

NICOLAS CORRADI

Genome Biology of Eukaryotic Microbes

<http://corradiilab.weebly.com/>

EDUCATION

Ph.D. *Biology*,
University of Lausanne, 2006
M.Sc. *Biology*,
University of Geneva, 2001
B.Sc. *Biology*,
University of Geneva, 1999

ACADEMIC EMPLOYMENT HISTORY

May 2022 *Full Professor*, Department of
Biology, University of Ottawa
May 2014-2022 *Associate Professor*,
Department of Biology, University of
Ottawa
May 2010-14 *Assistant Professor*,
Department of Biology, University of
Ottawa

SUMMARY OF IMPACT

- PhD June 2006 - H-index of 45
- \$2.9 M in research funding (post-overhead) from NSERC, MITACS, NSF, CIFAR, Ontario and others.
- 86 peer-reviewed publications
- 17 articles in high-visibility venues of general audience (*Nature Microbiology*, *eLife*, *PNAS*, *Current Biology*, *Nature Communications*)
- Fellow of the Canadian Institute for Advanced Research (CIFAR) - IMB program 2010-2017
- 2024 Mid-Career Research Excellence Award International Mycorrhiza Society (IMS)
- University Research Chair (UCR) in Microbial Genomics - 2020-2025
- Ontario Early Researcher Award (ERA) 2014-2017
- 64 invited lectures as PI - 8 keynote, 7 plenary + *John*, *EMBO*, *Gordon*, *New Phytologist*, etc.
- Prestigious invited reviews (*Annual Review of Microbiology*, *Trends in Plant Science*, *Trends in Microbiology*, *New Phytologist*, *PLoS Genetics*)

PRIZES AND HONOURS

- *Visiting Professor Fellowship - University of Bologna (Italy) - May 2025*
- *Mid-Career Research Excellence Award - International Mycorrhiza Society (IMS) - 2024*
- *University Research Chair in Microbial Genomics - University of Ottawa - 2020 - 2025 (renewable)*
- *NSERC Discovery Accelerator - 2020 - 2023*
- *CIFAR Fellow (Canadian Institute for Advanced Research) - 2009 - 2017*
- *Early Researcher Award - Ontario Ministry of Research, Innovation and Science - 2014 - 2019*
- *Young Investigator Award - 12th International Conference on Opportunistic Protists (IWOP12) - 2012*
- *Advanced Researcher Postdoctoral Fellowship - Swiss National Science Foundation - 2007-2009*
- *Early Researcher Postdoctoral Fellowship - Swiss National Science Foundation -*

2006-2007

- *Switzerland – Italy International Exchange MSc Scholarship* - Italian Ministry of Education - 1999-2000

RESEARCH FUNDING

Numbers refer to total funding for N. Corradi after overheads (in CAD\$). I am the principal investigator unless otherwise indicated. When I am a co-investigator, the name of the principal investigator is indicated below the name of the project.

Year	Source <i>Title of project</i>	Type ¹	Total Amount	Purpose ²
2023-2028	Genome Canada <i>Bio-inoculants for the promotion of nutrient use efficiency and resiliency in Canadian agriculture</i>	G	\$240,000	Research
2023-2026	MITACS Elevate <i>Arbuscular mycorrhizal fungi and carbon sequestration</i>	G	\$326,250	Research
2020-2025	University Research Chair (URC)	U	\$125,000	Research
2020-2025	Discovery Accelerator Supplement <i>The Genetics of Arbuscular Mycorrhizal Fungi</i>	G	\$120,000	Research
2020-2025	NSERC Discovery <i>The Genetics of Arbuscular Mycorrhizal Fungi</i>	G	\$325,000	Research
2020-2022	MITACS Industrial PDF <i>AM dikaryosis in a culture collection</i>	G	\$250,000	Research
2018-2020	MITACS PDF Accelerate <i>Genome sequencing of Echinacea purpurea</i>	G	\$150,000	Research
2018	NSERC Engage <i>Improving strain quality and traceability in bio-fertilizer products</i>	G	\$25,000	Research
2016	NSERC Engage <i>Optimization of Canadian fungal bio-fertilizers</i>	G	\$25,000	Research
2016-2020	NSERC Discovery Grant <i>Functional and Population Genomics of Ecologically Critical Eukaryotic Microbes</i>	G	\$190,000	Research
2015-2016	National Science Foundation (NSF) <i>ZygoLife</i> <i>Principal Investigators: Joey Spatafora (Oregon State University) and Jason Stajich (UC Riverside)</i>	C	\$160,000	Research
2014-2019	Ontario Early Researcher Award <i>Population Genomics of Ecologically Important Microbes</i>	C	\$150,000	Research
2012-2014	France Embassy / UOttawa Fund	G	\$15,000	Research

Year	Source Title of project	Type ¹	Total Amount	Purpose ²
2011-2012	UOttawa Research Development Fund <i>Functional genomics as a tool to study the biodiversity of ecologically critical symbionts in terrestrial ecosystems</i> <i>Exploring new frontiers in microsporidian genomics</i>	U	\$20,000	Research
2010-2015	Canada Foundation for Innovation/MRI <i>Laboratory for Comparative Fungal Genomics</i>	C	\$267,000	Research
2010-2017	Canadian Institute for Advanced Research – IMB program <i>CIFAR Fellowship</i>	F	\$175,000	Research
2010-2015	NSERC Discovery Grant <i>Genomic basis of ecological and evolutionary success in the arbuscular mycorrhizal fungi</i>	G	\$160,000	Research

¹Type: C-granting councils; F-Foundations; G-Government; O-Other; U-University.

