Phillip Karpowicz

1. Address

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2. Employment

University of Windsor, Canada 2014 – Present
- Associate Professor, Department of Biomedical Sciences
- Chair, Biomedical / Biological Sciences Graduate Program (2017-2020)
- Coordinator, Biological Sciences B.Sc. Honours Program (2015-16)

Harvard Medical School, USA 2008 – 2014
- Postdoctoral Fellow (supervised by Dr. Norbert Perrimon)
- Intestinal stem cell biology

3. Education

University of Toronto, Toronto, ON, Canada 2003 - 2008
- Ph.D., Medical Science (supervised by Dr. Derek van der Kooy)
- Neural stem cell biology

University of Toronto, Toronto, ON, Canada 2001 - 2003
- M.Sc., Medical Science, with Collaboration in Bioethics

Mount Allison University, Sackville, NB, Canada 1996 - 2000
- B.Sc. Honours Biochemistry

4. Awards / Recognitions

- University of Windsor, Research Impact Award (2025)
- CIHR Outstanding Reviewer Recognition (2025, 2026)
- University of Windsor, Faculty of Science Student Mentor Award (2022)
- Ontario Early Researcher Award (2018-2022)
- Canadian Society for Chronobiology Junior Investigator Award (2019)

- University of Windsor Outstanding Faculty Research Award (2019)
- Human Frontier Science Program Long Term Fellowship (2009-2012).
- NSERC Postgraduate Scholarship (Ph.D. Program) (2004-2006)

5. Research funding history

- Worldwide Cancer Research Grant (2025-2028)
- Canadian Institutes of Health Research Project Grant (2022-2027)
- Natural Sciences and Engineering Research Council of Canada Discovery Grant (2020-2027); Discovery Accelerator Supplement (2020-23)
- Genome Canada Large-Scale Applied Research Project, co-PI (2019-2025)
- Canadian Institutes of Health Research Project Grant (2018-2023)
- Ontario Early Researcher Award (2018-2023)
- Swiss National Science Foundation Scientific Exchanges Project (co-applicant, 2022).
- Canada Foundation for Innovation (John Evans Leadership Fund) / Ontario Research Fund (2015; 2017; 2020; 2025)
- Natural Sciences and Engineering Research Council of Canada Discovery Grant (2015-2020)
- Ontario Institute for Regenerative Medicine New Ideas Grant (2018-19)
- Crohn's and Colitis Foundation of Canada Innovations Grant (2018-19)
- Natural Sciences and Engineering Research Council of Canada Engage Grants (2018-2019)
- Windsor Essex Cancer Centre Foundation Seeds4Hope Grant (2015-2017)
- Mitacs/JSPS and SWORP Student Training Grants (2016, 2017)
- Harvard Stem Cell Institute Cancer Pilot Grant (2011-2013)

6. Professional activities

6.1 Editorial and peer-review activities

- **Peer-reviewer for funding agencies (2017-present):**
    - CIHR Program Grant committee member (HDK: Hematology, Digestive Disease & Kidney, 2024-present)
    - CIHR Program Grant peer review member (CB1: Cell Biology Molecular / Fundamental, 2021, 2024)
    - NSERC Discovery Grant Program 1501 Genes, Cells, and Molecules committee: Section Chair (2022-2024); Alt-chair (2021-2022); Evaluation Group Member (2020-2024)
    - DFG / German Research Foundation, Germany (2022-present)
    - NFRF Exploration Grants (2020, 2022)
    - Canada Foundation for Innovation (2019-2022)
    - UK Research Institute, UK (2024)
    - Israel Science Foundation (2022, 2024)
    - Crohn's and Colitis Canada (2023)
    - CIHR Graduate Scholarships (2017-2020)

- Wellcome Trust Grants, UK (2019)
- Human Frontier Science Program Research Grants, International (2018)
- Medicine by Design Fellowship Awards (2017-2020)

- **Peer-reviewer for scientific journals (2014-present):**
  - *Gastroenterology*
  - *Nature Cell Biology*
  - *Nature Communications*
  - *Science Advances*
  - *Cell Reports*
  - *Trends in Molecular Medicine*
  - *Stem Cells*
  - *EMBO Reports*
  - *Mucosal Immunology*
  - *eLife*
  - *Disease Models & Mechanisms*
  - *British Journal of Pharmacology*
  - *Gut Microbes*
  - *Experimental Physiology*
  - *Developmental Biology*
  - *Oncogene*
  - *Scientific Reports*
  - *Inflammation*
  - *BMC Medical Genomics*
  - *Journal of Biological Rhythms*
  - *Gastroenterology Reports*
  - *F1000 Research*
  - *iScience*
  - *JoVE*
  - *Frontiers in Molecular Biosciences*
  - *Cell Physiology and Biochemistry*
  - *Cell Research*
  - *Cell Cycle*
  - *PLoS Genetics*
  - *PLoS ONE*
  - *Theranostics*
  - *Translational Research*
  - *Life Sciences*
  - *G3*, *Genome*
  - *Methods*

6.2 Society memberships

- *International Society for Stem Cell Research* (2003-present)
- *Canadian Society for Chronobiology* (2015-present)
- *Canadian Association for Gastroenterology* (2020-present)
- *Crohn's and Colitis Canada IBD Research Institute* (2014-present)
- *Canadian Sleep and Circadian Network* (2015-present)
- *RNA Canada* (2021-present)

- *Ontario Institute for Regenerative Medicine* (2014-2019)
- *Windsor-Essex SPARK Health Institute* (2014-present)
- *Halifax Project – Broad-Spectrum Integrative Design for Cancer Prevention and Therapy* (2012-2015)
- *CHIMBRIDS* (*Chimeras and Hybrids in Comparative European and International Research*) International Working Group for Scientific and Legal Policy (2004-2008)

