



**Charles LeDuc, Ph.D.**

*Research Scientist*

**Research Summary:**

*I am interested in how, on a molecular level, body weight is regulated. This encompasses work on both genetically obese and high fat fed mice, rats that become obese when exposed to hi energy chow, cell lines, and in humans.*

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**Selected Publications:**

Duggal P, Guo X, Haque R, Peterson KM, Ricklefs S, Mondal D, Alam F, Noor Z, Verkerke HP, Marie C, **Leduc CA**, Chua SC Jr, Myers MG Jr, Leibel RL, Hout E, Gilchrist CA, Sher A, Porcella SF, Petri WA Jr. A mutation in the leptin receptor is associated with Entamoeba histolytica infection in children. The Journal of Clinical Investigation. 2011;121(3):1191-8. PubMed PMID: 21393862.

Huang X, **Leduc C**, Ravussin Y, Li S, Davis E, Song B, et al. A differential dielectric affinity glucose sensor. Lab on a chip. 2014;14(2):294-301. doi: 10.1039/c3lc51026c. PubMed PMID: 24220675; PubMed Central PMCID: PMC3893139.

**Leduc CA**, Crouch EE, Wilson A, Lefkowitz J, Wameling MM, Jakobs C, et al. Novel association of early onset hepatocellular carcinoma with transaldolase deficiency. JIMD reports. 2014;12:121-7. doi: 10.1007/8904\_2013\_254. PubMed PMID: 24097415; PubMed Central PMCID: PMC3897795.

Phan LK, Lin F, **LeDuc CA**, Chung WK, Leibel RL. The mouse mahoganoid coat color mutation disrupts a novel C3HC4 RING domain protein. The Journal of clinical investigation. 2002;110(10):1449-59. doi: 10.1172/JCI16131. PubMed PMID: 12438443; PubMed Central PMCID: PMC151815.

Ravussin Y, Gutman R, **Leduc CA**, Leibel RL. Estimating energy expenditure in mice using an energy balance technique. International journal of obesity. 2012. doi:

10.1038/ijo.2012.105. PubMed PMID: 22751256.

Ravussin Y, Koren O, Spor A, **LeDuc C**, Gutman R, Stombaugh J, et al. Responses of gut microbiota to diet composition and weight loss in lean and obese mice. *Obesity*. 2012;20(4):738-47. doi: 10.1038/oby.2011.111. PubMed PMID: 21593810.

Ravussin Y, **LeDuc CA**, Watanabe K, Mueller BR, Skowronski A, Rosenbaum M, et al. Effects of chronic leptin infusion on subsequent body weight and composition in mice: Can body weight set point be reset? *Molecular metabolism*. 2014;3(4):432-40. doi: 10.1016/j.molmet.2014.02.003. PubMed PMID: 24944902; PubMed Central PMCID: PMC4060284.

Wang L, Meece K, Williams DJ, Lo KA, Zimmer M, Heinrich G, Martin Carli J, **Leduc CA**, Sun L, Zeltser LM, Freeby M, Goland R, Tsang SH, Wardlaw SL, et al. Differentiation of hypothalamic-like neurons from human pluripotent stem cells. *The Journal of clinical investigation*. 2015;125(2):796-808. doi: 10.1172/JCI79220. PubMed PMID: 25555215; PubMed Central PMCID: PMC4319421.

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