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**STUDIES ON CHOROLOGY OF ENDANGERED PLANTS SPECIES  
FROM THE MIDDLE DNIESTER RIVER BASIN,  
REPUBLIC OF MOLDOVA**

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**ABSTRACT**

The study included research in natural areas protected by state, the period 2011-2014, in the middle Dniester River basin, located on the border with Ukraine, in order to establish habitats of rare plants species, with national and international protection status, within existing areas across Europe and to identify new habitats (in the study) for the most threatened species of flora in the region. Physical and geographical peculiarities of the investigated region conditioned a unique floristic diversity, given also by chorology of rare species. For example, some endangered plant species included in the Red Book of the Republic of Moldova (2001), with continuous or compact area of distribution were recorded at *Northeastern* limit (*Trifolium pannonicum*), at *Eastern* limit (*Cephalanthera damasonium*), at *Southern* limit of species area (*Athyrium filix-femina*, *Hepatica nobilis*, *Dryopteris carthusiana*, *Maianthemum bifolium*), and those with discontinuous or disjunctive area - at *Eastern* limit (*Doronicum hungaricum*), at *Northeastern* limit (*Nectaroscordum bulgaricum*, *Fritillaria meleagroides*, *Galanthus nivalis*), at *Southern* limit (*Poa versicolor*), and at *Southeastern* limit of species area (*Melittis sarmatica*) etc. Identified rare species are mentioned in the various Annexes of environmental Conventions (Bern, 1979; Washington, 1973; Annexes IUCN, 2008; Red Book of neighboring countries), therefore requires additional measures of rehabilitation and conservation of habitats. New habitats, for growth and development of rare species in Moldova, have been identified, compared to data subjects in performed studies of country geobotanical districts (Negru, 2002 Gheideman, 1975) or their maps distribution from the Red Book of Republic of Moldova (2001).

**Keywords:** natural areas protected by state, area of rare plant, environmental conventions, habitats.

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## HEAVY METAL AND METALLOID UPTAKE IN FORAGE PLANTS GROWN ON WASTEWATER CONTAMINATED VERTISOL AND FLUVISOL IN AKAKI, ETHIOPIA: A FIELD EXPERIMENT

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### ABSTRACT

Due to irrigation with Untreated Wastewater from several Industrial, Commercial, and Domestic Discharges for some decades, Vertisol and Fluvisol accumulated an assortment of Heavy Metals and Metalloids. Consequently, assessment of Potential Environmental Risks and Phytoremediation of the Soils entail information on their simultaneous Uptake and Translocation. The Study, thus, assessed concomitant Soil-to-Shoot transfer of Cr, Co, Ni, Cu, Zn, Cd, Pb, Hg, Se, V, and As employing Oat (*Avena sativa*), Alfalfa (*Medicago sativa*), Rhodes (*Chloris gayana*), Clover [Red] (*Trifolium pratense*), and Setaria (*Setaria sphacelata*) under Field Conditions. The Soil Type, Species and Soil Variables (Soil Fractions, CEC and pH: R<sup>2</sup> adj., 67–94.2%) significantly ( $p < 0.05$ ) influenced Shoot Heavy Metal/Metalloid Levels. The levels of most Heavy Metals/Metalloids in the Plants were not only higher than the Natural (Whole-Plant) Contents but also were comparable to or even higher than some Plants from Soils with Polymetallic Pollution. The Soil to Shoot Transfer Coefficients (TC) reached up to 1.25, with higher values observed for most Heavy Metals and Metalloids in Clover and Oat (Vertisol) as well as Setaria and Rhodes (Fluvisol). Generally, the TC values decreased in the order of Cd > Cu > Zn > Se > Cr > As > Ni > Hg > Pb > V > Co, with higher values on Vertisol. Therefore, the data suggest Potential Health Risk for Humans and Livestock via their introduction to the Food Chain that may proceed from the use of Fodder and Vegetables grown on the Soils.

**Key words:** Fluvisol, Heavy Metals, Metalloids, Phytoremediation, Vertisol, TC, Wastewater.

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**HAEMATOLOGICAL CHANGES IN HIV INFECTION****<sup>1</sup>Majlinda Kokici, <sup>2</sup>Arjan Harxhi, <sup>2</sup>Najada Çomo, <sup>2</sup>Klodiana Shkurti, <sup>3</sup>Fahri Kokici, <sup>2</sup>Dhimiter Kraja***<sup>1</sup>Laboratory Department, Medical Faculty, Medical University, Tirana, Albania;**<sup>2</sup>Infectious Diseases Department, Medical Faculty, Medical University, Tirana, Albania;**<sup>3</sup>University Hospital "Shefqet Ndroqi", Tirana, Albania;*E-mail: [majlindakokici@yahoo.com](mailto:majlindakokici@yahoo.com)

