

Professor of Medical Genetics and Genomic Medicine; School of Medical Sciences, University of Campinas – UNICAMP, Campinas, Brazil

***ISCIA LOPES-CENDES, M.D.Ph.D.***

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| **1. Education/Training** | | |
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| **2. Professional History** | | |
| I work in the field of neurogenetics, where I focus on studying genetic and phenotypic markers in neurologic disorders, with a particular emphasis on epilepsies. My main interest lies in investigating the underlying molecular mechanisms that contribute to these diseases. To achieve this, I utilize cutting-edge multi-omics techniques and strive to discover improved treatment options and preventive measures. My research team is widely recognized for our expertise in next-generation sequencing technologies, bioinformatics analysis of complex genomic data, non-coding RNAs, and single-cell techniques. I have been honored with various awards and distinctions for my scientific contributions, including my election as a member of the Brazilian Academy of Sciences, which is the highest recognition for scientists in Brazil. Furthermore, I played a crucial role in establishing the Brazilian Initiative on Precision Medicine (www.bipmed.org), which launched the first public genomic database in Latin America. Additionally, I contributed to the creation of LatinGen ([www.latingen.org](http://www.latingen.org/)), a web portal dedicated to the sharing of genetic and genomic information in Latin America. These initiatives have laid the foundation for the implementation of genomic testing in Brazil.  In 1997, I pioneered the establishment of the first presymptomatic testing clinic for late-onset neurodegenerative disorders in Brazil. Currently, I hold the position of principal investigator at the Brazilian Institute of Neuroscience and Neurotechnology (www.brainn.org.br), a renowned center for research, innovation, and dissemination in Brazil (<https://cepid.fapesp.br/en/home/>).  Throughout my career, I have published **277 scientific papers** in peer-reviewed journals, with **15,654** **citations** according to Google Scholar. My **h-index**, also according to Google Scholar, is **58**. I have had the privilege of supervising 71 graduate students, 33 post-doctoral research fellows, and 39 undergraduate students as part of their initiation into the field of science. In addition to my research work, I also serve as an attending physician in the outpatient clinics at the UNICAMP University Hospital.  ***Positions and Honors***  **1997 – Assistant Professor of Medical Genetics, University of Campinas (UNICAMP), Campinas, S.P., Brazil.**  **2002 – Associate Professor of Medical Genetics, University of Campinas (UNICAMP), Campinas, S.P., Brazil.**  **2002-2004 – Director-at-large Ibero-American Society of Human Genetics).**  **2006 - Academic Recognition Award "Zeferino Vaz" for high performance in teaching and research activities among the Professors at the Faculty of Medical Sciences, UNICAMP.**  **2006-2010 – Dean of Graduate Studies. School of Medical Sciences. University of Campinas, Campinas, SP, Brazil.**  **2002-2013 – Member of the International League Against Epilepsy (ILAE) Genetics Commission.**  **2008-2012 – Councilor of the Neurogenetics Section of the American Academy of Neurology.