Jolanda van Leeuwen, PhD
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EMPLOYMENT & EDUCATION

2024-present **Associate Professor**
Department of Systems Biology, University of Massachusetts Chan Medical School, USA

2024-2025 **Associate Professor** (with tenure)
Center for Integrative Genomics, University of Lausanne, Switzerland

2018-2023 **Tenure-track Assistant Professor**
Center for Integrative Genomics, University of Lausanne, Switzerland

2017-2018 **Research associate in Functional Genomics**
Donnelly Centre for Cellular and Biomolecular Research, University of Toronto, Canada
Advisors: Dr. Charlie Boone & Dr. Brenda Andrews

2011-2017 **Postdoctoral fellow in Functional Genomics**
Donnelly Centre for Cellular and Biomolecular Research, University of Toronto, Canada
Advisors: Dr. Charlie Boone & Dr. Brenda Andrews

2006-2011 **PhD in Molecular Toxicology**
Division of Molecular and Computational Toxicology, VU University Amsterdam, the Netherlands
Advisor: Dr. Nico Vermeulen

2001-2006 **Doctoraal (BSc and MSc) in Chemistry** (*cum laude*)
Leiden University, the Netherlands & Trieste University, Italy
Advisors: Dr. Jan Reedijk & Dr. Gianni Sava

GRANTS, FELLOWSHIPS & AWARDS

2025 4YouandMe, sponsored research agreement, USD 45,276.

2024-2028 Swiss National Science Foundation, project grant, CHF 600,000.

2023-2025 Swiss Cancer Research foundation, research grant, CHF 374,860.

2023 GenScript, sponsored research agreement, CHF 50,000 (estimation).

2022 Fondation pour la lutte contre le cancer, research grant, CHF 20,000.

2022 Fondation Herbette, University of Lausanne, grant for organization of the CIG symposium, CHF 7,200.

2022 Commission Egalité Diversité Intégration, University of Lausanne, grant for organization of the CIG symposium, CHF 3,500.

2020 Swiss National Science Foundation, Open Access grant, CHF 4,146.

2019-2025 Swiss National Science Foundation, Eccellenza grant, CHF 1,500,000.

2013-2016 Canadian Institutes of Health Research, postdoctoral fellowship.

2010 Travel award, Organization for the advancement of biochemical research.

2009	2nd prize, national PhD student competition, FIGON Dutch Medicine Days.
2009	Travel award, Organization for the advancement of biochemical research.
2008	Travel award, Royal Dutch Chemistry Society.
2005-2006	European Cooperation in Science and Technology, short-term scientific mission grant.

INVITED SEMINARS

2026	Epigenetics Club, University of Massachusetts Chan Medical School, Worcester, USA.
2024	Department of Chemistry, Biochemistry and Pharmaceutical Sciences, University of Bern, Switzerland.
2023	Donnelly Centre for Cellular and Biomolecular Research, University of Toronto, Toronto, Canada.
2023	Department of Systems Biology, University of Massachusetts Chan Medical School, Worcester, USA.
2022	Institute of Molecular Biology, Mainz, Germany.
2021	Goethe University Frankfurt, Frankfurt, Germany.
2020	Center for Genomic Regulation, Barcelona, Spain.
2020	Friedrich Miescher Institute for Biomedical Research, Basel, Switzerland.
2019	Dementia Research Institute, Cardiff University, Cardiff, UK.
2017	Gurdon Institute, University of Cambridge, Cambridge, UK.
2017	Institute for Systems Genetics, NYU Langone Medical Center, New York, USA.
2016	Institute for Research in Biomedicine, Barcelona, Spain.
2016	Wellcome Trust Sanger Institute, Hinxton, UK.
2016	Amsterdam Institute for Molecules, Medicines, and Systems, VU University Amsterdam, the Netherlands.