6.3 Professional service activities

- Canadian Society for Chronobiology Secretary (2025-present); Board Member (2021-present)
- Canadian Association of Gastroenterology Research Committee Member (2024-present)
- Co-Host / Organizer for Canadian Association of Gastroenterology: Digestive Diseases Week Conference (2021, 2024)
- Session Chair for Stem Cell – Niche Interactions in the Gastrointestinal Tract, Cancun, Mexico (2024).
- Conference organizing committee (Canadian Society for Chronobiology Conference 2019; Conference of the Canadian Society of Zoologists 2019)
- Conference poster judge (Canadian Developmental Biology Meeting 2021; Canadian Society for Chronobiology, 2025, 2017; Windsor Cancer Research Group, 2016/2020; Till and McCulloch Meeting, 2015)
- External evaluator: tenure application (University of Rochester USA 2024, University of Ottawa 2022, Brock University 2021)

6.4 Professional service activities at home institution

- Member Research Ethics Board (2018-present)
- Biomedical Sciences Department Head Search Committee (2024)
- Biological Sciences Graduate Committee (2016-2021)
- Biological Sciences Faculty Appointments Committee (2015-16 and 2017-18)
- Graduate Committee member for >30 students, and Thesis Defense Chair for >20 students (2015-present)
- Organizer of Biomedical Grad Program open house (2024)
- Moderator at Windsor Cancer Research Group conference session (2016)
- UWill Discover abstract reviewer (2016-present)

6.5 Outreach activities

- Media outreach: “What Is The Healthiest Time To Eat Dinner?” Chatelaine Magazine (2026); Interview at Windsor Morning CBC Listen (radio, 2026); “Our Internal Clocks.” New Realm Studios (film, 2023); “Circadian rhythms and daylight savings time.” CHED Mornings Edmonton (radio, 2021), Global News Vancouver (TV, 2021), The Chronicle Herald (newspaper, 2020); “Communicating in Science.” University of Windsor (film, 2020)
- IGNITE Medical Case Competition judge (Canadian high school science organization, 2021-22); UWill Discover Competition judge (2023)
- Mentor for grade 8 students and high school students / science fairs (2015, 2016, 2019)
- Let’s Talk Cancer symposium speaker (2017, 2019, 2025)

- Let's Talk Science symposium speaker (2016, 2019, 2020, 2021)
- March for Science speaker (2017)

7. Research activities

7.1 Publications (* indicates under my supervision)

1. Carmona-Alcocer V. *, Gobet C., MacDonald J. *, Taleb Z. *, Naef F., Karpowicz P. *Chrono-atlas of cell-type specific daily gene expression rhythms in the regenerating colon*. **Nature Communications** 17(1): 9438 (2026).

2. Taleb Z. *, Edwards C. *, Fatmah M. *, Haireek M. *, Wan R. *, Karpowicz P. *Epithelial function of the circadian clock gene, Bmal1, in regulating the mucosa*. **American Journal of Physiology: Gastrointestinal and Liver Physiology** (revision submitted, 2026) **bioRxiv**.

3. Carmona-Alcocer V. *, Igbokwe T. *, MacDonald J. *, Yousif M. *, Todorovski A. *, Taleb Z. *, Grondin J., Khan W., Karpowicz P. *Time restricted feeding ameliorates colitis through clock-dependent and nutrition-dependent processes*. (2026) **bioRxiv**.

4. Islam S., Heath D., Dixon B., Karpowicz P., Vuu K. *, Lablanc J., Bernier N., Jeffries K. *Development of multi-species qPCR assays for a stress transcriptional profiling (STP) chip to assess the resilience of salmonids to changing environments*. **Canadian Journal of Fisheries and Aquatic Sciences** 83: 1-12 (2026).

5. Thraya M. *, Patel A. *, Stewart K. *, Stephens A. *, Abou-Akl H. *, Heath D., Pitcher T., Carmona-Alcocer V. *, Karpowicz P. *Integration of photoperiod and time-restricted feeding on the circadian gene rhythms in juvenile salmon*. **Scientific Reports** 15(1):16156 (2025).

6. Parasram K. *, Zuccato A. *, Shin M., Willms R., Deveale B., Foley E., Karpowicz P. *The emergence of circadian timekeeping in the intestine.* **Nature Communications** 15(1): 1788. (2024).

7. Taleb Z. *, Karpowicz P. *Circadian regulation of digestive and metabolic tissues*. **American Journal of Physiology: Cell Physiology** 323(2): C306-C321. (2022). (Invited Review)

8. Parasram K. *, Bachetti D. *, Carmona-Alcocer V. *, Karpowicz P. *Fluorescent reporters for studying circadian rhythms in Drosophila melanogaster*. **Methods in Molecular Biology** 2482: 353-371 (2022).

9. Taleb Z. *, Carmona-Alcocer V. *, Stokes K. *, Haireek M. *, Wang H., Collins S., Khan W.I., Karpowicz P. *Bmal1 regulates the daily timing of colitis*. **Frontiers in Cellular and Infection Microbiology** 12: 773413 (2022).

10. Stokes K. *, Nunes M. *, Trombley C. *, Flores D. E. F. L., Wu G., Curran C. *, Taleb Z. *, Alkhateeb A., Banskota S., Harris C., Love O., Khan W.I., Rueda L., Hogenesch J.B., Karpowicz P. *The circadian clock gene, Bmal1, regulates intestinal stem cell signaling and*

represses tumor initiation. **Cellular & Molecular Gastroenterology and Hepatology** 12(5): 1847-1872 (2021).

