

Editorial

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The end of 2005 marks the completion of the second publication year for this editorial team. We thank the contributing authors, editorial team and board, and especially the 233 reviewers who have been of such great assistance to the performance of the journal. Their names are given at the end of this editorial.

The declared scope of the journal has been borne out in its published pages. This journal is devoted to high-quality original research that explores the mechanisms of disease pathogenesis, based on both human and experimental studies. Particular emphasis is given to research that elucidates the structural and molecular pathogenesis of disease. This includes research identifying the mechanisms underlying the morphologic manifestations of disease. We also seek high-quality reports that translate basic research findings into advances in diagnostic methodologies for human disease, and rigorous, full-length reports of technical advances in the investigation of human or experimental disease. The latter may include reports of novel animal models of disease, with detailed phenotypic characterization. Lastly, we publish concise critical reviews in the form of Minireviews, devoted to mechanisms of disease.

These principles are reflected well in the articles drawing the greatest attention from the reading public. Table 1 gives the top 10 articles accessed from the web in the form of HTML or PDF downloads, for publication years 2004–2005. The top article (de Kok *et al*) is, in fact, a technical report of which are the best ‘control genes’ to use for gene expression studies, and was viewed over 3900 times in 2005 at the time of this writing (January–September). This article is a detailed and rigorous analysis of the reproducibility of gene expression measurements. The second article (Zagzag *et al*) reveals the role of major histocompatibility complex antigens in invading glioma cells. The third article (Cunningham and Gotlieb) is a minireview on the role of shear stress in the pathogenesis of atherosclerosis. Of the remaining seven articles, one is a minireview on proteomics in pathology research; three are original research exploring a mechanism of invasive behavior in glioblastoma, and injury to the heart and pancreas; and three are also technical reports, on isolation of intrahepatic lymphocytes, detection of *Variola* virus in archived human tissue, and rapid detection of von Hippel–Lindau gene (VHL) exon deletions.

Table 2 gives the top 10 articles cited in the literature. The cited topics range from intestinal

epithelial barrier function, and differentiation of insulin-producing cells from bone marrow stem cells; to molecular studies of cancers of the stomach, colon, kidney, and bladder. There are highly ‘current’ themes, such as stem cells, DNA methylation, analysis of receptors for PDGF and EGF. Interestingly, two technical reports are also among the top 10 cited articles: SELDI mass spectrometry for analysis of serum amyloid variants, and amplification of RNA transcripts using terminal continuation.

We draw several conclusions from these data. First, the high volume of web downloads makes it clear that the scientific world turns to the web for access to the published literature. This underscores the value of electronic subscriptions to the scientific literature (and we are working to ensure that all major academic institutions have an electronic subscription to this journal). Second, published articles addressing molecular mechanisms of carcinogenesis are highly read, and this journal addresses the breadth of human and animal carcinogenesis. Third, mechanisms of tissue injury and response are also important, again across the panoply of mammalian tissues. Fourth, technical reports and critical reviews are of high value. The attention given to our technical reports is particular affirmation of our philosophy of publishing full-length papers, with detailed and rigorous reporting of data validating the reported methodology.

In 2005 (volume 85), we have published 129 articles across the broad spectrum of human and animal disease. A total of 41% of the articles were studies of human tissues; 43% were animal studies (ignoring the occasional articles which utilize both human and animal tissues). Technical reports and Minireviews comprise the remaining 16%. Studies of cancer totaled 24%; of noncancer topics 76%. There is a broad distribution across essentially all organ systems, with the brain (10%), gut (16%), and liver (16%) being the most common. The cardiovascular system (9%), hematopoietic and lymphoid system (9%), pancreas (8%), and kidney (5%) comprise a mid-frequency group. We are interested in increasing the number of articles we publish in the categories of breast, prostate, and endocrine other than pancreas diabetes, as these are underrepresented in our pages (3, 4, and 3%, respectively). We welcome articles from these and other ‘tissue’ areas (eg, bone and soft tissue, skin, head-and-neck, gynecologic), but recognize that there are excellent subspecialty journals in these areas. Overall, these publication numbers reflect both the broad

