



Pauline Y. Aad, Ph.D.

Professor

Department of Science

O: FNAS 0.24

T: 09 218 950, Ext. 2364

E: paad@ndu.edu.lb

Biography

Dr. Pauline Aad is an animal biologist researching the molecular reproductive physiology of local sheep and goat breeds. She is also working on understanding the effect of environmental contaminants and variable factors on production and reproduction of these breeds. Currently Dr. Aad is the recipient of cycle 9 USAID-PEER grant to investigate parasite prevalence in Lebanese goats and the resilience of the Baladi goat in a changing climate. She received both a Ph.D. in Animal Breeding and reproduction and an MS in reproductive Biology from Oklahoma State University, as well as an Ag engineering degree from the Lebanese University. Dr. Aad is currently an associate professor at NDU, has 28 peer-reviewed publications, and has won multiple awards including the 2019 AOAD 1st prize for outstanding publication in animal improvement, and the Fulbright student scholarship award in 2002.

Publications

Books

- Regional climate change initiative (contributors: A. Kanamanos, R. Nejdawi, M. Omirou, T. El-Hasan, P.Y. Aad, K. Kormas, I. Ipsilantis, A. Tsikliras, D. Fasoula, G. Hadjipavlou, M. Tester, C. Kosmas, M. Rabi). 2022. Report of the Task Force on Agriculture and the food chain, eastern mediterranean and middle east climate change initiative, The Cyprus Institute. <https://emme-cci.org/scientific-task-forces/task-force-agroforestry-and-food-chain/>.

Peer-reviewed Journal Articles

- Schütz, L. F., A. M. Hemple, B. C. Morrell, N. B. Schreiber, J. N. Gilliam, C. Cortinovic, M. L. Totty, F. Caloni, P.Y. Aad, and L. J. Spicer. 2022. Changes in fibroblast growth factor receptors-1c, -2c, -3c, and -4 mRNA in granulosa and theca cells during ovarian follicular growth in dairy cattle. *Dom. Anim. Endocrinol.* In press. <https://doi.org/10.1016/j.domaniend.2022.106712>.
- L. J. Spicer, L. F. Schutz, and P.Y. Aad. 2021. Effects of bone morphogenetic protein 4, gremlin, and connective tissue growth factor on estradiol and progesterone production by bovine granulosa cells. *Journal of animal science.* In press.
- Maya Kharrat, Philippe Hassoun, Pauline Y. Aad, Elham Hajj, Francois Bocquier. 2020. Surveillance of Baladi goat feeding behavior in response to a Mediterranean natural rangeland evolution. *Rangeland Ecology and Management* 73: 403-410. <https://doi.org/10.1016/j.rama.2020.01.005>.
- Jawasreh, K.I., Ahmad H. Al-Amareen, Pauline Y. Aad. 2019. Relationships Between Hha1 Calpastatin Gene Polymorphism, Growth Performance, and Meat Characteristics of Awassi Sheep. *Animals* 9 (9). pii: E667. doi: 10.3390/ani9090667.
- El Khoury, D., S. Fayjaloun, M. Nassar, J. Sahakian, P.Y. Aad. 2019. Updates on the effect of Mycotoxins on male reproductive efficiency. *Toxins* 11(9). pii: E515. doi: 10.3390/toxins11090515.