CONFERENCE TALKS

2026	Invited talk, *Evolution and Modeling of Cancer Genetic and Transcriptional Networks* Forbeck Forum, Tennessee, USA.
2026	Invited talk, *FASEB Conference on Chromosome Biology and Cell States in Yeasts*, Niagara Falls, USA.
2026	Invited talk, *20th Anniversary Symposium of the Donnelly Centre*, University of Toronto, Canada.
2025	Invited talk, *UMass Chan Research Retreat*, University of Massachusetts Chan Medical School, Worcester, USA.
2025	Invited talk, *Synthetic Lethality Approaches in Oncology* Gordon Research Conference, University of Southern Maine, USA.
2025	Invited talk, *Systems Biology workshop*, McGill-Bellairs research institute, Barbados.
2024	Invited talk, Canadian Institute for Advanced Research *Fungal Kingdom* meeting, Geneva, Switzerland.
2024	Invited talk, *Latsis Symposium on Genome and Transcriptome Engineering*, ETH Zürich, Switzerland.
2023	Invited talk, *European Cancer Dependency Map* workshop, Milan, Italy.
2023	Invited talk, *Network Biology* meeting, Cold Spring Harbor, USA.

2022 Invited talk (canceled due to COVID-19), *Life Sciences Switzerland* (LS2) conference, Zurich, Switzerland.

2021 Invited talk, *CRISPR and beyond - perturbations at scale to understand genomes*, Hinxton, UK.

2021 Talk, *Levures, Modèles et Outils*, Strasbourg, France.

2021 Talk, *International Congress on Yeasts* and *International Conference on Yeast Genetics and Molecular Biology*, Vienna, Austria.

2021 Invited talk, Workshop "*Mapping the Landscape of Genetic Dependencies in Cancer*", Frankfurt, Germany.

2020 Invited talk (canceled due to COVID-19), Canadian Institute for Advanced Research *Genetic Networks* meeting, Santa Cruz, USA.

2020 Invited talk (canceled due to COVID-19), *European Network Biology Conference: From Networks to Modeling*, Hinxton, UK.

2019 Talk, *International Conference on Yeast Genetics and Molecular Biology*, Gothenburg, Sweden.

2019 Invited talk, *European Society of Human Genetics Conference*, Gothenburg, Sweden.

2019 Talk, *Network Biology* meeting, Cold Spring Harbor, USA.

2018 Invited talk, iGenolevure meeting "*High-Throughput Technologies Applied to Yeasts*", Strasbourg, France.

2018 Invited talk, *Levures, Modèles et Outils*, Rheinau, Switzerland.

2017 Invited talk, Canadian Institute for Advanced Research *Genetic Networks* meeting, Toronto, Canada.

2017 Talk, *Systems Biology: Networks* meeting, Cold Spring Harbor, USA.

2016 Talk, *International Conference on Systems Biology*, Barcelona, Spain.

2016 Talk, *The Allied Genetics Conference*, Orlando, USA.

2016 Talk, *North East Regional Yeast Meeting*, Buffalo, USA.

2016 Invited talk, Breast Cancer Informatics Group *Genetic Networks* meeting, McGill-Bellairs research institute, Barbados.

2015 Talk, *OMICs in Biomedical Research* meeting, Split, Croatia.

2015 Invited talk, Canadian Institute for Advanced Research *Genetic Networks* meeting, Toronto, Canada.

2014 Talk, *Yeast Genetics meeting*, Seattle, USA.

2010 Talk, *Yeasterday*, Leuven, Belgium.

2009 Invited talk, *FIGON Dutch Medicine Days*, Lunteren, the Netherlands.

ORGANIZATION OF CONFERENCES

2025-present Member, Finance and Policy Committee, *International Conference on Yeast Genetics and Molecular Biology*.

2024-present Co-organizer, *Network Biology* meeting, Cold Spring Harbor, USA.

2023-present Chair, Genomics and Systems Biology subcommittee, GSA *Yeast Genetics Meeting*, USA.

2022-present Program committee member, GSA *Yeast Genetics Meeting*, USA.

