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Abstract 1

DENTAL STEM CELL BANKING

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Stem cells are a promising tool for tissue regeneration. Dental stem cells have the potential to regenerate the bone,periodontal ligament and teeth,Cryopreservation technology of dental pulp ,tooth banking and storage provides significant contribution to clinical autotransplantation. Polymer scaffolds guide stem cells growth into customized sizes and shapes. Stem cells also produce the bone that connects the tooth to the jaw, eliminating the need for bone grafting, a procedure that can delay dental implant surgery for months.This poster focus on the dental stem cell banking which preserve baby teeth and wisdom teeth inorder to provide tooth less no more in future.

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Abstract 2

MARINE BIOTOXINS

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Marine biotoxins are poisons that are produced by certain kinds of microscopic algae (a type of phytoplankton) that are naturally present in marine waters, normally in amounts too small to be harmful. However, a combination of warm temperatures, sunlight, and nutrient-rich waters can cause rapid plankton reproduction, or "blooms". These blooms are commonly referred to as *harmful algal blooms* or "HABs" because of their potential to cause illness. Molluscan shellfish (shellfish with hinged shells such as oysters, clams, and mussels) are filter feeders and ingest any particles, both good and bad, that's in the surrounding water. Algae is a food source for them, and HABs create a plentiful food supply. When shellfish eat toxin-producing algae, the toxin remains in their system; large amounts of algae means more toxin can concentrate in their tissue. Biotoxins don't harm shellfish, but they can accumulate in shellfish to levels that can cause illness or death in humans and other mammals that eat them.

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Abstract 3

ESSENTIAL OIL REPELLANTS

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Essential oils from plants have been recognized as important natural resources of insecticides because some are selective, biodegrade to non-toxic products and have few effects on non-target organisms and environment. Essential oils are volatile mixtures of hydrocarbons with a diversity of functional groups, and their repellent activity has been linked to the presence of mono - terpenes and sesquiterpenes. However, in some cases, these chemicals can work synergistically, improving their effectiveness. The aim of the poster is to highlight a reduction in the application of chemical in mosquito repellents, which in turn increases the opportunity for Essential oil from natural product for control of vector- borne disease.

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Abstract 4

HERBAL MOUTHWASH

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Plaque accumulation is one such factor which predisposes the individual to both dental caries and periodontal disease. Salivary microfloras like *Streptococcus mutans* and other predisposing factors lay an important role in the initiation and progression of dental diseases such as dental caries. Various herbal extracts like chamomile, ocimum, and *echinacea* are known to provide therapeutic benefits in the oral cavity when used topically. Chemotherapeutic and antimicrobial agents aiming at these predisposing factors, therefore play, a significant role in prevention of these oral diseases and have a dramatic impact on improving the oral health of the individual.

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Abstract 5

CHELATING AGENTS

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Exposure to toxic metals remains a wide spread occupational and environmental problems in the world. Due to their widespread use in human activities such as industry, agriculture and even as medicine numerous health risks may be associated with the exposure of these substances. Lead, arsenic and cadmium generally interferes with a number of body functions such as the haematopoietic system, central nervous system (CNS), liver and kidneys. Over the past few decades there have been growing awareness and concern that the toxic biochemical and functional effects are occurring at lower level of metal exposure than those that produce overt clinical and pathological signs and symptoms. Despite many years of research we are still far from an effective treatment of chronic heavy metal poisoning. The main therapeutic option for chronic metal poisoning relies in chelation therapy. Chelating agents are capable of linking together metal ions to form complex structures which can be easily excreted from the body. They have been used clinically as antidotes for acute and chronic poisoning. 2, 3-dimercaprol (BAL) has long been the mainstay of chelation therapy of lead or arsenic poisoning. Meso 2, 3, -dimercaptosuccinic acid (DMSA) has been tried successfully in animals as well as in few cases of human lead or arsenic poisoning.

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Abstract 6

PHARMACOLOGICAL PROFILE OF ROSEMARY

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Rosemary is a flower species of *Rosemarinus officinalis*. They are needle like leaves and white, pink, purple and blue colour flowers. They are native of Mediterranean region. They are used for decorative purpose in gardens. It may have pest control effects. They are also used for flavour various foods such as stuffings. Rosemary extract has been shown to improve shelf life and heat stability of omega 3 rich oils which are prone to rapidity. Rosemary have number of phytochemicals including rosmarinic acid, camphor, caffeine acid, ursolic acid,botulinum acid and antioxidants,carnotite acid and carnosol. It is used as antispasmodic in renal colic and dysmenorrhea, in relieving respiratory disorders and to stimulate the growth of hair. Extract of Rosemary relaxes smooth muscles of trachea and intestine and has choleretic, hepatoprotective and anti merogenic activity. Most important constituent are caffe if acid and rosmarinic acid. They have antioxidant effect. It increases production of pgE2 and reduces leukotrine B4 in human polymorphonuclear leukocytes. It has major role in preventing the bronchial asthma, peptic ulcer, ischaemic heart disease, cancer, cataract,hepatoxicity.