SUPERVISION

	MSc	PhD	Postdoc Fellows
<i>Completed</i>	14	6	9
<i>In Progress</i>	3	3	2
Career Total	17	9	11

CONTRIBUTIONS

Career Total	
Papers in refereed journals	83
Invited book chapters	3
Incl. major invited contributions and/or technical reports	4
+ Papers in refereed conference proceedings	2
+ Others (workshops organized)	1

Conventions on authorship: The trainee leading the research project is listed as first author. Second author trainees played a key role in publication. The senior researcher who supervises and funds the work is listed last, or as corresponding co-author.

Refereed Papers. Lab members in bold.

* Contributed equally.

1. **Corradi N.**, Antunes PMA and Magurno F. A call for reform: implementing genome-based approaches for species classification in Glomeromycotina. 2025. *New Phytologist* (In Press)
2. Oliveira J.I.N, Lane C., Mugambi K., Yildirim G., Nicol AM. Kokkoris V.,

- Banchini C., Dadej K., Dettman J., Stefani F. and N. Corradi. Analyses of transposable elements in arbuscular mycorrhizal fungi support evolutionary parallels with filamentous plant pathogens. 2025. Genome Biology and Evolution (In Press)
3. Ferguson R, Mugambi K., Villeneuve-Laroche M., Kallenbach C.M., Antunes P.M.* and N. Corradi *Arbuscular mycorrhizal fungal genotype and nuclear organization as driving factors in host plant nutrient acquisition and stable carbon capture. 2025. Plants People Planet
 4. Sorwar E., Oliveira J.I.N., Malar M.C., Krüger M. and N. Corradi. Assembly and comparative analyses of the *Geosiphon pyriformis* metagenome. 2024. Environmental Microbiology
 5. Oliveira J.I.N.O.*, Yildirim G. * and N. Corradi. From Chaos comes Order: Genetics and Genome Biology of Arbuscular Mycorrhizal Fungi. 2024. Annual Review of Microbiology.
 6. Oliveira J.I.N. and N. Corradi. Strain-specific evolution and host-specific regulation of transposable elements in the model plant symbiont *Rhizophagus irregularis*. 2024. G3: Genes, Genomes, Genetics. Volume 14, Issue 5
 7. Kokkoris V., Banchini C., Paré L., Abdellatif L., Séguin S., Hubbard K., Findlay W., Dalpé Y., Dettman J., Corradi N., and F. Stefani. 2024. *Rhizophagus irregularis*, the model fungus in arbuscular mycorrhiza research, forms dimorphic spores. 2024. New Phytologist.
 8. Sperschneider J. *, Yildirim Y., * Rizzi, Y, Malar C. M., Mayrand Nicol A., Sorwar E., Chen E.C.H. , Brauer E.K , Bosnich W., Gutjahr C. and N. Corradi. Arbuscular mycorrhizal fungi heterokaryons have two nuclear populations with distinct roles in host-plant interactions. 2023. Nature Microbiology (8) 2142-53.
 9. Jiménez E.M., Ferrol N., Corradi N., Peñalosa J.M, and M. Rillig. Perspectives of arbuscular mycorrhizal fungi enhance metallic micronutrient uptake and mitigate food contamination in agriculture. 2024. New Phytologist. Volume 13, Issue 6.
 10. Kokkoris V. and N. Corradi. AMF genetics and the future of AMF applications. 2023. IMS Newsletter.
 11. Terry V., Kokkoris V., Villeneuve-Laroche M., Turcu B., Chapman K., Cornell C, Zheng Z., Stefani F. and N. Corradi. Mycorrhizal response of *Solanum tuberosum* to homokaryotic versus dikaryotic arbuscular fungi. 2023. Mycorrhiza.
 12. Manley BF., Lotharukpong J.S., Barrera-Redondoosue J., Yildirim G., Sperschneider J., Corradi N., Paszkowski U., Miska E.A and Dallaire A. A highly contiguous genome assembly reveals sources of genomic novelty in the symbiotic fungus *Rhizophagus irregularis*. 2023. G3: Genes, Genomes, Genetics
 13. Corradi N. The genetics of prominent plant symbionts: the arbuscular mycorrhizal fungi. Microbiology Today. 2022 October Issue.
 14. Malar M.C.; Wang Y., Stajich J.E, Kokkoris V., Villeneuve- Laroche M., Yildirim G., and N. Corradi. The early branching arbuscular mycorrhizal fungus *Paraglomus occultum* carries a small and repeat poor genome compared to relatives in the Glomeromycotina. 2022. Microbial Genomics. 8 (4), 000810