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**ABSTRACT**

Determination and assessment of Hemogram's parameters of patients diagnosed with HIV. We studied 104 seropositive HIV patients, aged 18-65 years, diagnosed in infectious Disease Service at the University Hospital Center "Mother Teresa" in Tirana, during the period January 2008 - January 2013. The Hemogram was examined to all the patients at the time of diagnosis. There were excluded from the study all patients under antiretroviral therapy (ART) Blood was collected in a sterile EDTA containing tube and processed following our established laboratory protocol. Haematology parameters were analysed in haematology auto analyser Sysmex KX-21 which analyses using three detector blocks. White blood cell (WBC) count, red blood cell (RBC) count and platelets are measured using direct current detection method. Differential leucocyte count was done on peripheral smear stained with Giemsa stain. Data were analyzed with SPSS statistical program. Considering the slight to moderate anemia the values of Hb of 8-12 g/dL and severe anemia the values of Hb of <8 g/dl, we found that 40.4% of patients had slight to moderate anemia while only 1% had severe anemia. Out of 43 patients with anemia 83% of them had normochromic, normocytic anemia. 17.3% of patients had leucopenia, while 80.8% of patients had normal values of leucocytes. Lymphopenia was found in 12.3% of patients, while granulopenia in 10.5% of them. 14.7% of patients had thrombocytopenia. Slight to moderate normochromic, normocytic anemia is the most frequent change in patients diagnosed with HIV. Thrombocytopenia can be the first appearance of hematological changes in patients diagnosed with HIV. Leucopenia, lymphopenia and granulocytopenia are important changes of hemogram of patients infected with HIV.

**Key words:** HIV, Anemia, Thrombocytopenia, Leucopenia, Lymphopenia.

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## INCIDENCE OF BENIGN PATHOLOGIES OF UTERINE CERVIX

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### ABSTRACT

Among various gynaecological specimens, the commonest are non-neoplastic lesions affecting the uterine cervix. The aim of this study is to establish the incidence and histological types of non-neoplastic cervical lesions of the cervix in tertiary hospital. This is a prospective study of 261 patients admitted over the period January 2012 and December 2014 to the Obstetric Gynecologic University Hospital "Queen Geraldine", in Tirana, Albania. The present study was conducted in the histopathology division including specimens of uterine cervix obtained either in the form of biopsies or hysterectomy specimens. During this two year period, a total of 261 cervical specimens were received in the pathology department. Of these, 154 cases (59%) were benign lesions while 107 cases (41%) were malignant. The age range of benign cervical lesions was 24 to 73 years with a mean age of  $49.3 \pm 3.3$  years. The peak age incidence was in age group 41-50 years accounting for 38% of benign cases. Eight percent of cases occurred before 30 years and 6% of cases after 60 years. Endocervical hyperplasia accounted for 42% of all lesions (table 2). The second most common lesion were endocervical polyp accounting for 18% of benign cervical lesions followed by Leiomyomatous polyp (10%), Chronic non-specific cervicitis (9%), Adenosis (8%). More rare lesions were Endometriosis (5%), Nabothian cyst and Granulation Tissue with (4%) respectively. The present study emphasizes the spectrum of benign lesions of uterine cervix, which can be divided under various categories. These categories can provide the basis for identifying the etiology and their clinical presentations. Early detection and management of the benign lesions prevents further complications; thereby reducing the amount of morbidity.

**Key words:** uterine cervix, benign lesions, histologic type

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## COLORECTAL CANCER SURGERY IN REGIONAL HOSPITAL OF DURRES, ALBANIA

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### ABSTRACT

Colorectal cancer (CRC) is one of the major causes of cancer-related deaths in the western world. Due to the fact that CRC is mostly asymptomatic until it progresses to advanced stages, the implementation of screening programs aimed at early detection is essential to reduce incidence and mortality rates. The aim of our study is to assess the role of TME in the treatment of rectal cancer in last two decades and show our modest experience applying this innovative technique. This is a retrospective study of 67 patients diagnosed with CRC admitted to Surgery Service, Durrës Hospital between March 2010 - June 2015. Only 20.1% of patients (14) were diagnosed with rectal cancer with Duke's B (T3, N 0, M0) and C (T 2-3, N4-5, M0), underwent operation according to the principle of TME. 47.7 % of patients (32) were diagnosed with sigmoid and left colon cancer and underwent operation according to the principle of IMA, 7.4 % of patients (4) were diagnosed with ileocecal cancer and 23 % of patients (16) were diagnosed with transverse and right colon cancer. Six of all the patients are operated in the emergency. Total mesorectal excision has become the new standard of operative rectal cancer management. To preoperatively identify patients who will most likely benefit from (neo-) adjuvant therapy, emphasis needs to be put on better preoperative staging and imaging. TME technique is now considered as a “gold standard” for the treatment of rectal carcinoma.

