational Neuroscience

Faculty of Health Sciences

1. Bachelor of Science (Honours) in Physiotherapy
2. Bachelor of Science (Honours) in Physics, Medical Physics and Radiation Protection
3. Bachelor of Science (Honours) in Communication Therapy
    - Study-Unit CODE PHB2015, Neurophysiology

2010 - 2016

Lezioni pratiche (Misurazione della Pressione Arteriosa, ECG e Spirometria)
Corso di Laurea Magistrale in Medicina e Chirurgia, Universita' di Perugia, Italia.

2010 - 2016

Lezioni teoriche di Fisiologia Generale e Umana
Corso di Laurea in Biotecnologie (B.Sc.) e Master in Biotecnologie, Facolta` di Medicina e Chirurgia Universita' di Perugia, Italia.

2010 – 2016

Supporto alla Didattica ed assistenza agli studenti
Corso di Laurea in Biotecnologie (B.Sc.) e Master in Biotecnologie, Facolta` di Medicina e Chirurgia Universita' di Perugia, Italia.

2010 - 2013

Lezioni teoriche di Fisiologia Generale e Umana
Corso di Laurea Magistrale in Medicina e Chirurgia, Universita' di Perugia, Italia.

ATTIVITA` EDITORIALE

MEMBRO DELL`EDITORIAL BOARD

Frontiers in Cellular Neuroscience Archive (**Associate Editor**);

Frontiers in Pharmacology (**Associate Editor**)*: Pharmacology of Ion Channels and Channelopathies*;

Frontiers in Cellular Neurophysiology (**Associate Editor and Review Editor**);

International Journal of Neurology Research.

Frontiers in Physiology (**Guest Associate Editor**). *Research Topic:* "**Ion Channels: from Physiology to Channelopathies**";
http://www.frontiersin.org/people/MariaD_Adamo/111624/researchtopic

International Journal of Molecular Sciences **(Special Issue Editor)**:
"**Implication of Ion Channels in Neurodevelopmental Disorders**";
https://www.mdpi.com/journal/ijms/special_issues/IonChannel_NeuroDisorder

REFEREE DI GIORNALI SCIENTIFICI

- Nature Genetics
- Nature: Scientific Reports
- Journal of Pharmacological Sciences, ELSEVIER
- Current Drug Metabolism
- Epilepsy Research
- British Journal of Pharmacology
- Pflügers Archiv - European Journal of Physiology

PREMI E RICONOSCIMENTI

1998 "Alfredo Leonardi Prize for Rare Disease".

1998 Fellowship from the "Gustavus and Louise Pfeiffer Research Foundation" (Denville, N.J., U.S.A.) and "Alfredo Leonardi Fund".

1998 *Principal Success of Telethon's Research Award* (April 1998, *Cell Biology*) for the results obtained and published in the paper D'Adamo *et al.,* 1998.

1999 Front cover figure of *FEBS lett.* Vol. 449

2001 Front cover figure of *J. Physiol.* (*London*) Vol. 532.2.

2008 Front cover figure of *Neuroscience* Vol. 157.

External Reviewer Corsi di Master e Dottorato

Master of Science in Biochemistry, Department of Physiology and Biochemistry, University of Malta

External examiner AA 2021-22

Dissertation tile: "Defining a differentiation cocktail for generation of Dopaminergic Neurons using small molecules and spent media from SH-SY5Y cells and LUHMES cells".

Candidate: Ms. Deborah Warrington.

DOTTORATO DI RICERCA IN MEDICINA MOLECOLARE

Università degli Studi di Roma "La Sapienza", Facoltà di Medicina e Chirurgia

XXXIII ciclo del corso di Dottorato Anno Accademico 2019/2020

Ph.D. thesis "HUNTINGTON DISEASE: NEW INSIGTHS INTO PATHOGENESIS AND TREATMENT." Applicant Dr. Alba Di Pardo

EXTERNAL REVIEWER DI PROGETTI DI RICERCA

Referee for **ATAXIA UK,** the medical research charity based in London (www.ataxia.org.uk).

Referee for the **German Federal Ministry for Education and Research** (BMBF). Research funding: "Translational consortia for rare disease research". (http://www.dlr.de/pt/Portaldata/45/Resources/Dokumente/call_text_short_2018.pdf)

Member of **REPRISE** (Register of scientific experts established by the **Ministry of Education and Research,** ITALY).

Evaluator of Research Projects of National Relevance (PRIN), **Ministry of Education and Research**, ITALY.

Evaluator of intramural grant proposals for the **University of Eastern Piedmont "Amedeo Avogadro**", ITALY

FINANZIAMENTI OTTENUTI COME PRINCIPAL COLLABORATOR DEL PI

***Grant** awarded by **TELETHON**. "Functional Determinants of Episodic Ataxia/Myokymia Syndrome" (amount awarded 120.000 €).*

***Grant** awarded by **COMPAGNIA di San Paolo (Turin),** Neuroscience Program "Role of Potassium Channels of the Brain in Health and Disease" (amount awarded 100.000 €).*

***Grant** awarded by **COMPAGNIA di San Paolo (Turin)**, "Study of the pathogenic mechanisms of EA1" (amount awarded 61.000 €).*

***Grant** awarded by **TELETHON** (n. GGP11188). "Role of astrocytic inwardly−rectifying K^+ channels in the pathogenesis of Autism Spectrum Disorders with susceptibility to seizures (Autism−Epilepsy Phenotype)" (amount awarded 145.000 €).*

