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Editorial

The AALAS Journals: 2015 in Review

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The November issue of *JAALAS* volume 54 and the December issue of *Comparative Medicine* (*CM*) volume 65 marked the end of another year for the AALAS journals. Our sincere thanks go again to the talented support the journals receive from art director Amy Tippett and scientific editor Amy Frazier, as well as to the AALAS staff, John Farrar and Virginia Dawson. This team together continues to sustain a timely flow of well-edited and professionally presented information through the entire process from manuscript submission to publication.

As shown in Table 1, publication statistics for the journals remain strong, although notably the number of submissions fell somewhat for both journals (Figure 1). Determining whether this

Table 1. Journal statistics

JAALAS	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total submissions	68	119	132	172	167	191	170	179	158	148
International	24	31	52	61	52	71	57	74	75	54
% international	35	26	39	35	31	37	34	41	59	36
Disposition of submissions										
Referred to *CM*	3	4	11	15	18	31	16	17	25	23
Withdrawn	3	7	6	4	8	5	5	3	4	4
Rejected	24	37	35	41	43	55	64	75	62	44
Accepted	41	61	73	93	91	90	75	80	91	62
Total number accepted or rejected*	65	98	108	134	134	145	139	155	153	106
% accepted	63	62	68	69	68	62	54	52	59	58
Days from submission to										
first decision	28	32	28	28	28	28	28	28	32	34
final decision	50	55	66	64	62	62	50	56	75	60
Articles published**	62	65	62	68	90	96	79	71	88	67
Pages published	812	756	732	840	916	993	872	810	727	446
Average pages per article	6.9	6.3	5.7	5.9	5.8	6.4	6.8	11.4	8.3	6.7
Impact factor		0.52	0.53	0.95	0.80	0.71	1.14	***	1.12	NA
CM	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total submissions	83	136	126	158	138	162	171	169	135	127
International	35	42	50	86	55	73	76	89	80	66
% international	42	31	40	54	40	45	44	53	59	52
Disposition of submissions										
Referred to *JAALAS*	18	27	24	39	36	31	29	23	12	9
Withdrawn	1	7	8	6	6	4	3	6	1	0
Rejected	20	34	37	51	35	54	75	69	75	54
Accepted	44	57	56	47	61	57	64	63	45	56
Total number accepted or rejected*	64	91	93	98	96	111	139	132	120	110
% accepted	69	63	60	48	64	51	46	48	38	51
Days from submission to										
first decision	49	40	32	28	28	28	24	24	28	24
final decision	95	66	62	53	61	53	46	42	45	47
Articles published **	45	63	63	59	55	60	68	60	58	59
Pages published, articles	452	614	623	613	520	576	568	547	436	401
Average pages per article	7	7.2	7.4	7.7	6.9	7.0	6.7	9.1	7.5	6.8
Impact factor	0.99	1.15	1.09	1.09	1.20	1.05	1.12	***	0.74	NA

*, some articles submitted in 2015 were still under review in 2016
**, some of the articles published in 2015 were accepted in 2014
***, impact factors for 2013 were calculated based on 3 issues, rather than 6, for each journal and as a result were inaccurate.
NA, not yet available