**Key words:** colorectal cancer surgery, therapy, TME technique

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## THE TELLUS PROJECT, A STUDY OF SEISMIC PRECURSORS

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### ABSTRACT

The Tellus project is aimed to study, on the basis of data detected from the ground, what happens during the phase preceding an earthquake, and subsequent correlation with available data received from space thanks to satellites capable of measuring electromagnetic and thermal fields. The Tellus Project consists of multidisciplinary stations suitable for the measurement of chemical, electromagnetic, meteorological and physical parameters on Earth. In particular, the study focuses on the measurements of radon emissions on limited areas in the presence of various measuring stations (Local Area Network). The measurements of radon emissions will be collected in a specific database that will automatically be updated every hour, counting data based on registered alpha decays from radon. A specific software will be able to detect and communicate to the central hall any detected seismic anomalies. The local multidisciplinary networks will be part of the "Seismic Network Arachne Tellus" (SNAT) that will handle all the data of each Local Network. Our scientific investigation has set as its ultimate goal the identification of parameters considered "seismic precursors". The combination of data could provide a broad geophysicist framework, able to improve the current understanding of the physics of earthquakes and their processes of preparation, detectable from ground and from space.

**Key words:** earthquakes, framework, radon emissions, Local Network

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## PARENTS' ATTITUDE UPON CHILDREN'S DEHYDRATION

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### ABSTRACT

Oral rehydration (ORS) is the treatment of choice in the mild and moderated dehydration. Despite recommendations, it is not widely used in the clinics. Several factors thought to affect this practice are the attitude and knowledge of the parents, and the pressure exerted by them on the physicians. This study aims to assess by what is affected parents' attitude toward their children's rehydration plan. This is a cross-sectional study and was conducted among 381 parents whose children were hospitalized with acute gastroenteritis at the Regional Hospital of Vlora, Albania during January-September 2015. They were interviewed about their knowledge and attitudes on integrated management of dehydration. During the study period in the pediatric ward 94.7% of children were diagnosed with mild to moderate dehydration, 77.4% of them were subjected to intravenous rehydration, 24.4% of parents said they have put pressure on the doctor to decide on giving IV fluids to their child. In over 90% of cases the parents admitted to have sufficient knowledge about dehydration diagnosis and its treatment. However a high percentage of parents (53%) have done nothing to treat or prevent dehydration at home. There is lack of awareness of parents on the integrated management of dehydration, despite having some information on it. Parents' pressure on physicians in placing their children in intravenous rehydration treatment was found correlated with child age, previous experiences, parents' education and socioeconomic status. Parent's education must be a priority.

**Key words:** children dehydration, rehydration knowledge, parental attitude, pressure on doctors

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**CHARACTERISTICS OF SUPER-REFRACTORY SCHIZOPHRENIA****Irena Thoma, Anita Pilika, Anastas Suli***Psychiatric Service, University Hospital Centre "Mother Theresa" Tirana, Albania;*E-mail: [athomasr@hotmail.com](mailto:athomasr@hotmail.com)

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**ABSTRACT**

Approximately 30% of treatment-resistant schizophrenic patients do not fully respond to Clozapine and such patients are termed Clozapine non-responders or super-refractory schizophrenics. The aim of this study was to characterize patients with super-refractory schizophrenia according to demographic and psychopathological variables, as compared with patients with refractory schizophrenia or non-refractory subjects. The aim of this study was to characterize patients with super-refractory schizophrenia according to demographic and psychopathological variables, as compared with patients with refractory schizophrenia. We conducted a 6-month cohort study with patients undergoing pharmacological treatment for schizophrenia. We compared demographical and clinical aspects of three groups: schizophrenic patients who responded other antipsychotics than Clozapine, Clozapine responders (refractory patients), and Clozapine non-responders (super-refractory patients). Sixty seven patients were included in the study. The mean age was 35 years ( $\pm 2.9$ ) across groups. Most patients were male (71%) and the mean age at onset of the disorder across groups was 22.5 years ( $\pm 4.4$ ) while the mean age at first hospitalization was 23 ( $\pm 5.1$ ). Of the 67 patients, 15 (23%) were classified as responders, 31 (46%) being refractory (Clozapine responders) and 21 (31%) super-refractory. The super-refractory group had the highest scores for totals of BPRS ( $p < 0.01$ ) in all visits. Patients who do not benefit from the first prescribed drug will not benefit from any pharmacological intervention. These efforts must result in a more specific definition of TRS, as well as in a better understanding of the illness pathophysiology and the mechanism of action of the drugs.