- Jawasreh, K., A.A. Amareen, M.D. Obeidat, P.Y. Aad. 2019. Growth Performance and Meat Characteristics of the First Awassi–Rambouillet Callipyge Backcross . *Animals* 9 (6), 517.
- Jawasreh, K., A.A. Amareen, P. Aad. 2019. Effect and Interaction of β -Lactoglobulin, Kappa Casein, and Prolactin Genes on Milk Production and Composition of Awassi Sheep. *Animals* 9 (6), 382.
- Jawasreh, K., S. Al Athamneh, M.B. Al-Zghoul, A. Al Amareen, I. AlSukhni, P. Aad. 2019. Evaluation of growth performance and muscle marker genes expression in four different broiler strains in Jordan. *Italian Journal of Animal Science* 18 (1):766-776.
- Jawasreh, K.I.Z., A.H. Al-Amareen, P.Y. Aad. 2019. Growth performance and meat characteristics of the first filial Awassi-Rambouillet callipyge ram lambs. *Veterinary World*, 12 (6): 783-788. EISSN: 2231-0916 Available at www.veterinaryworld.org/Vol.12/June-2019/9.pdf.
- Abi Saab, S., F. Esseily, M. Saliba, and P.Y. Aad. 2017. Organoleptic and physical and chemical evaluation of milk-fed Baladi goats: a value-added meat alternative in an extensive rearing system. *Lebanese Science Journal* 18(1): 73-80.
- Aad, P.Y., S.E. Echternkamp, L.J. Spicer. 2013. Possible role of IGF2 receptors in regulating selection of 2 dominant follicles in cattle selected for twin ovulations and births. *Domestic Animal Endocrinology* 45: 187–195.
- Aad, P.Y., Echternkamp S.E., Sypherd D.D., Schreiber N.B., Spicer L.J. 2012. The hedgehog system in ovarian follicles of cattle selected for twin ovulations and births: evidence of a link between the IGF and hedgehog systems. *Biol Reprod.* 87:79-89.
- Echternkamp, S.E., P.Y. Aad, D. R. Eborn, and L. J. Spicer. 2012. Increased abundance of aromatase and follicle stimulating hormone receptor mRNA and decreased insulin-like growth factor-2 receptor mRNA in small ovarian follicles of cattle selected for twin births. *J. Anim Sci.* 90: 2193-200.
- Spicer, L. J., N. B. Schreiber, D. V. Lagaly, P.Y. Aad, L.B. Douthit, and J. A. Grado-Ahuir. 2011. Effect of resistin on granulosa and theca cell function in cattle. *Anim. Reprod. Sci.* 124: 19-27.
- Grado-Ahuir, J.A, P.Y. Aad and L.J. Spicer. 2011. New insights into the pathogenesis of cystic follicles in cattle: microarray analysis of gene expression in granulosa cells. *J Anim Sci.* 89: 1786-1796.
- Abi Saab, S., F.T. Sleiman, N. Kallassy, W.Y. Darweesh, P.Y. Aad. 2011. Effect of Adaptation and Heat Stress on Reproductive Performances of Fat-Tail Awassi Rams in Eastern Mediterranean. *Lebanese Science journal* 12: 31-44.
- L.J. Spicer, S. Sudo, P.Y. Aad, L.S. Wang, S.-Y. Chun, I. Ben-Shlomo, C. Klein and A.J. Hsueh. 2009. The hedgehog-patched signaling pathway and function in the mammalian ovary: A novel role for hedgehog proteins in stimulating proliferation and steroidogenesis of theca cells. *Reproduction* 138:329-39.