***Grant** awarded by **University of Malta, Research Excellence 2020**: "Role of the interplay between abnormal K^+ channel gene, gut microbiota and brain function in the genesis of autism", amount awarded 60.000 €.*

***Grant** awarded by the **Malta Council of Science and Technology**, **2020**: "Boosting K^+ channels in neurological diseases", amount awarded 230.000 €.*

PARTECIPAZIONE A SEMINARI E CONGRESSI

26 Febraio, 2018	"Implications of Kir channels in autism spectrum disorders." Invited by Prof. Chiarotti Lorenzo, Department of Molecular Medicine and Medical Biotechnology, University of Naples "Federico II". Seminar
12-15 Giugno, 2017	"Ion channels and disease" VI° MNS "Mediterranean Neuroscience Society", Malta. Chairperson
3-5 Dicembre, 2015	"Implication of inwardly-rectifying K^+ channels in the pathogenesis of autism" IX° Malta Medical School Conference, Hilton Malta Hotel, St. Julians, Malta. Oral Presentation
12-15 Giugno, 2015	"K^+ Channels: structure-function features, physiological roles and channelopathies". MNS 2015 - 5th Conference of the Mediterranean Neuroscience Society, Cagliari, Italy Chair Prof. Giacomo Rizzolatti (invited speaker).
28 Settembre-1 Ottobre, 2014	64°Conference of the Italian Society of Physiology (SIF), Capri (Naples). Oral Presentation.
21 Settembre, 2006	"Effect of ERG Channels on Medial Vestibular Neurons activity" Coordinator Prof. G. Orlando, "G. D'Annunzio " University of Chieti. Seminar
13 Aprile, 2006	"Pathophysiological role of Kv1.1 Potassium Channels in the onset of Episodic Ataxia type 1" Coordinator Prof. S.Fulle, "G. D'Annunzio " University of Chieti. Seminar
15 Aprile, 1998	"Molecular determinants of Episodic Ataxia Type 1: a Shaker-like syndrome associated with potassium channels dysfunction", Mario Negri Institute, Santa Maria Imbaro CMNS (Chieti). Seminar
30 Settembre-3 Ottobre, 1997	Conference of the Italian Society of Biophysics and Molecular Biology (ABCD) Montesilvano Lido (EP). Oral Presentation.
26-30 Giugno, 1994	XIII National Meeting of the Italian Society for the Study of Haemostasis and Thrombosis (SISET) Lanciano (CH). Oral Presentation

Principali Collaboratori

Prof. Stephen J. Tucker, Professor of Biophysics, University of Oxford, OX1 3PT, UK. stephen.tucker@physics.ox.ac.uk

Prof. Joseph Gonzalez-Heydrich, Professor of Psychiatry, HARVARD MEDICAL SCHOOL, USA. Joseph.Gonzalez-Heydrich@childrens.harvard.edu

Prof Thomas Klopstock, Professor of Neurology, Ludwig-Maximilians-University of Munich, Germany. thomas.klopstock@med.uni-muenchen.de

Dr. Elena Ambrosini, Department of Cell Biology and Neuroscience, ISS, Italy. elena.ambrosini@iss.it

PUBBLICAZIONI SU RIVISTE INTERNAZIONALI

(I.F. collected at the date of publication)

1. Brignone MS, Lanciotti A, Michelucci A, Mallozzi C, Camerini S, Catacuzzeno L, Sforna L, Caramia M, **D'Adamo MC**, Ceccarini M, Molinari P, Macioce P, Macchia G, Petrucci TC, Pessia M, Visentin S, Ambrosini E. The CaMKII/MLC1 Axis Confers Ca^{2+}-Dependence to Volume-Regulated Anion Channels (VRAC) in Astrocytes. **Cells**. 2022 Aug 26;11(17):2656. doi: 10.3390/cells11172656. **(I.F. 7.67)**.

2. Dinoi G, Morin M, Conte E, Mor Shaked H, Coppola MA, **D'Adamo MC**, Elpeleg O, Liantonio A, Hartmann I, De Luca A, Blunck R, Russo A, Imbrici P. Clinical and (2022) Functional Study of a De Novo Variant in the PVP Motif of Kv1.1 Channel Associated with Epilepsy, Developmental Delay and Ataxia. **Int J Mol Sci**. Jul 22;23(15):8079. doi: 10.3390/ijms23158079. **(I.F. 6.2)**.

3. Zanni G., Conte E., Blunck R., Liantonio A., Stregapede F., Tosi M., **D'Adamo M.C.,** Brankovic V., Imbrici P. (2021) A novel *KCNA2* variant in a patient with nonprogressive congenital ataxia and epilepsy: functional characterization and sensitivity to 4-aminopyridine. **Int. J. Mol. Sci.,** Sep 14;22(18):9913. doi: 10.3390/ijms22189913 **(I.F. 5.9)**.

4. Pavinato L., Nematian-Ardestani E., Zonta A., De Rubeis S., Buxbaum J., Mancini C., Bruselles A., Tartaglia M., Pessia M., Tucker S.J., **D'Adamo M.C.*,** Brusco A.* (2021) *KCNK18* Biallelic Variants Associated with Intellectual Disability and Neurodevelopmental Disorders Alter TRESK Channel Activity. **Int. J. Mol. Sci.,** 22 (11) doi.org/10.3390/ijms22116064 (*co-correspondence) **(I.F. 5.9)**.