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Abstract 7

NEONATAL ABSTINENCE SYNDROME

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Neonatal abstinence syndrome (NAS) is a group of problems that occur in a newborn who was exposed to addictive opiate drugs while in the mother's womb. Neonatal Abstinence Syndrome. Defined as a group of clinical signs and symptoms in a neonate resulting from prolonged exposure to illicit or prescribed drugs. Also called Neonatal Drug Withdrawal.Short term syndrome but may have long lasting effects. Can be caused by in-utero exposure or iatrogenic ally in hospitalized neonates

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Abstract 8

SAFER DRUGS USED IN PREGNANCY

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Drugs are used in over half of all pregnancies and prevalence of use is increasing. The most commonly used drugs include antiemetics, antacids, antihistamines, analgesics, antimicrobials, diuretics, hypnotics, tranquilizers, and social and illicit drugs. Despite this trend, evidence-based guidelines for drug use during pregnancy are still lacking. The FDA classifies drugs into 5 categories of safety for use during pregnancy (see FDA Categories of Drug Safety During Pregnancy). However, few well-controlled studies of therapeutic drugs have been conducted in pregnant women. Most information about drug safety during pregnancy is derived from animal studies and uncontrolled studies in people (eg, postmarketing reports). During pregnancy, drugs are often required to treat certain disorders. Despite widespread concern about drug safety, exposure to therapeutic drugs accounts for only 2 to 3% of all fetal congenital malformations; most malformations result from genetic, environmental, or unknown causes.

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Abstract 9

DRUG INDUCED DISEASES

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Each year, more than 9.6 million adverse drug reactions occur in older Americans. One study found that 37 percent of adverse reactions in the elderly were not reported to the doctor, presumably because patients did not realize the reactions were due to the drug. This is not too surprising considering that most doctors admitted they did not explain possible adverse effects to their patients.A serious problem exists because both doctors and patients do not realize that practically any symptom in older adults and in many younger adults can be caused or worsened by drugs. Some doctors and patients assume that what are actually adverse drug reactions are simply signs of aging. As a result, many serious adverse reactions are entirely overlooked or not recognized until they have caused significant harm. The drugs responsible for the most serious adverse reactions in older adults are tranquilizers, sleeping pills, and other mind-affecting drugs; cardiovascular drugs such as high blood pressure drugs, digoxin, and drugs for abnormal heart rhythms;13 and drugs for treating intestinal problems.

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Abstract 10

DRUGS FROM MARINE SOURCES

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For many years, traditional Western pharmacognosy focused on the investigation and identification of medically important plants and animals in the terrestrial environment, although many marine organisms were used in Traditional Chinese Medicine. With the development of the open-circuit self-contained underwater breathing apparatus or SCUBA in the 1940s, some chemists turned to more pioneering work looking for new medicines in the marine environment. With 79% of the earth's surface covered by water, research into the chemistry of marine organisms is relatively unexplored and represents a vast resource for new medicines to combat major diseases such as cancer, AIDS or malaria. Research typically focuses on sessile organisms or slow moving animals because of their inherent need for chemical defenses. Standard research involves an extraction of the organism in a suitable solvent followed by either an assay of this crude extract for a particular disease target or a rationally guided isolation of new chemical compounds using standard chromatography techniques.

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Abstract 11

ROLE IN STEM CELL IN ORGAN TRANSPLANTATION

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Although many people may think of a transplant to mean replacing a diseased organ with another one, such as in heart or liver transplants, stem cells have an important and often life saving use for treating disease. A stem cell transplant doesn't involve surgery in the same sense as an organ transplant and the procedure is simplistic in comparison. Its benefit, however, can be just as enormous. In basic terms, a stem cell transplant is the infusion of healthy cells to replace diseased or damaged ones. If successful, the healthy replacement stem cells will integrate into the body and give rise to more cells that can all take on the necessary functions for a specific tissue.

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Abstract 12

ANTI-VENOM FROM NATURE STORE

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Venomous snakebites kill at least 100,000 people per year. The only antidote—antivenom—takes time, skill and abundant resources to make. In India, ashwagandha extracts are traditionally used as a topical anti-venom treatment. Now modern science has uncovered that ashwagandha has a glycoprotein component that is a potent inhibitor of the hyaluronidase enzymes in venom. These enzymes break down the snake bite victim's tissue and help spread venom toxins throughout the body. Lab studies demonstrate that ashwagandha's hyaluronidase inhibitor can completely inhibit this enzyme in cobra and viper venoms at a 1:1 ratio. Although ashwagandha did not completely eliminate the toxicity of the venom, it did significantly reduce it in animal studies.

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Abstract 13

HEAVY METAL POISONING & ANTIDOTE

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There are many individual metals causing varying degrees of illness based on acute and chronic exposures. Heavy metals is the term used for a group of elements that have particular weight characteristics. They are on the "heavier" end of the periodic table of elements. Some heavy metals – such as cobalt, copper, iron, manganese, molybdenum, vanadium, strontium, and zinc – are essential to health in trace amounts. Others are non-essential and can be harmful to health in excessive amounts. These include cadmium, antimony, chromium, mercury, lead, and arsenic – these last three being the most common in cases of heavy metal toxicity.

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Abstract 14

DEADMAN'S BELLS

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Digitalis is also called Deadmans bells. Digitalis purpurea (foxglove). It is grown as ornamental plant in open woods , woodland clearings, moorland, sea cliffs and Rocky Mountains.Digitalis works by inhibiting sodium potassium ATPase. Which increases intacellular concentration of sodium ions and decrease concentration gradient across the cell. They extract contain cardiac glycosides for the treatment of heart disease.this will increase the contractility of the heart rate and acts as anti arrhythmic agent to control the heart rate. Especially atrial fibrillation. Digitalis toxicity causes nausea, vomiting and diarrhoea, abnormal heart rate, bradycardia.