2022 Co-organizer, *Fungi & Friends*, Lausanne, Switzerland.

2022	Program committee member, Systems Track, *European Conference on Computational Biology*, Sitges, Spain.
2022	Co-organizer, CIG symposium "*Interactions in Biology*", Lausanne, Switzerland.
2019-2022	Founder and co-organizer, *CRISPR and beyond - perturbations at scale to understand genomes*, Hinxton, UK.
2013-2016	Co-organizer, Annual postdoc symposium and biweekly seminars, University of Toronto, Canada.

CONFERENCE TALKS BY TRAINEES

2026	Sabine van Schie, GSA *Yeast Genetics Meeting*, Pacific Grove, USA.
2026	Michelle Conti, GSA *Yeast Genetics Meeting*, Pacific Grove, USA.
2025	Sabine van Schie, *International Conference on Yeast Genetics and Molecular Biology*, Paris, France
2025	Núria Bosch, CIG symposium *"CIG @20: Bridging science and careers",* Lausanne, Switzerland.
2024	Sabine van Schie, *CRISPR and beyond - perturbations at scale to understand genomes*, Hinxton, UK.
2024	Amandine Batté, *The Allied Genetics Conference*, Washington DC, USA.
2023	Amandine Batté, *International Conference on Yeast Genetics and Molecular Biology*, Florence, Italy.
2023	Linh Ho, *European Society of Human Genetics Conference*, Glasgow, UK.
2023	Linh Ho, CIG symposium *"Emergence of order across biological scales"*, Lausanne, Switzerland.
2023	Sabine van Schie, *Network Biology* meeting, Cold Spring Harbor, USA.
2023	Linh Ho, *Network Biology* meeting, Cold Spring Harbor, USA.
2022	Linh Ho, *CRISPR and beyond - perturbations at scale to understand genomes*, Hinxton, UK.
2022	Betül Ünlü, *Swiss Society for Microbiology Annual Meeting*, EPFL, Switzerland.
2022	Núria Bosch, GSA *Yeast Genetics Meeting*, UCLA, USA.
2022	Linh Ho, *Talents de la génétique*, Société Française de Génétique, France.
2022	Núria Bosch, *Fungi & Friends*, Lausanne, Switzerland.
2021	Núria Bosch, *International Congress on Yeasts* and *International Conference on Yeast Genetics and Molecular Biology*, Vienna, Austria.

SUPERVISION OF TRAINEES

Postdocs

2024-present	Michelle Conti	
2021-present	Sabine van Schie	
2021-2026	Núria Bosch	then clinical genomics analyst, Medigenome
2019-2025	Amandine Batté	then clinical genomics analyst, Medigenome
2018-2023	Betül Ünlü	then postdoctoral fellow, Royal College of Surgeons

PhD students

2025-present	Sumaira Perez	
2022-present	Claire Paltenghi	
2021-2025	Erfan Heidari	
2019-2020	Dinis Barros	then bioinformatician, Sophia Genetics
2019-2024	Uyen Linh Ho	then account manager, Thermo Fisher

MSc students (1-year thesis project)

2025-present	Alix Abrecht	
2022-2023	Camille Schmidt	then intern with Elena Kuzmin, Concordia
2021-2022	Jade Nicolet	then PhD student with Niko Geldner, UNIL
2021-2022	Claire Paltenghi	then PhD student with us
2019-2020	Romane Mizeret (co-advisor)	then PhD student with David Suter, EPFL