**  **2009 to date - Professor of Medical Genetics, University of Campinas (UNICAMP), Campinas, S.P., Brazil.**  **2010 to date. Sectional Editor Brazilian Journal of Medical and Biological Research**  **2011-2014 – Head of the Department of Medical Genetics, School of Medical Sciences, University of Campinas, Campinas, S.P., Brazil.**  **2014 to date - Member of the Global Alliance for Genomics and Health (GA4GH)**  **2015 to date – Elected Member of the Brazilian Academy of Sciences (ABC), Rio de Janeiro, Brazil, the highest recognition for a Brazilian Scientist.**  **2016 - Scientist and Entrepreneur of the Year Award Nanocell Institute in the area of Neuroscience - New Perspectives for a Better Life, Instituto Nanocell**  **2017 to date – Elected Member of the São Paulo Academy of Sciences (ACIESP), São Paulo, Brazil.**  **2017 to date – Member Editorial Board of the Journal *Epilepsia Open***  **2018-2021 - Member of the International League Against Epilepsy (ILAE) task force on Genetics and Epigenetics. Neurobiology Commission, ILAE.**  **2018 to date: Member of the Research Ethics of the University of Campinas, Campinas, S.P., Brazil.**  **2019 to date: Coordinator of the Commission for Biosecurity at the School of Medical Sciences, University of Campinas, Campinas, S.P., Brazil.**  **2019 to date. Member of the International Common Diseases Alliance (ICDA) and the LatinGenomes.**  **2019 -2023: Coordinator of the Graduate Program in Medical Physiopathology School of Medical Sciences, University of Campinas, Campinas, S.P., Brazil.**  **2020 - Academic Recognition Award "Zeferino Vaz" for high performance in teaching and research activities among the Professors at the Faculty of Medical Sciences, UNICAMP.**  **2021 to date - Member of the Genetics Commission of the International League against Epilepsy (ILAE) and the Taskforce on Clinical Genetics Testing.**  **2021 to date - Member of the Education Committee at the Human Genome Organization (HUGO).**  **2022 to date – Member of the Evaluation Committee in (the area of) Medicine of the Brazilian Research Council (CNPq)**  **2023 to date** - Associate Editor of the journal *Human Genomic.*  **2023 to 2025** – Chair (2023-2024), Technical Advisory Group on Genomics (TAG-G) of the World Health Organization (WHO). Established in September of 2023 to provide WHO technical advice on Genomics and to support the secretariat with work aimed at accelerating access to genomic knowledge and technologies, especially in low- and middle-income countries.  **2023** – Member of the Task Force on Health Challenges of the Science20. A group established by the Brazilian Academy of Sciences (ABC) to propose the Official Document for the Brazilian Presidency of the G-20.  **2024** – Elected Member of The World Academy of Science (TWAS). An organization supported by UNESCO to“support sustainable prosperity through research, education, policy and diplomacy”.  **2024 –** Member of the HUGO Executive Board. | | |
| **3. List of the 5 most relevant research results of my career** | | |