Table 1 Top 10 articles downloaded as HTML or PDF files, January 2005–September 2005

Rank	Authors	Title	Volume	Issue	Pages
1	Jacques B de Kok, Rian W Roelofs, Belinda A Giesendorf, Jeroen L Pennings, Erwin T Waas, Ton Feuth, Dorine W Swinkels, Paul N Span	Normalization of gene expression measurements in tumor tissues: comparison of 13 endogenous control genes	85	1	154–159
2	David Zagzag, Konstantin Salnikow, Luis Chiriboga, Herman Yee, Li Lan, M Aktar Ali, Roberto Garcia, Sandra Demaria, Elizabeth W Newcomb	Downregulation of major histocompatibility complex antigens in invading glioma cells: stealth invasion of the brain	85	3	328–341
3	Kristopher S Cunningham, Avrum I Gotlieb	The role of shear stress in the pathogenesis of atherosclerosis	85	1	9–23
4	Mohamed A Morsy, Paul J Norman, Ragai Mitry, Mohamed Rela, Nigel D Heaton, Robert W Vaughan	Isolation, purification and flow cytometric analysis of human intrahepatic lymphocytes using an improved technique	85	2	285–296
5	Jasmien Hoebeeck, Rob van der Luijt, Bruce Poppe, Els De Smet, Nurten Yigit, Kathleen Claes, Richard Zewald, Gert-Jan de Jong, Anne De Paepe, Frank Speleman, Jo Vandesompele	Rapid detection of <i>VHL</i> exon deletions using real-time quantitative PCR	85	1	24–33
6	Hiroaki Ushikoshi, Tomoyuki Takahashi, Xuehai Chen, Ngin Cin Khai, Masayasu Esaki, Kazuko Goto, Genzou Takemura, Rumi Maruyama, Shinya Minatoguchi, Takako Fujiwara, Satoshi Nagano, Kentaro Yuge, Takao Kawai1, Yoshiteru Murofushi, Hisayoshi Fujiwara, Ken-ichiro Kosai	Local overexpression of HB-EGF exacerbates remodeling following myocardial infarction by activating noncardiomyocytes	85	7	862–873
7	Megan S Lim, Kojo S J Elenitoba-Johnson	Proteomics in pathology research	84	10	1227–1244
8	Kan V Lu, Kimberly A Jong, Ayyappan K Rajasekaran, Timothy F Cloughesy, Paul S Mischel	Upregulation of tissue inhibitor of metalloproteinases (TIMP)-2 promotes matrix metalloproteinase (MMP)-2 activation and cell invasion in a human glioblastoma cell line	84	1	8–20
9	Claude Rescan, Stéphanie Le Bras, Véronique H Lefebvre, Ulrik Frandsen, Tino Klein, Marco Foschi, Daniel G Pipeleers, Raphael Scharfmann, Ole D Madsen, Harry Heimberg	EGF-induced proliferation of adult human pancreatic duct cells is mediated by the MEK/ERK cascade	85	1	65–74
10	Randal J Schoepp, Michelle D Morin, Mark J Martinez, David A Kulesh, Lisa Hensley, Thomas W Geisbert, Daniel R Brady, Peter B Jahrling	Detection and identification of <i>Variola</i> virus in fixed human tissue after prolonged archival storage	84	1	41–48

distribution of submitted articles, and the high quality of submitted articles in each potential category. The journal does not ‘pitch’ to one area of emphasis, as expert reviewers appropriate to each topic category are selected for external review.

Each month, we have highlighted articles of clear general interest to our readership. ‘Inside Lab Invest’ is a monthly editorial feature that gives background and comment on three to five articles per issue; the highlighted articles are featured each month on the home webpage for Lab Invest. ‘Inside Lab Invest’ also is published in the back pages of our sister journal, *Modern Pathology*. These editorial commentaries are intended to give context and perspective on articles in our pages; they also serve as an entry point for web access to our featured articles. We also now have opportunity to upload over half of our published articles to the main Nature Publishing

Group web-environment, through the topical links found on the main web page (www.nature.com). Thus, authors publishing in *Laboratory Investigation* have substantive and multiple opportunities for ‘featured’ treatment of their work.