Other

2026	Nelson Tetteh	summer student
2025-present	Kathleen Ben-Aroch	research associate
2025	Sumaira Perez	rotation student
2025	Hillary Nna	rotation student
2025	Mika Wesley	rotation student
2025	Jana Sheikh Ammar	research assistant
2024	Jana Sheikh Ammar	MSc student (6-month research project)
2024	Antoine Chatillon	research assistant
2023-2024	Jana Brenner	research assistant
2023-2024	Camille Schmidt	stagiaire
2023	Abigail Yoel	summer undergraduate student
2022-2023	Nadine Eliasson	research assistant
2022	Loïc Zen-Ruffinen	MSc student (3-month research project)
2022	Claire Paltenghi	stagiaire
2022	Eve Mangin	research assistant
2021	Karunnya Tharmakulasinkam	MSc student (3-month research project)
2020-2021	Jonas Barraud	technician apprentice
2020	Christopher Forbes-Jaeger	MSc student (3-month research project)
2020	Elise Eray	MSc student (3-month research project)
2019	Jessica Burnier	MSc student (3-month research project)
2006-2018	Daily supervisor of 10 MSc and 24 BSc students.	

Mentees

2023-2024	Vishwaja Jhaveri (Roignant lab)	PhD student mentorship program
2020-2024	Chiara Auwerx (Reymond lab)	PhD student mentorship program
2019-2024	Nina Dukanovic (Franken lab)	PhD student mentorship program
2018	Piret Avila (Lehmann lab)	PROWD mentorship program for female postdocs

SERVICE ON THESIS COMMITTEES

2026	Chair, qualifying exam committee, Matthew Funk Wang lab, UMass Chan Medical School
2026	Member, qualifying exam committee, Mika Wesley Lee lab, UMass Chan Medical School
2025	Member, PhD exam committee, Leila Inigo de la Cruz Laan lab, TU Delft, the Netherlands
2024-present	Member, PhD committee, Angela Topic Diss lab, Friedrich Miescher Institute for Biomedical Research, Switzerland
2023	Member, PhD exam committee, Mireia Seuma Bolognesi lab, Institute for Bioengineering of Catalonia, Spain
2020-2024	Member, PhD committee, Anastasiia Semenova Gambetta lab, University of Lausanne, Switzerland
2020	President, PhD exam committee, Júlia Domingo Lehner lab, Center for Genomic Regulation, Spain
2019-2023	Member, PhD committee, Alexandra Bendel Diss lab, Friedrich Miescher Institute for Biomedical Research, Switzerland
2019	Member, PhD committee, Terry Mara Martin and Pelet labs, University of Lausanne, Switzerland

TEACHING

2026	Lecturer, *Scientific Inquiry in Biomedical Research*, BBS 614, 1 hour, UMass Chan Medical School.
2026	Instructor, *Postbaccalaureate Research Education Program*, 2 hours, UMass Chan Medical School.
2026	Lecturer, *Summer Undergraduate Research Program*, 1 hour, UMass Chan Medical School.
2026	Instructor, *Biomedical Sciences tutorial*, BBS 800, 1 hour, UMass Chan Medical School.
2024	Lecturer, *Yeast Genetics and Genomics course*, 2 hours, Cold Spring Harbor Laboratory, NY, USA.
2022	Tutor and lecturer, *Reviews in Quantitative Biology*, ~8 hours, course for PhD students, University of Lausanne, Switzerland.
2020-2025	Course director and lecturer, *CRISPR-Cas9 genome editing*, 16 hours, course for MSc students, University of Lausanne, Switzerland.
2019-2025	Course director and lecturer, *Epistasis, Oligogenicity, Pleiotropy and beyond*, 6 hours, course for 3rd year BSc students, University of Lausanne, Switzerland.
2019-2023	Tutor, *Write-a-review*, ~8 hours, course for MSc students, University of Lausanne, Switzerland.
2007-2011	Teaching assistant, 7 lab courses in life sciences, VU University Amsterdam, the Netherlands.

