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Bates T, Anić A, Marušić M, Marušić A. Authorship criteria and disclosure of contributions: comparison of 3 general medical journals with different author contribution forms. JAMA. 2004;292:86-8.

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A number of general medical journals and the International Committee of Medical Journal Editors (ICMJE) request authors to disclose their contributions. Little is known about the effect of journal policies on authors' disclosure of their contributions. We analyzed the number of named authors who do not meet ICMJE criteria for authorship, according to their published contributions, in 3 medical journals with different contribution disclosure practices. We studied observational study of authors' contributions in research articles published in 2002 in Annals of Internal Medicine (n = 72), BMJ (n = 107), and JAMA (n = 81). BMJ asks authors to describe research contributions in their own words; Annals asks authors to choose from a list of coded contributions; and JAMA uses a structured checklist with instructions on contributions that qualify for ICMJE authorship criteria. Honorary authorship was defined as the lack of contribution from the first ICMJE criterion (study conception and design, or acquisition of data, or analysis and interpretation of data) and/or second (drafting the article or critical revision for important intellectual content) ICMJE criterion. According to authors' published contributions, the number of honorary authors was highest in Annals (121/562 authors, 21.5%), followed by BMJ (46/482, 9.5%), and JAMA (3/641, 0.5%) (chi-square = 146.67, $P < 0.001$). The number of articles with honorary authors was 60% in Annals, 21% in BMJ, and 4% in JAMA. Honorary authors had fewer published contributions than authors who met ICMJE criteria and were positioned more toward the end of the byline. Honorary authors either lacked contributions for both ICMJE criteria (10% in Annals and 22% in BMJ) or contributions to the second ICMJE criterion (75% in Annals, 67% in BMJ, and 2 out of 3 in JAMA). Different authorship/contributorship policies and procedures should be explored as a possible explanation for the differences in contributions disclosed by authors among these journals.

Štefulj J, Buttner A, Škavić J, Zill P, Balija M, Eisenmenger W, Bondy B, *Jernej B. Serotonin 1B (5HT-1B) receptor polymorphism (G861C) in suicide victims: association studies in German and Slavic population. Am J Med Genet. 2004;127B:48-50.

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Serotonin1B (5HT-1B) receptor mediates aggressive behavior in mice models and was proposed to be involved in the control of aggression and impulsivity in humans. In this study the authors investigated the association of G861C polymorphism of the 5HT-1B receptor gene with suicide commitment. Study was based on two independent samples, one of German (245 suicide victims vs. 248 controls) and the other of Slavic/Croatian (118 suicide victims vs. 192 controls) ethnicity. No significant differences in allele or genotype frequencies between victims and controls were demonstrated either in German or Croatian sample. There were no differences in allele frequencies between German and Croatian population, and the combined sample, having high statistical power, also did not demonstrate significant differences between victims and controls. Results provide evidence that the investigated 5HT-1B receptor gene variants are not implicated in the susceptibility to suicide.

***Bubić I, Wagner M, Krmpotić A, Saulig T, Kim S, Yokoyama WM, et al. Gain of virulence caused by loss of a gene in murine cytomegalovirus. J Virol. 2004;78:7536-44.**

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Mouse strains are either resistant or susceptible to murine cytomegalovirus (MCMV). Resistance is determined by the Cmv1(r) (Ly49h) gene, which encodes the Ly49H NK cell activation receptor. The protein encoded by the m157 gene of MCMV has been defined as a ligand for Ly49H. To find out whether the m157 protein is the only Ly49H ligand encoded by MCMV, the authors constructed the m157 deletion mutant and a revertant virus. Viruses were tested for susceptibility to NK cell control in Ly49H(+) and Ly49H(-) mouse strains. Deletion of the m157 gene abolished the viral activation of Ly49H(+) NK cells, resulting in higher virus virulence *in vivo*. Thus, in the absence of m157, Ly49H(+) mice react like susceptible strains. 129/SvJ mice lack the Ly49H activation NK cell receptor but express the inhibitory Ly49I NK cell receptor that binds to the m157 protein. The Deltam157 inhibitory phenotype was weak because MCMV encodes a number of proteins that mediate NK inhibition, whose contribution could be shown by another mutant.