**Key words:** schizophrenia, super refractory, treatment, psychopathology

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**ABSTRACT**

Chronic Obstructive Pulmonary Disease (COPD) is now a leading cause of disability in the developed world. The progress of COPD is associated with increasing breathlessness, disability and frequent hospitalisations. An ageing population in the developed world and increasing cigarette consumption in developing countries compounds the global impact of this condition. The disability associated with COPD leads to a reduction in physical activity and loss of functional independence. The aim of this study was to investigate the effects of PR in patients with normal exercise capacity on health-related quality of life and exercise capacity. The mean FEV1/FVC was  $59.4 \pm 14.1\%$ , and the mean FEV1 was  $64.8 \pm 23.0\%$  of predicted. Most subjects had mild to moderate COPD. The  $P_{I_{max}}$  and  $P_{E_{max}}$  were normal. These subjects had no previous participation in home-based or hospital-based PR. All the subjects had normal maximal  $\dot{V}O_2$  and work rate before PR. After PR there were still significant improvements in maximal  $\dot{V}O_2$  (mean increase of 101.3 mL/min,  $p < 0.001$ ) and work rate (mean increase of 8.2 watts,  $p < 0.001$ ). Ventilation, heart rate, and mean blood pressure were unchanged following PR. The maximum oxygen pulse at maximum exercise was significantly increased with PR ( $p < 0.02$ ). The  $S_{pO_2}$  and end-tidal  $PCO_2$  at peak exercise did not significantly change after PR. Although dyspnea scores at rest were low and did not change significantly with PR, dyspnea at end-exercise was significantly improved after PR ( $p = 0.01$ ). PR should be part of the clinical management of patients with COPD, even for those with normal exercise capacity. However, benefits on disease progression, hospitalization, and survival for these patients remain unknown.

**Key words:** pulmonary rehabilitation; COPD; exercise capacity.

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## OUR EXPERIENCE IN CAROTID ENDARTERECTOMY

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### ABSTRACT

Carotid endarterectomy (CEA) operations are more frequent in our practice last years, mostly for asymptomatic patients. In this article we present our experience in this field. Primary endpoints were death and stroke within 30 days of the procedure for asymptomatic patients. Secondary endpoints were acute myocardial infarction within 30 days of the procedure and peripheral nerve injury in all patients. This is retrospective review for our experience of our recent experience. Data of 219 consecutive CEA, 177 in asymptomatic patients, operated on from January 2004-February 2009 by our equip are collected, All the patients were diagnosed with Duplex scanner and confirmed with multi-slice CT scanner angiography. Endarterectomy was performed either with loco-regional or general anesthesia with selective use of shunt. Combined anti-aggregation with Clopidogrel and Aspirin was the rule at discharge. Patients were controlled for new neurological and cardiac events 30 days after the operation. One asymptomatic patient had major stroke and died. In this group stroke and mortality rate is 1,69%. No peri-operative new acute myocardial infarction happened in any patient. Peripheral nerve lesions happened in 2,7 % of all procedures. CEA is a safe treatment for asymptomatic internal carotid stenoses in the hands of an experienced vascular surgeon. Our results for asymptomatic carotid stenoses are according to those recommended by international guidelines.

**Key words:** carotid endarterectomy, CEA, asymptomatic carotid stenosis.

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## AN OUTBREAK OF ADENOVIRAL KERATOCONJUNCTIVITIS

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### ABSTRACT

Epidemic keratoconjunctivitis (EKC) is a viral conjunctivitis caused by a group of adenoviruses. This family of adenoviruses contains different serotypes that can also cause pharyngoconjunctival fever and nonspecific follicular conjunctivitis. EKC is highly contagious and has a tendency to occur in epidemics. It has been reported worldwide. The aim of the study is to describe an outbreak of adenoviral keratoconjunctivitis. We report an outbreak of adenoviral keratoconjunctivitis that occurred during November 2012–March April 2013 at outpatient clinic in city of Tirana. A field investigation was conducted. All cases were identified and also the HAdV serotype. In April 2013, an investigation after being informed of an EKC outbreak at an outpatient ophthalmology practice that predominately served elderly patients (4). During November 2012–March April 2013, 26 persons were clinically diagnosed with EKC, including the two staff physician, who continued to work while symptomatic. Among those patients, 15 (58%) visited the ophthalmology practice within 16 days before onset of their symptoms. Six (23%) patients developed keratitis requiring long-term topical steroid treatment. Conjunctival specimens collected for viral culture from four patients were all positive for HAdV-8. Outpatient clinics, hospitals, and other facilities that provide ophthalmologic care should have protocols in place to prevent transmission of EKC. Infection control measures used by the clinics before and after the outbreak varied.