11. Rahman F., Angus S., Stokes K. *****, Karpowicz P., Krause M. *Impaired ECM Remodeling and Macrophage Activity Define Necrosis and Regeneration Following Damage in Aged Skeletal Muscle*. **International Journal of Molecular Sciences** 21(13): 4575 (2020).

12. Parasram K. *****, Karpowicz P. *Time after time: Circadian clock regulation of intestinal stem cells*. **Cellular and Molecular Life Sciences** 77(7): 1267-1288 (2019). (Invited Review)

13. Parasram K. *****, Bernardon N. *****, Li H., Hammoud M. *****, Chang H. *****, Perrimon N., Karpowicz P. *Intestinal stem cells exhibit conditional circadian clock function.* **Stem Cell Reports** 11(5): 1287-1301 (2018). (Journal Cover Image)

14. Thraya M. *****, Hammoud M. *****, Heath D., Karpowicz P. *Testing the expression of circadian clock genes in the tissues of Chinook salmon, Oncorhynchus tshawytscha*. **Chronobiology International** 36(8): 1088-1102 (2019).

15. Stokes K. *****, Cooke A. *****, Chang H. *****, Weaver D.R., Breault D.T., Karpowicz P. *The circadian clock gene BMAL1 coordinates intestinal regeneration.* **Cellular & Molecular Gastroenterology and Hepatology** 4(1): 95-114 (2017).

16. Amin R., Karpowicz P., Carey T.E., Arbiser J., Nahta R., Chen Z.G., Dong J-T., Kucuk O., Khan G.N., Huang G.S., Lee H-Y., Reichrath J., Honoki K., Georgakilas A.G., Amedei A., Amin A., Helferich B., Boosani C.S., Ciriolo M.R., Chen S., Mohammed S.I., Azmi A.S., Keith W.N., Bhakta D., Halicka D., Niccolai E., Fujii H., Aquilano K., Ashraf S.S., Nowsheen S., Yang X., Bilsland A, Shin D.M. *Evasion of anti-growth signaling: a key step in tumorigenesis and potential target for treatment and prophylaxis by natural compounds.* **Seminars in Cancer Biology** 35: S55-77 (2015).

17. Block K.I., *et al. Designing a broad-spectrum integrative approach for cancer prevention and treatment*. **Seminars in Cancer Biology** 35: S276-304 (2015).

18. Karpowicz P., Zhang Y., Hogenesch J.B., Emery P., Perrimon N. *The circadian clock gates the intestinal stem cell regenerative state.* **Cell Reports** 3(4): 996-1004 (2013).

19. DeVeale B., Bausch-Fluck D., Seaberg R., Runciman S., Akbarian V., Karpowicz P., Yoon C., Song H., Zandstra P., Wollscheid B., van der Kooy D. *Surfaceome profiling reveals regulators of neural stem cell function.* **Stem Cells** 32(1): 258-68 (2014).

20. Smukler S.R., Arntfield M.E., Razavi R., Bikopoulos G., Karpowicz P., Seaberg R., Dai F., Lee S., Ahrens R., Fraser P., Wheeler M., van der Kooy D. *The adult mouse and human pancreas contain rare multipotent stem cells that express insulin.* **Cell Stem Cell**. 8(3): 281-93. (2011).

21. Ni J.Q., Zhou R., Czech B., Liu L., Holderbaum L., Yang-Zhou D., Shim H.S., Tao R., Handler D., Karpowicz P., Binari R., Booker M., Brennecke J., Perkins L.A., Hannon G.J., Perrimon N. *A genome-scale shRNA resource for transgenic RNAi in Drosophila*. **Nature Methods**. 8(5): 405-7. (2011).

22. Karpowicz P., Perez J. *****, Perrimon N. *The hippo tumor suppressor pathway regulates intestinal stem cell regeneration.* **Development** 137(24): 4135-45 (2010).

23. Karpowicz P., Perrimon, N. *All for one and one for all: The clonality of the intestinal stem cell niche.* **F1000 Biology Reports** 2:73 (2010).

24. Karpowicz P., *Biased DNA segregation.* **Encyclopedia of Life Sciences**. John Wiley & Sons, Ltd: [DOI: 10.1002/9780470015902.a0022543] (2010).

25. Karpowicz P., *Response to letter from Renata Maas.* **DNA Repair**. 9: 1024-25 (2010).

26. Karpowicz P., Willaime-Morawek S., Inoue T., Deveale B., Hitoshi S., van der Kooy D. *E-Cadherin regulates neural stem cell self-renewal*. **Journal of Neuroscience**. 29(12): 3885-96. (2009).

27. Karpowicz P., Pellikka M., Godt D., Tepass U., van der Kooy D. *The germline stem cells of Drosophila melanogaster partition DNA non-randomly.* **European Journal of Cell Biology**. 88(7): 397-408. (2009).

28. Coles-Takabe B.L., Brain I., Purpura K.A., Karpowicz P., Zandstra P.W., Morshead C.M., van der Kooy D. *Don't Look: growing clonal versus non-clonal neural stem cell colonies*. **Stem Cells**. 26(11): 2938-44. (2008).

29. Karpowicz P., Inoue T., Runciman S., Chaddah R., Seaberg R., Gertsenstein M., Byers L., Yamanaka Y., Tondat S., Slevin J., Hitoshi S., Rossant J., van der Kooy D. *Adhesion Is prerequisite but, alone, is insufficient for neural stem cell pluripotency*. **Journal of Neuroscience**. 27(20): 5437-47. (2007).

30. Karpowicz P., Morshead C., Kam A., Jervis E., Cheng V., van der Kooy D. *Support for the immortal strand hypothesis: neural stem cells partition DNA asymmetrically in vitro*. **Journal of Cell Biology**. 170(5): 721-32. (2005).