- Grado-Ahuir, A.J., P.Y. Aad, G. Ranzenigo, F. Caloni, F. Cremonesi, and L.J. Spicer. 2009. Microarray Analysis of Insulin-Like Growth Factor-I-induced Changes in mRNA Expression in Cultured Porcine Granulosa Cells: Possible role of IGF-I in Angiogenesis. *J Anim Sci.* 87:1921-33.
- Lagaly, D. V., P.Y. Aad, J. A. Grado-Ahuir, L. B. Hulsey, and L. J. Spicer. 2008. Role of adiponectin in regulating ovarian theca and granulosa cell function. *Mol Cell Endocrinol.* 284: 38-45.
- Spicer, L. J., P.Y. Aad, D. T. Allen, S. Mazerbourg, A. H. Payne, and A. J. Hsueh. 2008. Growth differentiation factor-9 (GDF-9) stimulates proliferation and inhibits steroidogenesis by bovine theca cells: Influence of follicle size on responses to GDF-9. *Biol Reprod* 78: 243-253.
- Flannagan, A.M., J.L. Brown, C.A. Santiago, P.Y. Aad, L.J. Spicer, and M.T. Spicer, 2007. High-fat diets promote insulin resistance through cytokine gene expression in growing female rats. *J Nutr Biochem.* 19: 505-513.
- Ranzenigo, G., F. Caloni, F. Cremonesi, P.Y. Aad, and L.J. Spicer. 2008. Effects of Fusarium mycotoxins on steroid production by porcine granulosa cells. *Anim Reprod Sci.* 107: 115-130.
- Spicer, L.J., P.Y. Aad. 2007. Insulin-like growth factor-II stimulates steroidogenesis and mitosis of bovine granulosa cells through the IGF type I receptor: Role of follicle-stimulating hormone and IGF type II receptor. *Biol. Reprod.* 77: 18-27.
- Spicer, L.J., P.Y. Aad, D. Allen, S. Mazerbourg, and A.J. Hsueh. 2006. Growth differentiation factor-9 has divergent effects on proliferation and steroidogenesis of bovine granulosa cells. *J. Endocrinol.* 189:329-239.
- Aad, P.Y., J.L. Voge, C.A.T. Santiago, J.R. Malayer, L.J. Spicer. 2006. Real-Time RT-PCR Quantification of Pregnancy-Associated Plasma Protein-A Gene Expression in Bovine Granulosa and Theca Cells: Effects of Hormones in vitro. *Domestic Animal Endocrinology* 31: 357-372.
- Santiago, C.A., J.L. Voge, P.Y. Aad, D.T. Allen, D.R. Stein, J.R. Malayer and L.J. Spicer. 2005. Pregnancy-associated plasma protein-A mRNA insulin-like growth factor binding protein expression in granulosa cells of dominant and subordinate follicles of preovulatory cattle. *Domestic Animal Endocrinology*, 28: 46-63.
- Voge, J.L., C.A.T. Santiago, P.Y. Aad, D.W. Goad, J.R. Malayer, L.J. Spicer. 2004. Quantification of insulin-like growth factor binding protein mRNA using real-time PCR in bovine granulosa and theca cells: effect of estradiol, insulin, and gonadotropins. *Domestic Animal Endocrinology*, 26: 241-258.
- Voge, J.L., P.Y. Aad, C.A.T. Santiago, D.W. Goad, J.R. Malayer, D. Allen and L.J. Spicer. 2004. Effect of insulin-like growth factors (IGF), FSH, and leptin on IGF-binding-protein mRNA expression in bovine granulosa and theca cells: quantitative detection by real-time PCR. *Peptides*, 25: 2195-2203.