**Key words:** keratoconjunctivitis infection, outbreak, serotype

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## TREATMENT OF ANISOMETROPIC AMBLYOPIA IN CHILDREN

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### ABSTRACT

Amblyopia is one of the most significant paediatric disorders in ophthalmic and orthotic practice and it is the most common cause of monocular visual loss. It is usually unilateral. It can be bilateral, usually where there is high bilateral refractive error or other binocular pathology. The aim of the study is to determine the effectiveness of spectacles alone in the treatment of anisometropia in paediatric population. This was a hospital based prospective study conducted at Regional Hospital of Fier in Albania between 2012 and 2014. A total of 40 patients (80 eyes) with mean age  $11.2 \pm 2.72$  years were included in the study. There were 30 males (75%) and 10 females (300%). (Table 1) Among these, 28 (70%) had unilateral amblyopia and 12 (30%) had bilateral amblyopia. Many children will have a residual visual deficit despite compliance with treatment. Failure of visual acuity to improve within six months of the commencement of amblyopia treatment should prompt re-refraction and re-examination of the fundus, looking in particular for optic nerve hypoplasia and subtle macular pathology. Progression of visual deficit during treatment, in the absence of obvious ocular pathology, raises the possibility of progressive cerebral pathology.

**Key words:** Anisometropic amblyopia, inter-ocular difference, refractive correction

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## THE PRODUCTION POTENTIAL OF AGRICULTURAL LAND IN KOSOVO AND ITS PERSPECTIVE

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### ABSTRACT

This paper consists in the analysis of the agricultural land fund in Kosovo, in quality, production potential and food security for the population, but also the challenges facing Kosovo with this strategic resource. Basic properties of the agricultural economy in Kosovo are: continuing reduction of the number of farming households, in addition to this the reduction of the agricultural population, and this shows that the rural environment is undergoing significant socioeconomic processes. Other important features of the agricultural economy and rural environment are: increased productivity per unit of agricultural land on one side, but also endangering the permanent productive land from pollution, landfills and coal surface mining, uncontrolled construction without a plan, frequent floods from unregulated rivers etc.

**Key words:** agricultural land, productivity, strategic resource, agro-technical measures.

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## EXTERNAL DACRYOCYSTORHINOSTOMY SURGERY

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### ABSTRACT

Dacryocystorhinostomy (DCR) surgery is a procedure that aims to eliminate fluid and mucus retention within the lacrimal sac, and to increase tear drainage for relief of epiphora. The aim of the study was to describe the outcome of silicone tube intubation procedure. This is a prospective study of 121 patients conducted at University Hospital Centre "Mother Theresa" in Tirana, Albania over the period 2013-2014. Patients with a review period of minimum 3 months were included in the study. Patients were examined carefully for lid margin disease, punctal or lid malposition or laxity. Co-existing sinus or nasal pathology was excluded. One hundred twenty one patients were included in the study. The mean age was 61.4 years (range, 29 – 79 years). Thirty eight (31%) were females and 83 (69%) males. Minimum duration of follow up was 3 months; maximum 46 months (mean 12.4). Twenty four (20%) patients had a history of prior DCR surgery and 5 (4%) patients had a history of DCT. Overall, 112 (93%) of cases were relieved of epiphora, with a success rate of 93.0%. External DCR with silicone intubation is safe and effective surgery in patients whom we expect less favourable outcome.

**Keywords:** epiphora, external dacryocystorhinostomy, silicon tube, surgery

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## DIVERSITY OF GRASS PEA (*L. SATIVUM*) LANDRACES FOR SUSTAINABLE FIELD GRASS PEA BREEDING IN ALBANIA

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### ABSTRACT

Fourteen grass peas (*Lathyrus sativum*) landraces collected in three different region of Albania (Korca, Elbasan and Fieri) were used to assess genetic diversity by quantitative morphological traits and molecular markers. The study, carried out in a randomized design with four replications during three growing seasons (2011 - 2013), had the objective of identification and selecting the traits with favourable characteristics for use in grass pea field breeding. ANOVA, principal component analysis and cluster analysis (method ward) used to assess the variability and association among different traits showed significant genetic diversity between collected grass pea landraces. Study identified the traits with more significant weighting on respective PC variances (days to flowering, and to pods, and to maturity, plant height, leaf size, leaflet length, number of pods per plant and seeds per pod, and yield per genotype), which can be used successfully as morphological quantitative markers for evaluation and characterization of the grass pea germplasm. The high amount of genetic variability founded in the present study, available to the breeders, is sufficient for selection of desirable traits and high yield parental lines, and for creation of new favourable gene combinations to sustain field grass pea breeding programs.