5. Poli G., Hasan S., Belia S., Cenciarini M., Tucker S., Imbrici P., Shehab S., Pessia M., Brancorsini S., **D'Adamo M.C.** (2021) *Kcnj16* (Kir5.1) Gene Ablation Causes Subfertility and Increases the Prevalence of Morphologically Abnormal Spermatozoa **Int. J. Mol. Sci.,** 22 (11) doi.org/10.3390/ijms22115972 **(I.F. 5.9).**

6. Imbrici P., Accogli A., Blunck R., Altamura C., Iacomino M., **D'Adamo M.C.**, Allegri A., Pedemonte M., Brolatti N., Vari S., Cataldi M., Capra V., Gustincich S., Zara F., Desaphy J.F., Fiorillo C. (2021). Musculoskeletal features without ataxia associated to a novel *de novo* mutation in *KCNA1* impairing the voltage sensitivity of Kv1.1 channel. **Biomedicines** 9(1), 75; https://doi.org/10.3390/biomedicines9010075 (**I.F. 6.08**).

7. Mubashir S., Farrugia M., Coretti L., Pessia M. and **D'Adamo M.C**. (2020). AUTISM SPECTRUM DISORDER. **Malta Medical Journal,** 32 (3) December 2020.

8. Hasan S., Megaro A., Cenciarini M., Imbrici P., Coretti L., Botti F.M., Steinbusch H., Hunter T., Hunter G., Pessia M. and **D'Adamo M.C.** (2020). Electromechanical coupling of the Kv1.1 voltage-gated K^+ channel is fine-tuned by the simplest amino acid residue in the S4-S5 linker. **Springer NATURE** - ***Pflügers Archiv - European Journal of Physiology*** DOI:10.1007/s00424-020-02414-0. **(I.F. 3.29)**.

9. **D'Adamo M.C.,** Liantonio A., Rolland J.F., Pessia M., Imbrici P. (2020). Kv1.1 Channelopathies: Pathophysiological Mechanisms and Therapeutic Approaches. **Int. J. Mol. Sci.** Apr 22;21(8). pii: E2935. doi: 10.3390/ijms21082935. **(I.F. 4.55).**

10. **D'Adamo M.C.,** Liantonio A, Rolland JF, Pessia M, Imbrici P. (2020). Diseases Associated with Kv1.1 Channel Dysfunction. **Encyclopedia.** https://encyclopedia.pub/item/revision/5260ef4b4dc9b6b3b707b416dc431898.

11. Imbrici P., Nematian-Ardestani E., Hasan S., Pessia M., Tucker S.J. and **D'Adamo M.C.** (2020). Altered functional properties of a missense variant in the TRESK K^+ channel (*KCNK18*) associated with migraine and intellectual disability. **Springer NATURE - Pflügers Archiv - European Journal of Physiology,** May 12. doi: 10.1007/s00424-020-02382-5. **(I.F. 3.29)**.

12. Stendel C., **D`Adamo M.C.**, Wiessner M., Dusl M., Cenciarini M., Belia S., Nematian-Ardestani E., Bauer P., Senderek J., Klopstock T. and Pessia M. (2020). Association of a novel splice site mutation in P/Q-type calcium channels with childhood epilepsy and late-onset slowly progressive non-episodic cerebellar ataxia. **Int. J. Mol. Sci.** 21, 3810; doi:10.3390/ijms21113810. **(I.F. 4.55)**

13. **D'Adamo M.C.,** Liantonio A., Conte E., Pessia M., Imbrici P. (2020). Ion channels involvement in neurodevelopmental disorders. **ELSEVIER – Neuroscience** https://doi.org/10.1016/j.neuroscience.2020.05.032. **(I.F. 3.24).**

14. Cenciarini M., Valentino M., Belia S., Sforna L., Rosa P., Ronchetti S., **D'Adamo M.C.**, Pessia M. (2019) Dexamethasone in Glioblastoma Multiforme Therapy: Mechanisms and Controversies. ***Front Mol Neurosci.*** Mar 29;12:65. doi: 10.3389/fnmol.2019.00065 **(I.F. 3.9)**.

15. Karalok Z.S., Megaro A., Cenciarini M., Guven A., Hasan Majed S., Taskin D.B., Imbrici P., Ceylaner S., Pessia M. and **D'Adamo M.C.** (2018) Identification of a new "*de novo*" mutation underlying regressive Episodic Ataxia type I. Case Report, ***Front. Neurol. – Neurodegeneration.*** 9: 587. DOI: 10.3389/fneur.2018.00587 **(I.F. 3.57)**.

16. Hasan S., Hunter T., Hunter G., Pessia M. and **D'Adamo M.C.** (2018) Commentary: A channelopathy mutation in the voltage-sensor discloses contributions of a conserved

phenylalanine to gating properties of Kv1.1 channels and ataxia. ***Front. Cell. Neurosci*.** 12:174. doi: 10.3389/fncel.2018.00174 **(I.F. 4.56)**.

17. Majed Hasan S., Balobaid A., Grottesi A., Dabbagh O., Cenciarini M., Rawashdeh R., Al-Sagheir A., Bove C., Macchioni L., Pessia M., Al-Owain M., **D'Adamo M.C.** (2017) Lethal digenic mutations in the K^+ channels Kir4.1 (*KCNJ10*) and SLACK *(KCNT1)* associated with severe-disabling seizures and neurodevelopmental delay. **Journal of Neurophysiology** Published 26 July, DOI: 10.1152/jn.00284.2017 **(I.F. 2.89)**.

18. Hasan S., Bove C., Silvestri G., Mantuano E., Modoni A., Veneziano L., Macchioni L., Hunter H., Hunter G., Pessia M., **D'Adamo M.C.** (2017) A channelopathy mutation in the voltage-sensor discloses contributions of a conserved phenylalanine to gating properties of Kv1.1 channels and ataxia. ***Nature Publishing Group:*** **Scientific Reports.** 7: 4583. doi: 10.1038/s41598-017-03041-z **(I.F. 5.23)**.