31. Karpowicz P., Cohen C., van der Kooy D. *Developing human/nonhuman chimeras in human stem cell research: ethical issues and boundaries.* **Kennedy Institute of Ethics Journal**. 15(2): 107-34. (2005).

32. Karpowicz P., Cohen C., van der Kooy D. *It is ethical to transplant human stem cells into nonhuman embryos.* **Nature Medicine**. 10(3): 331-5. (2004).

33. Stewart J.M., Blakely J.A., Karpowicz P., Martin B.M., Thatcher B. *Unusually weak oxygen binding, physical properties, partial sequence, autoxidation rate and a potential phosphorylation site of beluga whale (Delphinapterus leucas) myoglobin.* **Comp Biochem Physiol B Biochem Mol Biol**. 137(3): 401-12. (2004).

34. Karpowicz P. *In defense of stem cell chimeras: a response to 'Crossing species boundaries'.* **American Journal of Bioethics**. 3(3): w17-19. (2003).

7.3 Invited lectures

1. Western University, Department of Physiology & Pharmacology. "*Circadian rhythms in the gastrointestinal tract during colitis and regeneration*." Dec, 2025.

2. Gordon Research Conference: Chronobiology, Barcelona, Spain. "*Diurnal rhythms in the regenerating colon.*" Jul, 2025.

3. Canadian Society for Chronobiology Meeting, Montreal, Canada. "*Rhythms and Regeneration in the colon.*" May, 2025.

4. Banff Inflammation Workshop (University of Calgary), Banff, Canada. "*Circadian rhythms and colitis*." Jan 24, 2025.

5. Western Organoid Workshop, London, Canada. "*Organoids to study circadian rhythms in the intestine*." Oct 16, 2024.

6. Stem Cell – Niche Interactions in the Gastrointestinal Tract, Cancun, Mexico. "*The emergence of circadian timekeeping in the intestine.*" May 8, 2024.

7. 2023 FINI Symposium: The Good, the Bad and the Ugly! Nutrition in Inflammatory Gastrointestinal Disorders Symposium, Hamilton, Canada. "*Circadian clock rhythms and colitis: A new role for time-restricted feeding*." Nov 24, 2023.

8. Latin American Society for Chronobiology Conference, Playa del Carmen, Mexico, "*Circadian rhythms in the intestine: insights from flies.*" Oct 25, 2023.

9. Canadian Society for Chronobiology Meeting, Guelph, Canada. "*Circadian rhythms in the intestine: insights from flies and mice.*" Jun 14, 2023.

10. Canadian Association of Gastroenterology: Digestive Diseases Week, Halifax, Canada. "*Circadian clock genes and epithelial permeability.*" Mar 3, 2023.

11. Swiss Fly Meeting, Bern, Switzerland. "*Circadian rhythms in the Drosophila midgut*." Sep 14, 2022.

12. Intestinal Stem Cell – Niche Interactions in Health and Disease, Cancun, Mexico. "*The circadian clock gene, Bmal1, regulates intestinal stem cell signaling and represses tumor initiation*." May 23, 2022.

13. Centre d'études avancées en médecine du sommeil, Montréal (virtual seminar), Canada. "*Clock controlled rhythms in regeneration are critical in resolving colitis.*" Feb 21, 2022.

14. Canadian Society for Chronobiology Meeting (virtual conference), Canada. "*Circadian Rhythms in Intestinal Health and Disease*." Nov 3, 2021.

15. Windsor-Essex County COVID19 Webinar to address vaccine hesitancy, Windsor (virtual), Canada. Feb 10, 2021

16. International Society for Stem Cell Research, Boston (virtual), USA. "*The circadian clock gene, Bmal1, suppresses tumourigenesis by regulating intestinal stem cell signaling.*" June 26, 2020.

17. Crohn's and Colitis Canada – Gutsy Chat for Donors, Toronto (virtual), Canada. "*A matter of timing: Circadian rhythms and inflammatory bowel disease.*" June 2, 2020.

18. Canadian Association of Gastroenterology: Digestive Diseases Week, Montreal, Canada. "*A matter of timing: Testing the role of the circadian clock gene Bmal1 during inflammation.*" Mar 1, 2020.

19. Chronic Inflammation, Immunity, and Cancer Meeting, Orford, Canada. "*Circadian rhythms in the intestinal epithelium.*" Oct 4, 2019.

20. Canadian Society for Chronobiology Meeting, Montreal, Canada. "*The use of model organisms and genetic approaches in biological rhythms research*." May 26, 2019.

21. Ontario Institute of Regenerative Medicine, Toronto, Canada. "*Circadian rhythms in organoid culture: regulation of stem cells by the circadian clock*." May 15, 2019.

22. University of Cincinnati College of Medicine, Cincinnati, USA. "*Circadian rhythms in the intestinal epithelium regulate inflammation*." Mar 5, 2019.

23. Wayne State University, Detroit, USA. "*Circadian rhythms in regeneration.*" Jun, 2018.

24. Farncombe Institute, McMaster University, Hamilton, Canada. "*Circadian control of intestinal physiology and health.*" Nov, 2017.

25. Canadian Developmental Biology Meeting, Banff, Canada. "*The circadian clock regulates a conserved regeneration program.*" Mar, 2016.

26. Wayne State University, Detroit, USA. "*Circadian rhythms in intestinal healing.*" Dec, 2015.

27. Gordon Research Conference: Chronobiology, Girona, Spain. "*The role of the circadian clock in regeneration.*" Jun, 2015.

28. Harvard Digestive Diseases Center, Boston, USA. "*The timing of intestinal regeneration.*" Jan, 2014.

29. Harvard Medical School: HSCI Cancer Program, Boston, USA. "*Intestinal regeneration and circadian rhythms.*" Nov, 2013.