For volumes 84 and 85 (2004–2005), we have published ‘Pathology Elsewhere’, which seeks to identify recent key publications of relevance to articles published in the same issue of Lab Invest. In the coming year (2006, volume 86), this feature will be replaced by a ‘Pathology Forum’, in which single issues in the pathogenesis of disease will be examined by an expert editorial panel. At this time, I want to extend my thanks to the editorial team that has brought ‘Pathology Elsewhere’ to our pages for 2004–2005: Swan Thung, MD, Section Editor; and Sunil Badve, Maria Isabel Fiel, Maria Guido, Shabnam Jaffer, Gabriel S Levi, Raffaella Morotti,

Table 2 Top 10 cited articles, January 2004–September 2005

Rank	Authors	Title	Volume	Issue	Pages
1	Clayburgh DR, Shen L, Turner JR	A porous defense: the leaky epithelial barrier in intestinal disease	84	3	282
2	Oh SH, Muzzonigro TM, Bae SH, LaPlante JM, Hatch HM, Petersen BE	Adult bone marrow-derived cells trans-differentiating into insulin-producing cells for the treatment of type I diabetes	84	5	607
3	Tolson J, Bogumil R, Brunst E, Beck H, Elsner R, Humeny A, Kratzin H, Deeg M, Kuczyk M, Mueller GA, Mueller CA, Flad T	Serum protein profiling by SELDI mass spectrometry: detection of multiple variants of serum amyloid alpha in renal cancer patients	84	7	845
4	Kim TY, Lee HJ, Hwang KS, Lee M, Kim JW, Bang YJ, Kang GH	Methylation of RUNX3 in various types of human cancers and premalignant stages of gastric carcinoma	84	4	479
5	Nakatani K, Okuyama H, Shimahara Y, Saeki S, Kim DH, Nakajima Y, Seki S, Kawada N, Yoshizato K	Cytoglobin/STAP, its unique localization in splanchnic fibroblast-like cells and function in organ fibrogenesis	84	1	91
6	Lasota J, Dansonka-Mieszkowska A, Sobin LH, Miettinen M	A great majority of GISTs with PDGFRA mutations represent gastric tumors of low or no malignant potential	84	7	874
7	Stoehr R, Wissmann C, Suzuki H, Knuechel R, Krieg RC, Klopocki E, Dahl E, Wild P, Blaszyk H, Sauter G, Simon R, Schmitt R, Zaak D, Hofstaedter F, Rosenthal A, Baylin SB, Pilarsky C, Hartmann A	Deletions of chromosome 8p and loss of sFRP1 expression are progression markers of papillary bladder cancer	84	4	465
8	Che SL, Ginsberg SD	Amplification of RNA transcripts using terminal continuation	84	1	131
9	Lee S, Hwang KS, Lee HJ, Kim JS, Kang GH	Aberrant CpG island hypermethylation of multiple genes in colorectal neoplasia	84	7	884
10	Kersting C, Tidow N, Schmidt H, Liedtke C, Neumann J, Boecker W, van Diest PJ, Brandt B, Buerger H	Gene dosage PCR and fluorescence <i>in situ</i> hybridization reveal low frequency of egfr amplifications despite protein overexpression in invasive breast carcinoma	84	5	582

Romil Saxena, Arief Suriwanata, Guoxia Tong, Lawrence Tsao, and Ruliang Xu, Contributing Editors.