15. **Cornell C.***, **Kokkoris V.***, **Turcu B.**, Dettman J., Stefani F. and **N. Corradi**. The arbuscular mycorrhizal fungus *Rhizophagus irregularis* harmonizes nuclear dynamics in the presence of distinct abiotic factors. 2022. Fungal Genetics and Biology. 158, 103639
16. **Yildirim G.**, Sperschneider J., Malar MC, Chen ECH., Iwasaki W., **Cornell, C.** and **N. Corradi**. Long reads and Hi-C sequencing illuminate the two-compartment genome of the model arbuscular mycorrhizal symbiont *Rhizophagus irregularis*. 2022. New Phytologist. 223, 1097-1107
17. **Serghi E.U***, **Kokkoris V. ***, **Cornell C.**, Dettman J., Stefani F. and **N. Corradi** . Homo- and dikaryons of the arbuscular mycorrhizal fungus *Rhizophagus irregularis* differ in life history strategy. 2021. Frontiers in Plant Science. 12:715377
18. **Malar M.C.**, Roux C.R. and **Corradi N.** Regulation of mating genes during arbuscular mycorrhizal isolate coexistence – where is the evidence? 2021. ISME. 15 (8), 2173-2179.
19. **Malar M.C. ***, **Krüger M.***, **Krüger C.***, Wang Y., Stajich J.E., Keller J., **Chen C.H.**, **Yildirim G.**, **Villeneuve-Laroche M.**, Roux C.R., Delaux P.M. and **Corradi N.** The genome of *Geosiphon pyriformis* reveals ancestral traits linked to the emergence of the arbuscular mycorrhizal symbiosis. 2021. Current Biology. 31, 1570-1577.e
20. **Kokkoris V.**, Chagnon P.L., **Yildirim G.**, **Clarke K.**, Goh D., MacLean A.M., Dettman J., Stefani F. and **Corradi N.**. Host identity influences nuclear dynamics in arbuscular mycorrhizal fungi. 2021. Current Biology. 31, 1531-1538.e6
21. **Corradi N.** Genetic Dominance in Oomycete Sex. 2020. Current Biology. 30 (20), R1256-R1258
22. Reinhardt D., Roux C., **Corradi N.** and A. Di Pietro. Lineage-specific genes and cryptic sex: parallels and differences between arbuscular mycorrhizal fungi and fungal pathogens. 2021. Trends in Plant Science. 26, p. 111-123
23. **Chen E.C.H.**, **Mathieu S.**, Hoffrichter A., Ropars J., Deissig S., Fuchs J., Brachmann A. and **N. Corradi**. More filtering on SNP calling does not remove evidence of inter-nucleus recombination in dikaryotic arbuscular mycorrhizal fungi. 2020. Frontiers in Plant Sciences.
24. **Kokkoris V.**, Dettman J., Dalpé Y., Stefani F. and **N. Corradi**. Nuclear Dynamics in the Arbuscular Mycorrhizal Fungi. 2020. Trends in Plant Science 25 p. 41-48.
25. **Yildirim G.**, **Malar M.C.**, **Kokkoris V.** and **N Corradi**. 2020. Parasexual and Sexual Reproduction in Arbuscular Mycorrhizal Fungi: Room for Both. 2020. Trends in Microbiology 28 (7), 518-520
26. **Morin E.**, **Miyauchi S.**, **San Clemente H.**, **Chen E.C.H.**, **Pelin A.**, **de la Providencia I.**, **Ndikumana S.**, **Beaudet D.**, Hainaut M., Drula E., Kuo A., Tang N., Roy S., Viala J., Henrissat B., Grigoriev I.V., **Corradi N.**⁺, Roux C.R ⁺. and **FM Martin ⁺**. Comparative genomics of *Rhizophagus irregularis*, *R. cerebriforme*, *R. diaphanus* and *Gigaspora rosea* highlights specific genetic features in Glomeromycotina. New Phytologist 222 (3), 1584-1598

27. Peters M.J., Suwannapong G., Pelin A. and Corradi N. In Press. Genetic and genome analyses reveal genetically distinct populations of the bee pathogen *Nosema ceranae* from Thailand. 2019. Microbial Ecology. 77, 877-889
28. Chen E.C.H, Mathieu S., Hoffrichter A., Sedzielewska-Toro K., Peart M., Pelin A., Ndikumana S., Ropars J., Dreissig S., Fuchs J., Brachmann A. and N. Corradi. Single nucleus sequencing reveals evidence of inter-nucleus recombination in arbuscular mycorrhizal fungi. 2018. eLife 7:e39813
29. Bruns T., Corradi N., Redecker D., Taylow J.W., Öpik M. 2018. The Glomeromycotina: What is a species and why should we care. 2018. New Phytologist 220 (4), 963-967.
30. Mathieu S. Cusant L. Roux C.R. and N. Corradi. 2018. Arbuscular mycorrhizal fungi: intraspecific diversity and pangenomes. 2018. New Phytologist 220 (4), 1129-1134
31. Requena N., Voss S., Betz R., Heidt S. and N. Corradi. 2018. RiCRN1, a crinkler effector from the arbuscular mycorrhizal fungus *Rhizophagus irregularis*, functions in arbuscule development. 2018. Frontiers in Microbiology 9, 2068
32. Chen E.C.H, Morin E, Beaudet D., Noel J., Yildirim G., Ndikumana S., Charron P., St-Onge C., Giorgi J., Kruger M., Marton T., Ropars J., Grigoriev I.V., Hainaut M, Henrissat B., Roux C., Martin F⁺ and N. Corradi⁺. High intraspecific genome diversity in the model arbuscular mycorrhizal symbiont *Rhizophagus irregularis*. 2018. New Phytologist. 220 (4), 1161-1171.
33. Beaudet D., Chen E.C.H., Mathieu S., Yildirim G., Ndikumana S., Dalpé Y., Séguin S., Farinelli L., Stajich J.E. and N. Corradi. Ultra-low input transcriptomics reveal the spore functional content and phylogenetic affiliations of poorly studied arbuscular mycorrhizal fungi. 2018. DNA Research.
34. Da Fonte D., Martyniuk C.J., Xing L., Pelin A., Corradi N., Wei Hu, Vance L. Trudeau. Secretoneurin A regulates neurogenic and inflammatory transcriptional networks in goldfish (*Carassius auratus*) radial glia. 2017. Scientific Reports 7 (1), 14930s
35. Quandt C.A, Beaudet D., Corsaro D., Walochnik J., Michel R., Corradi N.⁺ and T.Y. James ⁺. The genome of an intranuclear parasite unveils alternative adaptations to obligate intracellular parasitism. 2017. eLife. 6:e29594 ⁺ senior co-authors
36. Corradi N. and A. Brachmann. Fungal mating in the most widespread plant symbionts? Trends in Plant Science. 2017, 22 (2), 175-183
37. Ndikumana S., Pelin A., Williot A. Kent M. Sanders J. and N. Corradi. 2016. Genome analysis of *Pseudoloma neurophilia*: a microsporidian parasite of Zebrafish (*Danio rerio*). 2017. Journal of Eukaryotic Microbiology 64 (1), 18-30.
38. Spatafora J.W., Chang Y., Benny G.L., Lazarus K., Smith M.E., Berbee M.L., Bonito G., Corradi N., Grigoriev I., Gryganskyi A., James T.Y., O'Donnell K.,