| **1.**  [International League Against Epilepsy Consortium on Complex Epilepsies GWAS meta-analysis of over 29,000 people with epilepsy identifies 26 risk loci and subtype-specific genetic architecture.](https://pubmed.ncbi.nlm.nih.gov/37653029/). Nat Genet. 2023 Sep;55(9):1471-1482. doi: 10.1038/s41588-023-01485-w.  **2**. Pascoal VDB, Marchesini RB, Athié MCP, Matos AHB, Conte FF, Pereira TC, Secolin R, Gilioli R, Malheiros JM, Polli RS, Tannús A, Covolan L, Pascoal LB, Vieira AS, Cavalheiro EA, Cendes F, Lopes-Cendes I.   [Modulating Expression of Endogenous Interleukin 1 Beta in the Acute Phase of the Pilocarpine Model of Epilepsy May Change Animal Survival.](https://pubmed.ncbi.nlm.nih.gov/35061107/) Cell Mol Neurobiol. 2023 Jan;43(1):367-380. doi: 10.1007/s10571-022-01190-y.  **3**. Avansini SH, Puppo F, Adams JW, Vieira AS, Coan AC, Rogerio F, Torres FR, Araújo PAOR, Martin M, Montenegro MA, Yasuda CL, Tedeschi H, Ghizoni E, França AFEC, Alvim MKM, Athié MC, Rocha CS, Almeida VS, Dias EV, Delay L, Molina E, Yaksh TL, Cendes F, Lopes Cendes I, Muotri AR.   [Junctional instability in neuroepithelium and network hyperexcitability in a focal cortical dysplasia human model.](https://pubmed.ncbi.nlm.nih.gov/34957478/) Brain. 2022 Jun 30;145(6):1962-1977. doi: 10.1093/brain/awab479.  **4.** Maurer-Morelli CV, de Vasconcellos JF, Bruxel EM, Rocha CS, do Canto AM, Tedeschi H, Yasuda CL, Cendes F, Lopes-Cendes I. Exp Biol Med (Maywood). 2022 Dec;247(24):2233-2250. doi: 10.1177/15353702221126666.  **5.** Grasby KL, Jahanshad N, Painter JN, Colodro-Conde L, Bralten J, Hibar DP, Lind PA, Pizzagalli F, Ching CRK, McMahon MAB, Shatokhina N, Zsembik LCP, Thomopoulos SI, Zhu AH, Strike LT, Agartz I, Alhusaini S, Almeida MAA, Alnæs D, Amlien IK, Andersson M, Ard T, Armstrong NJ, Ashley-Koch A, Atkins JR, Bernard M, Brouwer RM, Buimer EEL, Bülow R, Bürger C, Cannon DM, Chakravarty M, Chen Q, Cheung JW, Couvy-Duchesne B, Dale AM, Dalvie S, de Araujo TK, de Zubicaray GI, de Zwarte SMC, den Braber A, Doan NT, Dohm K, Ehrlich S, Engelbrecht HR, Erk S, Fan CC, Fedko IO, Foley SF, Ford JM, Fukunaga M, Garrett ME, Ge T, Giddaluru S, Goldman AL, Green MJ, Groenewold NA, Grotegerd D, Gurholt TP, Gutman BA, Hansell NK, Harris MA, Harrison MB, Haswell CC, Hauser M, Herms S, Heslenfeld DJ, Ho NF, Hoehn D, Hoffmann P, Holleran L, Hoogman M, Hottenga JJ, Ikeda M, Janowitz D, Jansen IE, Jia T, Jockwitz C, Kanai R, Karama S, Kasperaviciute D, Kaufmann T, Kelly S, Kikuchi M, Klein M, Knapp M, Knodt AR, Krämer B, Lam M, Lancaster TM, Lee PH, Lett TA, Lewis LB, Lopes-Cendes I, Luciano M, Macciardi F, Marquand AF, Mathias SR, Melzer TR, Milaneschi Y, Mirza-Schreiber N, Moreira JCV, Mühleisen TW, Müller-Myhsok B, Najt P, Nakahara S, Nho K, Olde Loohuis LM, Orfanos DP, Pearson JF, Pitcher TL, Pütz B, Quidé Y, Ragothaman A, Rashid FM, Reay WR, Redlich R, Reinbold CS, Repple J, Richard G, Riedel BC, Risacher SL, Rocha CS, Mota NR, Salminen L, Saremi A, Saykin AJ, Schlag F, Schmaal L, Schofield PR, Secolin R, Shapland CY, Shen L, Shin J, Shumskaya E, Sønderby IE, Sprooten E, Tansey KE, Teumer A, Thalamuthu A, Tordesillas-Gutiérrez D, Turner JA, Uhlmann A, Vallerga CL, van der Meer D, van Donkelaar MMJ, van Eijk L, van Erp TGM, van Haren NEM, van Rooij D, van Tol MJ, Veldink JH, Verhoef E, Walton E, Wang M, Wang Y, Wardlaw JM, Wen W, Westlye LT, Whelan CD, Witt SH, Wittfeld K, Wolf C, Wolfers T, Wu JQ, Yasuda CL, Zaremba D, Zhang Z, Zwiers MP, Artiges E, Assareh AA, Ayesa-Arriola R, Belger A, Brandt CL, Brown GG, Cichon S, Curran JE, Davies GE, Degenhardt F, Dennis MF, Dietsche B, Djurovic S, Doherty