Peer-reviewed Conference Proceedings

- Murr, S., E. El Hajj, K. Houchaymi, J. Burke, B. Murdoch, P.Y. Aad. 2022. Effect of Summer Heat Stress on Internal Parasite Populations in Lebanese Baladi Goats. ACSA-ASAS annual meeting 2022, Oklahoma City, USA.
- Youssef, M., M.E-D Hilali, P. Aad, K. Houchaymi, S. Abi Saab. 2019. Effect of Lactation season on Awassi sheep milk quality and fatty acid profiles. TROPENTAG 2019, Universities of Kassel & Goettingen, Germany.
- Aad, P.Y., Kharrat-Sarkis, M. 2018. Prospects of local sheep and goat breeds for sustainable farming in a changing mediterranean region. EAAP Annual Meeting 2018, Croatia (session: 60: Practices and prospects for adapting to a challenging Mediterranean environment; abstract will be published by Wageningen academic press.) invited talk.
- Aad, P.Y., S. Bou Karroum. 2017. Development of a mature adipocyte culture system, EAAP Annual Meeting 2017, Tallinn, Estonia (session 31 "Biology of adipose tissue and lipid metabolism"; abstract will be published by Wageningen academic press).
- Al Masri, B., K. Houchaymi, P.Y. Aad. 2017. Effect of Solar Radiation and Increased Salinity on Awassi Ewe Adaptation and Production. ACSA-ASAS annual meeting 2017, Baltimore, USA. *Journal of Animal Science*, Volume 95, Issue suppl_4, August 2017, Page 331, <https://doi.org/10.2527/asasann.2017.678>.
- Oneissy, S., Y. Kalash, P.Y. Aad. 2017. Effect and Localization of Lead Accumulation in Mice Testes and Spermatogenesis. 50th SSR Annual Meeting, 13–16 July 2017, in Washington, D.C. (abstract will be published in *Biology of Reproduction Supplement*).
- Schütz, L. F., L. Zhang, B. C. Morrell, N. B. Schreiber, C. Cortinovis, P.Y. Aad, M. L. Totty, J. N. Gilliam, F. Caloni, and L. J. Spicer. 2017. Fibroblast growth factor receptor-1c, -2c, -3c, and -4 mRNA abundance in granulosa cells during follicular growth in cattle. 43rd annual meeting of the International Embryo Society, Austin TX. *Reproduction Fertility and Development* 29(1):167.
- Aad, P.Y., R. Makdessi, R. Ghorayeb, K. Houchaymi, S. Abi Saab. 2016. Comparative analysis of growth curves of Awassi lambs fed different protein diets. 67th Annual Meeting of the European Association for Animal Production, Book of Abstracts 32. Wageningen academic press.
- El Balaa R., E. Mousaoumai, P. Aad, K. Houchaymi, S. Abi Saab. 2016. Comparing the efficiency of intravaginal progesterone dispenser to CIDR for Awassi sheep. 67th Annual Meeting of the European Association for Animal Production, Book of Abstracts 32. Wageningen academic press.
- Abi Saab, S., W. Tarabay, E. Tabet, P.Y. Aad. 2015. Effect of tailectomy, testicular ventilation and Fat-Tail elevation on Awassi ram spermatogenesis. 66th Annual Meeting of the European Association for Animal Production, Book of Abstracts 31: 533. Wageningen academic press.