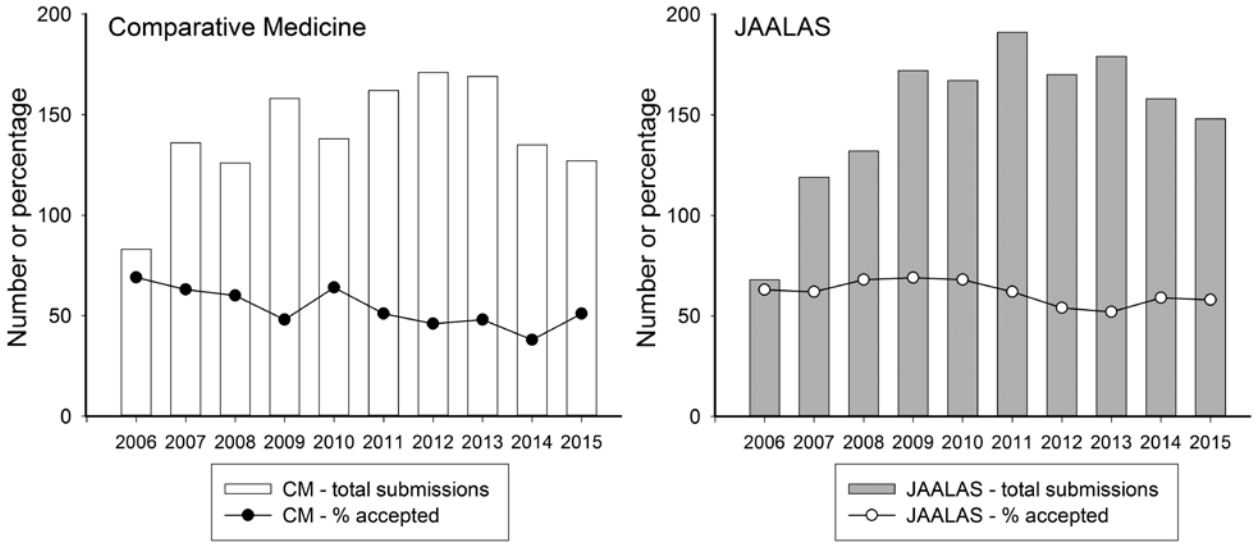

Figure 1.

decrease foretells a trend must await future data. In 2015, the percentage of articles submitted from international (non-US) institutions and authors was lower than the previous year for both journals. Acceptance rates rose to 51% for *CM* and were stable at 58% for *JAALAS* (Table 1, Figure 1). These percentages are consistent with obtaining an adequate amount of high-quality content for each issue. Our expectation is that the number of submissions will increase in the future time, resulting in lower acceptance rates. Prospective authors should be aware that as more submissions are received, standards for acceptance will be higher. For example, manuscripts that contain relatively little data (only one table or figure) will be viewed as less desirable than articles that present a substantive and comprehensive investigation of a research question.

The tables of top 10 downloaded articles for the two journals really highlight the value of the AALAS publications (Tables 2 and 3). As you can see, many articles are downloaded thousands of time a year for many years after the publication date. These data show that even though the journal impact factors are not high, the articles are used by the community we serve and are durable in terms of content. The number of citations from both journals also continues to grow annually (Figure 2).

Table 2. *Comparative Medicine* - Top 10 Downloaded Articles from PubMed Central

Article	Live in PMC	Total Requests			
		2012	2013	2014	2015
Novak MA, Meyer JS. Alopecia: possible causes and treatments, particularly in captive nonhuman primates. **59:**18–26, 2009	8/1/2009	7936	14808	18992	16504
Graham ML, Janecek JL, Kittredge JA, Hering BJ, Schuurman HJ. The streptozotocin-induced diabetic nude mouse model: differences between animals from different sources. **61:**356–360, 2011	2/1/2012	1913	6785	5203	8759
Lynch WJ, Nicholson KL, Dance ME, Morgan RW, Foley PL. Animal models of substance abuse and addiction: implications for science, animal welfare, and society. **60:**177–188, 2010	12/1/2010	1785	3512	4039	6825
Cray C, Zaias J, Altman NH. Acute phase response in animals: a review. **59:**517–526, 2009	6/1/2010	2896	4445	4467	6629
Casals JB, Pieri NC, Feitosa ML, Ercolin AC, Roballo KC, Barreto RS, Bressan FF, Martins DS, Miglino MA, Ambrósio CE. The use of animal models for stroke research: a review**. 61:**305–313, 2011	2/1/2012	1906	2993	2932	4273
Lelovas PP, Xanthos TT, Thoma SE, Lyritis GP, Dontas IA. The laboratory rat as an animal model for osteoporosis research. **58:**424–430, 2008	7/17/2009	3286	4598	2960	3935
Nemzek JA, Hugunin KM, Opp MR. Modeling sepsis in the laboratory: merging sound science with animal well-being. **58:**120–128, 2008	7/17/2009	**	3075	2530	3597
Tartarov I, Panda A, Petkov D, Kolappaswamy K, Thompson K, Kavirayani A, Lipsky MM, Davis,CC, Martin DS, DeTolla LJ. Effect of magnetic fields on tumor growth and viability. **61**:339-345, 2012	2/1/2012	**	**	2107	3083
Elmore D, Eberle R. Monkey b virus (*Cercopithecineherpesvirus 1*). **58:**11–21, 2008	7/17/2009	2082	2926	2302	3048
Liu Y, Chen JY, Shang HT, Liu CE, Wang Y, Niu RY, Wu J, Wei H. Light microscopic, electron microscopic, and immunohistochemical comparison of Bama minipig (*Sus scrofa domestica*) and human skin. **60:**142-148, 2010	10/1/2010	**	**	**	2670