30. University of Massachusetts Medical School, Worcester, USA. "*Intestinal regeneration.*" Oct, 2013.

31. Atlantic Cancer Research Institute, Moncton, Canada. "*Intestinal regeneration, cancer, and circadian Rhythms.*" Aug, 2012.

32. Till and McCulloch Meeting, Montreal, Canada. "*Intestinal regeneration is gated by circadian rhythms.*" May, 2012.

33. Department of Genetics, Harvard Medical School, Boston, USA. "*Intestinal stem cell regeneration.*" Jul, 2011.

34. 2nd Annual Hippo Workshop, Rome, Italy. "*The hippo tumor suppressor pathway requires Jak/Stat activity to regulate tissue stem cell regeneration.*" Nov, 2010.

35. Mount Allison University, Sackville, Canada. "*Adhesion proteins regulate stem cell activity."* Feb, 2010.

36. Dalhousie University, Halifax, Canada. "*Adhesion proteins regulate stem cell activity."* Feb, 2010.

37. St. Francis Xavier University, Antigonish, Canada. "*Adhesion proteins regulate stem cell activity."* Feb, 2010.

38. Abcam Stem Cell Research Conference, Cancun, Mexico. "*DNA Is partitioned asymmetrically in the germline stem cells of Drosophila melanogaster.*" Dec, 2006.

39. MaRS Centre, University of Toronto, Toronto, Canada. "*Technical issues pertaining to the introduction of cells into ultrasound guided chimeras.*" Feb, 2006.

40. Developmental Biology Program, University of Toronto, Toronto, Canada. "*Support for the immortal strand hypothesis: asymmetric DNA partitioning is evidenced in vitro.*" Sep, 2005.

41. Christopher Reeve Hot Topics in Stem Cell Biology, New Orleans, U.S.A. "*Neural stem cells cosegregate immortal strand bearing chromosomes during asymmetric divisions.*" Nov, 2003.

42. Stem Cell Network Annual General Meeting, Vancouver, Canada. "*Neural progenitors exhibit cosegregation of chromosomes.*" Oct, 2003.

43. Stem Cell Network Annual General Meeting, Toronto, Canada. "*The human/macaque retinal stem cell chimera."* Sep, 2002.

7.4 Conference posters (* indicates under my supervision)

1. Gordon Research Conference: Systems Aging, Maine, USA. "*Involvement of core clock genes in controlling senescent cells in vivo*." Takao I. *****, O'Brien L., Karpowicz P. Jun, 2026.

2. Canadian Association of Gastroenterology: Digestive Diseases Week, Toronto, Canada. "*Testing the Effects of Time Restricted Feeding in Colorectal Tumorigenesis.*" Patel R. *****, Carmona-Alcocer V. *****, McBride A. *****, Karpowicz P. Mar, 2026.

3. Canadian Conference in Organoid Research, London, Canada. "*Testing Circadian Clock Rhythms In Human Organoids*." Wnaiza J. *****, Skurvidayte K. *****, Albakri M. *****, Stokes K. *****, Narula N., Karpowicz P. Nov, 2025.

4. Canadian Society for Chronobiology, Montreal, Canada. "*Colons lost in time: Delayed regeneration in mice lacking an epithelial clock.*" Taleb Z. *****, Wan R. *****, Fatmah M. *****, Carmona-Alcocer V. *****, Karpowicz P. May, 2025.

5. Canadian Society for Chronobiology, Montreal, Canada. "*Time-Restricted Feeding Effects on Colorectal Tumorigenesis in the Apcmin Model."* Patel R. *****, Carmona-Alcocer V. *****, Mcbride A. *****, Karpowicz P. May, 2025

6. Society for Research on Biological Rhythms, Puerto Rico, USA. "*Prevention of inflammatory bowel disease by timed nutrition.*" Carmona-Alcocer V *****, MacDonald J *****, Igbokwe T. *****, Yousif M. ***,** Todorovski A. *****, Adair K. ***,** Taleb Z. *****, Karpowicz P. June, 2024.

7. Stem Cell – Niche Interactions in the Gastrointestinal Tract, Cancun, Mexico. "*Prevention of inflammatory bowel disease by timed nutrition.*" Carmona-Alcocer V. *****, MacDonald J. *****, Igbokwe T. *****, Yousif M. ***,** Todorovski A. *****, Gobet C., Adair K. ***,** McBride A. ***,** Taleb Z. *****, Naef F., Karpowicz P. May, 2024.

8. Latin American Society for Chronobiology Conference, Playa del Carmen, Mexico, "*Time-restricted feeding reduces ulcerative colitis and improves colon regeneration.*" Carmona-Alcocer V. *****, Macdonald J. *****, Igbokwe T. *****, Todorovski A. *****, Yousif M. *****, Taleb Z. *****, Karpowicz P. Oct 25, 2023.

9. Gordon Research Conference: Chronobiology, Maine, USA. "*Developing methods to study circadian rhythms in organoid culture*." Karpowicz P., Skurvidayte K. *****, Albakri M. *****, Stokes K. *****, Narula N. Jun, 2023.

10. Gordon Research Conference: Chronobiology, Maine, USA. "*The origin of timekeeping in the intestine.*" Parasram K. *****, Zuccato A. *****, Shin M., Wilms R., Foley E., Karpowicz P. Jun, 2023.