19. Romani L., Oikonomou V., Moretti S., Iannitti R.G., **D'Adamo M.C.**, Villella V., Pariano M., Sforna L., Borghi M., Bellet M., Fallarino F., Pallotta M.T., Servillo G., Ferrari E., Puccetti P., Kroemer G., Pessia M., Maiuri L., Goldstein A., Garaci E. (2017) Thymosin α1 represents a potential potent single molecule-based therapy for cystic fibrosis. **Nature Medicine.** May; 23(5): 590–600. doi:10.1038/nm.4305 **(I.F. 29.89)**.

20. Imbrici P., Altamura C., Gualandi F., Mangiatordi G.F., Neri M., De Maria G., Ferlini A., Padovani A., **D'Adamo M.C.**, Nicolotti O., Pessia M., Conte D., Filotosto M., Desaphy J. (2017) Identification of a novel *KCNA1* mutation in a patient with paroxysmal ataxia, myokymia, painful contractures and diabetes type 2. **Mol. Cell. Neurosci.,** 83:6-12. doi: 10.1016/j.mcn.2017.06.006 **(I.F. 3.08).**

21. Kaya N., Alsagob M., **D'Adamo M.C.**, Al-Bakheet A., Hasan S., Muccioli M., Almutairi F.B., Almass R., Aldosary M., Monies D., Mustafa O.M., Alyounes B., Kenana R., Al-Zahrani J., Naim E., Binhumaid F.S., Qari A., Almutairi F., Meyer B., Plageman T.F., Pessia M., Colak D., Al-Owain M. (2016). *KCNA4* deficiency leads to a syndrome of abnormal striatum, congenital cataract and intellectual disability. **J. Med. Genet.** *August 31, 2016 doi:10.1136/jmedgenet-2015-103637.* **(I.F. 5.65)**.

22. Sicca F., Ambrosini E., Marchese M., Sforna S., Servettini I., Valvo G., Brignone M.S., Lanciotti A., Moro F., Grottesi A., Catacuzzeno L., Baldini S., **D'Adamo M.C.,** Franciolini F., Molinari P., Santorelli F.M., Pessia M. (2016). *Gain-of-function* defects of astrocytic Kir4.1 channels in children with autism spectrum disorders and epilepsy. ***Nature Publishing Group:*** **Scientific Report** 6:34325. doi: 10.1038/srep34325. **(I.F. 5.23)**.

23. **D'Adamo M.C.,** Sforna L., Visentin S., Grottesi A., Servettini l., Guglielmi L., Macchioni L., Saredi S., Curcio M., De Nuccio C., Hasan S., Corazzi L., Franciolini F., Mora M., Catacuzzeno L. and Pessia M. (2016). A *calsequestrin-1* mutation associated with a skeletal muscle disease alters sarcoplasmic Ca^{2+} release. **PLOS One.** 2016 May 19;11(5):e0155516. doi: 10.1371/journal.pone.0155516. **(I.F. 3.54)**.

24. **D'Adamo M.C.**, Hasan S., Guglielmi L., Servettini I., Cenciarini M., Catacuzzeno L., Franciolini F. (2015). New insights into the pathogenesis and therapeutics of episodic ataxia type 1. **Front Cell Neurosci**. Aug 19; 9:317. doi: 10.3389/fncel.2015.00317. eCollection 2015. **(I.F. 4.3)**.

25. Schnekenberg P.R., Wayne IL D., Tolmie J., O'Regan M., Gillard E., Hudspith K., **D'Adamo M.C.,** Pessia M., Tucker S.J., Nemeth A.H. (2015). *De novo* potassium channel mutations underlie a form of sporadic cerebral palsy. **BRAIN.** Jul;138(Pt 7):1817-32. doi: 10.1093/brain/awv117. Epub 2015 May 16. **(I.F. 9.2)**.

26. Catacuzzeno L., Caramia M., Sforna L., Belia S., Guglielmi L., **D'Adamo M.C.,** Pessia M. and Franciolini F. (2015). Reconciling the discrepancies on the involvement of large-conductance Ca^{2+}-activated K^+ channels in glioblastoma cell migration. **Front. Cell. Neurosci.** Apr 20; 9:152. doi: 10.3389/fncel.2015.00152. **(I.F. 4.3)**.

27. Guglielmi L., Servettini I., Caramia M., Catacuzzeno L., Franciolini F., **D'Adamo M.C.** and Pessia M. (2015). Update on the implication of potassium channels in autism: K^+ channelautism spectrum disorder. **Front. Cell. Neurosci.**, Mar 2; 9:34. doi: 10.3389/fncel.2015.00034. **(I.F. 4.2)**.

28. Sforna L., **D'Adamo M.C.,** Servettini I., Guglielmi L., Pessia M., Franciolini F. and Catacuzzeno L. (2015). Expression and function of a CP339,818–sensitive K^+ current in a subpopulation of putative nociceptive neurons from adult mouse trigeminal ganglia. **J. Neurophysiol.** Apr 1;113(7):2653-65. jn.00379.2014. doi: 10.1152/jn.00379.2014. **(I.F. 2.9)**.