**Keywords:** genetic variability; grass pea landraces; morphological traits, factorial analysis

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## THE USE OF COMPUTER TECHNOLOGY IN ALBANIAN TOURISM ENTERPRISES A WAY TO INCREASE THE PERFORMANCE

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### ABSTRACT

The computer technology nowadays is considered as a necessary tool for carrying out the activities and core business operations, but also as a communication tool, which thanks to the Internet network has created an ease and high comfort for the enterprises. The tourism industry is one of those industries where information and communication technology (ICT) is used at very high scale and is linked directly with the increased performance of services and tourism marketing. The main purpose of this study is to explore how the use of computer technology affects in enhancing the performance of the tourism enterprises (accommodation units, travel agencies and restaurants), how much it affects the efficiency of the enterprises and whether it fosters better decisions and higher income. The sample consisted of N = 208 participants, representatives of tourism enterprises concerned. The study is extended to five districts of Albania: in Tirana, Durrës, Shkodra in Vlora and Saranda. The research instrument used is a questionnaire with 16 statements. Results have showed that the use of computers in their work significantly improves the performance, helps them to do their job faster, improves the quality of work etc.

**Key words:** computer technology, marketing, tourism enterprises, performance, Albania

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## DIAGNOSE OF NON-CELIAC WHEAT SENSITIVITY

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### ABSTRACT

Non-celiac wheat sensitivity is considered important during the last years. An increasing percentage of the general population avoids gluten ingestion. Our aim was thus to demonstrate the existence of WS and define its clinical and serologic markers. In our study was included one hundred persons. The wheat sensitivity patients showed a higher frequency of anemia, weight loss, self-reported wheat intolerance, coexistent atopy, and food allergy. There was also a higher frequency of positive serum assays for IgG/IgA anti-gliadin. From our data, 74% resulted with absent of undetectable allergen specific IgE (less than 0,35 IU/ml) and 6% resulted with extremely high level of allergen specific IgE (more than 100.00 IU/ml). We considered the 123 patients suffering from WS as a whole group, they showed an anemia (most sideropenic anemia) and weight loss frequency intermediate between the CD control groups and a higher frequency of coexistent atopic diseases, self-reported wheat intolerance, and history of food allergy in infancy than CD controls. Patients with Wheat Sensitivity alone, when compared with patients with multiple food sensitivity showed a higher frequency of anemia and weight loss. Patients with multiple food sensitivity showed a higher frequency of coexistent atopic disease and self-reported wheat intolerance. If someone has been diagnosed with celiac disease and eliminates gluten from his or her diet, then the autoantibody levels should fall.

**Key words:** intolerance, wheat sensitivity, markers, Immunoglobulins.

## EVALUATION OF GLAUCOMA PROGRESSION

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### ABSTRACT

Glaucoma is a multi-factorial optic neuropathy characterised by progressive structural loss of retinal ganglion cells (RGC) that may result in vision loss and irreversible blindness. The ability to detect structural loss is fundamental in the diagnosis and management of glaucoma. The aim of the study was to assess the glaucoma progression among patients diagnosed with glaucoma. One hundred six eyes of 53 patients with glaucoma who were followed up during the period from 2010 to 2011 were included at “Ungjillezimi” Clinic in Tirana, Albania. Each eye had at least four serial RNFL measurements, and the first and last measurements were separated by at least 3 years. A total of 106 eyes of 53 patients with glaucoma were analysed. The average number of OCT scans and visual field tests for each eye was 9.5 and 8.9, respectively, with a median follow-up interval of approximately 4 months. The follow-up duration ranged between 3.0 and 5.2 years. The mean age (SD) was 56.8 (13.5) years. The respective baseline visual field MD and average RNFL thickness were  $8.31 \pm 6.9$  dB and  $80.1 \pm 20.03$ . There were significant differences between baseline and final MD and average RNFL thickness measurements ( $p < 0.001$ ). Twenty-four eyes (22.6%) showed progression by trend analysis of VFI. Using SD-OCT to assess peripapillary RNFL and macular layers can be valuable, in conjunction with visual field analysis, to improve our ability to detect glaucoma progression.