- Roberson R.W., Taylor T.N., Uehling J., Vilgalys R., White M.M., Stajich J.E. A phylum-level phylogenetic classification of zygomycete fungi based on genome-scale data. 2016. *Mycologia* 108(5): 1028-1046, 2016.
39. Schauer KL, LeMoine CM, Pelin A, Corradi N, Warren WC, Grosell M. A proteinaceous organic matrix regulates carbonate mineral production in the marine teleost intestine. 2016. *Scientific Reports* 6: 34494.
40. Ropars J., Kinga Sędziewska Toro K. Noel J., Pelin A., Charron P., Farinelli L., Marton T., Krüger M., Fuchs J., Brachmann A., and N. Corradi. Evidence for the sexual origin of heterokaryosis in Arbuscular Mycorrhizal Fungi. 2016. *Nature Microbiology* 1(6): 16033.
41. Pelin A., Moteshareie H, Sak B., Selman M., Naor A., Eyahpaise M.E. , Farinelli L., Golshani A., Kvac M., and Corradi N. The genome of an *Encephalitozoon cuniculi* type III strain reveals insights into the genetic diversity and mode of reproduction of a ubiquitous vertebrate pathogen. 2016. *Heredity* 116 (5): 458-465,
42. Corradi N. Microsporidia: Intracellular Parasites Shaped by Gene Loss and Horizontal Gene Transfer. 2015. *Review of Microbiology* 69 (1): 167-183.
43. Pelin A., Selman M., Laurent Farinelli, Aris-Brosou S. and N. Corradi. Genome analyses suggest the presence of polyploidy and recent human-driven expansions in eight global populations of the honeybee pathogen *Nosema ceranae*. 2015. *Environmental Microbiology* 17 (11): 4443-4458, 2015.
44. Ropars J. and N. Corradi. Homokaryotic vs heterokaryotic status of Arbuscular Mycorrhizal Fungal genomes; Different Techniques, Different Results? 2015. *New Phytologist* 208 (3): 635-994.
45. Sokolova Y., Pelin A., Hawke J. and N. Corradi. Morphology and Phylogeny of *Agmasoma penaei* (Microsporidia) infecting its type host, *Litopenaeus setiferus*, and the type locality, Louisiana, USA. 2015. *International Journal of Parasitology* 45 (1): 1-16,.
46. Parisot N. *, Pelin A. *, Gasc C., Polonais V., Belkorchia A., Panek J., El Alaoui H., Biron D.G., Brassat E., Vaury C., Peyret P., Corradi N.+, Peyretailade E.+ and E. Lerat *. Microsporidian genomes harbour a diverse array of transposable elements that demonstrate an ancestry of horizontal exchange with metazoa. 2014. *Genome Biology and Evolution* 6 (9): 2289-2300,. *Contributed equally. + Co-Corresponding authors.
47. Riley R., Charron P., Idnurm A., Farinelli L., Dalpé Y., Martin F. and N. Corradi. Extreme Diversification of the MATA-HMG Gene Family in the Plant - Associated Arbuscular Mycorrhizal Fungi. 2014. *New Phytologist* 201: 254-268.
48. Tisserant E., Malbreil M. Huang S., Kuo A., Kohler A., Symeonidi A. , Balestrini R., Charron P., Formey D., Geurts R., Gianinazzi-Pearson V., Gilbert B., Hijri M., Kaul R., Krajinski F., Lammers P., Lapierre D., Masclaux F., Murat C., Morin E., Ndikumana S., Pagni M., Petitpierre D., Requena N., Rosikiewicz P., Riley R.,