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Abstract 15

ANTIOXIDANTS – ROLE IN ORAL HEALTH

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There is increasing attention to the potential benefit from the use of antioxidants in the field of dental medicine. In general, antioxidants may be available through oral ingestion, diet or vitamin supplements, and in nutraceuticals. In addition, treatment of oral and dental health problems may include drug-free, natural antioxidant remedies that are available in topical oral applications such as mouth rinse, gel, paste, gum, or lozenge compositions. These topical antioxidant remedies help reduce free-radical or reactive-oxygen species, which are causative inflammatory factors in the progression of gingival and periodontal maladies. The use of specific antioxidants in the proper combination can provide natural protection from environmental and inherent free-radical exposure. Antioxidants neutralize damaging free radicals that produce disease states. It has been suggested that the negative effects of nicotine could be reversed by antioxidants.Antioxidants are available from different sources, including vitamins, minerals, enzymes, and hormones, as well as food and herbal supplements. The supplements may exist in bar, capsule, drops, liquid, powder, gel, and tablet forms. This paper focuses on relationships between antioxidants and free-radical/reactive-oxygen species in the oral environment.

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Abstract 16

STEM CELL THERAPY IN DENTISTRY

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The discovery of dental stem cells and recent advances in cellular and molecular biology have led to the development of novel therapeutic strategies that aim at the regeneration of oral tissues that were injured by disease or trauma. Tissue engineering is multidisciplinary by nature, bringing together biology, engineering, and clinical sciences with the goal of generating new tissues and organs. Stem cells constitute the source of differentiated cells for the generation of tissues during development, and for regeneration of tissues that are diseased or injured post-natally. Growing evidence demonstrates that stem cells are primarily found in niches and that certain tissues contain more stem cells than others. Among these tissues, the dental pulp is considered a rich source of mesenchymal stem cells that are suitable for tissue engineering applications. It is known that dental pulp stem cells have the potential to differentiate into several cell types, including odontoblasts, neural progenitors, osteo- blasts, chondrocytes, and adipocytes. The dental pulp stem cells are highly proliferative. This characteristic facilitates ex vivo expansion and enhances the translational potential of these cells. Notably, the dental pulp is arguably the most accessible source of postnatal stem cells. Collectively, the multipotency, high proliferation rates, and accessibility make the dental pulp an attractive source of mesenchymal stem cells for tissue regeneration. This review discusses fun- damental concepts of stem cell biology and tissue engineer- ing within the context of regenerative dentistry.

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Abstract 17

BIOLUMINANCE

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Bioluminescence is the production and emission of light by a living organism. It is a form of chemiluminescence. Bioluminescence occurs widely in marine vertebrates and invertebrates, as well as in some fungi, microorganisms including some bioluminescent bacteria and terrestrial invertebrates such as fireflies. In some animals, the light is produced by symbiotic organisms such as Vibrio bacteria.The principal chemical reaction in bioluminescence involves the light-emitting pigment luciferin and the enzyme luciferase, assisted by other proteins such as aequorin in some species. The enzyme catalyzes the oxidation of luciferin. In some species, the type of luciferin requires cofactors such as calcium or magnesium ions, and sometimes also the energy-carrying molecule adenosine triphosphate (ATP). In evolution, luciferins vary little: one in particular, coelenterazine, is found in nine different animal (phyla), though in some of these, the animals obtain it through their diet. Conversely, luciferases vary widely in different species. Bioluminescence has arisen over forty times in evolutionary history.The uses of bioluminescence by animals include counter-illumination camouflage, mimicry of other animals, for example to lure prey, and signalling to other individuals of the same species, such as to attract mates. In the laboratory, luciferase-based systems are used in genetic engineering and for biomedical research. Other researchers are investigating the possibility of using bioluminescent systems for street and decorative lighting, and a bioluminescent plant has been created.

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Abstract 18

PIGMENTATION-DISORDERS

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Disorders of pigmentation present as skin that is discolored, blotchy, or darker or lighter than normal. They occur when the body produces too little (hypopigmentation) or too much (hyperpigmentation) melanin. Melanin is a pigment that creates hair, skin, and eye color and protects the skin by absorbing ultraviolet light. These disorders can be localized or can diffusely spread about the body. Some pigmentation disorders, such as liver spots, are common, whereas others, such as albinism, are rare, affecting approximately 1 out of every 17,000 people. With some disorders, the cause of dyspigmentation may be readily identified as sun exposure, drug reactions, or inflammation; in other cases, the etiology is not as clear. Most disorders can be diagnosed by appearance. Congenital hypopigmentary diseases, which result from a defect in the production of melanin, include oculocutaneous albinism (types 1 to -4), ocular albinism, Chédiak-Higashi syndrome, and Hermansky-Pudlak syndrome. The infant shown has type 1 oculocutaneous albinism caused by an autosomal recessive mutation in the tyrosinase gene. Note the hypomelanotic skin, white hair, and pink pupils caused ultimately by the lack of melanin synthesis. Patients also typically have photophobia, poor visual acuity, and nystagmus from misrouting of optic fibers from the retina to the visual cortex of the brain. Two other subtypes of oculocutaneous albinism have moderate pigmentation, termed type 1B, or pigmentation in hair follicles on the cooler areas of the body, termed type 1TS. Type 1 oculocutaneous albinism affects 1 in 40,000 people and is not associated with mortality and/or morbidity.