Pećina-Šlaus N, Gall-Trošelj K, Šlaus M, Radić K, Nikuševa-Martić T, Pavelić K. Genetic changes of the E-cadherin and APC tumour suppressor genes in clear cell renal cell carcinoma. Pathology. 2004;36:145-51.

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The roles of tumour suppressor genes - adenomatous polyposis coli (APC) and E-cadherin (CDH1) - were investigated in clear cell renal cell carcinoma. Forty-five human clear cell renal cell carcinomas were tested for APC gene instability by polymerase chain reaction/loss of heterozygosity using the restriction fragment length polymorphism method. E-cadherin gene was analysed by PCR amplification of tetranucleotide marker (D16S 752) and the alleles were visualised by PAGE/silver staining. The overall proportion of loss of heterozygosity of the APC gene was 37.5% (9/24). D16S752 marker linked to E-cadherin gene (informativeness 91%) revealed three samples with loss of heterozygosity (7.5%). Interestingly, replication error phenotype was detected in 9.1% of clear cell renal cell carcinoma samples. Multivariate statistical analysis of samples informative for both APC and E-cadherin genes showed that, in this data set, loss of heterozygosity of the APC gene is correlated with advanced age and more severe TNM stages. These results suggest that alterations, both in APC and E-cadherin genes, are involved in the evolution and progression of clear cell renal cell carcinoma. Microsatellite genetic instability of the E-cadherin gene indicates that another cellular mechanism, mismatch repair, may also be targeted in this malignancy.

Dumić M, Ille J, Žunec R, Plavšić V, Francetić I, Škrabić V, et al. Nonclassic 21-hydroxylase deficiency in Croatia. J Pediatr Endocrinol Metab. 2004;17:157-64.

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This is the first report of nonclassic congenital adrenal hyperplasia due to 21-hydroxylase (21-OH) deficiency in Croatia in which the patients have been evaluated clinically, hormonally, and by molecular genetic analysis. Genetic analysis was performed on 18 Croatian patients with nonclassic CAH due to 21-OH deficiency using allele-specific PCR. ACTH stimulation testing and HLA typing were used to evaluate patients hormonally. Molecular genetic analysis revealed a variety of mutations in individuals with different clinical symptoms, including precocious pubarche, hirsutism, (dysmenorrhea, subfertility and clitoromegaly. Serum stimulated 17-hydroxyprogesterone (17-OHP) levels indicated that all patients fell within the acceptable range for nonclassic congenital adrenal hyperplasia. Clinical and genetic analysis confirmed nonclassic 21-OH deficiency in this Croatian sample of ten males and eight females. This study shows that genotype does not necessarily predict fertility status in affected patients.

Šimundić AM, Bašić V, Topić E, Demarin V, Vrkić N, Kunović B, et al. Soluble adhesion molecules in acute ischemic stroke. Clin Invest Med. 2004;27:86-92.

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The aim of this study was to explore the association of plasma levels of soluble (s) intercellular and vascular cellular adhesion molecules-1 (sICAM-1 and sVCAM-1), sE-selectin and sL-selectin with acute ischemic stroke (AIS). A total of 67 subjects with AIS and 76 healthy individuals (visiting the centre for reasons unrelated to stroke) were prospectively enrolled in the study. Mean levels of sICAM-1 ($p < 0.001$), sVCAM-1 ($p < 0.034$) and sE-selectin ($p < 0.002$) were higher in patients than in controls, whereas sL-selectin was lower in patients ($p = 0.043$). In patients, levels of soluble adhesion molecules were independent of age and sex except for sL-selectin, which was inversely correlated with age ($r = 0.260$, $p = 0.034$) and higher in women ($p = 0.006$) and diabetics ($n = 14$; $p = 0.004$). Serum levels did not differ significantly with respect to carotid atherosclerotic disease, smoking status, hypertension or hypercholesterolemia, but in group of patients correlated with biochemical markers of inflammation (leukocyte count, erythrocyte sedimentation rate, and C-reactive protein level). Concentrations of sICAM-1 and high-density lipoprotein-cholesterol and ESR were identified as significant independent predictors/indicators of AIS. In conclusion, acute ischemic stroke is associated with elevated plasma levels of sICAM-1, sVCAM-1 and sE-selectin, independent of age, sex and other recognized risk factors for stroke. Decreased levels of sL-selectin are associated with acute stroke.