- Saito K., San Clemente H., Shapiro H., van Tuinen D., Bécard G., Bonfante P., Paszkowski U., Shachar-Hill Y., J. Young P.W., Zhang Z., Sanders I.R., Henrissat B., Rensing S.A., Grigoriev I.V., Ton Bisseling, Corradi N., Roux C. and Martin F.. The arbuscular mycorrhizal *Glomus* genome provides insights into the evolution of the oldest plant symbiosis. 2013. Proceedings of the National Academy of Sciences - USA 110 (50):20117-20122.
49. Burki F., Corradi N., Sierra R., Pawlowski J., Meyer G.R., Abbott C.L, and P. J. Keeling. 2013. Phylogenomics of the uncultivated intracellular parasite *Mikrocytos mackini* reveals evidence for a mitosome in Rhizaria. 2013. Current Biology 23(16): 1541-1547.
50. James T.Y, Pelin A., Bonen L., Ahrendt S., Sain D., Corradi N., Stajich J.E. 2013. Shared signatures of parasitism and phylogenomics unite the Cryptomycota and Microsporidia. 2013. Current Biology 23 (16):1548-1553.
51. Corradi N. and M. Selman. Latest progress in microsporidian genome research. 2013. Journal of Eukaryotic Microbiology 60 (3): 309-12.
52. Selman M., Sak B., Kvac M., Farinelli L., Weiss L.M. and N. Corradi. Extremely reduced levels of heterozygosity in the vertebrate pathogen *Encephalitozoon cuniculi*. 2013. Eukaryotic Cell 12(4): 496-502
53. Riley R. and N. Corradi. Searching for clues of sexual reproduction in the genomes of arbuscular mycorrhizal fungi. 2013. Fungal Ecology 6 (1): 44-49.
54. N. Corradi and L. Bonen. Mitochondrial genome invaders: an unselfish role as molecular markers. 2012. New Phytologist 196 (4), 963-965.
55. Pombert J.F.*, Selman M*, Burki F., Bardell F.T., Farinelli, L, Solter L.F., Whitman D.W., Weiss L.M., Corradi N* and P.J. Keeling†. Gain and loss of multiple functionally related horizontally transferred genes in the reduced genomes of two microsporidian parasites. 2012. Proceedings of the National Academy of Sciences - USA, 109(31):12638-43. *Contributed equally. †Co-Corresponding authors
56. Corradi N. and P. Bonfante. The Arbuscular Mycorrhizal Symbiosis: Origin and Evolution of a Beneficial Plant Infection. 2012. PLoS Pathogens. 8(4): e1002600,
57. Pelin A., J.F. Pombert J.F., Salvioli A., Bonen L., Bonfante P., N Corradi. The mitochondrial genome of the arbuscular mycorrhizal fungus *Gigaspora margarita* reveals two unsuspected trans-splicing events of group I introns. 2012. New Phytologist 194 (3), 836-845.
58. Corradi N. and L. Lildhar. Meiosis genes in the arbuscular mycorrhizal fungi - what for? Communicative & Integrative Biology 5 (2): 187-189,.
59. Selman, M. and N. Corradi. Microsporidia: horizontal gene transfers in vicious parasites. 2012. Mobile Genetic Elements 1(4), 2011.

60. Halary, S, Malik S.B., Lildhar L., Slamovits, CH, Hijri, M. and N. Corradi. Conserved meiotic machinery in a putative ancient asexual fungal lineage. 2011. Genome Biology and Evolution 3: 950-958.
61. Selman, M., Pombert, J.F., Solter, L., Farinelli, L., Weiss, L.M., Keeling P.J., and N. Corradi. Acquisition of an animal gene by two microsporidia. 2011. Current Biology 21(15): R576-R577.
62. Corradi N. and C. Charest. Some like it Toxic. 2011. Molecular Ecology 20: 3289-3290,.
63. Corradi, N. and C.H. Slamovits. The intriguing nature of microsporidian genomes. 2011. Briefings in Functional Genomics 10(3): 115-24,
64. Keeling P.J. and N. Corradi. Shrink it or lose it: balancing loss of function with shrinking genomes in the microsporidia. 2010. Virulence 2(1): 67-70,
65. Corradi N., Pombert, J.F, Farinelli L., Didier E.S., P.J. Keeling. 2010. The complete sequence of the smallest known nuclear genome from the microsporidian.
66. Keeling P.J.*, Corradi N.*, Morrison H.G.*, Haag K.L., Ebert D., Weiss L.M., Akiyoshi D.E., Tzipori S. The Reduced Genome of the Parasitic Microsporidian *Enterocytozoon bieneusi* Lacks Genes for Core Carbon Metabolism. 2010. Genome Biology and Evolution 2: 304-309.
67. Lee S.C., Corradi N., Doan S., Dietrich F.S., Keeling P.J. and J. Heitman. Evolution of the sex-related locus and genomic features shared in microsporidia and fungi. 2010. PLoS ONE, 5(5): e10539,.
68. Gill E.E.*, Lee R.*, Corradi N., Grisdale C., Lampright V., Keeling P.J. and N. Fast. Splicing and transcription differ between spore and meront life stages in the parasitic microsporidia. 2010. Molecular Biology and Evolution 27(7): 1579-84,.
69. Corradi N., Haag K.L., Pombert J.F. Ebert D. and P.J. Keeling. Draft genome sequence of the *Daphnia* pathogen *Octospora bayeri*: insights into the gene content, structure and evolution of a large microsporidian genome and a model for host-parasite interactions. Genome Biology 10: R106.
Corradi N. and P.J. Keeling. Microsporidia: a journey through radical taxonomical revisions. 2009. Fungal Biology Reviews 23: 1-8, 2009.
70. Corradi N., Ruffner, B., Croll D., Colard A. and I.R. Sanders. High molecular diversity at the copper-zinc superoxide dismutase gene among and within species of arbuscular mycorrhizal fungi. 2009. Applied and Environmental Microbiology 75(7): 1970-1978.
71. Akiyoshi D.E, Morrison H.G., Lei Shi, Feng X., Zhang Q., Corradi N., Mayanja H., Tumwine J.K., Keeling P.J., Weiss L.M. and S. Tzipori. 2009. Genomic Survey of *Enterocytozoon bieneusi*, a Major Contributor to Chronic Diarrhea and Wasting in Individuals with HIV/ AIDS. PLoS Pathogens 5 (1) e1000261,.