**Key words:** glaucoma, progression, OCT, evaluation

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## INCIDENCE OF GESTATIONAL DIABETES AND PREGNANCY OUTCOME

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### ABSTRACT

Gestational diabetes mellitus (GDM) is defined as glucose intolerance of variable degree with onset or first recognition during pregnancy. Infants of mothers with preexisting diabetes mellitus experience double the risk of serious injury at birth, triple the likelihood of cesarean delivery, and quadruple the incidence of newborn intensive care unit (NICU) admission. We estimated the incidence and outcome of gestational diabetes mellitus in pregnant women at our hospital. This is a prospective study carried out at "Queen Geraldine" maternity Hospital in Tirana, Albania. All women referred to the antenatal clinics at the hospital were enrolled in our study over a two year period of 2012- 2014 years and screened for GDM. Patients with known diabetes were excluded from the study. A total of 1137 women were enrolled in this study. Of these, 55 (4.8%) had GDM, with a incidence of (95% CI, 3.6 – 6.2). Women with GD were significantly older ( $p < 0.01$ ) than normal women. The mean age was 30.09 ( $\pm 5.2$ ) years in women with GD and 26.7 ( $\pm 4.8$ ) years in normal women. The incidence of obesity, as defined by a BMI of more than 27, was 34% in the GDM group, compared with 12% in normal women ( $p < 0.01$ ). There were 36% of women with GDM who had a positive family history of diabetes, compared with 9% of women in the normal group ( $p < 0.01$ ). The obstetric outlook for pregnancy in women with pre-existing diabetes has potential to improve as rapid advances in diabetes management, fetal surveillance, and neonatal care emerge.

**Key words:** pregnancy, gestational diabetes mellitus, incidence

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## MANAGEMENT OF PEDIATRIC STRABISMUS

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### ABSTRACT

Surgery for strabismus, a condition in which the visual axes of the eyes are not parallel and the eyes appear to be looking in different directions. The concern is that the brain may come to rely more on one eye than the other and that the part of the brain circuitry connected to the less-favored eye fails to develop properly, leading to amblyopia or blindness in that eye. The aim of this study was to assess the outcomes of surgical re-alignment of the eyes. The study was conducted at University Hospital Center "Mother Theresa" in Tirana, Albania. A total of 44 patients underwent strabismus surgery from 2013-2014. Age varied from a minimum of 1 year to a maximum of 14 years with a mean of 8 years. Regarding the gender distribution, females were 25 (57%) and males were 19 (43%) were using spectacles prior to the squint surgery. History of ocular trauma was present in 9 (20%) of patients. Similarly, abnormal head posture was present in 5 (11%) of patients. Extra ocular movements were full in 70% right eyes and 30% left eyes. Strabismus surgery is a common procedure and most patients will see a large improvement in the alignment of their eyes after surgery. Well aligned eyes also offer proven social and developmental benefits for children.

**Keywords:** pediatric strabismus, surgical management

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## EPIDEMIOLOGY OF HEPATITIS C IN ALBANIA

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### ABSTRACT

Hepatitis C is a blood-borne, infectious, viral disease that is caused by a hepatotropic virus called Hepatitis C virus (HCV). The aim of this study was to determine the characteristics of anti-HCV positive persons in the general population in Albania. Sera specimen from all over the country submitted for testing at Institute of Public Health (IPH) along with individual reporting form including sociodemographic, epidemiological, clinical and risky behaviour exposure variables. Serum specimens were tested for anti-HCV by using enzyme-linked immunosorbent assay (ELISA). From 5439 specimens analysed in total, 71 of them resulted positive for the presence of anti-HCV-antibodies, corresponding to a prevalence of 1.3%. The prevalence of anti-HCV among females is 1% (39/4028) whereas among males is 2.3% (32/1411). Males are 2.4 times more likely than females to have anti-HCV antibodies (OR=2.4 95%CI 1.5 – 3.8 p<0.001). The highest seropositivity rate was found among drug users (40%) followed by hemodialysed individuals (25.4%) and blood transfusion (6.3%). There is no vaccine for hepatitis C, therefore prevention of HCV infection depends upon reducing the risk of exposure to the virus in health-care settings, in higher risk populations.

**Key words:** epidemiology, hepatitis C, drug use

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## TREATMENT OF MALOCCLUSION CLASS II WITH FUNCTIONAL APARATUS

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Occlusion is a term that is used to refer to the alignment of your teeth. Malocclusion of the teeth is a misalignment problem that can lead to serious oral health complications. The teeth won't be able to perform vital functions if they're misaligned. Deviations from ideal occlusion are known as malocclusion. The aim of the study was to evaluate the treatment outcome of malocclusion class II with functional apparatus. This is a prospective study including 39 patients of age 10-12 years old with protrusive bite who were treated with functional apparatus over the period 2012-2013. All children underwent a detailed orthodontic examination. A total of 39 patients with retrognathia were included in the study. They were compared with an age and gender matched control group. There was no statistically significant difference between groups by age and gender. The mean age of patients was 11.4 ( $\pm 1.2$ ) years while the mean age of control group was 11.5 ( $\pm 1.4$ ) years ( $t=0.7$   $p=0.4$ ). 18 (46.2%) patients were males and 21 (53.8%) females while in control group 17 (44.7%) were males and 21 (55.3%) females without a significant difference between them,  $p=0.9$ . Improvement was achieved in 34 (87.2%) patients after 1.5 years,  $p<0.01$ . The treatment of malocclusion of teeth in children and adults typically results in correction of the problem. Early treatment in childhood will reduce the duration of treatment, and also make it less expensive.