CP, Espiritu R, Garijo D, Gil Y, Gowland PA, Green RC, Häusler AN, Heindel W, Ho BC, Hoffmann WU, Holsboer F, Homuth G, Hosten N, Jack CR Jr, Jang M, Jansen A, Kimbrel NA, Kolskår K, Koops S, Krug A, Lim KO, Luykx JJ, Mathalon DH, Mather KA, Mattay VS, Matthews S, Mayoral Van Son J, McEwen SC, Melle I, Morris DW, Mueller BA, Nauck M, Nordvik JE, Nöthen MM, O'Leary DS, Opel N, Martinot MP, Pike GB, Preda A, Quinlan EB, Rasser PE, Ratnakar V, Reppermund S, Steen VM, Tooney PA, Torres FR, Veltman DJ, Voyvodic JT, Whelan R, White T, Yamamori H, Adams HHH, Bis JC, Debette S, Decarli C, Fornage M, Gudnason V, Hofer E, Ikram MA, Launer L, Longstreth WT, Lopez OL, Mazoyer B, Mosley TH, Roshchupkin GV, Satizabal CL, Schmidt R, Seshadri S, Yang Q; Alzheimer’s Disease Neuroimaging Initiative; CHARGE Consortium; EPIGEN Consortium; IMAGEN Consortium; SYS Consortium; Parkinson’s Progression Markers Initiative, Alvim MKM, Ames D, Anderson TJ, Andreassen OA, Arias-Vasquez A, Bastin ME, Baune BT, Beckham JC, Blangero J, Boomsma DI, Brodaty H, Brunner HG, Buckner RL, Buitelaar JK, Bustillo JR, Cahn W, Cairns MJ, Calhoun V, Carr VJ, Caseras X, Caspers S, Cavalleri GL, Cendes F, Corvin A, Crespo-Facorro B, Dalrymple-Alford JC, Dannlowski U, de Geus EJC, Deary IJ, Delanty N, Depondt C, Desrivières S, Donohoe G, Espeseth T, Fernández G, Fisher SE, Flor H, Forstner AJ, Francks C, Franke B, Glahn DC, Gollub RL, Grabe HJ, Gruber O, Håberg AK, Hariri AR, Hartman CA, Hashimoto R, Heinz A, Henskens FA, Hillegers MHJ, Hoekstra PJ, Holmes AJ, Hong LE, Hopkins WD, Hulshoff Pol HE, Jernigan TL, Jönsson EG, Kahn RS, Kennedy MA, Kircher TTJ, Kochunov P, Kwok JBJ, Le Hellard S, Loughland CM, Martin NG, Martinot JL, McDonald C, McMahon KL, Meyer-Lindenberg A, Michie PT, Morey RA, Mowry B, Nyberg L, Oosterlaan J, Ophoff RA, Pantelis C, Paus T, Pausova Z, Penninx BWJH, Polderman TJC, Posthuma D, Rietschel M, Roffman JL, Rowland LM, Sachdev PS, Sämann PG, Schall U, Schumann G, Scott RJ, Sim K, Sisodiya SM, Smoller JW, Sommer IE, St Pourcain B, Stein DJ, Toga AW, Trollor JN, Van der Wee NJA, van 't Ent D, Völzke H, Walter H, Weber B, Weinberger DR, Wright MJ, Zhou J, Stein JL, Thompson PM, Medland SE; Enhancing NeuroImaging Genetics through Meta-Analysis Consortium (ENIGMA)—Genetics working group. [The genetic architecture of the human cerebral cortex.](https://www.ncbi.nlm.nih.gov/pubmed/32193296) *Science*. 2020 Mar 20;367(6484). pii: eaay6690. doi: 10.1126/science.aay6690. | | |
| **4. List of current research grants with funding from any agency or company** | | |
| **1**. *Conselho Nacional de Pesquisa* (CNPq) - Senior Research Fellowship from the Nacional Council of Research (*Bolsa de Produtividade em Pesquisa* – 1A). 01/02/2020 to 31/01/2025.  **2.** *Fundação de Amparo a Pesquisa do Estado de São Paulo* **(**FAPESP). Research, Innovation and Dissemination Center - Brazilian Institute of Neuroscience and Neurotecnology (BRAINN). Principal Investigator (grant # 2013/07559-3). 01/07/2013 to 30/06/2025.  **3.** Chan-Zuckerberg Initiative on Single Cell Genomics. *Single-cell analysis of the pediatric brain.* Principal Investigator. 30/11/2021 to 01/10/2023. | | |
