CURRICULUM VITAE

| Name: | Daray, Federico Manuel |
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| Nationality: | Argentine |
| Place of Birth: | Ciudad de Buenos Aires, Argentina |
| Date of Birth: | January 20, 1978 |
| Home Address: | La Pampa 1851, floor 1°A (1428). Ciudad Autónoma de |
| | Buenos Aires. Argentina |
| Home Phone Number: | (549) 1163597476 |
| E-mail Address: | fdaray@hotmail.com |

Actual Position

Independent researcher of the National Council of Scientific Research of Argentina (CONICET) Head Teaching Assistant. Department of Pharmacology. School of Medicine. University of Buenos Aires. Argentina

Education and training

| 03 - 2005 08 - 2008 | M.D. School of Medicine. University of Buenos Aires, Argentine Ph.D. in Pharmacology. School of Medicine. University of Buenos Aires, Argentine. |
|------------------------|--|
| 05 – 2010 | Specialty in Psychiatry. Residency Training Program in Psychiatry. "Braulio Moyano Neuropsychiatric Hospital". City of Buenos Aires, Argentine |
| 12 – 2011 | Specialization in Forensic Medicine. University of General San Martin. Buenos Aires. Argentine |
| 04 – 2017 | MSC. Clinical Effectiveness. School of Medicine. University of Buenos Aires, Argentine |

Medical training

| 06 - 2006 / 06- 2010 | Residency in Mental Health. Hospital "Braulio A. Moyano". |
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| | Government of the City of Buenos Aires. Argentina. |
| 01– 2009 / 04– 2009 | Practice in the "Mood Disorders Program". Tufts Medical Center, |
| | Boston, USA. Director: S. Nassir Ghaemi. Duration: 4 months. |
| 06–2010 / 06–2011 | Chief of Residents of Mental Health. Hospital "Braulio A. Moyano". |
| | Government of the City of Buenos Aires. Argentina. |
| 12–2015 / 3–2016 | Adjunct Associate Research Scientist |
| | Division of Molecular Imaging and Neuropathology. New York State |
| | Psychiatric Institute Columbia University. 1051 Riverside Drive. |
| | New York, NY 10032. Director: Dr. JJ Mann. |

Previous Positions

| 2001-2004 | Teaching Assistant in the course of Pharmacology. Department of Pharmacology, School of Medicine. University of Buenos Aires, Argentine. |
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| 2003 – 2004 | Student Research Fellowship. University of Buenos Aires. Argentine. |
| 2004-2012 | Head Teaching Assistant in the course of Pharmacology. |
| | Department of Pharmacology, School of Medicine. University of |
| | Buenos Aires. Argentine. |
| 2005 – 2006 | Doctoral Research Fellowship. Secretary of Science and |
| | Technology. Buenos Aires. Argentine. |
| 2006 – 2010 | Residence Training in Psychiatry. "Braulio A. Moyano" |
| | Neuropsychiatric Hospital. Ciudad de Buenos Aires. Argentine. |
| 2010 – 2011 | Chief of Residence of Mental Health. "Braulio A. Moyano" |
| | Neuropsychiatric Hospital. Ciudad de Buenos Aires. Argentine. |
| 2011 | Clinical Effectiveness Research Fellowship. Instituto de Efectividad |
| | Clínica y Sanitaria (IECS). Buenos Aires. Argentine. |
| 2011 – 2018 | Psychiatrist. Outpatient Department. "Braulio A. Moyano" |
| | Neuropsychiatric Hospital. Ciudad de Buenos Aires. Argentine. |
| 2012 – 2015 | Chairman of the Research Ethics Committee. "Braulio A. Moyano" |
| | Neuropsychiatric Hospital. Ciudad de Buenos Aires. Argentine. |
| 2012 – 2016 | Researcher of the CONICET (National Council of Scientific and |
| | Technical Research). Category: Assistant. |
| 2016 – 2019 | Researcher of the CONICET (National Council of Scientific and |
| | Technical Research). Category: Adjunct. |
| 2019 – | Researcher of the CONICET (National Council of Scientific and |
| | Technical Research). Category: Independent. |