72. Corradi N., Burri L., and P.J. Keeling. mRNA processing in *Antonospora locustae* spores. 2008. Molecular Genetics and Genomics 280 (6): 565-574.
73. Lee S.C., Corradi N., Byrnes E.J. 3rd, Torres-Martinez S., Dietrich F.S., Keeling P.J., J. Heitman. Microsporidia evolved from ancestral sexual fungi. Current Biology 18 (21), 1675-1679. 2008
74. Croll, D., Corradi, N., Gamper, H. I, and I. R. Sanders. Multilocus genotyping of arbuscular mycorrhizal fungi and marker suitability for population genetics. New Phytologist 180 (3): 564-568, 2008.
75. Croll, D., Wille, L., Gamper, H.A., Mathimaran, M., Lammers, P.J., Corradi, N. and I.R. Sanders. Genetic diversity and host plant preferences revealed by simple sequence repeat and mitochondrial markers in a population of the arbuscular mycorrhizal fungus *Glomus intraradices*. New Phytologist 178(3): 672-687, 2008.
76. Corradi, N., Gangaeva, A. and P.J. Keeling. Comparative profiling of overlapping transcription in the compacted genomes of microsporidia *Antonospora locustae* and *Encephalitozoon cuniculi*. Genomics 91(4): 388-393, 2008.
77. Corradi, N.*, Akiyoshi, D.E.*, Morrison, H.G., Feng, X., Weiss, L.M., Tzipori, S. and P.J. Keeling. Patterns of Genome Evolution among the Microsporidian Parasites *Encephalitozoon cuniculi*, *Antonospora locustae* and *Enterocytozoon bieneusi*. PLoS ONE 2(12): e1277, 2007.
78. Corradi, N., Croll, D., Colard, A., Kuhn, G., Ehinger, M. and I.R. Sanders. Gene copy number polymorphisms in an arbuscular mycorrhizal fungal population. Applied and Environmental Microbiology 73 (1): 312-319, 2007.
79. Corradi, N. and I.R. Sanders, 2006. Evolution of the P-type II ATPase gene family in the fungi and presence of structural genomic changes among isolates of *Glomus intraradices*. BMC Evolutionary Biology, 6. 21.
80. Corradi, N., Hijri, M., Fumagalli, L. and I.R Sanders. 2004. Arbuscular mycorrhizal fungi (Glomeromycota) harbor ancient fungal tubulin genes that resemble those of the chytrids (Chytridiomycota). Fungal Genetics and Biology 41, 1037-1045.
81. Corradi, N., Kuhn, G. and I.R. Sanders. 2004. Monophyly of beta-tubulin and H⁺-ATPase gene variants in *Glomus intraradices*: consequences for molecular evolutionary studies of AM fungal genes. Fungal Genetics and Biology 41, 262-273.
82. Marzano, F. N., Corradi, N., Papa, R., Tagliavini, J., Marzano, F.N. and G. Gandolfi. 2003. Molecular evidence for introgression and loss of genetic variability in *Salmo trutta macrostigma* as a result of massive restocking of Apennine populations (Northern and Central Italy). Environmental Biology of Fishes 68, 349-356.

83. Corradi, N., Tagliavini, J., Gandolfi G. and F.N. Marzano. 2001. Molecular markers useful to characterize the *macrostigma* taxon (Duméril, 1858) belonging to the *Salmo trutta* complex. Quaderni ETP 30: 139-143

Book Chapters:

1. Riley R., Charron P., Marton T. and N. Corradi. Evolutionary genomics of Arbuscular Mycorrhizal Fungi. In F. Martin (ed), *Molecular Mycorrhizal Symbiosis*, 421-435. Wiley-Blackwell, 2016
2. Keeling P.J., Corradi N. and N.M. Fast. 2014. The Microsporidian Genome Insights and Molecular Biology, in Weiss and Widmer (ed), The Microsporidia: Pathogens of Opportunity (Wiley-Blackwell)
3. Corradi N. and P.J. Keeling. Ecological Genomics of Microsporidia, in F. Martin (ed), Ecological Genomics of the Fungi (Wiley-Blackwell, 2014).

SCHOLARLY AND PROFESSIONAL ACTIVITIES

Editorial work

- Associate Editor for *Frontiers in Plant Science*, *PLoS ONE* and *Eukaryotic Cell*
- Reviewer for high-impact venues (e.g. *PNAS*, *Current Biology*, *Nature Ecology and Evolution*, *Nature Communications*, *PLoS Genetics*, *PLoS Biology*, *Genome Biology*, etc.) and top journals in my area (e.g. *New Phytologist*, *Environmental Microbiology*, *Genome Biology and Evolution*).
- Reviewing Committee/Panel member for NSERC New Frontiers in Research Fund (NFRF)
- Reviewing Committee/Panel member for FQRNT grant applications.
- Reviewing Committee/Panel member for NSERC PDF and Doctoral Scholarships.
- Reviewing Committee/Panel member for NSERC Banting Fellowships
- Reviewing Committee/Panel member for University of Ottawa Scholarships and Thesis Prizes and Awards.
- Reviewing Committee/Panel member for International government agencies (e.g. NSERC, FQRNT, IRSST, Netherlands Organisation for Scientific Research; US National Science Foundation, Science Foundation Ireland, Agence Nationale de la Recherche, Swiss National Science Foundation).

Invitations to present work from my laboratory at international conferences, symposia and departmental seminars.)