11. Canadian Society for Chronobiology, Guelph, Canada. "*Time-restricted feeding reduces ulcerative colitis and improves colon regeneration.*" Carmona-Alcocer V. *****, Macdonald J. *****, Todorovski A. *****, Igbokwe T. *****, Yousif M. *****, Taleb Z. *****, Karpowicz P. Jun, 2023

12. Canadian Society for Chronobiology, Guelph, Canada. "*Investigating Circadian Rhythms in Human Intestinal Organoids.*" Albakri M. *****, Stokes K. *****, Skurvidayte K. *****, Bhunnoo S. *****, Karpowicz P. Jun, 2023

13. Canadian Society for Chronobiology, Guelph, Canada. "*Testing RNA Rhythms in Intestinal Organoids*." Skurvidayte K. *****, Albakri M. *****, Carmona-Alcocer V. *****, Karpowicz P. Jun, 2023

14. Canadian Society for Chronobiology, Guelph, Canada. "*Time-restricted feeding improves daily behavioural rhythms during colitis.*" MacDonald J. *****, Carmona-Alcocer V. *****, Karpowicz P. Jun, 2023

15. Canadian Society for Chronobiology, Guelph, Canada. "*Tracing Rhythms in the Developing and Differentiating Gut.*" Parasram K. *****, Zuccato A. *****, Shin M., Willms R., Foley E., Karpowicz P. Jun, 2023

16. Canadian Society for Chronobiology, Guelph, Canada. "*Testing the epithelial clock in colonic regeneration.*" Taleb Z. *****, Carmona-Alcocer V. *****, Wan R. *****, Stokes K. *****, Karpowicz P. Jun, 2023

17. Canadian Association of Gastroenterology: Digestive Diseases Week, Halifax, Canada. "*Time-restricted feeding reduces ulcerative colitis and improves colon regeneration.*" Carmona-Alcocer V. *****, Taleb Z. *****, Todorovski A. *****, Igbokwe T. *****, Macdonald J. *****, Yousif M. *****, Karpowicz P. Mar, 2023.

18. Canadian Association of Gastroenterology: Digestive Diseases Week, Halifax, Canada. "*Epithelial function of the circadian clock gene, Bmal1, is necessary for colonic regeneration.*" Taleb Z. *****, Carmona-Alcocer V. *****, Stokes K. *****, Wang H., Collins S., Khan W., Karpowicz P. Mar, 2023.

19. Genomic Network for Fish Identification, Stress and Health Annual Meeting, Windsor, Canada. "*Developing TaqMan Array to test circadian clock gene expression*." Patel A. *****, Carmona-Alcocer V. *****, Karpowicz P. Nov, 2022. (presentation award)

20. Intestinal Stem Cell – Niche Interactions in Health and Disease, Mexico. "*The circadian clock gene, Bmal1, regulates regeneration during colitis.*" Taleb Z. *****, Carmona-Alcocer V. *****, Stokes K. *****, Haireek M. *****, Wang H., Collins S., Khan W., Karpowicz P. May, 2022.

21. Intestinal Stem Cell – Niche Interactions in Health and Disease, Mexico. "*Development of intestinal timekeeping*." Parasram K. *****, Haddad S. *****, Zuccato A. *****, Karpowicz P. May, 2022.

22. Intestinal Stem Cell – Niche Interactions in Health and Disease, Mexico. "*Time restricted feeding ameloriates inflammatory bowel disease and improves colon*

regeneration." Carmona-Alcocer V. *****, Taleb Z. *****, Stokes K. ***,** Dehgan S. *****, Todorovski A. *****, Igbokwe T. *****, Skurvidayte K. ***,** Karpowicz P. May, 2022.

23. CanFly Drosophila Conference (virtual), Canada. "*The emergence of circadian rhythms during gut development.*" Parasram K. *****, Zuccato A. *****, Karpowicz P. Jun, 2021.

24. Canadian Society for Chronobiology (virtual), Canada. "*Colitis and the clock: circadian disruption impairs rhythms in epithelial regeneration*." Taleb Z. *****, Stokes K. *****, Wang H., Collins S., Khan K., Karpowicz P. Jun, 2021.

25. Canadian Society for Chronobiology (virtual), Canada. *"The intestinal regenerative response is dependent on the timing of damage."* Parasram K. *****, Bachetti D. *****, Hammoud M. *****, Roye-Azar M., He L., Perrimon P., Karpowicz P. Jun, 2021.

26. Canadian Society for Chronobiology (virtual), Canada. "*The circadian clock gene, Bmal1, regulates intestinal stem cell signaling and represses tumor initiation*." Stokes K. *****, Nunes M. *****, Trombley C. *****, Flôres D., Wu G., Hogenesch J., Karpowicz P. Jun, 2021.

27. Canadian Developmental Biology Meeting (virtual), Canada. "*Circadian rhythms in the developing intestine of Drosophila melanogaster.*" Parasram K. *****, Zuccato A. *****, Karpowicz P. Apr, 2021.

28. Canadian Association of Gastroenterology: Digestive Diseases Week (virtual), Canada. "*The loss of the circadian clock gene Bmal1 increases tumour initiation in Apc-min mice*." Stokes K. *****, Nunes M. *****, Trombley C. *****, Flôres D., Wu G., Curran C. *****, Taleb Z. *****, Hogenesch JB., Karpowicz P. Mar, 2021. (travel award)

29. Canadian Association of Gastroenterology: Digestive Diseases Week (virtual), Canada. "*The circadian clock influences Jak/Stat signaling and gut permeability*." Parasram K. *****, Bachetti D. *****, Karpowicz P. Mar, 2021.

30. Canadian Association of Gastroenterology: Digestive Diseases Week (virtual), Canada. "*The circadian timing of inflammatory bowel disease*." Taleb Z. *****, Stokes K. *****, Wang H., Collins S., Khan W., Karpowicz P. Mar, 2021. (travel award)

31. 4th Biennial International WCRG Conference (virtual), Canada. "*The loss of the circadian clock gene Bmal1 increases tumour initiation in Apc-min mice*." Stokes K. *****, Nunes M. *****, Trombley C. *****, Flôres D., Wu G., Curran C. *****, Taleb Z. *****, Hogenesch JB., Karpowicz P. Nov, 2020.