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Abstract 19

OVARIAN CANCER

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The term "ovarian cancer" includes several different types of cancer that all arise from cells of the ovary. Most commonly, tumors arise from the epithelium, or lining cells, of the ovary. These include epithelial ovarian (from the cells on the surface of the ovary), fallopian tube, and primary peritoneal (the lining inside the abdomen that coats many abdominal structures) cancer. These are all considered to be one disease process. There is also an entity called borderline ovarian tumors that have the microscopic appearance of a cancer, but tend not to spread much.However, there are also less common forms of ovarian cancer that come from within the ovary itself, including germ cell tumors and sex cord-stromal tumors. All of these diseases will be discussed, as well as their treatment. Borderline ovarian tumors account for a small percentage of epithelial ovarian cancers. They are most often serous or mucinous cell types. They often have large masses, but they only rarely metastasize, that is, spread to other areas. Often, removal of the tumor, even at more advanced stages, can be a cure.

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Abstract 20

JUVENILE DIABETES

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Type 1 diabetes in children is a condition in which your child's pancreas no longer produces the insulin your child needs to survive, and you'll need to replace the missing insulin. Type 1 diabetes in children used to be known as juvenile diabetes or insulin-dependent diabetes. The classification of diabetes mellitus and the tests used for its diagnosis were brought into order by the National Diabetes Data Group of the USA and the second World Health Organization Expert Committee on Diabetes Mellitus in 1979 and 1980. A WHO Consultation has therefore taken place in parallel with a report by an American Diabetes Association Expert Committee to re-examine diagnostic criteria and classification. The main changes proposed are as follows. The diagnostic fasting plasma (blood) glucose value has been lowered to ≥7.0 mmol l^{-1} (6.1 mmol l^{-1}). Impaired Glucose Tolerance (IGT) is changed to allow for the new fasting level. A new category of Impaired Fasting Glycaemia (IFG) is proposed to encompass values which are above normal but below the diagnostic cut-off for diabetes (plasma ≥6.1 to <7.0 mmol l^{-1}; whole blood ≥5.6 to <6.1 mmol l^{-1}). Gestational Diabetes Mellitus (GDM) now includes gestational impaired glucose tolerance as well as the previous GDM. The classification defines both process and stage of the disease. The processes include Type 1, autoimmune and non-autoimmune, with beta-cell destruction; Type 2 with varying degrees of insulin resistance and insulin hyposecretion; Gestational Diabetes Mellitus; and Other Types where the cause is known (e.g. MODY, endocrinopathies). It is anticipated that this group will expand as causes of Type 2 become known. Stages range from normoglycaemia to insulin required for survival.

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Abstract 21

ACCESSORY FOREMAN - SPENOID BONE

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The greater wing of the human sphenoid bone is pierced by several foramina, which contain, as a main element, the venous anastomoses between the interior of the skull and the extracranial veins. Since data concerning these foramina are scarce in the literature, studies comprising the frequency of occurrence and morphology of the foramina of the greater wing of the human sphenoid bone were undertaken on 100 macerated skulls. We found that the foramen ovale is divided into 2 or 3 components in 4.5% of cases. Moreover, the borders of the foramen ovale in some skulls were irregular and rough. This may suggest, on radiological images, the presence of morbid changes, which might be the sole anatomical variation. Concurrent with the foramen ovale are accessory forami- na. The foramen of Vesalius and the cavernous foramen were present in 17% and 33% of cases, respectively. The foramen of Vesalius was always single and the cavernous foramen also occurred in multiple form. The foramen spinosus and the foramen rotundum occurred as permanent elements of the skulls stud- ied. The mean area of the foramina measured, excluding the foramen ovale, was not considerable, which may suggest that they play a minor role in the dynamics of blood circulation in the venous system of the head.

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Abstract 22

FAT OR FIT

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The logistic regression model is being used with increasing frequency in all areas of public health research. In the calendar year 1989, over 30% of the articles published in the American Journal of Public Health employed some form of logistic regression modeling. In spite of this increase, there has been no commensurate increase in the use of commonly available methods for assessing model adequacy. We review the current status of the use of logistic regression modeling in the American Journal of Public Health. We present a brief overview of currently available and easily used methods for assessing the adequacy of a fitted logistic regression model.An example is used to demonstrate the methods as well as a few of the adverse consequences of failing to assess the fit of the model. One important adverse consequence illustrated in the example is the inclusion of variables in the model as a result of the influence of one subject. Failure to address model adequacy may lead to misleading or incorrect inferences. Recommendations are made for the use of methods for assessing model adequacy and for future editorial policy in regard to the review of articles using logistic regression.

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Abstract 23

IRON DEFICIENCIES ANEMIA IN FEMALE POPULATION

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The iron status of a population of 1564 subjects living in the northwestern United States was evaluated by measurements of transferrin saturation, red cell protoporphyrin, and serum ferritin. The frequency distribution of these parameters showed no distinct separation between normal and iron-deficient subjects. When only one of these three parameters was abnormal (transferrin saturation below 15%, red cell protoporphyrin above 100 mug/ml packed red blood cells, serum ferritin below 12 ng/ml), the prevalence of anemia was only slightly greater (10.9%) than in the entire sample (8.3%). The prevalence of anemia was increased to 28% in individuals with two or more abnormal parameters, and to 63% when all three parameters were abnormal. As defined by the presence of at least two abnormal parameters, the prevalence of iron deficiency in various populations separated on the basis of age and sex ranged from 3% in adolescent and adult males to 20% in menstruating women. It is concluded that the accuracy of detecting iron deficiency in population surveys can be substantially improved by employing a battery of laboratory measurements of the iron status.