- Al Fahel, C., C. Nassif, R. Bou Karroum, J. Ibrahim. J. Sahakian, K. Houchaymi, E. Hajj and P.Y. Aad. 2015. Folliculogenesis and oocyte quality in Awassi sheep. *Experimental Biology 2015*, Boston, MA, USA, The FASEB *Journal* 29(1): LB659.
- Aad P.Y., S. Abi Saab. 2014. Managerial Steps to Alleviate the Effects of Heat Stress, Water Deprivation and Low Pasture Quality in Small Ruminants. *J. Anim. Sci* Vol. 92, E-Suppl. 2: 370.
- Aad P.Y., J. Ibrahim, C. Al-Fahel, S. Boustany, N. El Ghossein Malouf. 2014. Effect of antimicrobial substitution with *Bacillus Subtilis* on broiler health and performance. 66th Annual Meeting of the European Association for Animal Production, Book of Abstracts 30: 296. Wageningen academic press.
- Balaa, R., P.Y. Aad and S. Abi Saab. 2014. Influence of birth weight and feeding program on growth performance of baladi goat kids fed milk replacer. EAAP 2014, Copenhagen, Denmark. 65th Annual Meeting of the European Association for Animal Production, Book of Abstracts 30: 241. Wageningen academic press .
- Abi Saab, S., N. Abdel Nour, I. Lahoud and P.Y. Aad. 2014. Effect of Sprinkling and ventilation on performance of heat stressed Awassi sheep. *Animal Change 2014*, Madrid, Spain.
- Spicer, L., L. Douthit, P. Aad and S. Echterkamp. 2013. Concentrations and expression of growth differentiation factor 9 as an indicator of follicular development and atresia in cattle. ESDAR 2013, Bologna, Italy. *Reproduction In Domestic Animals* 48 (Suppl.1): 114.
- Aad, P., R. Bou Karroum, C. Nassif and E. Hajj. 2013. Analysis of oocyte morphological quality in Awassi sheep. ESDAR 2013, Bologna, Italy. *Reproduction In Domestic Animals* 48: 100.
- Abi Saab, S., F. Esseily, M. Saliba, P.Y. Aad. 2013. Post-natal evaluation of local baladi capretto meat. EAAP 2013 Annual meeting, 64th Annual Meeting of the European Association for Animal Production, Nantes, France. Book of Abstracts 29: 376. Wageningen academic press.
- Spicer L.J., N.B. Schreiber, L.F. Schultz, M.L. Totty, P.Y. Aad. 2013. Changes in thecal bone morphogenetic protein receptor 2 (BMP2) mRNA in dominant and subordinate follicle during the first follicular wave, and the effects of BMP4 and its agonist, gremlin, on ovarian granulosa cell function. *Reproductive endocrinology (Ovarian & Uterine Function II): MON-564-MON-564*. Endocrine Society.
- Abi Saab, S., F.T. Sleiman, F. Ayoub, P.Y. Aad. 2011. Effect of protein restriction on body characteristics and fat storage in Awassi sheep. 2011 joint ASAS/ADSA annual meeting, New Orleans. *J. Anim. Sci.* (92):50.