32. International Society for Stem Cell Research (virtual), USA. "*Circadian regulation of regeneration in the intestine of Drosophila melanogaster.*" Parasram K. *****, Bachetti D. *****, Lei K. *****, Karpowicz P. June, 2020.

33. International Society for Stem Cell Research (virtual), USA. "*Circadian transcriptional regulation in intestinal organoids of mice.*" Stokes K. *****, Flôres D., Wu G., Hogenesh JB., Karpowicz P. June, 2020.

34. International Society for Stem Cell Research (virtual), USA. "*The clock gene Bmal1 affects regeneration of intestinal epithelial cells in mice with inflammatory bowel disease.*" Taleb Z. *****, Stokes K. *****, Wang H., Collins S., Khan W., Karpowicz P. June, 2020.

35. International Society for Stem Cell Research (virtual), USA. "*The effects of Bmal1 on mouse intestinal tumours.*" Curran C. *****, Stokes K. *****, Trombley C. *****, Nunes M. *****, Karpowicz P. June, 2020.

36. Canadian Society for Chronobiology, Montreal, Canada. "*Green guts: Development of circadian rhythms in the Drosophila intestine*." Parasram K. *****, Zuccato A. *****, Karpowicz P. May, 2019. (1st place for best poster)

37. Canadian Society for Chronobiology, Montreal, Canada. "*A dive into the circadian clock of chinook salmon.*" Thraya M. *****, Hammoud M. *****, Stephens A. *****, Chang H. *****, Heath D., Karpowicz P. May, 2019.

38. Canadian Society for Chronobiology, Montreal, Canada. "*The effect of BMAL1 on colorectal tumourigenesis*." Trombley C. *****, Nunes M. *****, Stokes K. *****, Curran C. *****, Karpowicz P. May, 2019.

39. Canadian Society for Chronobiology, Montreal, Canada. "*Inflammatory bowel disease pathogenesis in the absence of the clock gene Bmal1*." Taleb Z. *****, Stokes K. *****, Wang H., Khan W., Collins S., Karpowicz P. May, 2019.

40. Canadian Society for Chronobiology, Montreal, Canada. "*Testing circadian regulation of the JAK/STAT signaling pathway.*" Bachetti D. *****, Parasram K. *****, Hammoud M. *****, He L., Perrimon N., Karpowicz P. May, 2019.

41. Canadian Society for Chronobiology, Montreal, Canada. "*Evaluating circadian rhythms in adenoma organoids*." Stokes K. *****, Narula N., Karpowicz P. May, 2019.

42. Canadian Society of Zoologists, Windsor, Canada. "*A dive into the circadian clock of chinook salmon.*" Thraya M. *****, Hammoud M. *****, Stephens A. *****, Chang H. *****, Heath D., Karpowicz P. May, 2019.

43. Ontario Biology Day, London, Canada. "*The effects of Bmal1 on intestinal tumour characteristics*." Curran C. *****, Stokes K. *****, Zhao T., Nunes M. *****, Karpowicz P. Mar, 2019.

44. Ontario Biology Day, London, Canada. "*Studying the impact of photoperiod and feeding time on circadian rhythms in chinook salmon*." Stephens A. *****, Thraya M. *****, Hammoud H. *****, Karpowicz P. Mar, 2019.

45. UWill Discover Undergraduate Conference, Windsor, Canada. "*A dive into the circadian clock of chinook salmon.*" Thraya M. *****, Hammoud M. *****, Stephens A. *****, Chang H. *****, Heath D., Karpowicz P. Mar, 2019.

46. Society for Research of Biological Rhythms, Florida, USA. "*Single-cell analysis of circadian clock activity in the Drosophila intestine*." Parasram K. *****, Bernardon N. *****, Hammoud M. *****, Chang H. *****, He L., Perrimon N., Karpowicz P. May, 2018. (travel award)

47. Society for Research of Biological Rhythms, Florida, USA. "*Testing circadian regulation of stem cell growth and Wnt signaling*." Stokes K. *****, Nunes M. *****, Weaver D., Karpowicz P. May, 2018. (travel award)

48. UWill Discover Undergraduate Conference, Windsor, Canada. "*Investigating the effect of circadian rhythm regulator Bmal1 on tumorigenesis in Apc-min mice*." Zhou T. *****, Stokes K. *****, Nunes, M. *****, Curran C. *****, Karpowicz, P. Mar, 2018.

49. Gordon Research Conference: Chronobiology, Vermont, USA. "*Circadian regeneration in the intestinal epithelium.*" Stokes K. *****, Cooke A. *****, Chang H. *****, Weaver DR., Breault DT., Karpowicz P**.** Jul, 2017.

50. Canadian Society for Chronobiology, Toronto, Canada. "*Bmal1 and colorectal cancer progression.*" Nunes M. *****, Stokes K. *****, Cooke A. *****, DeBiasio C. *****, Karpowicz P. May, 2017. (travel award)

51. Canadian Society for Chronobiology, Toronto, Canada. "*Circadian interdependence in the Drosophila midgut.*" Bernardon N. *****, He L., Perrimon N., Karpowicz P. May, 2017. (travel award)

52. Canadian Society for Chronobiology, Toronto, Canada. "*Intestinal inflammation: a circadian regenerative response.*" Stokes K. *****, Cooke A. *****, Chang H. *****, Weaver D., Breault D., Karpowicz P. May, 2017. (travel award)

53. UWill Discover Undergraduate Conference, Windsor, Canada. "*Time will tell: The involvement of the circadian clock in colorectal cancer.*" Cooke A. *****, Nunes M. *****, Stokes K. *****, Karpowicz P. Mar, 2017 (2nd place winner).