1. **Keynote Speaker** - Institute for Advanced Studies (ISA) Visiting Professor Lecture - Università di Bologna (Italy) - May 21st, 2025.
2. **Invited Speaker** - Session on "Mobile genetic elements and their role in fungal diversity and evolution" - Mycological Society of America (MSA) - University of Wisconsin, Madison, USA - June 28th - July 2nd, 2025.
3. **Session Organiser, Chair and Speaker** - Session on Evolution and Taxonomy - 12th International Conference on Mycorrhiza (ICOM12) - August 4 - 9th, 2024.
4. **Keynote Speaker** - Tri-institutional Molecular Mycology and Pathogenesis Training Program (Tri-I MMPTP) Summer Symposium - Duke University - July 26th, 2024.

5. **Invited Speaker (Industry)** - Northern Ontario Ag Conference - Sudbury, ON, Canada - February 12-13th, 2024.
6. **Invited Speaker** - New Phytologist Symposium on "Ecological and evolutionary consequences of plant-fungal invasions". Campinas-SP, Brazil, 26-29th June 2024.
7. **Invited speaker** - John Innes Center (Norwich, UK) - September 29th, 2023.
8. **Plenary speaker** - International Meeting on Molecular Mycorrhiza (IMMM 2023) - September 24-27th 2023, Cambridge.
9. **Invited Speaker** - University of Toronto (Downtown Campus) - September 11th, 2023.
10. **Invited speaker (Industry)** - Pacific Bioscience Discoveries Road Show (Montreal) - March 29th, 2023.
11. **Invited speaker** - Departmental Seminar - Caltech EBE (California, USA) - November 7th, 2022
12. **Keynote Speaker** - Colloque Mycorrhizes 2022 - Université de Laval (Québec) - Octobre 21st, 2022.
13. **Invited speaker** - Departmental Seminar - University of Ottawa - September 12th, 2022.
14. **Plenary Speaker** - 11th International Conference on Mycorrhiza (ICOM11) - Beijing (China) - July 31-August 5, 2022.
15. **Plenary Speaker** - Joint Great Lakes Mycology/CanFunNet/ Western University meeting in Mycology - June 1st-3rd 2022.
16. **Invited speaker** - Eukaryotic Division of the Microbiology Society, and Protistology UK - "Symbiosis session" - Belfast (UK) - April 4th - 7th, 2022.
17. **Plenary Speaker** - 30th Fungal Genetics Conference - Asilomar (CA, USA) - March 15-20, 2022.
18. **Invited Speaker** - Supergroup Virtual Meeting (Duke University, JNCASR, and University of Murcia) - February 3rd, 2022.
19. **Invited speaker** - Sainsbury Laboratory (University of Cambridge) - September 12th, 2021.
20. **Invited speaker** - University Alberta - September 10th, 2021. Edmonton, Canada.
21. **Invited Chair and Speaker** - Joint Great Lakes Mycology/CanFunNet/ Western University meeting in Mycology - May 24th 2021.
22. **Invited speaker** - University of Uppsala - December 11th, 2020. Uppsala, Sweden.
23. **Invited speaker** - University of California in Riverside - November 12, 2020
24. **Invited speaker** - Western University, London, ON, Canada. March 27th 2020.
25. **Plenary Speaker** - 15th European Conference on Fungal Genetics (ECFG15). Rome, Italy, 17-20 February 2020.
26. **Invited Speaker** - Université de Clairemont-Ferrand, France, April 29th, 2019.
27. **Invited Speaker** - EMBO Workshop on Comparative Genomics of Eukaryotic Microbes, Sant Feliu de Guixols, Spain, on 14-19 October 2019.
28. **Invited Chair and Speaker** - 30th Fungal Genetics Conference - Asilomar (CA, USA) - March 12-17, 2019.
29. **Plenary Speaker** - International Meeting on Molecular Mycorrhizae 2019 (IMMM2019), February 6-8th 2019, Turin (Italy).
30. **Invited Speaker** - CSEE annual meeting (Canadian Society of Ecology and

- Evolution) - July 18 - 21, 2018, Guelph, Ontario, Canada.
31. **Invited Speaker** - Departmental Seminar. University of Wisconsin Madison (USA), April 19th, 2018.
 32. **Invited Speaker** - Departmental Seminar. Laval University (Canada), April 6th, 2018
 33. **Invited Speaker** - Joint Genome Institute (JGI) Fungal Workshop. San Francisco. March 13, 2018
 34. **Invited Speaker** - Departmental Seminar. University College London, (UK), March 7th, 2018
 35. **Invited Speaker** - Departmental Seminar. University of Kent (UK), February 15th, 2018
 36. **Plenary Speaker** - 9th International Conference on Mycorrhiza (ICOM9). July 30 - August 4, 2017. Prague, Czech Republic.
 37. **Invited Chair** - Symposium on "Population genetics/genomics/DNA polymorphism" - 9th International Conference on Mycorrhiza (ICOM9). July 30 - August 4, 2017. Prague, Czech Republic.
 38. **Invited Speaker** - Workshop on "Species concept in Glomeromycota" - 9th International Conference on Mycorrhiza (ICOM9). July 30 - August 4 2017. Prague, Czech Republic.
 39. **Invited Speaker** - Canadian Institute for Advanced Research (CIFAR) - Integrated Microbial Biodiversity Program. June 6-9, 2017
 40. **Invited Speaker** - Departmental Seminar. University of Pisa (Italy) - March 30th, 2017.
 41. **Invited Speaker** - Departmental Seminar - Ludwig-Maximilians-Universität (LMU Genetics), Munich (Germany) - March 27th 2017.
 42. **Invited Speaker** - Biology Departmental Seminar Series - University of New Brunswick - November 18th, 2016.
 43. **Invited Speaker** - European Conference of Fungal Genetics. April 3-6, 2016. Paris, France
 44. **Invited Speaker** - 2nd International Molecular Mycorrhizal Meeting. September 3-5, 2015, University of Cambridge, Cambridge
 45. **Invited Speaker** - Canadian Institute for Advanced Research (CIFAR) - Integrated Microbial Biodiversity meeting - Victoria (BC). May 27-29, 2015.
 46. **Keynote speaker** - Mycorrhizas 2015. Agriculture Canada, Ottawa. May 8-9, 2015
 47. **Invited Speaker** - Great Lakes Mycology Meeting. Queens University Biological Station. May 2-3, 2015.
 48. **Invited Speaker and chair** - Fungal Genetics meeting, Asilomar, California, March 17-21, 2015.
 49. **Chair and invited Speaker** - Congress of the International Union of Microbiological Societies - Mycology Division (IUMS 2014). July 27 - August 1, 2014, Montréal. - Breakout session in Sexual reproduction and Regulation.
 50. **Invited Speaker** - Gordon Research Conference - Cellular and Molecular Fungal Biology. Holderness School, Holderness, NH, USA. June 15-20, 2014.
 51. **Invited Speaker** - Departmental Seminar Series - University of Toronto, Mississauga, Department of Ecology and Evolutionary Biology. November 8th,