| **5. Academic Quantitative indicators**   1. Books: 1 2. Publications in journals with selective editorial policy: **277** 3. Book chapters: **44** 4. Supervised and concluded Master's dissertations: **29 (+ co-supervised: 3) = 32** 5. Supervised and concluded PhD thesis: **34 (+ co-supervised: 5) = 39** 6. Others: Undergraduate students supervised (science initiation program): **39**   Post-doctoral fellows supervised: **33**   1. Current supervisions: **12**   - MSc students: **2**  **-** Ph.D. students: **2**  - Post-doctoral fellows **8 (**includes technical supervision of individuals with a Ph.D.) |
| ***List of current supervisions as main advisor:***   1. **Laiz Luiza Miranda de Oliveira**. MSc. student (scholarship: CAPES) 2. **Vinicius Rodolfo.** MSc. Student (scholarship: CAPES) 3. **Nkembi Matilde Miguel Ferraz.** Ph.D. student (scholarship: CAPES) 4. **Jaqueline Geraldis**. Ph.D. student (scholarship: FAPESP) 5. **Danielle do Carmo Bruno.** Post-doctoral fellow (fellowship: FAPESP) 6. **Amanda Morato do Canto**. Post-doctoral fellow (fellowship: FAPESP) 7. **Thais Crippa de Oliveira.** Post-doctoral fellow (fellowship: FAPESP) 8. **Luciano Henrique Braz dos Santos.** Technical training (TT-5: FAPESP) 9. **Pedro Túlio de Resende Lara.** Technical training (TT-5: FAPESP) 10. **Tânia Kawasaki Araújo .** Technical training (TT-5: FAPESP) 11. **Saúl Lindo Samanamud.** Technical training (TT-4: FAPESP) 12. **Estela Maria Bruxel**. Technical training (TT-5: FAPESP) |
| **6. WEB LINKS FOR ACADEMIC INFORMATION** |
| **Link ORCID:** <https://orcid.org/0000-0002-6221-6822>  **Link Scopus**: https://www.scopus.com/authid/detail.uri?authorId=7003572956  **Link to ResearcherID**: <http://www.researcherid.com/rid/B-9416-2013>  **Link to My Citations (Google Scholar)** <http://scholar.google.com.br/citations?user=H4g6TDcA>.  **Link to My Bibliography**: <https://www.ncbi.nlm.nih.gov/myncbi/1r5I4Ybvtb9gve/bibliography/public/>  **Link to PubMed**: <https://www.ncbi.nlm.nih.gov/pubmed/?term=Lopes-Cendes> |
| **7. Other relevant biographical information** |
| ***Registered process and software:***  **1.** DEBORA. A platform for the determination of sequence targets for RNA interference (RNAi). Authors: Iscia Lopes Cendes, Tiago Campos-Pereira e Ivan Maia.  **2.** STRAND ANALYSIS . Software for the design of siRNAs. Registered at INPI. Authors: Tiago Campos-Pereira, Vinícius B. Pascoal, Rodrigo Secolin, Ivan Maia e Iscia Lopes Cendes.  **3.**JINGLEFIX. Software for the analysis of genotyped microsatellites and SNPs. Registered at INPI. Authors: Rodrigo Secolin, Claudia Vianna Maurer Morelli, Cristiane de Souza Rocha, Fábio Rossi Torres, Marilza Lima Santos, Neide Ferreira dos Santos e Iscia Lopes Cendes.  **4.** THERMODYNAMIC DOMAIN ASSEMBLER. Software for the determination of thermodynamic characteristics of small DNA and RNA sequences.Registered at INPI. Authors: Rodrigo Secolin, Tiago C. Pereira e Iscia Lopes Cendes.  **5.**Rqc package offers the user efficient strategies for quality assessment of Next-Generation Sequencing data. It processes FASTQ and BAM files without compromising the system performance, allowing the user to evaluate possible issues during the sequencing experiment.  Website: <http://www.bioconductor.org/packages/Rqc>.  **6.** GA4GHclient is a R package for accessing GA4GH API data servers. This software is based on official Data Model Schemas created by Global Alliance for Genomics and Health.  Website: <https://github.com/labbcb/GA4GHclient> |