**New to top ten list

Table 3. *JAALAS* - Top 10 Downloaded Articles from PubMed Central

Article	Live in PMC	Total Requests			
		2012	2013	2014	2015
Turner PV, Brabb T, Pekow C, Vasbinder MA. Administration of substances to laboratory animals: routes of administration and factors to consider. **50:**600–613, 2011	3/1/2012	6650	22624	21404	31034
Turner PV, Pekow C, Vasbinder MA, Brabb T. Administration of substances to laboratory animals: equipment considerations, vehicle selection, and solute preparation. **50:**614–627, 2011	3/1/2012	**	5533	8262	13013
Duran-Struuck R, Dysko RC. Principles of bone marrow transplantation (BMT): providing optimal veterinary and husbandry care to irradiated mice in BMT studies. **48:**11–22, 2009	7/1/2009	7570	10623	8328	11634
Turner DE, Daugherity EK, Altier C, Maurer KJ. Efficacy and limitations of an ATP-based monitoring system. **49:**190-195, 2010	9/4/2010	**	**	4112	7131
Fernandez I, Pena A, Del Teso N, Perez V, Rodriguez-Cuesta J. Clinical biochemistry parameters in C57BL/6J mice after blood collection from the submandibular vein and retroorbital plexus. **49:**202–206, 2010	9/1/2010	3001	3774	3109	6178
Cray C, Rodriguez M, Zaias J, Altman NH. Effects of storage temperature and time on clinical biochemical parameters from rat serum. **48:**202–204, 2009	9/1/2009	2631	4275	3822	5974
Alworth LC, Hernandez, SM, Divers SJ. Laboratory reptile surgery: Principles and techniques. **50:**11-26, 2011	7/1/2011	**	**	**	4535
Matthews KA, Taylor DK. Assessment of sterility in fluid bags maintained for chronic use. **50:**708-712	3/1/2012	**	**	**	4277
Zaias J, Mineau M, Cray C, Yoon D, Altman NH. Reference values for serum proteins of common laboratory rodent strains. **48:**387–390, 2009	1/1/2010	**	3852	2490	4266
Luo C, Zuniga J, Edison E, Palla S, Dong W, Parker-Thornburg J. Superovulation strategies for 6 commonly used mouse strains. **50:**471–478, 2011	1/1/2012	**	3861	3011	4008

**New to top ten list

The list of top 10 cited articles has several new additions this year (Tables 4 and 5). Table 6 shows the top 10 journals that either cited articles in *JAALAS* and *CM* or were cited in *JAALAS* and *CM* articles.

We would also like to mention an abstract from the 2015 national meeting that was titled "Uptake of the ARRIVE Guidelines in Scientific Reporting: How Well Are AALAS Journals Doing?" The authors were Campo, Kylie, and Turner from the University of Guelph. They performed a retrospective study to assess the degree to which articles published in *CM* and *JAALAS* conform with the ARRIVE guidelines. ARRIVE (Animals in Research: Reporting In Vivo Experiments) were published in 2010 and outline the minimal information that should be included in research publications that involve the use of animals, with the goals of improving reproducibility of animal-based research and increasing awareness of the 3Rs. The authors evaluated hypothesis-driven, original research publications that included in vivo studies and were published in 2013 and 2014, for a total of 132 papers (82 *JAALAS*, 50 *CM*). They concluded that the journals overall show good incorporation of the ARRIVE guidelines, but can improve particularly with regard to details pertaining to animal numbers. The editors encourage reviewers