- Cortinovis, C., N. Schreiber, P.Y. Aad, F. Caloni and L.J. Spicer. 2011. In vitro effect of fumonisin B1 on proliferation and steroidogenesis of porcine granulosa cells. CELLTOX 1991-2011 Twenty years of in Vitro Toxicology: Achievements and Future Challenges", Rome, Italy, on October 19-21, 2011.
- Echternkamp, S.E., P.Y. Aad, and L.J. Spicer. 2010. Comparisons of mRNA expression for IGF-2 receptor and IGF-1 in small ovarian follicles between cattle selected and not selected for twin ovulations. 8th International Ruminant Reproduction Symposium.
- Spicer, L. J., N. B. Fry, P.Y. Aad, J. L. Dentis, and J. A. Grado-Ahuir. 2010. Role of Fibroblast Growth Factor-9 (FGF9) and its Receptor in Regulating Function of Ovarian Granulosa Cells. World Congress on Fertility and Sterility, Munich, Germany.
- El-Obeid, D., P.Y. Aad. 2010. Beekeeping in Lebanon: from traditional to organic. First Apimondia Conference on Organic Beekeeping. Bulgaria, 27 - 29 August 2010.
- Spicer, L.J., J. Dentis, N.B. Fry, P.Y. Aad, and J.A. Grado-Ahuir. 2010. Regulation of angiogenin mRNA in bovine granulosa cells quantified by real-time RT-PCR. Biol. Reprod. 82(Suppl. 1): 136.
- Grado-Ahuir, J.A., P.Y. Aad, L. Hulseley, and L. J. Spicer. 2009. Microarray analysis of bovine granulosa cells from normal and cystic follicles. Proceedings of the Western Section of the American Society of Animal Scientists 60:314-316./ J. Anim. Sci. 87(E-Suppl. 3): 163-164.
- Spicer, L.J., D.V. Lagaly, P.Y. Aad, J.A. Grado-Ahuir, and L.B. Hulseley. 2009. Role of adiponectin in regulating ovarian theca and granulosa cell function in cattle. 16th International Congress on Animal Reproduction, Budapest, Hungary.
- Grado-Ahuir, J.A., P.Y. Aad, and L. J. Spicer. 2009. Microarray Analysis of Insulin-Like Growth Factor-I-induced Changes in mRNA Expression in Cultured Porcine Granulosa Cells: Possible role of IGF-I in Angiogenesis. The Endocrine Society Annual Meeting, Washington, D.C.
- Grado-Ahuir J.A., P.Y. Aad, G. Ranzenigo, F. Caloni, L.J. Spicer. 2008. Microarray analysis of insulin-like growth factor-I (IGF-I)-induced changes in mRNA expression in cultured porcine granulosa cells: Possible role of IGF-I in angiogenesis. 45th Congress of the European Societies of Toxicology, Rhodes, Greece. Toxicology Letters 180S: S97.
- Aad, P.Y., L.J. Spicer, and S.E. Echternkamp. 2008. The hedgehog system in ovarian follicles of cattle selected for twin ovulations and births: evidence of a link between the IGF and hedgehog systems. 41st SSR Annual Meeting, Kailua-Kona, HI. Biol. Reprod. 78(Suppl. 1): 109-110.
- Grado-Ahuir, J. A., P.Y. Aad, L. Hulseley, D. Lagaly, L. J. Spicer. 2008. IGF-I dependent gene expression in cultured porcine granulosa cells. Southern Association of Agricultural Scientists, American Society of Animal Science Annual Meeting, Dallas, TX (Poster Presentation). J. Anim. Sci. 88 (Suppl. 1): 22.
- Aad, P.Y., S. E. Echternkamp, and L. J. Spicer. 2008. Evidence for possible involvement of IGF type II receptors (IGF2R) in regulating growth of two concomitant dominant follicles in cattle. Graduate Student Competition, Southern Association of Agricultural Scientists, American Society of Animal Science Annual Meeting, Dallas, TX (Oral Presentation). J. Anim. Sci. 88 (Suppl. 1): 10.
- Aad, P.Y., S.E. Echternkamp, and L.J. Spicer. 2006. IGF type 2 receptor gene expression in granulosa and theca cells of cattle selected for twin ovulations and births. Biol. Reprod. (Suppl.): 173.
- Spicer, L.J., P.Y. Aad, D.T. Allen, S. Mazerbourg, K. Sangkuhl, and A.J. Hsueh. 2006. Growth differentiation factor-9 stimulates proliferation and inhibits steroidogenesis of bovine theca cell. Biol. Reprod. 74 (Suppl. 1): 175.
- Rubio, I., R. P. Wettemann, F.J. White, P.Y. Aad, and L.J. Spicer. 2005. Effect of postpartum nutrition of primiparous beef cows on insulin in follicular fluid and abundance of mRNA for binding proteins (IGFBP) -4 and -5 and aromatase in granulosa cells of dominant follicles. J. Anim. Sci. 83 (Suppl. 1): 243-244.
- Spicer, M.T., P.Y. Aad, A.M. Flanagan, J.L. Brown, and L.J. Spicer. 2005. Effect of High Fat Feeding on levels of mRNA for insulin receptor (InsRc), forkhead box O1 (FoxO1), inositol 1,4,5-triphosphate 3-kinase (I3PK), and ribosomal protein S6 kinase (RPS6K) in adipose tissue of growing rats quantified by real-time RT-PCR. The Endocrine Society 87th Annual Meeting, pg. 597.
- Santiago, C.A., J.L. Voge, P.Y. Aad, D.T. Allen, D.R. Stein, J.R. Malayer and L.J. Spicer. 2004. Free IGF-I in follicular fluid: Relationship with total IGF-I, IGFBP, and steroids in dominant and large subordinate follicles of preovulatory cattle. J. Anim. Sci. 82 (Suppl. 1): 19.
- Aad, P.Y., C.A.T. Santiago, J.L. Voge, L.J. Spicer and J.L. Malayer. 2003. Relationships among levels of mRNA for granulosa insulin-like growth factor binding protein-4 (IGFBP-4), IGFBP-5 and pregnancy associated plasma protein-A (PAPP-A), and follicular fluid IGFBP-4 and -5 in dominant and subordinate pre-ovulatory follicles. FASEB J. 17: A449-A450.