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Abstract 24

ALZHEIMER DISEASE

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It is evident that Neurodegenerative diseases (Alzheimer's, Parkinson's and Huntington's) have many similarities at cellular and molecular level as they carry parallel mechanisms including protein aggregation and inclusion body formation caused by protein mis-folding. The main objective of this study was to have detailed insight on variation and resemblance among these proteins. One hundred and four protein sequences, both directly and indirectly involved in disease mechanism to perform phylogenetic analysis revealing insight on evolutionary relationship among these proteins, were selected. The percentage of replicate trees, in which the associated taxa clustered together in the bootstrap test, was 1000 replicates. Various statistical tests were performed for the confirmation of results e.g., Tajma's Neutrality Test showed $D > 6$, nucleotide diversity $\pi > 0.6$ and ps value as greater than 1. Phylogenetic analysis showed that the protein sequences of neurodegenerative diseases had high sequence similarity and identity to each other as depicted by the evolutionary tree. It showed the similar mechanism of evolving from each other and had similar mechanism of generating mis-folding leading towards symptoms of disease.

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Abstract 25

TRANSCRIPTION

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Transcription of the lymphocyte-specific terminal deoxynucleotidyltransferase gene begins at a single nucleotide, but no TATA box is present. We have identified a 17 bp element that is sufficient for accurate basal transcription of this gene both *in vitro* and *in vivo*. This motif, the initiator (Inr), contains within itself the transcription start site. Homology to the Inr is found in many TATA-containing genes, and specific mutagenesis influences both the efficiency and accuracy of initiation. Moreover, in the presence of either a TATA box or the SV40 21 bp repeats, a greatly increased level of transcription initiates specifically at the Inr. Thus, the constitutes the simplest functional promoter that has been identified and provides one explanation for how promoters that lack TATA elements direct transcription initiation.

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Abstract 26

GILBERT'S SYNDROME

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Gilbert Syndrome is a common, harmless genetic condition in which a liver enzyme essential to the disposal of bilirubin (the chemical that results from the normal breakdown of hemoglobin from red blood cells is abnormal. The condition has also been referred to as constitutional hepatic dysfunction and familial nonhemolytic jaundice.The enzyme abnormality in Gilbert syndrome results in mild elevations of bilirubin in the blood, particularly after starvation, consumption of alcohol or dehydration

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Abstract 27

PHENYLKETONURIA

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Phenylketonuria (PKU) is an autosomal recessive inborn error of phenylalanine (Phe) metabolism resulting from deficiency of phenylalanine hydroxylase (PAH). Most forms of PKU and hyperphenylalaninaemia (HPA) are caused by mutations in the PAH gene on chromosome 12q23.2. Untreated PKU is associated with an abnormal phenotype which includes growth failure, poor skin pigmentation, microcephaly, seizures, global developmental delay and severe intellectual impairment. However, since the introduction of newborn screening programs and with early dietary intervention, children born with PKU can now expect to lead relatively normal lives. A better understanding of the biochemistry, genetics and molecular basis of PKU, as well as the need for improved treatment options, has led to the development of new drugs.

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Abstract 28

GERD

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Gastroesophageal reflux disease, or GERD, is a digestive disorder that affects the lower esophageal sphincter (LES), the ring of muscle between the esophagus and stomach Many people, including pregnant women, suffer from heart burn or acid indigestion caused by GERD. Doctors believe that some people suffer from GERD due to a condition called hiatal hernia In most cases, heartburn can be relieved through diet and lifestyle changes; however, some people may require medication or surgery.

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Abstract 29

GOUT

Balaji

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Gout is a type of arthritis that occurs when too much uric acid builds up in the body, causing crystals to form in joints, and joints to become inflamed and painful. It can be hereditary or result from another condition. Gout usually affects men over 40 with a family history of gout, but it can occur at any time, and also affects women, especially after menopause. Excessive intake of food and alcohol, surgery, infection, physical or emotional stress, or the use of certain drugs can lead to the development of gout.

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Abstract 30

SALIVARY GLAND TUMOURS

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To date the British Salivary Gland Tumour Panel has accumulated 2569 salivary gland tumours. Of these, 2410 were primary epithelial salivary gland tumours and these formed the basis of the present study. The diagnosis of individual tumours was based on the World Health Organisation classification. Tumours were analysed according to histological type, site, age and sex. The principal site was the parotid and the combined minor (oropharyngeal) glands formed the second largest group. Pleomorphic adenomas formed the largest group of tumours in most sites, but were particularly common in the parotid. The frequency of malignant tumours increased with age after the third decade and was maximal in the eighth decade. Malignant tumours were more common in the submandibular and the minor glands than in the parotid. In the sublingual gland six out of seven tumours were malignant.

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Abstract 31

A UNIFYING AETIOLOGICAL EXPLANATION FOR ANOMALIES OF HUMAN TOOTH NUMBER AND SIZE

Jane Blenda

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Genetic and environmental factors are implicated in the aetiology of supernumerary teeth, hypodontia, megadontia and microdontia; these anomalies tend to be associated. 1115 school children aged 11–14 years examined clinically and radiographically provided prevalence data. A further 703 children with dental anomalies were studied. 153 of these became probands for a family study and 327 of their first-degree relatives were examined. There were much higher frequencies ($p < 0.001$) of all anomalies among the relatives of probands than in the general population. Males more often had supernumerary teeth and megadontia and females more frequently had hypodontia ($p < 0.05$) and microdontia. For hypodontia, the proportion of relatives affected varied with the severity of the condition in the proband ($p < 0.05$). In the prevalence study, there was an association between hypodontia and microdontia ($p < 0.001$). These findings may be explained by a multifactorial model having a continuous scale, related to tooth number and size, with thresholds. Position on the scale usually depends upon the combination of numerous genetic and environmental factors, each with a small effect, but occasionally a chromosomal anomaly, a major single gene or a major environmental insult may have a large effect. The finding that the estimated difference between the means of the sexes was the same for each anomaly, within the limits of experimental error, supports the validity of the model.