Research Support

| 2013 | Granted Agency: Ministry of Science and Technology (PID-2012- 0064). Project Title: "Epidemiology of suicide and suicidal behavior". Duration: 4 years. Role: Principal Investigator. |
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| 2013 | Granted Agency: University of Buenos Aires. Project UBACYT (2013-2014). Project Title: "Epidemiology of suicide and suicidal behavior". Duration: 2 years. Role: Principal Investigator |
| 2013 | Awarded by CONICET (National Council of Scientific and Technical Research) (N°4541-12). Project Title: "Association of antipsychotic drug-induced weight gain with - 759 C / T genetic variation of 5-HT2C receptor gene polymorphism. Duration: 1 year. Role: Principal Investigator. EXTENSION |
| 2013 | Foundation "Alberto J. Roemmers". Title: "Association of antipsychotic drug-induced weight gain with - 759 C / T genetic |

| | variation of 5-HT2C receptor gene polymorphism". Duration: 1 |
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| | year. Role: Principal Investigator |
| 2016 | Granted Agency: CONICET (National Council of Scientific and |
| | Technical Research). PIP 2015-2017 (Code 112 |
| | 20120150100567CO). Project Title: "TAM signaling pathway in the |
| | control of inflammation and induction of macrophage alternative". |
| | Duration: 3 años. Role: Co-Principal Investigator |
| 2017 | Granted Agency: American Foundation for Suicide Prevention |
| 2017 | (AFSP). Young Investigator Innovation Grants (YIG-0-036-16). Title: |
| | "Polyunsaturated fatty acids as predictors of future suicide |
| | · · · · |
| | attempt". PI: Daray, Federico Manuel. Mentor: M. Elizabeth |
| 2010 | Sublette, MD, Ph.D. Columbia University. NY. EEUU |
| 2018 | Granted Agency: Ministry of Science and Technology of Argentina. |
| | (PICT 2431). Title "Participation of inflammatory response in the |
| | physiopathology of depression and evaluation of ketamine |
| | induction of alternative macrophage program as part of ketamine |
| | mechanisms of antidepressant action ". Duration: 3 years. Role: Co- |
| | Principal Investigator. |
| 2019 | Granted Agency: Brain & Behavior Research Foundation (BBRF). |
| | 2019 NARSAD Young Investigator Grant (ID # 27855). Title |
| | "Inflammatory mediators in Patients with Mood Disorders: |
| | Contribution of monocyte-macrophage lineage ". Duration: 2 |
| | years. Role: Principal Investigator. |
| 2020 | Granted Agency: Ministry of Science and Technology of Argentina. |
| | (PID-2018-0054). Title " Inflammatory mediators in Patients with |
| | Mood Disorders ". Duration: 3 years. Role: Principal Investigator |
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Key achievements

Our research group worked together with several National and International Institutions to generate information and develop and test mental health interventions in Argentina. In the last 5 years, we published 30 papers in international peer-review journals, we received 3 National Grants and 2 International Grant, I mentor of 16 researchers (students, MD, and Ph.D.), we received 7 National prizes for research in Mental Health and we cooperate with national and international Institutions. Our group is one of the most active and productive research groups in the Public sector in Argentina and Latin America. Some fields in which we worked:

- 1) Risk factors for suicidal behavior
- 2) Develop and implementation of "CALMA" the first tool-based app for smartphones in Spanish for the prevention of suicide
- 3) Pharmacovigilance of clozapine in Argentina
- 4) Mood disorders: etiology, validation of questionaries, epidemiology in the general population and specific groups

- 5) Implementation of pharmacogenetics in clinical practice
- 6) Mechanism of rapid antidepressive action of ketamine

Peer-Reviewed Research Publications (last 5 years)

1) Daray FM, Grendas LN, Rodante DE, Errasti AE, Cases GG, Moix CF, Uicich RE, GimÉnez MI, Puppo S, Fasolino GH, Portela A, Galfalvy HC, Sublette ME. Polyunsaturated fatty acids as predictors of future suicide attempt. Prostaglandins Leukot Essent Fatty Acids. 2021 Jan 12;165:102247. doi: 10.1016/j.plefa.2021.102247. Epub ahead of print. PMID: 33482466.

2) Fornaro M, **Daray FM**, Hunter F, Anastasia A, Stubbs B, De Berardis D, Shin JI, Husain MI, Dragioti E, Fusar-Poli P, Solmi M, Berk M, Vieta E, Carvalho AF. The prevalence, odds and predictors of lifespan comorbid eating disorder among people with a primary diagnosis of bipolar disorders, and vice-versa: Systematic review and meta-analysis. J Affect Disord. 2021 Feb 1;280(Pt A):409-431. doi: 10.1016/j.jad.2020.11.015. Epub 2020 Nov 13. PMID: 33227671.