Local and Regional Conferences

- Ghanem, E. D. Azzi, P.Y. Aad. 2021. Effective Skill Set Development for Science Students in the COVID-19 era. DAAD Mediterranean conference on Open Education.
- Oneissy, S., Y. Kalash, K. Rahmeh, P.Y. Aad. 2016. Lead accumulation in mice reproductive tissues: the development of immunohistology methods. LAAS 2016, USEK, Lebanon.
- Makdissi, R., R. Ghorayeb, K. Houchaymi, P.Y. Aad, S. Abi Saab. 2016. Effect of Protein supplementation on fat remodelling in male Awassi lambs. LAAS 2016, USEK, Lebanon.
- Ghorayeb, R., R. Makdissi R., S. Oneissy, K Houchaymi, P.Y. Aad, S. Abi Saab. 2016. Effet de l'alimentation sur la mobilization de la queue grasse chez les agnelles Awassi. LAAS 2016, USEK, Lebanon.
- El Balaa R., E. Mousaoumai, P. Aad, K. Houchaimi, S. Abi Saab. 2016. La corrélation entre les dimensions de l'ovaire et le poids corporel des brebis Awassi. LAAS 2016, USEK, Lebanon.
- Aad, P.Y. 2015. Teaching Bioinformatics to computer language illiterate biologists: a practical approach. National Conference on Education 2015: Adapting Education to a Changing Arab Region, NDU, Lebanon.
- Aad, P.Y., and E. Ghanem. 2015. Environmental science: interesting and impacting non major students. National Conference on Education 2015: Adapting Education to a Changing Arab Region, NDU, Lebanon.
- C. Al Fahel, J. Sahakian, K. Houchaymi, E. Hajj and P.Y. Aad. Ultrasonographic evaluation of Awassi folliculogenesis and dominant oocyte quality assessment. LAAS 2015, USJ, Lebanon.
- Baalabaki, A., J. Sahakian, B. Bcherrawi, P.Y. Aad, E. Hajj, M. Kharrat Sarkis. 2015. Milk production in Baladi goats under rural transhumance. LAAS 2015, USJ, Lebanon.
- Sahakian, J., Baalabaki, A., B. Bcherrawi, E. Hajj, M. Kharrat Sarkis, P.Y. Aad. 2015. Folliculogenesis and Cyclicity in Baladi Goats. LAAS 2015, USJ, Lebanon.
- J.O. Sahakian, M.R. Hajjar, G. Mikdashi, A. Haile, K. Houchayme, and P.Y. Aad. 2014. Evaluation of Awassi Ram Breeding Soundness in LARI and ICARDA Improved Flocks. 20th LAAS, Lebanese University, Hadath, Lebanon.
- Abi Saab, S., N. Kfoury, W. Darweesh and P.Y. Aad. 2012. Effet du stress alimentaire sur les performances reproductives et la composition du sang des béliers Awassi. 18th International Science Meeting of the Lebanese Association for the advancement of science, NDU-Louaize, Lebanon, 75.
- Bou Karroum, R., C. Nassif, P.Y. Aad, and E. Hajj-Semaan. 2012. Critères morphologiques de choix des ovocytes de qualité de la race caprine Baladi. 18th International Science Meeting of the Lebanese Association for the advancement of science, NDU-Louaize, Lebanon, 91.
- Ibrahim, J., C. Fahel, N. Ghossein-Maalouf, S. Boustany, P.Y. Aad. 2012. Effect of Clostat® as daily supplementation on broiler health and growth performance. 18th International Science Meeting of the Lebanese Association for the advancement of science, NDU-Louaize, Lebanon, 74.
- Nassif, C. R. Bou Karroum, J. Ibrahim, E. Hajj-Semaan and P.Y. Aad. 2012. Analysis of oocyte morphological quality in Awassi sheep 18th International Science Meeting of the Lebanese Association for the advancement of science, NDU-Louaize, Lebanon, 73.
- Grado-Ahuir, J. A., P.Y. Aad, L. Hulseley, D. Lagaly, L. J. Spicer. 2008. IGF-I dependent gene expression in cultured porcine granulosa cells. 19th Annual OSU Research Symposium, pg. 13.
- Aad, P.Y. S.E. Echterkamp, and L.J. Spicer. 2007. Evidence for possible involvement of IGF type II receptors in regulating growth of two concomitant dominant follicles in cattle. 18th Annual OSU Research Symposium, pg. 2-3 (Oral Presentation).
- Aad, P.Y., L.J. Spicer, D.T. Allen, S. Mazerbourg, and A. J. Hsueh. 2007. Growth differentiation factor-9 stimulates proliferation and inhibits steroidogenesis of bovine theca cells from small but not large follicles. 4th Annual OSU Graduate Research in Biological Sciences Symposium. Sept. 28, 2007.
- Rubio, I., R. P. Wettemann, F.J. White, P.Y. Aad, and L.J. Spicer. 2005. Effect of postpartum nutrition of primiparous beef cows on insulin in follicular fluid and abundance of mRNA for binding proteins (IGFBP) -4 and -5 and aromatase in granulosa cells of dominant follicles. 16th Annual OSU Research Symposium, pg. 41-42.
- Aad, P.Y., C.A.T. Santiago, J.L. Voge, L.J. Spicer. 2004. Hormonal control of pregnancy associated plasma protein-A gene expression in bovine granulosa and theca cells: Quantitation by RT-PCR. The Endocrine Society's 86th annual meeting.
- Aad, P.Y., C.A.T. Santiago, J.L. Voge, L.J. Spicer and J.R. Malayer. 2004. Pregnancy associated plasma protein-A (PAPP-A) gene expression in granulosa and theca cells: Differential effects of IGF-1 and -2. 15th Annual OSU Research Symposium, pg. 6 (Oral presentation).
- Aad, P.Y., C.A.T. Santiago, J.L. Voge, J.R. Malayer, L.J. Spicer. 2004. Effects of IGF-I and -II on pregnancy-associated plasma protein-A (PAPP-A) gene expression in bovine granulosa and theca cells: Assessment by quantitative RT-PCR. J. Anim. Sci. 82(Suppl. 1): 12 (Graduate Student Competition, Southern Association of Agricultural Scientists, Tulsa, OK- Oral presentation).