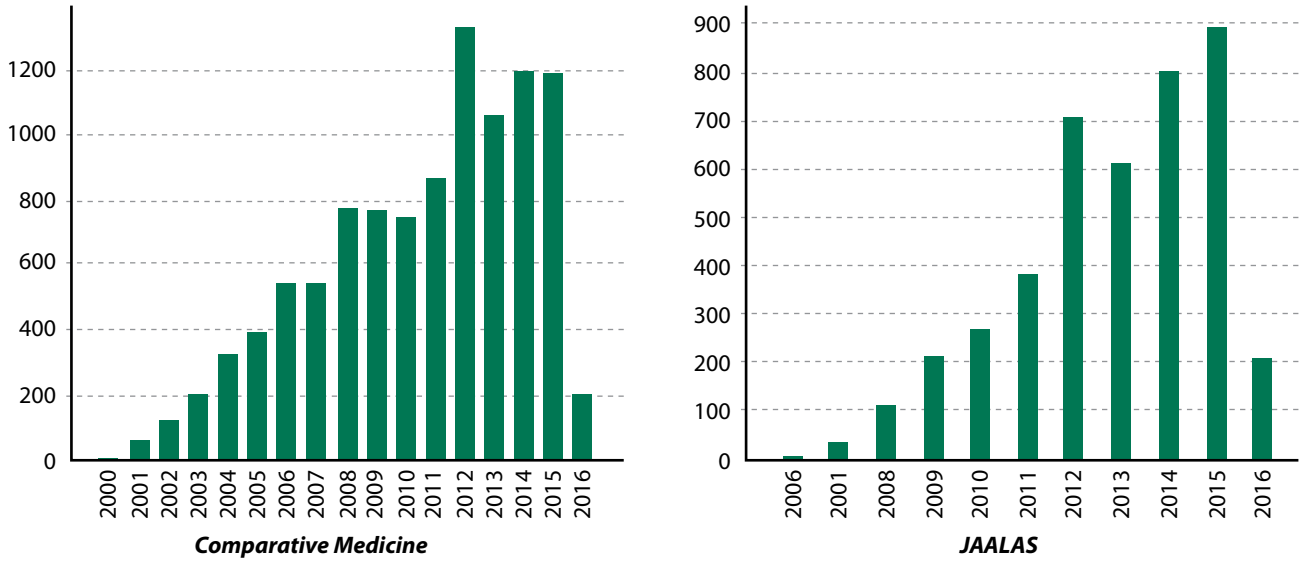

Figure 2. Citations per year (figures from Web of Science, April 4, 2016)

Table 4. *Comparative Medicine* - Top 10 cited articles*

Article	Publication year	Total number of citations as of			
		Feb. 18, 2013	Jan. 15, 2014	May 6, 2015	April 4, 2016
Cray C, Zaias J, Altman NH. Acute phase response in animals: a review**. 59:**517–526**.**	2009	**	73	137	178
Lelovas PP, Xanthos TT, Thoma SE, Lyritis GP, Dontas IA. The laboratory rat as an animal model for osteoporosis research**. 58:**424–430**.**	2008	**	86	134	162
Mansfield K. Marmoset models commonly used in biomedical research. **53:**383–392.	2003	76	94	122	143
Abbott DH, Barnett DK, Colman RJ, Yamamoto ME, Schultz-Darken NJ. Aspects of common marmoset basic biology and life history important for biomedical research. **53:**339–350.	2003	62	79	99	110
Dyson MC, Alloosh M, Vuchetich JP, Mokelke EA, Sturek M. Components of metabolic syndrome and coronary artery disease in female Ossabaw swine fed excess atherogenic diet. **56:**35–45.	2006	60	75	93	104
Callicott RJ, Womack JE. Real-time PCR for measurement of mouse telomeres. **56**:17-22	2006	**	**	74	82
Hsu CC, Riley LK, Wills HM, Livingston RS.. Persistent infection with and serologic cross-reactivity of three novel murine noroviruses. **56:**247–251.	2006	54	59	73	80
Arras M, Autenried P, Rettich A, Spaeni D, Rülicke T. Optimization of intraperitoneal injection anesthesia in mice: drugs, dosages, adverse effects, and anesthesia depth. **51:**443–456.	2001	49	58	67	79
Parker JM, Mikaelian I, Hahn N, Diggs HE. Clinical diagnosis and treatment of epidermal chytridiomycosis in African clawed frogs (*Xenopustropicalis*). **52:**265–268.	2002	59	67	71	77
Garner JP, Weisker SM, Dufour B, Mench JA. Barbering (fur and whisker trimming) by laboratory mice as a model of human trichotillomania and obsessive-compulsive spectrum disorders. **54:**216–224.	2004	54	64	70	76