29. **D'Adamo M.C.,** Gallenmüeller C., Servettini I., Hartl E., Tucker S., Arning L., Biskup S., Grottesi A., Guglielmi L., Imbrici P., Bernasconi P., Di Giovanni G., Franciolini F., Catacuzzeno L., Pessia M. and Klopstock T. (2015). Novel phenotype associated with a mutation in the *KCNA1*(Kv1.1) gene. **Front. Physiol.** Jan 15; 5:525. doi: 10.3389/fphys.2014.00525. **(I.F. 3.5)**.

30. Sforna L., Cenciarini M., Belia S., **D'Adamo M.C.,** Pessia M. Franciolini F. and Catacuzzeno L. (2015). The role of ion channels in the hypoxia-induced aggressiveness of glioblastoma. **Front. Cell. Neurosci.**, Jan 15;8:467. doi: 10.3389/fncel.2014.00467. **(I.F. 4.2)**.

31. **D'Adamo M.C.,** Di Giovanni G. and Pessia M. (2014). Animal Models of Episodic Ataxia Type 1 (EA1). Book title: **Movement Disorders: Genetics and Models, Second Edition.** Editor: Mark S. LeDoux. **Academic Press Inc./Elsevier Science Publishing Co. Inc. San Diego;** p. 797-807. **ISBN 13:** 978-0124051959; **ISBN 10:** 0124051952 (***invited book chapter***).

32. Ambrosini E., Sicca F., Brignone M.S., **D'Adamo M.C.,** Napolitano C., Servettini I., Moro F., Gugliemi L., Pieroni S., Servillo G., Lanciotti A., Valvo G., Catacuzzeno L., Franciolini F., Molinari P., Marchese M., Grottesi A., Guerrini R., Santorelli F.M., Priori S. and Pessia M. (2014). Genetically-induced abnormalities of Kir2.1 channels: implications for short QT3 syndrome and autism/epilepsy phenotype. **Hum. Mol. Genet.** Sep 15, 23(18): 4875–4886, doi:10.1093/hmg/ddu201. (**I.F. 6.393**)

33. Catacuzzeno L., Sforna L., **D'Adamo M.C.,** Pessia M., Franciolini F. (2014) A method to identify tissue cell subpopulations with distinct multi-molecular profiles from data on

co-localization of two markers at a time: the case of sensory ganglia. **J. Neurosci. Methods**. 224:88-95. doi: 10.1016/j.jneumeth.2013.12.015 (**I.F. 2.3**)

34. **D'Adamo M.C.,** Catacuzzeno L., Di Giovanni G., Franciolini F. and Pessia M. (2013). K^+ CHANNELEPSY: progress in the neurobiologyy of potassium channels and epilepsy. Special issue: *Neuronal Mechanisms of Epileptogenesis*. Topic Editor: Di Maio R. **Front. Cell. Neurosci. 7**, (134) 1-21. *doi: 10.3389/fncel.2013.00134.* **(I.F. 4.2)**.

35. **D'Adamo M.C.,** Servettini I., Guglielmi L., Di Matteo V., Di Maio R., Di Giovanni G. and Pessia M. (2013). 5-HT_2 receptors-mediated modulation of voltage-gated K^+ channels and neurophysiopathological correlates. **Experimental Brain Res.,** Springer; May 24, 230:453–462. DOI 10.1007/s00221-013-3555-8. **(I.F. 2.17)**.

36. Pessia M., **D'Adamo M.C.,** Imbrici P. (2012). The neurobiology of episodic ataxia type 1: a *Shaker*-like K^+ channel disorder. *In: Sung Hoi Hong. Ataxia: Causes, Symptoms and Treatment p. 47-75,* **NOVA SCIENCE New York U.S.A.** 47-75 **ISBN: 978-1-61942-867-6** (***invited book chapter***).

37. Brunetti O., Imbrici P, Botti F.M., Pettorossi V.E., **D'Adamo M.C.,** Valentino M., Zammit C. Mora M., Gibertini S., Di Giovanni G., Muscat R. and Pessia M. (2012). *Kv1.1* knock-in ataxia mice exhibit spontaneous myokymic activity exacerbated by fatigue, ischemia and low temperature. **Neurobiol. Dis.** 47, 310-321. doi:10.1016/j.nbd.2012.05.002 (**I.F. 5.121**).

38. **D'Adamo M.C.,** Moro F., Imbrici P., Martino D., Roscini M., Santorelli F.M.,Sicca F. and Pessia M. (2011). The emerging role of the inwardly rectifying K^+ channels in autism spectrum disorders and epilepsy. **Malta Medical Journal 23** (3), 10-14. [https://www.um.edu.mt/library/oar//handle/123456789/1063] (***invited review***).

39. Sicca F., Imbrici P., **D'Adamo M.C.,** Moro F., Bonatti F., Brovedani P., Grottesi A., Guerrini R., Masi G., Santorelli F.M., Pessia M. (2011). Autism with Seizures and Intellectual Disability: Possible Causative Role of Gain-of-function of the Inwardly-Rectifying K^+ Channel Kir4.1. **Neurobiol. Dis.** 43(1):239-47. doi:10.1016/j.nbd.2011.03.016 **(I.F. 5.12).**

40. Imbrici P., **D'Adamo M.C.,** Grottesi A., Biscarini A., Pessia M. (2011). Episodic Ataxia Type 1 Mutations Affect Fast Inactivation of K+ Channels by a Reduction in either Subunit Surface Expression or Affinity for Inactivation Domain. **Am. J. Physiol. Cell. Physiol.** 300(6):C1314-22. DOI:10.1152/ajpcell.00456.2010 **(I.F.4.68).**

41. **D'Adamo M.C.,** Shang L., Imbrici P., Brown S.D.M., Pessia M., Tucker S. (2011). Genetic inactivation of *Kcnj16* identifies Kir5.1 as an important determinant of neuronal PCO_2/pH sensitivity **J. Biol. Chem**. Jan 7; 286(1):192-8. DOI: 10.1074/jbc.M110.189290. **(I.F.5.33).**

42. Hasan S.M. and **D'Adamo M.C**. Episodic Ataxia Type 1. 2010 Feb 9 [Updated 2018 May 31]. In: Adam MP, Ardinger HH, Pagon RA, et al., editors. GeneReviews® [Internet]. Seattle (WA): University of Washington, Seattle; 1993-2018. Available from: https://www.ncbi.nlm.nih.gov/books/NBK25442/. (***invited review***).