3) Demián Rodante, Marcela Kaplan, Ramiro Olivera Fedi, Pablo Gagliesi, Agustina Pascali, Paula Jose Quinteros, Emilio Compte, Ana Inés Perez, Melina Weinstein, Luciana Chiapella, and **Federico Manuel Daray**. CALMA, a mobile health application, as an accessory to therapy for reduction of suicidal and non-suicidal self-injured behaviors: a pilot cluster randomized controlled trial. Archives of Suicide Research. DOI: DOI:10.1080/13811118.2020.1834476

4) Wu Y, Levis B, Ioannidis JPA, Benedetti A, et. al. ." Probability of Major Depression Classification Based on the SCID, CIDI, and MINI Diagnostic Interviews: A Synthesis of Three Individual Participant Data Meta-Analyses". Psychother Psychosom. 2020 Aug 19; 1-13

5) Prokopez CR, Vallejos M, Farinola R, Alberio G, Caporusso GB, Cozzarin LG, Chiapella LC, Fuentes P, **Daray FM.** The history of multiple adverse childhood experiences in patients with schizophrenia is associated with more severe symptomatology and suicidal behavior with gender-specific characteristics. Psychiatry Res. 2020 Aug 18;293:113411.

6) Levis B, Sun Y, He C, Wu Y, et. al. "Accuracy of the PHQ-2 Alone and in Combination With the PHQ-9 for Screening to Detect Major Depression: Systematic Review and Meta-analysis". JAMA. 2020 Jun 9;323(22):2290-2300.

7) Wu Y, Levis B, Sun Y, et al. "Probability of major depression diagnostic classification based on the SCID, CIDI and MINI diagnostic interviews controlling for Hospital Anxiety and Depression Scale - Depression subscale scores: An individual participant data meta-analysis of 73 primary studies" J Psychosom Res. 2020 Feb;129:109892

8) Grendas LN, Rojas SM, Rodante DE, Puppo S, Vidjen P, Portela A, Daray
FM. Differential Impact of Child Sexual Abuse and Family History of Suicidal Behavior in High-Risk Suicidal Patients. Arch Suicide Res. 2020;24(sup2): S251-S263

9) Santero M, **Daray FM**, Prado C, Hernández-Vásquez A, Irazola V. Association between religiosity and depression varies with age and sex among adults in South America: Evidence from the CESCAS I study. PLoS One. 2019;14(12):e0226622.

10) Nowak W, Grendas LN, Sanmarco LM, Estecho IG, Arena ÁR, Eberhardt N, Rodante DE, Aoki MP, **Daray FM**, Carrera Silva EA, Errasti AE. Pro-inflammatory monocyte profile in patients with major depressive disorder and suicidal behavior and how ketamine induces anti-inflammatory M2 macrophages by NMDAR and mTOR. EBioMedicine. 2019 Dec;50:290-305.

11) Daray FM, Hunter F, Anastasia A, Fornaro M. Psychometric properties of the Patient Health Questionnaire nine-item version (PHQ-9) for use among hospitalized nonpsychiatric medical patients. Gen Hosp Psychiatry. 2019 Nov - Dec;61:69-75

12) Rojas SM, Skinner KD, Feldner MT, Rodante DE, Puppo S, Vidjen P, Portela A, Grendas LN, **Daray FM**. Lethality of Previous Suicidal Behavior among Patients Hospitalized for Suicide Risk Predicts Lethality of Future Suicide Attempts. Suicide Life Threat Behav. 2019 Oct;49(5):1431-1438.

13) Urtasun M, **Daray FM**, Teti GL, Coppolillo F, Herlax G, Saba G, Rubinstein A, Araya R, Irazola V. Validation and calibration of the patient health questionnaire (PHQ-9) in Argentina. BMC Psychiatry. 2019 Sep 18;19(1):291. doi: 10.1186/s12888-019-2262-9. PubMed PMID: 31533674; PubMed Central PMCID: PMC6751851.