*Data collected from Web of Knowledge
**New to top 10 list

Table 5. *JAALAS* - Top 10 cited articles*

Article	Publication year	Total number of citations as of			
		Feb. 18, 2013	Jan. 15, 2014	May 6, 2015	April 4, 2016
Portfors CV. Types and functions of ultrasonic vocalizations in laboratory rats and mice. **46:**28–34.	2007	76	101	138	172
Wilson JM, Bunte RM, Carty AJ. Evaluation of rapid cooling and tricainemethanesulfonate (MS222) as methods of euthanasia in zebrafish (*Daniorerio*). **48:**785–789.	2009	**	20	34	49
Turner PV, Brabb T, Pekow C, Vasbinder MA. Administration of substances to laboratory animals: routes of administration and factors to consider. **50:**600-613	2011	**	**	**	48
Matsumiya LC, Sorge RE, Sotocinal SG, Tabaka JM, Wieskopf JS, Zaloum A, King OD, Mogil JS. Using the mouse grimace scale to reevaluate the efficacy of postoperative analgesics in laboratory mice. **51**:42-49	2012	**	**	28	44
Hess SE, Rohr S, Dufour BD, Gaskill BN, Pajor EA, Garner JP. Home improvement: C57BL/6J mice given more naturalistic nesting materials build better nests. **47:**25-31	2008	**	**	**	43
Hayward R, Hydock DS. Doxorubicin cardiotoxicity in the rat: an in vivo characterization. **46:**20–32.	2007	15	22	32	35
Probst RJ, Lim JM, Bird DN, Pole GL, Sato AK, Claybaugh JR. Gender differences in the blood volume of conscious Sprague–Dawley rats. **45:**49–52	2006	14	21	30	35
Abatan OI, Welch KB, Nemzek JA. Evaluation of saphenous venipuncture and modified tail-clip blood collection in mice. **47:**8–15.	2008	17	18	29	34
Perdue KA, Green KY, Copeland M, Barron E, Mandel M, Faucette LJ, Williams EM, Sosnovtsev SV, Elkins WR, Ward JM. Naturally occurring murine norovirus infection in a large research institution. **46:**39–45.	2007	21	24	31	34
Konkle AT, Kentner AC, Baker SL, Stewart A, Bielajew C. Environmental-enrichment-related variations in behavioral, biochemical, and physiologic responses of Sprague–Dawley and Long Evans rats. **49:**427–436.	2010	**	18	28	33

*Data collected from Web of Knowledge
** New to top ten list

Table 6. Journals with greatest number of citations of and citations in AALAS journals in 2014

Rank	Cited Comp Med articles	Cited in Comp Med articles	Cited JAALAS articles	Cited in JAALAS articles
1	PLoS One (78)	Comp Med (51)	JAALAS (151)	JAALAS (151)
2	Comp Med (51)	Infect Immum (39)	PLoS One (44)	Lab Anim – UK (98)
3	JAALAS (48)	J Med Primatol (33)	Comp Med (31)	CTLAS (60)
4	Vet Pathol (23)	Vet Pathol (32)	Lab Animal (22)	Comp Med (48) *
5	Lab Anim - UK (22)	JAALAS (31)	Lab Anim – UK (18)	Guide Care Use Lab An* (48)
6	J Primatol	Guide Care Use Lab An*	App Anim Behav Sci	Lab Anim Sci
7	J Immunol	Lab Anim Sci*	J Exot Pet Med	Anesthesiology
8	Lab Animal	PNAS	J Zoo Wildlife Med*	Am J Primatol
9	Biomed Res Int*	PLoS One	Zoo Biol*	Anesth Analg*
10	ILAR J*	J Immunol *	BMC Vet Res*	ILAR J *
	JAVMA*	Sleep*	J Med Primatol*	
	PLoS Neglect Trop Dis*		Jove-J Vis Exp*	

*Tied rank

and authors to consider consistency with the ARRIVE guidelines in manuscript they review or submit, respectively.

Finally, on February 3, 2016, two of us (Linda and Susan) offered a webinar entitled "Promoting Reproducible Animal Research in Journal Publications." This webinar, which was part of a Laboratory Animal Bioscience Conference produced by Labroots, was viewed by about 100 participants. A notable question from participants regarded authors' difficulty in publishing negative results. However, in fact the AALAS journals, particularly *JAALAS*, often publish negative results, as our readership has great interest in knowing whether various practices, including those promulgated in regulatory and guidance documents, are effective, ineffective, or neutral with regard to outcomes. In terms of publication and reproducibility, authors, reviewers, and editors share in the responsibility of assuring that all information necessary to replicate a study is included in the published work. However, more fundamental requirements for reproducibility are good experimental design, solid statistical validation, and meticulous conduct and reporting of the study. Reviewers and editors generally assume that methods have been properly validated, research personnel are well trained, and the findings are reproducible in the laboratory of the reporting authors. However, the research group bears the burden of reproducibility, and mentors bear responsibility for modeling a high degree of scientific integrity and transmitting sound scientific practices to their trainees. As has been said by us and others, the real peer review begins after the work is published.

As always, we welcome your suggestions for improvements in the journals and encourage you to give us your opinions, perspective, concerns and suggestions. You have our continued thanks for your support in the development and growth of the journals.