The journal has a strong commitment to providing timely and expert review of papers from submitting authors. Our acceptance rate was 26% in 2004, and 20% in 2005. Submissions are continuing at the same rate as in 2004 (615 new submissions), with our being on target for approximately the same as in 2005. Submitted manuscripts are subjected to rigorous editorial evaluation to determine appropriateness for the journal and to assign an initial scientific priority, drawing upon the diverse scientific expertise of our Executive Editorial Group, with consultation from Editorial Board members as needed. For papers published in 2005, approximately 39% of manuscripts passed this initial review and underwent external peer-review evaluation. For those manuscripts that were not felt to be appropriate for the journal on initial editorial assessment (61%), authors were informed of the 'reject' within 5 days; not uncommonly, this information was given within 24 h. We feel that such rapid review is only fair, as it enables the authors

maximum opportunity to seek publication elsewhere with negligible delay. For manuscripts undergoing full external review, a decision was almost always rendered within 30 days, with 'in-house' editorial processing time representing 5–7 of those days. For manuscripts that were rejected with opportunity to resubmit, there was a 90% likelihood that the manuscript would ultimately be published in Lab Invest. Decision time on the resubmitted paper was usually less than 5 days. Lastly, accepted articles were published on-line usually within 5 weeks, and hardcopy within 16 weeks.

Taken together, our overall 'turnaround time' for reaching an initial decision on submitted papers averages 8 calendar days. Our data also indicate that a successful article can go from initial submission, through review and revision, and move to electronic publication on the web with a minimum of delay – 73 days on average (not including the authors' revision time) from initial submission to date of on-line publication, and 112 days until hardcopy publication. This high performance is made possible by the strong commitment of the editorial team, the consistent and outstanding timeliness of our outside

expert reviewers, the efficiency of the production team at Nature Publishing Group, and the superb web-based platform upon which this journal runs. We consider this level of performance an absolute requisite for serving authors who choose to submit their manuscripts to this journal.

A comment on the journal 'Impact Factor' is in order. In the 1999–2003 time frame, this journal has resided in the vicinity of '4', with a range of 3.934–4.530. *Laboratory Investigation* has thus routinely ranked third among the general Pathology journals, behind the *American Journal of Pathology* and the *Journal of Pathology*. The journal slipped a bit to an Impact Factor of 3.702 for 2004 (issued in July, 2005; reflecting 2004 citations of articles published in 2002–2003), placing us sixth among the 64 'Pathology' journals. We consider that this reflects in part the editorial transition at the end of 2003, as effort was made at the previous editorial office to bring to completion processing and publication of manuscripts in their office, with 'back-loading' of the journal pages at the end of 2003. This gives less time for published articles to be cited in the measured time interval, in this case January–December 2004.

We have been tracking both 'Impact Factor' and the 'Immediacy Index' (articles cited in the same year as their publication) for articles published in this journal since the start of our editorship (2004). The 2004 'Immediacy Index' for this journal was 0.748, third behind *J Pathol* (1.044) and *Am J Pathol* (0.957; excluding high self-citation journals). The 'Immediacy Index' reveals which journals are currently publishing the 'hottest' papers, and may be a good indicator of future 'Impact Factor' performance. Our calculated 2005 'Impact Factor'

is tracking well, with every indication that it will approach or exceed 4.5 when finally issued in June 2006. At the current time, our 2005 'Impact Factor' is tracking third to *J Pathol* and *Am J Pathol* among the general Pathology journals. It should also be noted that *Laboratory Investigation* ranks second among all pathology journals for total citations in the literature (11 048), clearly marking this as a major journal in the biomedical literature. We thus consider that *Laboratory Investigation* is in a strong competitive position as we move into 2006.

In closing, we call attention to a recent discussion in this journal of the value of the 'Pathology' literature.¹ Note was made that much 'pathology' research finds its way into the highest impact general medical research journals, and especially into higher impact 'specialty' journals (devoted either to organ systems or specific diseases). With our fellow 'General Pathology' journal editors, we hope that the best in pathology research can be published within the pages of pathology-oriented journals. We hold to the view that there is ample opportunity for growth and visibility of the several pathology journals, not at the expense of one another, but rather to the benefit of all investigators pursuing research into disease pathobiology.

James M Crawford
Editor-in-Chief

Reference

- 1 Crawford JM, Tykocinski ML. Pathology as the enabler of human research. *Lab Invest* 2005;85:1058–1064.

List of Reviewers for 2005

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