Gagro A, Aberle N, Rabatić S, Ajduk J, Jelačić J, Dekaris D. Effect of cysteinyl leukotriene receptor antagonist on CD11b and CD23 expression in asthmatic children. Clin Exp Allergy. 2004;34:939-44.

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Inhibitors of leukotriene receptors represent novel therapy in asthma treatment. The authors studied the effect of treatment with an oral antagonist of cysteinyl leukotriene receptors (montelukast) on the increased expression of the low-affinity IgE receptor, CD23, on B cells, and of its ligands, CD11b and CD11c, on $CD4^+$ T cells and monocytes in peripheral blood of patients with allergic asthma. In this uncontrolled open-label study, 14 children with allergic asthma received montelukast for a period of 6 weeks after demonstrating forced expiratory volume in 1s (FEV_1) of less than 80% of the predicted value. Samples of peripheral heparinized blood and sera were obtained before and after therapy completion. Expression of CD11b and CD11c on $CD4^+$ T lymphocytes and monocytes as well as the expression of CD21 and CD23 on B cells were determined ($n = 12$). Montelukast improved FEV_1 and PEFR, and decreased peripheral eosinophil counts in all study patients. There was no significant change in the expression of CD21 and CD23 on B cells. The expression of CD11c on $CD4^+$ T cells and of both CD11b and CD11c on monocytes remained similar to the pretreatment expression. However, the percentage of $CD11b^+CD4^+$ T lymphocytes significantly decreased after treatment with montelukast. This was accompanied by a significant decrease in the levels of total IgE. In conclusion, the capacity of 6-week montelukast therapy to reduce the percentage of $CD11b^+CD4+$ T cells might be a mechanism leading to the immune response modulation on this T cell subset interaction with CD23-expressing B cells and subsequent down-regulation of IgE synthesis.

Grubić Z, Perić P, Čečuk-Jeličić E, Žunec R, Štingl K, Ćurković B, et al. The MICA-A4 triplet repeats polymorphism in the transmembrane region confers additional risk for development of psoriatic arthritis in the Croatian population. Eur J Immunogenet. 2004;31:93-8.

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The aim of this study was to investigate possible differences in the frequencies of alleles at the HLA loci and at microsatellite loci within the HLA region among patients suffering from psoriatic arthritis (PsA) and healthy controls. Fifty-eight Croatian PsA patients (28 male and 30 female) and 157 healthy unrelated controls were typed for HLA alleles (A, B, Cw and DRB1) by the polymerase chain reaction-sequence-specific primers (PCR-SSP) method, while microsatellite alleles (D6S 265, D6S273, MHC class I chain-related gene/MICA and MIB) were analysed by electrophoresis in an ALFexpress sequencer (Pharmacia Biotech, Uppsala, Sweden). The findings from this study were: (1) the frequencies of B*39 and B*57 were significantly increased in PsA patients; (2) differences in the frequencies of B*13 and B*27 were not statistically significant after correction; (3) the B*0702, B*18, and B*38 alleles were decreased in patients only before correction; (4) none of the alleles at other HLA loci tested were associated with PsA in Croatia; (5) polymorphism at D6S265, D6S273, and MIB microsatellites in patients did not show any statistically significant differences when compared to controls; (6) the increase in the MICA-A4 allele frequency in PsA patients was independent of the B*39 and B*57 alleles.