Thesis Dissertations

- Aad, P.Y. 2008. Gene Expression in ovarian granulosa and theca cells in cattle selected for double ovulations and twin births. PhD Dissertation. Department of Animal Science, Oklahoma State University, Stillwater, OK - USA. Advisor Dr. Leon J. Spicer.
- Aad, P.Y. 2005. Real-time RT-PCR quantification of pregnancy-associated plasma protein-A gene expression in granulosa and theca cells: effects of hormones in vitro. Masters Thesis Project Report. Department of Animal Science, Oklahoma State University, Stillwater, OK- USA. ProQuest, EMI. Available in paperback or downloadable from Amazon.com.
- Aad, P.Y. 2001. Milk replacer feeding and body weight predicting for pre-and post-weaned bulls. Agricultural Engineer Diploma Thesis Project Report. Department of Animal Science, Faculty of Agricultural Engineering, Lebanese University, Horsh Tabet-Lebanon.

Research Reports

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Esteemed Indicators

- Winner of the cycle 9 PEER/USAID research grant # AID-OAA-A-11-00012.
- First prize, publication award from the Arab Organization of Agricultural Development (AOAD), with K. Jawasreh, Jordan University of Science and Technology.
- Instructor on an ICARDA organized 3 Day workshop on Essential Knowledge for effective improvement and dissemination of genetics in sheep and goats. Presentation entitled "Sheep and goat reproduction main features and applications for the management of female reproduction"; 3-5 Nov, 2020, CGIAR, ICARDA.
- Instructor on ICARDA online course entitled "Reproduction in sheep and goats: what you should know and what you should do to improve it in low input systems"; ICARDA, available online [ReProSheepGoat \(icarda.org\)](https://www.icarda.org/ReProSheepGoat)
- Molecular biology specialist for the establishment of a real-time PCR testing lab at Fouad Khoury Hospital/ Bekhazi Medical Group: testing COVID-19, genetic and infectious diseases.
- Extension assistance and expert consultant to the Lebanese Agricultural Research Institute in providing farmer support and troubleshooting of pregnancy evaluation, breeding program development and challenges. Development of applied research projects to address environmental and nutritional challenges for small ruminants.
- Expert consultant for CEVA microbiology, vaccination efficiency and autogenous vaccination development in the poultry industry in Lebanon.
- Participated in the 13th Lebanon-ICARDA Coordination and Planning Meeting, LARI, Tel-Amara, 25 September 2018.
- ICARDA Expert consultation workshop on "Small ruminant genetic improvement"; Izmir, Turkey, 13-17 November 2016.

Professional Memberships

- Society for Women Health Research (SWHR since 2024)
- American Society of Animal Science (ASAS since 2002), The Endocrine Society (since 2008), European Federation of Animal Science (EAAP since 2008), European Society for Domestic Animal Reproduction (ESDAR), International Society for Insulin-Like Growth Factor Research (IGF society), Lebanese Association for the Advancement of Science (LAAS), Lebanese League of Engineers, Society for the Study of Reproduction (SSR 2002-2017).
- President of youngEAAP, the Young and Early Career Researchers of the European Federation of Animal Science 2009-2011.
- Founding and board member of the Fulbright Alumni Association of Lebanon (FAAL).

CV

<https://www.ndu.edu.lb/Library/Assets/Files/Documents/NDUFacultyProfiles/NDUFacultyCVs/Pauline%20Aad.pdf>

Peer Project Profile

https://sites.nationalacademies.org/pga/peer/peerscience/pga_364185