2013.

52. **Invited Speaker** - Biology Departmental Seminar Series - University of Western Ontario, London (ON), Canada. October 25, 2013.
53. **Invited Speaker** - Departmental Seminar - University of Bourgogne - Dijon, France. July 2nd, 2013. "Evolutionary genomics of curious fungi".
54. **Invited Speaker** - ICOP XIV - International Congress of Protistology - July 28 to August 2, 2013, Vancouver, Canada.
55. **Invited Speaker** - Canadian Institute for Advanced Research (CIFAR) - Integrated Microbial Biodiversity Meeting. May 15-17, 2013
56. **Keynote Speaker** - 2013 Great Lakes - Saint Lawrence Spring Workshop in Mycology, April 27-28, 2013
57. **Invited Speaker and Chair** - Fungal Genetics meeting, Asilomar, California, March 12-17, 2013.
58. **Invited Speaker** - 12th International Workshop on Opportunistic Protists (IWOP12); Tarrytown (New York, USA) August 5th - 9th 2012.
59. **Keynote Speaker** - OCIB 9th annual symposium; Ottawa, April 25th, 2012.
60. **Plenary Speaker** - 79th Annual Meeting of the Mycological Society of America. August 2 to 5, 2011. Fairbanks, Alaska, U.S.A.
61. **Keynote Speaker** - Eighth Annual RECOMB Satellite Meeting on Comparative Genomics, 9 to 11 October 2010, Ottawa, Canada.
62. **Invited Speaker** - Seminar Series, Department of Botany, University of Torino, Italy, January 13th, 2010.
63. **Invited Speaker** - Seminar series - Institut de recherche en Biologie Végétale, University of Montreal, Canada, March 27, 2009.
64. **Invited Speaker** - Canadian Institute for Advanced Research - Integrated Microbial Biodiversity program. June 2nd-5th. 2009

Science Outreach Activities - Equity/Diversity/Inclusion (EDI) - Scientific Committees - Workshops - Session Chairs - Interviews/Press Releases

- **EDI: Inclusion Ambassador** - Genetics Society of America - Fungal Genetics Meeting 2024
- **EDI: Genetics Society of America (GSA) -Advisor of the "Accessibility" Subcommittee** of the GSA "Early Career Leadership Program"
- **EDI: OCIB 2023 Symposium - Discussion Panelist** on Mental Health in Academia
- **EDI: Committee** - Ottawa Equity, Diversity, and Inclusion (EDI) Action Plan for Research.
- **Organizing Committee Member** for the 14th International Conference on Mycorrhizae (ICOM 14) in Quebec City - July/ August 2028.
- **Interview (Radio):** Radio Canada/CBC - Moteur de Recherche - December 2024
- **Interview (Radio):** Radio Canada/CBC - Moteur de Recherche - August 2024
- **Interview (Radio):** Les chercheurs ontariens : Nicolas Corradi et les champignons microscopiques - 2019

- **Lab-interview** – videos aimed at vulgarising our work - Five Minutes of Science - 2021
- **Multiple Press Releases** – For papers published in *Nature Microbiology*, *eLife*, and *Current Biology*
- **Faculty Research Highlight - 2025** - Lab research on Carbon Sequestration by mycorrhizae and Industry partnership with Mikro-Tek
- University of Ottawa - IT advisory committee
- **OCIB 2023 Symposium** – Presentation and Poster Jury
- **Jury Member for the IgnITE program**: a not-for-profit bilingual organization that prompts high school and undergraduate students to develop a research proposal focused on a medical theme.
- **Department of Biology** – Space Committee
- Chair for **Hiring Faculty Tenure Track** position in Molecular Biology
- Committee Member for **Hiring Faculty Tenure Track** position in Plant Biotechnology
- Jury and Member for **uOttawa Research Award (all Faculties)**
- Showcased our research to Mid-School/High-School Students from the Ottawa region: “2018 Holiday Lectures series” (250 attendees) – Title: “Des Microbes pas comme les autres!”
- I organized and delivered annual lectures at high schools to showcase the importance of eukaryotic microbes for human activities and attract talented students to the University of Ottawa Biology Program.
- I co-organised a workshop on genome annotation and analysis at the University of Puerto-Rico, Mayaguez in January 2011.
- I was invited to chair 7 sessions/symposia at national and international conferences.

05/05/2025