Batinić D, Milošević D, Konjevoda P, Nižić L, Vrljičak K, Matkovic M, et al. The value of urine citrate/calcium ratio in the estimation of risk of urolithiasis. Clin Nephrol. 2004;61:387-91.

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To evaluate a simpler and cheaper test than urine saturation for distinguishing stone formers from healthy individuals, urinary citrate/calcium ratio was determined in 30 children with urolithiasis, 36 children with isolated hematuria, and 15 healthy control children. The ratio was significantly lower in urolithiasis group comparing to controls, and significantly higher in hematuria than in urolithiasis group. The cut-off points between normal children and children with urolithiasis, accuracy, specificity and sensitivity were determined and compared with those of the urine saturation calculated with the computer program EQUIL 2. Children with urolithiasis had citrate/calcium ratio below 1.38 and urine saturation above 5.285. The citrate/calcium ratio showed in comparison to urine saturation similar high accuracy (91.11 vs. 88.89%), somewhat lesser specificity (73.33% vs. 93.33%) and much better sensitivity (100% vs. 86.89%) in discrimination of stone formers from normal children. The advantage in comparison to urine saturation is that it can be easily performed in clinical practice.

Turk N, Mornar A, Mrzljak V, Turk Z. Urinary excretion of advanced glycation endproducts in patients with type 2

diabetes and various stages of proteinuria. Diabetes Metab. 2004;30:187-92.

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The aim of this study was to detect AGE-immunoreactive proteins in urine and to evaluate AGE excretion at various stages of diabetic nephropathy in type 2 diabetes assessed by the level of proteinuria. AGEs were measured in 24-h urine collection of patients with normoalbuminuria (N) (n = 22), microalbuminuria (Mi) (n = 31), macroalbuminuria (Ma) (n = 28), and overt proteinuria with elevated serum creatinine level (PC) (n = 25). Multiple comparison of urine AGE content among various stages of proteinuria showed significant differences (summary $p < 0.000$). Fifty percent of samples from the normoalbuminuric group, and only 15% of samples from microalbuminuria group were AGE negative. However, there was no significant difference in AGE excretion between the patients with persistent proteinuria and elevated serum creatinine, and those with macroalbuminuria (PC vs Ma, $p = 0.265$). None of the samples from these two groups of patients with highest AGE content was negative for AGE-immunoreactivity. The ratio between 24-h urinary AGEs and urinary albumin excretion was calculated to determine whether total 24-h urinary AGE content is an index of the toxic form of albumin released in the course of diabetic nephropathy: the bivariate comparison showed significant differences between the N vs Mi ($p = 0.006$) and Mi vs Ma ($p = 0.000$) groups. However, there was no significant difference between values in the Ma and PC groups. Multiple regression analysis indicated a relationship of urinary AGE-immunoreactivity with creatinine clearance values ($p < 0.001$). In conclusion, the study demonstrated the presence of AGE-immunoreactivity in the urine of diabetic patients with various stages of proteinuria. Study results pointed to creatinine clearance as the main predictor of AGE excretion. Therefore, the measurement of urinary AGE appears to offer limited extra information in patients with impaired renal function.

Ambriović-Ristov A, Gabrilovac J, Cimbora-Zovko T, Osmak M. Increased adenoviral transduction efficacy in human laryngeal carcinoma cells resistant to cisplatin is associated with increased expression of integrin alphavbeta3 and coxsackie adenovirus receptor. Int J Cancer. 2004;110:660-7.

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The authors investigated molecular mechanisms of increased adenoviral transduction efficacy in cisplatin-resistant human laryngeal carcinoma cells CA3ST as compared to parental cells HEp2. The genes potentially implicated in adenoviral entry were screened by RT-PCR. The data presented in this paper provide evidence that both alphavbeta3 integrin and CAR are involved in increased adenoviral transduction efficacy in cisplatin resistant CA3ST cells. These findings may have significant implications in human gene therapy using adenoviruses, especially in patients after unsuccessful cisplatin treatment.