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Abstract 32

BITE MARK ANALYSIS.

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Bite mark analysis plays an important role in personal identification in forensic odontology. They are commonly seen in violent crimes such as sexual assaults, homicides, child abuse, etc. Human bites are common on the face and are usually seen on prominent locations of the face such as the ears, nose and lips. Individual characteristics recorded in the bite marks such as fractures, rotations, attrition, and congenital malformations are helpful in identifying the individual who caused it. We are reporting the case of a 32 year-old lady with bite marks on her left ear, who was allegedly assaulted by the suspect. On the basis of characteristic features of the suspect's dentition, it was concluded that the bite marks seen on the victim was most probably caused by the suspect.

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Abstract 33

THE NATURAL HISTORY OF BELL'S PALSY.

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The purpose of this investigation was to explain the spontaneous course of idiopathic facial palsy without treatment of any kind. The investigation included 100 patients seen over a fifteen-year period. The patients were checked at short intervals until remission occurred, and these checks were discontinued only when normal function was restored or after a period of one year. For 65 percent of patients the first signs of remission were observed within three weeks after the outbreak; for the last 15 percent remission occurred three to six months later. Seventy-one percent recovered normal mimical function of the face, 13 percent had insignificant sequelae, and the last 16 percent had permanently diminished function with contracture and associated movements.

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Abstract 34

EFFECT OF TOBACCO ON RENAL FAILURE

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Smoking causes intense sympathetic excitation paralleled by an increase in blood pressure (up to 21 mmHg systolic, tachycardia and increased concentrations of catecholamines in the circulation. Vasoconstriction is noted in many vascular beds, i.e. the coronary circulation or the forearm. It comes as no surprise that in healthy volunteers acute smoking (compared to sham smoking) causes an increase in renovascular resistance of 11% as well. This is accompanied by a decrease in glomerular filtration rate (GFR) (−15%) and filtration fraction (−18%). The effect is presumably due to nicotine per se, since the findings can be reproduced by chewing nicotine-containing gum. Based on indirect data it has been concluded that in the healthy individual, smoking causes afferent vasoconstriction, presumably protecting the glomerulus against the acute rise in blood pressure. This hypothesis requires further confirmation. A recent analysis shows that the renal haemodynamic effects can be obliterated by pretreatment with β-blockers. Renal haemodynamic effects of smoking are apparently caused by β-adrenergic stimulation, either directly via increased circulating epinephrine, or indirectly via β-adrenergically mediated increase in local angiotensin II concentrations. The idea that circulating catecholamines are involved would make sense, since efferent sympathetic nerve traffic, at least to the *N. suralis,* is decreased, presumably as a consequence of a baroreceptor-mediated response to elevated blood pressure.

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Abstract 35

CEREBRAL PALSY

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Cerebral palsy is a general term describing a group of non-progressive disorder of the neuromuscular system. It is not a specific disease entity but rather a collection of disabling disorders caused by insult and permanent damage to the brain in prenatal and perinatal periods. The disability might involve muscle weakness, stiffness or paralysis, irregular gait and uncoordinated involuntary movements. In most of the cases, no discernible cause is found. It has been found that any factor causing decreased oxygenation to the developing brain can be responsible for brain damage. In addition, causal relationships have been established with cerebral palsy and the following factors- complication of labor or pregnancy, toxemia of pregnancy, poisoning, meningitis and encephalitis, kernicterus, congenital defect of brain, premature birth, trauma, tumors and cerebrovascular accidents. Cerebral palsy is classified according to the type of neuromuscular dysfunction as spasticity, athetosis (dyskinetic), ataxia and mixed. Common clinical manifestation of cerebral palsy are mental retardation, seizure disorder, speech disorders, joint contractures, sensory deficits, bruxism, dental caries, malocclusion and periodontal diseases due to poor oral hygiene. Hence, management of cerebral palsy starts with good history taking and patient evaluation of symptoms.

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Abstract 36

BLEEDING DISORDER

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Bleeding disorder is also known as vessel wall disorder. It can be inherited or can be due environmental factors. Bleeding disorder that are inherited are Ehlers-Danlos syndrome and Rendu-Osler-Weber syndrome. Ehlers danlos syndrome is an autosomal dominant inherited disorder of connective tissue matrix, generally resulting in fragile skin blood vessels and easy bruising. It is characterized by hyperelasticity of the skin and hyper mobile joints. Eleven subtypes have been identified withe unique biochemical defects and varying clinical features. Rendu-Osler-Weber syndrome also called hereditary hemorrhagic telangiectasia, is a group of autosomal dominant disorders with abnormal telangiectatic capillaries, frequent episodes of nasal and gastrointestinal bleeding, and associated brain and pulmonary lesions. Diagnosis is facilitated by the history of nose bleeding and the observation of multiple non pulsating vascular lesions, where arterioles connect to venules representing small arteriovenous malformation. Environmental factors include dietary deficiency and use of corticosteroids. Scurvy, resulting from dietary deficiency of water soluble vitamin C, is found in regions of urban poverty, among either infants on non supplemented processed milk formulas, elderly who cook for themselves, or adults with alcohol or drug dependencies or mental retardation. Many of the hemorrhagic features of scurvy result from defects in collagen synthesis. Cushing's syndrome resulting from excessive exogenous and endogenous corticosteroid intake or production, leads to general protein wasting and atrophy of supporting connective tissue around blood vessels. Patient may show skin bleeding and easy bruising. Aging causes similar perivascular connective tissue atrophy and lack of skin mobility. Tears in small blood vessels can result in irregularly shaped purpurin areas on arms and hands called purpurin senilis.