43. Imbrici P., Grottesi A., **D'Adamo M.C.** and Pessia M. (2009). Contributions of the central hydrophobic residue in the *PXP* motif of Voltage-Dependent K^+ Channels to S6 flexibility and Gating Properties. **Channels 3, issue 1. (I.F.1.908)**

44. Imbrici P., Gualandi F., **D'Adamo M.C.,** Taddei Masieri M., Cudia P., De Grandis D., Mannucci R., Nicoletti I., Tucker S.J., Ferlini A. and Pessia M. (2008). *A Novel KCNA1 Mutation Identified in an Italian Family Affected by Episodic Ataxia Type 1"* **Neuroscience 157**, 577-587 (DOI: 10.1016/j.neuroscience.2008.09.022, *published on line 24.09.2008*. **(I.F.3.5).**

45. Imbrici P., **D'Adamo M.C.,** Cusimano A. and Pessia M. (2007). Episodic Ataxia Type 1 Mutation F184C Alters Zn^{2+}-Induced Modulation of the Human Potassium Channel Kv1.4-Kv1.1/Kvβ1.1 **Am. J. Physiol.-Cell Physiol. 292,** C778-87 (*Online publication: September 6, 2006*) **(I.F.4.33).**

46. Imbrici P., **D'Adamo M.C.,** Kullmann D.M. and Pessia M. (2006). Episodic Ataxia Type 1 Mutations in the *KCNA1* Gene Impair the Fast Inactivation Properties of the Human K^+ Channels Kv1.4-1.1/Kvβ1.1 and Kv1.4-1.1/Kvβ1.2. **Eur. J. Neurosci. 24**, 3073-3083**(I.F.3.95)**.

47. Cusimano A., **D'Adamo M.C.** and Pessia M. (2004). An Episodic Ataxia Type-1 (EA1) mutation in the S1 segment sensitises the hKv1.1 potassium channel to extracellular Zn^{2+} **FEBS letters 576**, 237-44 **(***Online publication: September 22, 2004*) **(I.F.3.84).**

48. Casamassima M., **D'Adamo M.C.,** Pessia M. and Tucker S.J. (2003). Identification of a heteromeric interaction which influences the rectification, gating and pH-sensitivity of Kir4.1/Kir5.1 potassium channels. **J. Biol. Chem. 278** (44):43533-40 (*Online publication: August 15, 2003*) **(I.F.7.258)**.

49. Imbrici P., Cusimano A., **D'Adamo M.C.,** De Curtis A. and Pessia M. (2003). Functional Characterization of an Episodic Ataxia Type-1 Mutation Occurring in the S1 Segment of hKv1.1 Channels. **Pflügers Archiv - European Journal of Physiology 446**, 373-379 (*Online publication: November 26, 2002*) **(I.F.4.81)**.

50. **D'Adamo M.C.,** Imbrici P. and Pessia M. (2002). Episodic Ataxias as Ion Channel Diseases. The Cerebellum and its Disorders. Edited by M. Manto & M. Pandolfo, *vol. 1st edition, p. 562-572,* **Cambridge University Press, UK**. **ISBN 0-521-77156-0** (***invited book chapter***).

51. Corsaro A., Thellung S., Russo C., Villa V., Merlino M., Arena S., **D'Adamo M.C.,** Paludi D., Rossi Principe D., Damonte G., Benatti U., Aceto A., Tagliavin F., Schettini G. and Florio T.. (2002). Expression in e.coli and purification of recombinant fragments of wild type and mutant human prion protein **Neurochem. Int**. 41(1),55-63 **(I.F.2.90)**.

52. De Curtis A., **D'Adamo M.C.**, Amore C., Polishchuck R., Castelnuovo A.D., Donati M.B., Iacoviello L. (2001). Experimental arterial thrombosis in genetically or diet induced hyperlipidemia in rats--role of vitamin K-dependent clotting factors and prevention by low-intensity oral anticoagulation. **Thromb. Haemost. 86** (6),1440-8 **(I.F.4.58)**.

53. Pessia M., Imbrici P., **D'Adamo M.C.,** Salvatore L. and Tucker S.J. (2001). Differential pH-sensitivity of Kir4.1 and Kir4.2 and Modulation by Heteropolymerisation with Kir5.1. **J. Physiol.** (*London*) **532.2,** 359-367 **(I.F.4.48).**

54. De Curtis A., **D'Adamo M.C.,** Amore C., Donati M.B., Iacoviello L. (2000). Effects of dyslipidemia on t-PA release in rats. **Thromb. Haemost**. **84** (4),734-5**(I.F.4.58)**.

55. Imbrici P., Tucker S.J., **D'Adamo M.C.** and Pessia M. (2000). Role of RPTPα and Tyrosine Phosphorylation in the Serotonergic Inhibition of Voltage-Dependent Potassium Channels. **Pflügers Archiv - European Journal of Physiology 441**, 257-262 **(I.F.4.81)**.