OTHER ACADEMIC RESPONSIBILITIES

- Ad hoc manuscript reviewer for Biological Reviews; Cell Genomics; Cell Systems; Current Genetics; Current Opinion in Genetics and Development; eLIFE; EMBO Journal; G3: Genes, Genomes, Genetics; Genome Biology and Evolution; Genome Medicine;

	Genome Research; Journal of Molecular Biology; Nature Biotechnology; Nature Communications; Nature Genetics; Molecular Systems Biology; mSystems; PLOS Genetics; PNAS; Review Commons; and Science.
-	Ad hoc grant reviewer for DevelopMed (Marie Skłodowska-Curie COFUND action, Ireland), the European Research Council, the German Research Foundation, the Icelandic Research Fund, the Israel Science Foundation, the Swiss Cancer Research foundation, the Swiss National Science Foundation, and Wellcome Trust.
2026	Senior Editor, Special issue "Using functional genomics to explore biological networks", Genetics.
2025	Co-editor, yeast systems biology/functional genomics collection, CSH Protocols.
2023-2024	Chair, Equity, Diversity, and Inclusion committee, Center for Integrative Genomics, University of Lausanne, Switzerland.
2023	Member, Faculty search committee cell biology, Department of Fundamental Microbiology, University of Lausanne, Switzerland.
2022-2024	Chair, Safety committee, Center for Integrative Genomics, University of Lausanne, Switzerland.
2022	External expert, Faculty search committee CRISPR technology in human reproduction, Department of Endocrinology, Diabetology and Clinical Nutrition, University of Zurich, Switzerland.
2020-2024	Member, Equipment committee, Center for Integrative Genomics, University of Lausanne, Switzerland.
2020	Member, Faculty search committee microbial biotechnology, Department of Fundamental Microbiology, University of Lausanne, Switzerland.
2020	Member, Prix Guenin selection committee, Center for Integrative Genomics, University of Lausanne, Switzerland.

OUTREACH & MEDIA COVERAGE

2025	Cell Systems, Voices, *What is the current bottleneck in mapping molecular interaction networks?* (link).
2023	Human Technopole, interview on our research and the European Cancer Dependency Map initiative (link).
2022	Nature Biotechnology, *Adrestia Therapeutics — Gene networks to the rescue* (link).
2022	RTS (Swiss radio station), CQFD, radio interview on CRISPR technology (link).
2021	Science Daily, *'Rescue mutations' that suppress harmful DNA changes could shed light on genetic disorders* (link).
2021	Biomedical Picture of the Day, *Rescue Me* (link).
2017	University of Toronto, interview on the academic job search (link).
2017	Outreach video, *Genetic networks: mapping risk and tailoring treatment* (link).
2016	Quanta magazine, *Why some genetic miscues are helpful* (link).
2016	The Scientist, *Mutation vs. Mutation* (link).
2016	Trouw (Dutch newspaper), *Zoeken naar de rem op het gen dat ons ziek maakt.*
2011	NTR Radio 5 (Dutch radio station), Hoe?Zo!, radio interview on PhD thesis.
2011	RTL news (Dutch news agency), *Proefdieren mogelijk overbodig dankzij gist.*
2011	AT5 news (Dutch news agency), *Gist verlost proefdieren van onderzoek.*