54. UWill Discover Undergraduate Conference, Windsor, Canada. "*Clock work: the role of the circadian clock in colorectal cancer."* DeBiasio C. *****, Nunes M. *****, Stokes K. *****, Karpowicz P. Mar, 2017 (3rd place winner).

55. 3rd Biennial International WCRG Conference, Windsor, Canada. "*The circadian clock gene Bmal1 coordinates intestinal regeneration."* Stokes K. *****, Cooke A. *****, Chang H. *****, Weaver DR., Breault DT., Karpowicz P. Nov, 2016.

56. CIHR New Principal Investigators Meeting, Montreal, Canada. "*The circadian rhythms of intestinal regeneration.*" Stokes K. *****, Weaver D., Breault D., Karpowicz P. Oct, 2015.

57. Till and McCulloch Meeting, Toronto, Canada. "*A time to divide: Circadian gated proliferation."* Stokes K. *****, Chang H. *****, Weaver DR., Breault DT., Karpowicz P. Oct, 2015. (travel award)

58. Gordon Research Conference: Chronobiology, Newport, USA. "*Intestinal regeneration is gated by the circadian clock.*" Karpowicz P., Zhang Y., Emery P., Hogenesch JB., Perrimon N. Jul, 2013.

59. Abcam Stem Cell Research Conference, Punta Cana, Dominican Republic. "*Neural stem cell self-renewal is dependent on E-Cadherin.*" Karpowicz P., Willaime-Morawek S., Inoue T., van der Kooy D. Dec, 2007.

60. Society for Neuroscience, San Diego, U.S.A. "*Neural stem cell self-renewal is dependent on E-Cadherin.*" Karpowicz P., Willaime-Morawek S., Inoue T., van der Kooy D. Nov, 2007.

61. International Society for Stem Cell Research, Cairns, Australia. "*DNA Is partitioned asymmetrically in the germline stem cells of Drosophila melanogaster.*" Karpowicz P., Pellika M., Godt D., Tepass U. van der Kooy D. Jun, 2007. (Presentation award)

62. Society for Neuroscience, Atlanta, U.S.A. "*E-Cadherin regulates neural stem cell self-renewal.*" Karpowicz P., Willaime-Morawek S., Inoue T., Deveale B., Hitoshi S., van der Kooy D. Oct, 2006.

63. International Society for Stem Cell Research, Toronto, Canada. "*DNA Is partitioned asymmetrically during adult stem cell divisions but not embryonic blastomere divisions.*" Karpowicz P., Morshead C., Kam A., Pellikka M., Godt D., Tepass U., van der Kooy D. Jul, 2006.

64. Society for Neuroscience, Washington DC, U.S.A. "*DNA is partitioned asymmetrically in adult stem cell divisions but not embryonic blastomere divisions.*" Karpowicz P., Morshead C., Kam A., Godt D., Tepass U., van der Kooy D. Oct, 2005.

65. Society for Neuroscience, Washington DC, U.S.A. "*Adhesion is prerequisite but, alone, is insufficient for neural stem cell multipotency.*" Karpowicz P., Inoue T., Runciman S., Chaddah R., Gertsenstein M., Yamanaka Y., Hitoshi S., Rossant J., van der Kooy D. Oct, 2005.

66. Society for Neuroscience, San Diego, U.S.A. "*E-Cadherin maintains neural stem cells.*" Karpowicz P., Runciman S., Inoue T., Byers L., Gertsenstein M., Hitoshi S., Rossant J., van der Kooy D. Oct, 2004.

67. Society for Neuroscience, New Orleans, U.S.A. "*Neural stem cells cosegregate immortal strand bearing chromosomes during asymmetric divisions.*" Karpowicz P., Morshead C., Cheng V., van der Kooy D. Nov, 2003. (Presentation award)

68. International Society for Stem Cell Research, Washington DC, U.S.A. "*A case for human retinal stem cell transplants into non-human chimeras."* Karpowicz P., Cohen C., van der Kooy D. Jun, 2003. (Travel award)

8. Teaching activities

8.1 Courses taught

- Nutrition – Cellular and Molecular Mechanisms / BIOM-4580: 4th year seminar course (~30 students per year, 2024-present).
- Stem cells / BIOM-4510: 4th year seminar course (~30 students per year, 2015-present).
- Homeostasis and cell physiology / BIOM-3560: 3rd year course (~60 students per year, 2018-present).
- Graduate course in nutrition / BIOL-8008 (~10 students per year, 2023-present).
- Graduate courses in biomedical research methods (2020), circadian rhythms (2016-2017), stem cell biology (2015-16).
- Guest lectures for Evolution, and Environmental Endocrinology / BIOL 4252
- Student Evaluation of Teaching scores ≥6.0 (all years, maximum is 7)

8.2 Curriculum development and contribution

- Developed courses in stem cell biology, physiology, circadian biology, nutrition.
- Biomedical / Biological Sciences Graduate Curriculum Chair (2017-2020)
- Biological Sciences Curriculum Development Committee (2014-2015)
- Assisted in revising Molecular Biology and Biotechnology program curriculum (2015)
- Participant in Centre for Teaching and Learning summer series (2014-15)

8.3 Postdoctoral / PhD teaching experience

- Teaching Assistant for Howard Hughes Medical Institute, and Harvard Stem Cell Institute Internship Students, Boston (2009-2014)
- Teaching Assistant for University of Toronto Institute of Biomaterials and Biomedical Engineering, Toronto (2002-2007)
- External Evaluator for PhD theses (2017-present: University of Toronto; Brock University; Carleton University; École Polytechnique Fédérale de Lausanne, Switzerland; University of Newcastle, Australia)