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Abstract 37

ORAL MANIFESTATION OF ANAEMIA

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Anaemia is a disordered process in which the rate of red cell production fails to match the rate of destruction, which results in a reduction in haemoglobin concentration. Ethology of anaemia are excessive blood loss, iron deficiency, increased destruction of RBC's, decreased production of RBC's and folic acid deficiency. Extra-oral features of anaemia include chronic fatigue, pallor of conjunctive, lips and mucosa, brittle nails with spooning, cracking, splitting of nail beds and palmar crease. Intra-oral features include glossitis, stomatitis, angular cheilitis, pale oral mucosa, oral candidiasis, recurrent aphthous stomatitis, erythematous mucositis and burning mouth. Plummer-Vinson syndrome is also called Paterson-Kelly syndrome or sideropenic dysphagia, iron deficiency anaemia, and upperesophageal webs or strictures. It usually affects middle aged white women in the fourth to seventh decade of life but has also been described in children and adolescent. The clinical features of anaemia predominates. Additional features are glossitis, angular cheilitis and koilonychia. Radiograph if examination of pharynx shows presence of webs. Etiopathogenesis of Plummer-Vinson syndrome is unknown, however, the most important possible etiologic factor is iron deficiency. Other possible factors include malnutrition, genetic predisposition or autoimmune processes.

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Abstract 38

TRANSPORT OF OXYGEN AND CARBON DI OXIDE IN HUMAN BODY

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Oxygen and carbon dioxide dissociation curves were constructed for the blood of the Nile monitor lizard, Varanus niloticus, acclimated for 12h at 25 and 35°C. The oxygen affinity of Varanus blood was low when Pco2 wa s ln the range of in vivo values (25°C: Pso = 34-3 at PCO2 = 21mmHg; 35°C: Ps0 = 46-2mmHg at PCo2 = 35mmHg; 1 mmHg= 133-3 Pa), and the oxygen dissociation curves were highly sigmoidal (Hill's n = 2-97 at 25°C and 3-40 at 35°C). The position of the O2 curves was relatively insensitive to temperature change with an apparent enthalpy of oxygenation (AH) of — 9- 2kJmol~'. The carbon dioxide dissociation curves were shifted to the right with increasing temperature by decreasing total Cco2 a t fixed PCo2, whereas the state of oxygenation had little effect on total blood CO2 content. The in vitro buffer value of true plasma (A[HCO3~]pl/—ApHp!) rose from 12-0mequivpH~'r' at 25°C to 17-5 mequivpH"1 1"' at 35°C, reflecting a reversible increase of about 30 % in haemoglobin concentration and haematocrit levels during resting conditions in vivo.

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Abstract 39

MECHANISM OF STEROID HORMONE

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Steroid hormones regulate the expression of specific gene networks and thereby exert a wide variety of effects on growth, development, and differentiation in higher eukaryotes . The hormonal signals are transduced to the target genes through specific, intracellular receptors. The ligand-free receptor is functionally inactive. The hormone response is triggered by the binding of a steroidal ligand to its cognate receptor, followed by the interaction of the hormonereceptor complex with specific enhancer sequences referred to as steroid response elements (SREs) at the target gene. The receptor regulates gene transcription presumably by interacting with the transcription machinery at the target promoter.During the last several years, good progress has been made toward unravelling the molecular mechanism of signal transduction by steroid hormones. The molecular cloning of virtually all known steroid receptor genes has been accomplished, and precise definition of various SREs has been achieved through gene transfection experiments. However, the mechanisms underlying key molecular events in the steroid-induced gene activation pathway, such as ligand-induced activation of receptors and transactivation of target promoters by the activated receptor, have remained unresolved. One approach to analyzing these mechanisms is to reconstitute hormone and receptor-dependent gene activation in vitro. In a cell-free system one can precisely define the minimal combination and appropriate concentration of components necessary to achieve hormone and tissue-specific gene induction by careful manipulation of well-defined DNA templates, purified receptor and other transcription factors, and hormonal ligand. For many years the establishment of a steroid receptor-regulated gene expression system eluded the researchers in this area.