14) Grendas LN, Rojas SM, Puppo S, Vidjen P, Portela A, Chiapella L, Rodante DE, Daray FM. Interaction between prospective risk factors in the prediction of suicide risk. Journal of Affective Disorder; 258:144-150

15) Rodante DE, Grendas LN, Puppo S, Vidjen P, Portela A, Rojas SM, Chiapella LC, **Daray FM**. Predictors of short- and long-term recurrence of suicidal behavior in borderline personality disorder. Acta Psychiatrica Scandinavica; 140(2): 158-168.

16) Daray FM, Goldmann E, Gutierrez L, Ponzo J, Lanas F, Mores N, Calandrelli M, Poggio R, Watkins BX, Irazola V. Suicidal ideation is associated with cardiovascular disease in a large, urban cohort of adults in the Southern Cone of Latin America. Gen Hosp Psychiatry. 2018 Dec 18;57:34-40.

17) Daray FM, Olivera Fedi RH, Rodante DE. [Development of CALMA: A mobile APP for the prevention of suicide in adolescents and youth]. Vertex. 2018 Jan;29(137):55-64.

18) Daray FM, Arena ÁR, Armesto AR, Rodante DE, Puppo S, Vidjen P, Portela A, Grendas LN, Errasti AE. Serotonin transporter gene polymorphism as a predictor of short-term risk of suicide reattempts. Eur Psychiatry. 2018 Oct;54:19-26.

19) Daray FM, Mann JJ, Sublette ME. How lipids may affect risk for suicidal behavior. J Psychiatr Res. 2018 Sep;104:16-23. doi: 10.1016/j.jpsychires.2018.06.007.

20) Pham D, Cormick G, Amyx MM, Gibbons L, Doty M, Brown A, Norwood A, **Daray FM**, Althabe F, Belizán JM. Factors associated with postpartum depression in women from low socioeconomic level in Argentina: A hierarchical model approach. J Affect Disord. 2018 Feb;227:731-738. doi: 10.1016/j.jad.2017.11.091.

21) Grendas L, Rodante D, Rojas S, Puppo S, Vidjen P, Lado G, Portela A, **Daray FM**. Determinants of mental and physical health-related quality of life among patients hospitalized for suicidal behavior. Psychiatry Res. 2017 Nov;257:56-60.

22) Daray FM, Rubinstein AL, Gutierrez L, Lanas F, Mores N, Calandrelli M, Poggio R, Ponzo J, Irazola VE. Determinants and geographical variation in the distribution of depression in the Southern cone of Latin America: A population-based survey in four cities in Argentina, Chile and Uruguay. J Affect Disord. 2017 Oct 1;220:15-23.

23) Rodante D, Rojas SM, Feldner MT, Dutton C, Rebok F, Teti GL, Grendas L, Fógola A, **Daray FM**. Differences between female suicidal patients with a family history of suicide attempt and family history of completed suicide. Compr Psychiatry. 2016 Oct;70:25-31.

24) Daray FM, Rodante D, Carosella LG, Silva ME, Martínez M, Fernández Busch MV, Faccone DF, Rothlin RP, Maffía PC. -759C>T Polymorphism of the HTR2C Gene is Associated with Second Generation Antipsychotic-Induced Weight Gain in Female Patients with Schizophrenia. Pharmacopsychiatry. 2017 Jan;50(1):14-18.

25) Daray FM, Rojas SM, Bridges AJ, Badour CL, Grendas L, Rodante D, Puppo S, Rebok F. The independent effects of child sexual abuse and impulsivity on lifetime suicide attempts among female patients. Child Abuse Negl. 2016 Aug;58:91-8.

26) Prokopez CR, Armesto AR, Gil Aguer MF, Balda MV, Papale RM, Bignone IM, Daray
FM. Clozapine Rechallenge After Neutropenia or Leucopenia. J Clin Psychopharmacol.
2016 Aug;36(4):377-80.

27) Yanzón de la Torre A, Oliva N, Echevarrieta PL, Pérez BG, Caporusso GB, Titaro AJ, Todaro Kicyla A, Cuatz M, Locatelli M, Nelson LM, Mac Mullen M, Baldessarini RJ, **Daray FM.** Major depression in hospitalized Argentine general medical patients: Prevalence and risk factors. J Affect Disord. 2016 Jun;197:36-42.