56. Tucker J.S., Imbrici P., Salvatore L., **D'Adamo M.C.,** and Pessia M. (2000). pH-Dependence of the Inwardly Rectifying Potassium Channel Kir5.1 and Localisation in Renal Tubular Epithelia **J. Biol. Chem. 275,** 16404-16407 **(I.F.7.38).**

57. **D'Adamo, M.C.,** Imbrici P., Sponcichetti F. and Pessia M. (1999). Mutations in the *KCNA1* Gene Associated with Episodic Ataxia Type-1 Syndrome Impair Heteromeric Voltage-Gated K^+ Channel Function. **FASEB J. 13,** 1335-1345. **(I.F.13.86).**

58. Salvatore L., **D'Adamo M.C.,** Polishchuk R., Salmona M. and Pessia M. (1999). Localization and Age Dependent Expression of the Inward Rectifier Potassium Channel Kir 5.1 in a Mammalian Reproductive System **FEBS Letters** 449 (2-3): 146-152. **(IF: 3.84).**

59. **D'Adamo M.C.** and Pessia M. (1999). Photoreceptors and pigment epithelium of the retina: transduction and renewal mechanisms. *Chapter 19, 328-351*. Albert D.M. e Jakobiec F.A. Principles and Practice of Ophthalmology; Basic Science. *vol. 1*, Editor: **Verduci** (Rome). **ISBN 88-7620-514-4**.

60. **D'Adamo M.C.,** Liu Z., Adelman J.P., Maylie J. and Pessia M. (1998). Episodic Ataxia Type-1 Mutations in the hKv1.1 Cytoplasmic Pore Region Alter the Gating Properties of the Channel, **EMBO J.** 17: 1200-1207. **(IF: 13.50).**

61. Chabielska E., Kolpakov V., **D'Adamo M.C.,** De Curtis A., Buczko W., Iacoviello L. and Donati M.B. (1996). Morphological and Homeostatic Changes in Rats with Abdominal Arterial Prosthesis. **Thromb. Res.** 82 (1): 69-77. **(IF: 1.46).**

62. Iacoviello L., **D'Adamo M.C.,** Pawlak K., Polishchuck R., Wollny T., Buczko W., Donati M.B. (1996). Antithrombotic Activity of Dermatan Sulphates, Heparin and their Combination in an Animal Model of Arterial Thrombosis. **Thromb. Haemost**. 76 (6): 1102-7. **(IF: 4.58)**

63. Iacoviello L., **D'Adamo M.C.,** Buczko W., Donati M.B. (1995). Amiloride Inhibits Tissue-Type Plasminogen Activator (t-PA) Release from Vascular Endothelium. **Thromb. Haemost**. 74 (2): 793-810. **(IF: 4.58).**

64. Iacoviello L., **D'Adamo M.C.,** De Curtis A., Buczko W., Donati M.B. (1995). Enhanced Vascular Plasminogen Activator (t-PA) Release by Epinephrine in Aged Rats. **Thromb. Haemost**. 73 (5): 841-4. **(IF: 4.58).**

65. Kolpakov V., **D'Adamo M.C.,** Salvatore L., Amore C., Mironov A., Iacoviello L. and Donati M.B. (1994). Neutrophil Derived Cathepsin G Induce Potentially Thrombogenic

Changes in Human Endothelial Cells: a scanning electron microscopy study in static and dynamic conditions. **Thromb. Haemost**. 72 (1): 140-5. **(IF: 4.58).**

66. Iacoviello L., De Curtis A., **D'Adamo M.C.,** Amore C., Buczko W., de Gaetano G. and Donati M.B. (1994). Prostacyclin is Required for t-PA Release After Venous Occlusion. **Am. J. Physiol. - Heart Circ. Physiol**. 266/2 Part 2: H429-H434. **(IF: 3.11).**

67. Iacoviello L., De Curtis A., **D'Adamo M.C.,** Buczko W., Donati M.B. (1993). The Adrenergic Mechanism of Acute t-PA Release in Normal and Diseased Animals. **Fibrinolysis** 7 (Sup. 1): 33-34. **(IF: 1.51).**

68. Iacoviello L., De Curtis A., **D'Adamo M.C.** and Donati M.B. (1992). Different Response of Vascular Fibrinolysis to Adrenergic Stimulation in Young and Aged Rats. **Fibrinolysis** 6 (suppl.3): 36-38. **(IF: 1.51).**

69. Iacoviello L., De Curtis A., Amore C., **D'Adamo M.C.,** Buczko W., de Gaetano G. and Donati M.B. (1992). Effect of Aspirin on the Fibrinolytic Response in Perfused Rat Hindquarters. **Eur. J. Pharmacol.** 229: 39-44. **(IF: 1.96).**

MAIN REFEREED CONFERENCE PUBBLICATIONS

1. Coretti L., Ambrosini E., Cenciarini M., Sforna L., Belia S., Harold-Barry E., Hasan S., Lanciotti A., Brignone M.S., Sicca F., Santorelli F., Chiarotti L., Lembo F., Pessia M., **D'Adamo M.C**. (2019) Kir4. 1 gain-of-function and gut dysbiosis appear as risk factors for autism-epilepsy phenotype in a new mouse model of autism **ACTA PHYSIOLOGICA** 227, 63-63.

2. Sicca F., Imbrici P., **D'Adamo M.C.,** Moro F., Bonatti F., Brovedani P, Grottesi A., Guerrini R., Masi G., Santorelli F.M. and Pessia M. (2011). Gain-of-Function of the Inwardly-Rectifying K+ Channel Kir4.1 Contributes to Autism with Seizures and Intellectual Disability. **Epilepsia** 52, 87-88.