**Key words:** malocclusion, functional apparatus, protrusive bite

**ENTOMOLOGICAL STUDY OF TICKS IN ALBANIA DURING 2014****Përparim Kadriaj<sup>1</sup>, Enkelejda Velo<sup>1</sup>, Kujtim Mersini<sup>2</sup>, Viola Jani<sup>1</sup>, Kristaq Berxholi<sup>3</sup>, Silva Bino<sup>1</sup>**<sup>1</sup>*Infectious Disease Control Department, Institute of Public Health, Tirana., Albania;*<sup>2</sup>*National Veterinary Epidemiology Unit, Institute of Food Safety and Veterinary, Tirana, Albania;*<sup>3</sup>*Faculty of Veterinary Medicine, Agriculture University, Tirana, Albania;*E-mail: [pkadriaj@yahoo.com](mailto:pkadriaj@yahoo.com)

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**ABSTRACT**

In Albania the first cases of Crimean-Congo haemorrhagic fever was identified in 1986, and cases occur almost every year. The primary tick vectors belong to the *Hyalomma* genus. *Hyalomma* ticks infest a wide spectrum of different wildlife species. During 2014 ticks from hosted animals, have been collected from 6 districts in Albania. Dragging collection from the host and the environment are the methods used for tick collection. Cows, sheep, goat and dogs are examined using gloves for the presence of ticks in ears, thighs, perineal region etc. Collected ticks were transported alive in the laboratory where subsequent identification at species level has been carried out based on identification keys and taxonomic characters as described by Estrada-Pena (ICTTD-2004). Seven tick species have been identified during this study. *Hyalomma marginatum* (49%) was the predominant collected species, *Rhipicephalus bursa* (40%), *Rhipicephalus turanicus* (6%), *Ixodes ricinus* (2%), *Boophilus annulatus* (2%), and *Rhipicephalus sanguineus* (1%). Meanwhile *Hyalomma detritum detritum*, *Hyalomma detritum scupense* and *Dermacentor marginatum* were found with very low prevalence. Cows were the main host for *Hyalomma marginatum* and *Rhipicephalus bursa* on the other hand. *Hy. marginatum* were the prevalent species in CCHF endemic areas in Kukes prefecture, while *Rhp. bursa* was prevalent in Kolonje district where CCHF cases have been recently identified. *Hyalomma marginatum* and *Rhipicephalus bursa* are predominant in CCHF endemic areas in Albania. While other species are distributed all over the districts. Identification of geographical distribution of ticks allows evaluating the risks and promptly implementing control measures for tick borne diseases accordingly.

**Key words:** tick, *hyalomma marginatum*, entomology, crimean-congo hemorrhagic fever virus,

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## ENVIRONMENTAL PROTECTION, HOSPITAL WASTE MANAGEMENT, RESEARCH CONDUCTED IN VLORA REGIONAL HOSPITAL (2014-2015)

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Hospital waste becomes a source for the spread of nosocomial infections, putting the health of patients and medical personnel in danger. <sup>[6]</sup> The main purpose of this article is the implementation of methods of hospital waste management from the staff of the Regional Hospital in Vlora, in order to establish and implement adequate policies for the medical staff, to optimize the management of medical waste and to prevent the spread of nosocomial infections. Our objective is to understand the connection between the methods of medical waste management and the spread of nosocomial infection to the nursing staff of the Regional Hospital of Vlora. The study is transversal, descriptivo-analytic and quantitative. The sample of this study consists of 121 nursing staff members of Vlora Regional Hospital, during the period August 2014 to June 2015. The data collection was conducted through distribution of a self-administered questionnaire while the statistical data analysis was performed on SPSS 17.0 statistical software. From this study were excluded the primary care nursing staff. Our findings conclude that there is a statistically significant relation between the administration of hospital waste and the incidence of nosocomial infection, the P-value is 0.000. Statistically significant relation exists between the administration of sharp hospital waste and the spread of infection, P-value is 0.000. Furthermore the common residues are dumped in the proper containers by 76% of the nursing staff and the anatomical remnants are thrown in proper the containers by 64.5% of the staff. Based on our findings We concluded that that there is a statistically significant link between the administration of sharp medical waste and infectious waste, and the incidence of nosocomial infection. Most of hospital waste appears to be managed within the appropriate parameters.

**Keywords:** Management, environment, hospital waste, nursing staff, pollution.