Korolija D, Sauerland S, Wood-Dauphinee S, Abbou CC, Eypasch E, Caballero MG, et al. European Association for Endoscopic Surgery. Evaluation of quality of life after laparoscopic surgery: evidence-based guidelines of the European Association for Endoscopic Surgery. Surg Endosc. 2004;18:879-97.

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The aim of this consensus conference was twofold. First, it was to determine for which diseases endoscopic surgery results in better postoperative quality of life (QoL) than open surgery. Second, it was to recommend QoL instruments for clinical research. An expert panel selected 12 conditions in which QoL and endoscopic surgery are important. For each condition, studies comparing endoscopic and open surgery in terms of QoL were identified. The expert panel reached consensus on the relative benefits of endoscopic surgery and recommended generic and disease-specific QoL instruments for use in clinical research. Laparoscopic surgery provides better postoperative QoL in many clinical situations. Researchers would improve the quality of future studies by using validated QoL instruments such as those recommended in this article.

Hadžija MP, Radošević S, Kovačević D, Lukač J, Hadžija M, Spaventi R, et al. Status of the DPC4 tumor suppressor gene in sporadic colon adenocarcinoma of Croatian patients: identification of a novel somatic mutation. Mutat Res. 2004;548:61-73.

Division of Molecular Medicine, Rudjer Bošković Institute, Zagreb, Croatia

To investigate alterations of the DPC4 gene in sporadic colon adenocarcinoma, a panel of 60 tumor specimens from Croatian patients was surveyed for evidence of loss of heterozygosity (LOH) and also for mutations within the entire DPC4 coding region (exons 1-11). The presence of single nucleotide change at restriction sites of specific codons in exons 2, 8, 10, and 11 (which belong to the conserved region of the gene) was examined by RFLP analysis. The investigation was extended to search for any other mutation within the entire coding region of the DPC4 gene by single strand conformation polymorphism (SSCP) analysis. The results show a high frequency of heterozygosity in 58 of 60 (97%) colon adenocarcinoma samples. LOH at any one of the three flanking markers was observed in 26 (45%) of the 58 informative cases. The loss of one allele of the DPC4 gene was negatively correlated with tumor size; more frequent in smaller tumors (< 5 cm) than in larger ones. A mutation was found in exon 11 in only one tumor sample (T18), and the mutation was verified by sequencing. Sequencing demonstrated a novel mutation-a deletion in exon 11 (134-153 del TAGACGAAGTACTTCATACC) of the DPC4 gene in the MH2 domain. These data suggest that inactivation of the DPC4 gene contributes to the genesis of colorectal carcinoma through allelic loss whereas mutation in the coding region of the DPC4 gene is infrequently detected in Croatian patients with A, B or C stages of colorectal cancers.

Mayer L, Romić Z, Škreb F, Bačić-Vrca V, Čepelak I, Žanić-Grubišić T, Kirin M. Antioxidants in patients with hyperthyroidism. Clin Chem Lab Med 2004;42:154-8.

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The activities of whole blood glutathione peroxidase (GPx) and erythrocyte superoxide dismutase (SOD), total antioxidant status (TAS) in serum and erythrocytes, and serum urate and transferrrin concentrations were determined in 70 women: 14 with newly diagnosed Graves' disease (group A); 28 with hyperthyroidism on therapy with methimazole (group B, divided into two subgroups, B1 and B2) and 28 healthy women (group C). In comparison with control group C, GPx activity was significantly decreased in all patient groups ($p < 0.05$), whereas SOD activity was significantly decreased in group A ($p < 0.01$) and significantly increased in group B ($p < 0.01$). In comparison with the control group, serum TAS activity was significantly decreased in group A, and erythrocyte TAS activity in all patient groups. Study results suggest that the impaired antioxidative factor balance leads to the development and presence of oxidative stress in women with hyperthyroidism. The severity of these alterations, considered contradictory by some authors, appears to depend on the use of therapy.