28) Daray FM, Teti GL, Rojas SM, Fantini AP, Cárdenas-Delgado C, Armesto A, Derito MN, Rebok F. Time Left for Intervention in the Suicidal Process in Borderline Personality Disorder. Arch Suicide Res. 2015;19(4):489-99.

29) Balda MV, Garay OU, Papale RM, Bignone I, Bologna VG, Brandolini A, Prokopez CR, Balasini JI, Baldessarini RJ, **Daray FM**. Clozapine-associated neutropenia and agranulocytosis in Argentina (2007-2012). Int Clin Psychopharmacol. 2015 Mar;30(2):109-14.

30) Teti GL, Rebok F, Rojas SM, Grendas L, **Daray FM**. Systematic review of risk factors for suicide and suicide attempt among psychiatric patients in Latin America and Caribbean. Rev Panam Salud Publica. 2014 Aug;36(2):124-33.

<u>Books</u>

| 2017 | Author of the book "Practical aspects for the handling of |
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| | psychotropic drugs". |
| | 1st Edition (2017). Editorial Salerno. Buenos Aires. Argentina |
| 2014 | Author of the book "Neuropsychopharmacology. Basics "1st |
| | Edition (2014). Ed. Salerno. City of Buenos Aires. Argentine. |

Academic Service

03/2012 – 2016 Chairman of the Research Ethics Committee."Braulio A. Moyano" Neuropsychiatric Hospital. Brandsen 2570. Ciudad de Buenos Aires. Argentine

Fellowship

| 2017 | Young Fellowship Program for the WPA World Congress of Psychiatry Berlin 2017 |
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| 2017 | Fellowship "Dr. Abraam Sonis" 2017 for coordinating the research project entitled: Adherence to the psychopharmacological treatment in patients with schizophrenia. Ministry of Health of Argentina. Project: N ° 2572. |
| 2015 | Fellowship "Carrillo-Oñativia", 2015 for coordinating the research project entitled: Depression in patients hospitalized in medical clinic services. Ministry of Health of Argentina. Project: N°1853 |
| 2015 | External Postdoctoral Fellowship for Young Researchers. National Council of Scientific and Technical Research (CONICET). No. 2826/15. Columbia University. NY. USA. Director: Dr. John Mann. |
| 2011 | Clinical Effectiveness Research Fellowship. Instituto de Efectividad Clínica y Sanitaria (IECS). Dr. Emilio Ravignani 2024. Buenos Aires. Argentine. |
| 2005 – 2006 | Doctoral Research Fellowship.Secretary of Science and Technology. Buenos Aires. Argentine. Advisor: Prof. Dr. Rodolfo P. Rothlin. |
| 2003 – 2004 | Student Research Fellowship. University of Buenos Aires. Argentine. |

Reviewer Experience

| 2016- 2016 - 2018 2017 - 2017 - 2017 - 2018 2018 2018 - 2020 2019 2019 2019 2019 2019 | Ad hoc reviewer, Cellular Physiology and Biochemistry Ad hoc reviewer, Cognitive Therapy and Research. Ad hoc reviewer, Journal of Affective Disorders Ad hoc reviewer, BMJ Open Ad hoc reviewer, Psychiatric Research Ad hoc reviewer, Journal of Psychiatric Research Ad hoc reviewer, Vertex. Revista Argentina de Psiquiatría Ad hoc reviewer, Frontiers in Psychiatry Ad hoc reviewer, European Psychiatry Ad hoc reviewer, Reproductive Health Ad hoc reviewer, Brazilian Journal of Psychiatry Ad hoc reviewer, Pharmacological Reports Ad hoc reviewer, Acta Neuropsychiatrica |
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| | |
| 2019 | Ad hoc reviewer, Acta Neuropsychiatrica Ad hoc reviewer, Archives of Women's Mental Health |
| 2015 | Au not reviewer, Artimes of Women's Wental ricatin |

Professional Membership

| 2017- | Member of the Suicidology Section of the World Psychiatric |
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| | Association (WPA). |
| 2017- | Member of the Suicidology Section of the European Psychiatric |
| | Association (EPA) |
| 2017 | Member of the Argentinean Medical Association (AMA). |

| 2017 | Member of the Argentinean Society of Clinical Pharmacology |
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| 2015- | Member of the International Academy of Suicide Research (IASR). |
| 2004-2006 | Member of the Argentinean Psichiatric Association (APSA). |