PUBLICATIONS

37. S van Schie and **J van Leeuwen** (2026) *Protocol for mapping gene essentiality changes in yeast using inducible gene deletion mutants.* STAR Protoc, 7, 104723.
36. C Paltenghi-Peceva, S van Schie, E Heidari, S Friend, and **J van Leeuwen** (2026) *Genetic suppressors as new therapeutic targets for Mendelian diseases*. Trends Genet, in press.
35. F Iorio, MJ Garnett, P Beltrao, M Billmann, L Bless, C Bock, M Boutros, A Bruna, P Carninci, G Ciriello, I Cortés-Ciriano, G D'Alessandro, R Esposito, S Faletti, E Gonçalves, S Haider, N Kalebic, M Kaulich, G Leuzzi, N Lopez-Bigas, CJ Lord, E Petsalaki†, S Pettitt, L Proietti, R Rad, N Radic, CJ Ryan, JL Schmid-Burgk, S Sharma, A Sottoriva, C Tape, L Trusolino, **J van Leeuwen**, D Walter, and L Wessels (2026) *PRECISE as a European initiative for cancer-vulnerability mapping and prediction.* Nat Genet, 58, 1738-1744.
34. K Obara, H Okada, G Tan, S Ohnuki, G Suzuki, H Ohtake, K Kubo, F Ghanegolmohammadi, S Ishizaka, Y Yashiroda, A Okita, E Mishiro-Sato, K Suzuki, Y Tamura, R Ashine, Y Ikeda, T Kamura, B Andrews, **J van Leeuwen**, E Bi, NN Noda, C Boone, and Y Ohya (2026) *Role of Pbr1, a putative oxidoreductase in the ER quality-control and folding of yeast Fks1 glucan synthase*. PNAS, 123, e2612792123.
33. M Billmann, M Costanzo, X Zhang, AZ Hassan, M Rahman, KR Brown, KS Chan, AHY Tong, C Pons, HN Ward, C Ross, **J van Leeuwen**, M Aregger, KA Lawson, B Mair, AF Roth, NE Sen, DT Forster, G Tan, P Merro, SN Masud, Y Lee, M Aguilera-Uribe, M Usaj, SM Almeida, K Aulakh, U Bhojoo, S Birkadze, N Budijono, X Cai, JJ Caumanns, M Chandrashekhar, D Chang, R Clinie, K Dasgupta, A Drazic, JIR Echenique, R Gacesa, AG Farias, A Habsid, I Horecka, K Kantautas, F Ji, DK Kim, SY Lee, W Liang, J Lim, K Lin, X Lu, B Nami, A Nixon, N Mikolajewicz, L Nedyalkova, T Rohde, MS Rodrigues, M Soste, E Schultz, W Wang, A Seetheraman, E Shuteriqi, O Sizova, DT Taylor, M Tereschchenko, D Tieu, J Turowec, T Ubhi, S Varland, KE Wang, Z Wang, J Wei, YX Xiao, GW Brown, B Cravatt, SJ Dixon, HD Wyatt, HL Röst, FP Roth, T Xia, G Bader, R Loewith, NG Davis, BJ Andrews, CL Myers, J Moffat, and C Boone (2026) *Global genetic interaction network of a human cell maps conserved principles and informs functional interpretation of gene co-essentiality profiles.* Cell, 189, 1-24.
32. A Batté, N Bosch-Guiteras, C Pons, M Ota, M Lopes, S Sharma, N Tellini, C Paltenghi, M Conti, KT Kan, UL Ho, M Wiederkehr, J Barraud, M Ashe, P Aloy, G Liti, A Chabes, L Parts, and **J van Leeuwen** (2026) *The modifiers that cause changes in gene essentiality.* Cell Syst, 17, 101515.
31. M Billmann, M Costanzo, M Rahman, K Chan, AHY Tong, HN Ward, AZ Hassan, X Zhang, KR Brown, T Rohde, AH Shaw, C Ross, **J van Leeuwen**, M Aregger, K Lawson, B Mair, P Mero, M Usaj, B Andrews, C Boone, J Moffat, and CL Myers (2025) *Quantitative analysis of genetic interactions in human cells from genome-wide CRISPR-Cas9 screens.* bioRxiv, 10.1101/2025.06.30.662330.
30. C Paltenghi and **J van Leeuwen** (2025) *Genetic suppression interactions are highly conserved across genetically diverse yeast isolates.* G3 (Bethesda), 15, jkaf047.
29. C Pons and **J van Leeuwen** (2023) *Meta-analysis of dispensable essential genes and their interactions with bypass suppressors.* Life Sci Alliance, 7, e202302192.
28. B Ünlü, C Pons, UL Ho, A Batté, P Aloy, and **J van Leeuwen** (2023) *Global analysis of suppressor mutations that rescue human genetic defects.* Genome Med, 15, 78.
27. L Trastulla, A Savino, P Beltrao, I Cortés Ciriano, P Fenici, MJ Garnett, I Guerini, N Lòpez Bigas, I Mattaj, E Petsalaki, L Riva, CJ Tape, **J van Leeuwen**, S Sharma, F Vazquez, and F Iorio (2023) *Highlights from the 1st European Cancer Dependency Map Symposium and Workshop.* FEBS Lett, 597, 1921-1927.
26. N Bosch-Guiteras and **J van Leeuwen** (2022) *Exploring conditional gene essentiality through systems genetics approaches in yeast.* Curr Opin Genet Dev, 76, 101963.