3. **D'Adamo M.C.,** Shang L., Imbrici P., Brown S.D.M, Pessia M., Tucker S.J. (2011). The Kir5.1 Potassium Channel is an Important Determinant of Neuronal P_{CO2}/pH Sensitivity **Biophys. J.** 100 (3) 430.

4. Imbrici P., **D'Adamo M.C.,** Maylie J. and Pessia M. (2009). Mutations in *KCNA1* affect stoichiometry and fast inactivation of heteromeric K^+ channels **J. Neurosci. A.** 521.21/E16.

5. Imbrici P., Grottesi A., **D'Adamo M.C.,** Tucker S.J. and Pessia M. (2009). Contributions of the central hydrophobic residue in the PXP motif of Voltage-Dependent K+ Channels to S6 flexibility and Gating Properties **Biophys. J.** 96 (3) 656.

6. Imbrici P., Gualandi F., **D'Adamo M.C.,** Cudia P., De Grandis D., Ferlini A. and Pessia M. (2007). Functional Characterization of a Novel Mutation Causing Episodic Ataxia Type 1 Occurring in the *KCNA1* Gene. **Neuromuscular Dis. 17**, 892-893. doi:10.1016/j.nmd.2007.06.437

7. Imbrici P., Gualandi F., **D'adamo M.C.,** Taddei Masieri M., Cudia P., De Grandis D., Ferlini A., and Pessia M. (2007). Identification and functional characterization of a novel mutation in the *KCNA1* gene of a Sicilian family affected by episodic ataxia type 1. **Acta Physiol. 191**, (657), 78.

8. **D'Adamo M.C.,** Ambrosini M.V., Mariucci G., Taha E., Imbrici P., Servettini I., Tucker S. and Pessia M. (2007). Role of inwardly-rectifying potassium channels Kir5.1 in learning and memory processes in a mouse knock-out model. **Acta Physiol**. 191, (657), 59.

9. Servettini I., Imbrici P., **D'Adamo M.C.,** Pettorossi V.E. and Pessia M. (2007). Voltage-gated calcium channels modulate synaptic transmission at vestibular neurons. **Acta Physiol**. 191, (657), 113.

10. Servettini I., **D'Adamo M.C.,** Panichi R., Grassi S., Pettorossi V.E. and Pessia M. (2006). ERG channels modulate the medial vestibular neurons processing of temporal information. **Acta Physiol.** 188, Supp. 652, 4.

11. Servettini I., **D'Adamo M.C.,** Arcangeli A., Wanke E., Grassi S., Pessia M. and Pettorossi V.E. (2006). ERG channels regulate the excitability of medial vestibular neurons **Acta Physiol**. 188 (652), 127.

12. Imbrici P., **D'Adamo M.C.** and Pessia M. (2006). The Episodic Ataxia Type 1 Mutation F184C Alters the Zn^{2+} and pH Modulation of the Human Kv1.4-Kv1.1/Kvβ1 Channel. **Acta Physiol.** 188, 652, 75.

13. Tucker S.J., Casamassima M., **D'Adamo M.C.,** and Pessia M. (2002). Identification of Mutations in Kir5.1 which Affect Time-Dependent Activation of Heteromeric Kir4.1/Kir5.1 Potassium Channels **Biophys. J. 82,** 588**.**

14. Cusimano A., Imbrici P., **D'Adamo M.C.,** and Pessia M. (2001). Functional Properties of Voltage-Gated Potassium Channels Probed with Methanethiosulfonate Reagents. **Pharm. Res. 43**, 22.

15. Imbrici P., **D'Adamo M.C.** and Pessia M. (2001). Role of the S1 segment in the voltage-dependent gating of Kv1.1 channels revealed by naturally occurring pathogenic mutations. **Biophys. J. 80,** 443**.**

16. Pessia M., Imbrici P., **D'Adamo M.C.,** Salvatore L. and Tucker S.J. (2001). Differential pH-sensitivity of Kir4.1 and Kir4.2 and modulation by heteropolymerisation with Kir5.1. **Biophys. J. 80,** 631.

17. Imbrici P., Tucker J.T., **D'Adamo M.C.,** Sponcichetti F., and Pessia M. (2000). Modulation of hKv 1.1 and hKv 1.2 voltage gating and C-type inactivation by $5\text{-}HT_{2C}$ receptors. **Biophys. J. 78**, 206.

18. Imbrici P., **D'Adamo M.C.,** Sponcichetti F., and Pessia M. (1999). Modulation of human delayed rectifier K^+ channels by $5\text{-}HT_{2C}$ receptors. **Pharm. Res. 39**, 7.

19. **D'Adamo M.C.,** Imbrici P., Sponcichetti F., and Pessia M. (1999). Mutations in the *KCNA1* gene associated with episodic ataxia type-1 syndrome impair heteromeric voltage-gated K^+ channel function. **Neurosc. Lett.** Supp. 52, 28.

20. **D'Adamo M.C.,** Imbrici P., Sponcichetti F., and Pessia M. (1999). Gating properties of human heteromeric voltage-gated potassium channels and effects of episodic ataxia type-1 mutations. **Biophys. J.**, **76**, 190.

21. **D'Adamo M.C.,** Liu Z., Adelman J.P., Maylie J. and Pessia M. (1998). Episodic Ataxia Type-1 Mutations in the hKv1.1 Pore Region Alter the Gating Properties of the Channel. **Biophys. J.**, **74**, 218.