25. A Pallaseni, EM Peets, J Koeppel, J Weller, T Vanderstichele, UL Ho, L Crepaldi, **J van Leeuwen**, F Allen, and L Parts (2022) *Predicting base editing outcomes using position-specific sequence determinants.* Nucleic Acids Res, gkac161.
24. A Batté, SC van der Horst, M Tittel-Elmer, SM Sun, S Sharma, **J van Leeuwen**, A Chabes, and H van Attikum (2022) *Chl1 helicase controls replication fork progression by regulating dNTP pools.* Life Sci Alliance, 5, e202101153.
23. L Parts, A Batté, M Lopes, MW Yuen, M Laver, BJ San Luis, JX Yue, C Pons, E Eray, P Aloy, G Liti, and **J van Leeuwen** (2021) *Natural variants suppress mutations in hundreds of essential genes.* Mol Syst Biol, 17, e10138.
22. **J van Leeuwen***, C Pons, G Tan, JZ Wang, J Hou, J Weile, M Gebbia, W Liang, E Shuteriqi, Z Li, M Lopes, M Ušaj, A Dos Santos Lopes, N van Lieshout, CL Myers, FP Roth, P Aloy, BJ Andrews*, and C Boone* (2020) *Systematic analysis of bypass suppression of essential genes*. Mol Syst Biol, 16, e9828 (* co-corresponding authors).
20. E Kuzmin, B VanderSluis, AN Nguyen Ba, W Wang, EN Koch, M Usaj, A Khmelinskii, M Mattiazzi Usaj, **J van Leeuwen**, O Kraus, A Tresenrider, M Pryszlak, MC Hu, B Varriano, M Costanzo, M Knop, A Moses, CL Myers, BJ Andrews, and C Boone (2020) *Exploring whole-genome duplicate gene retention with complex genetic interaction analysis.* Science, 368, 1446.
21. M Costanzo, E Kuzmin, **J van Leeuwen**, B Mair, J Moffat, C Boone, and BJ Andrews (2019) *Global genetic networks and the genotype to phenotype relationship*. Cell, 177, 85-100.
19. J Hou, **J van Leeuwen**, BJ Andrews, and C Boone (2018) *Genetic network complexity shapes background-dependent phenotypic expression*. Trends Genet, 34, 578-586.
18. E Kuzmin, B VanderSluis, W Wang, G Tan, R Deshpande, Y Chen, M Usaj, A Balint, M Mattiazzi Usaj, **J van Leeuwen**, EN Koch, C Pons, AJ Dagilis, M Pryszlak, Z Wang, J Hanchard, M Riggi, K Xu, H Heydari, BJ San Luis, E Shuteriqi, H Zhu, N Van Dyk, S Sharifpoor, M Costanzo, R Loewith, A Caudy, D Bolnick, GW Brown, BJ Andrews, C Boone, and CL Myers (2018) *Systematic analysis of complex genetic interactions*. Science, 360, 283.
17. M Shin, **J van Leeuwen**, C Boone, and A Bretscher (2018) *Yeast Aim21/Tda2 both regulates free actin by reducing barbed end assembly and forms a complex with Cap1/Cap2 to balance actin assembly between patches and cables*. Mol Biol Cell, 29, 923-936.
16. **J van Leeuwen**, C Boone, and BJ Andrews (2017) *Mapping a diversity of genetic interactions in yeast*. Curr Opin Syst Biol, 6, 14-21.
15. T Hart, AHY Tong, K Chan, **J van Leeuwen**, A Seetharaman, M Aregger, M Chandrashekhar, N Hustedt, S Seth, A Noonan, A Habsid, O Sizova, L Nedyalkova, R Climie, L Tworzyanski, K Lawson, MA Sartori, S Alibeh, D Tieu, S Masud, P Mero, A Weiss, KR Brown, M Ušaj, M Billmann, M Rahman, M Costanzo, CL Myers, BJ Andrews, C Boone, D Durocher, and J Moffat (2017) *Evaluation and design of genome-wide CRISPR/Cas9 knockout screens*. G3 (Bethesda), 7, 2719-2727.
14. JS Piotrowski, SC Li, R Deshpande, SW Simpkins, J Nelson, Y Yashiroda, JM Barber, H Safizadeh, E Wilson, H Okada, AA Gebre, K Kubo, NP Torres, MA LeBlanc, K Andrusiak, R Okamoto, M Yoshimura, E DeRango-Adem, **J van Leeuwen**, K Shirahige, A Baryshnikova, GW Brown, H Hirano, M Costanzo, BJ Andrews, Y Ohya, H Osada, M Yoshida, CL Myers, and C Boone (2017) *Functional annotation of chemical libraries across diverse biological processes*. Nat Chem Biol, 13, 982-993.
13. **J van Leeuwen**, C Pons, C Boone, and BJ Andrews (2017) *Mechanisms of suppression: the wiring of genetic resilience*. BioEssays, 39, 1700042.
12. A Huseinovic, **J van Leeuwen**, T van Welsem, F van Leeuwen, NPE Vermeulen, JM Kooter, and JC Vos (2017) *The effect of acetaminophen on ubiquitin homeostasis in Saccharomyces cerevisiae* PLoS One 12, e017357.

11. **J van Leeuwen**, C Pons, JC Mellor, TN Yamaguchi, H Friesen, J Koschwanez, M Mattiazzi Ušaj, M Pechlaner, M Takar, M Ušaj, B VanderSluis, K Andrusiak, P Bansal, A Baryshnikova, C Boone, J Cao, A Cote, M Gebbia, G Horecka, I Horecka, E Kuzmin, N Legro, W Liang, N van Lieshout, M McNee, BJ San Luis, F Shaeri, E Shuteriqi, S Sun, L Yang, JY Youn, M Yuen, M Costanzo, AC Gingras, P Aloy, C Oostenbrink, A Murray, TR Graham, CL Myers, BJ Andrews, FP Roth, and C Boone (2016) *Exploring genetic suppression interactions on a global scale.* Science 354, 599.
10. M Costanzo, B VanderSluis, EN Koch, A Baryshnikova, C Pons, G Tan, W Wang, M Ušaj, J Hanchard, SD Lee, V Pelechano, EB Styles, M Billmann, **J van Leeuwen**, N van Dyk, ZY Lin, E Kuzmin, J Nelson, JS Piotrowski, T Srikumar, S Bahr, Y Chen, R Deshpande, CF Kurat, SC Li, Z Li, M Mattiazzi Ušaj, H Okada, N Pascoe, BJ San Luis, S Sharifpoor, E Shuteriqi, SW Simpkins, J Snider, H Garadi Suresh, Y Tan, H Zhu, N Malod-Dognin, V Janjic, N Przulj, OG Troyanskaya, I Stagljar, T Xia, Y Ohya, AC Gingras, B Raught, M Boutros, LM Steinmetz, CL Moore, AP Rosebrock, AA Caudy, CL Myers, BJ Andrews, and C Boone (2016) *A global genetic interaction network maps a wiring diagram of cellular function*. Science 353, 1381.
9. **J van Leeuwen**, BJ Andrews, C Boone, and G Tan (2015) *Rapid and efficient plasmid construction by homologous recombination in yeast* (protocol). Cold Spring Harb Protoc 9, pdb.prot085100.
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7. **J van Leeuwen**, NPE Vermeulen, and JC Vos (2012) *Yeast as a humanized model organism for biotransformation-related toxicity*. Curr Drug Metab 13, 1464-1475.
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