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Abstract 40

MECHANISM OF ATP SYNTHESIS

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The chemical mechanism by which ATP synthases catalyze the synthesis of ATP remains unknown despite the recent elucidation of the three-dimensional structures of two forms of the F1 catalytic sector (subunit stoichiometry, α3β3γδε). Lacking is critical information about the chemical events taking place at the catalytic site of each β-subunit in the transition state. we provided evidence for transition state formation in the presence of Mg2+, ADP, and orthovanadate (Vi), a photoreactive phosphate analog with a trigonal bipyramidal geometry resembling that of the γ-P of ATP in the transition state of enzymes like myosin. In the presence of ultraviolet light and O2,the MgADP•Vi-F1 complex was cleaved within the P-loop (GGAGVGKT) of a single β-subunit at alanine 158, implicating this residue as within contact distance of the γ-P of ATP in the transition state. Here, we report that ADP, although facilitating transition state formation, is not essential. In the presence of Mg2+ and Vi alone the catalytic activity of the resultant MgVi-F1 complex is inhibited to nearly the same extent as that observed for the MgADP•Vi-F1 complex. Inhibition is not observed with ADP, Mg2+, or Vi alone. Significantly, in the presence of ultraviolet light and O2,the MgVi-F1 complex is cleaved also within the P-loop of a single β-subunit at alanine 158 as confirmed by Western blot analyses with two different antibodies, by N-terminal sequence analyses, and by quantification of the amount of unreacted β-subunits. ATP synthases depicting a role for Mg2+ in transition state formation is proposed here for the first time.

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Abstract 40

MECHANISM OF ATP SYNTHESIS

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The chemical mechanism by which ATP synthases catalyze the synthesis of ATP remains unknown despite the recent elucidation of the three-dimensional structures of two forms of the F_1 catalytic sector (subunit stoichiometry, $\alpha_3\beta_3\gamma\delta\varepsilon$). Lacking is critical information about the chemical events taking place at the catalytic site of each β-subunit in the transition state. we provided evidence for transition state formation in the presence of Mg^{2+}, ADP, and orthovanadate (V_i), a photoreactive phosphate analog with a trigonal bipyramidal geometry resembling that of the γ-P of ATP in the transition state of enzymes like myosin. In the presence of ultraviolet light and O_2,the $MgADP{\cdot}V_i$-F_1 complex was cleaved within the P-loop (GGAGVGKT) of a single β-subunit at alanine 158, implicating this residue as within contact distance of the γ-P of ATP in the transition state. Here, we report that ADP, although facilitating transition state formation, is not essential. In the presence of Mg^{2+} and V_i alone the catalytic activity of the resultant MgV_i-F_1 complex is inhibited to nearly the same extent as that observed for the $MgADP{\cdot}V_i$-F_1 complex. Inhibition is not observed with ADP, Mg^{2+}, or V_i alone. Significantly, in the presence of ultraviolet light and O_2,the MgV_i-F_1 complex is cleaved also within the P-loop of a single β-subunit at alanine 158 as confirmed by Western blot analyses with two different antibodies, by N-terminal sequence analyses, and by quantification of the amount of unreacted β-subunits. These novel findings indicate that Mg^{2+} plays a pivotal role in transition state formation during ATP synthesis catalyzed by ATP synthases, a role that involves both its preferential coordination with P_i and the repositioning of the P-loop to bring the nonpolar alanine 158 into the catalytic pocket. A reaction scheme for ATP synthases depicting a role for Mg^{2+} in transition state formation is proposed here for the first time.

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Abstract 41

MAXILLARY TUBEROSITY FRACTURE DURING EXTRACTION

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Sudden, intra-operative fracture of maxillary tuberosity during upper molar extraction. The risk factors include dental anatomy characteristics or anomalies: long or bulbous roots, hypercementosis, multi-rooted teeth, lone standing upper molars, and highly pneumatized alveolus, pathoses: sinus disease, odontogenic cysts, periapical infection, ankylosis, osteoporosis and alveolar atrophy or, conversely, very dense bone, elevator use, particularly large elevators and elevators used as levers, rather than in a rotary fashion. Special considerations should be given to systematically compromised patients: diabetics, immunosuppressed (AIDS, chemotherapy), previously radiated, renal disease sufferers, and those taking bisphosphonates for osteoporosis or metastatic malignant disease.

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Abstract 42

PLACENTA

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The placenta is an organ that develops in your uterus during pregnancy. This structure provides oxygen and nutrients to your growing baby and removes waste products from your baby's blood. The placenta attaches to the wall of your uterus, and your baby's umbilical cord arises from it. In most pregnancies, the placenta attaches at the top or side of the uterus. Various factors can affect the health of the placenta during pregnancy, some modifiable and some not. For example: Certain placental problems are more common in older women, especially after age 40 .Premature rupture of the membranes. During pregnancy, your baby is surrounded and cushioned by a fluid-filled membrane called the amniotic sac. If the sac leaks or breaks before labor begins, the risk of certain placental problems increases. High blood pressure. High blood pressure can affect your placenta. Twin or other multiple pregnancy. If you're pregnant with more than one baby, you might be at increased risk of certain placental problems. Blood-clotting disorders. Any condition that either impairs your blood's ability to clot or increases its likelihood of clotting increases the risk of certain placental problems.

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Abstract 43

HEMIFACIAL SPASM

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First described by Gowers in 1884, hemifacial spasm represents a segmental myoclonus of muscles innervated by the facial nerve. The disorder presents in the fifth or sixth decade of life, almost always unilaterally, although bilateral involvement may occur rarely in severe cases. Hemifacial spasm generally begins with brief clonic movements of the orbicularis oculi and spreads over years to other facial muscles (corrugator, frontalis, orbicularis oris, platysma, zygomaticus). Clonic movements progress to sustained tonic contractions of involved musculature. Chronic irritation of the facial nerve or nucleus, the near-universal cause of hemifacial spasm, may arise from numerous underlying conditions. Facial musculature is subject to the same movement disorders as muscles of the limbs or trunk. Myoclonus, dystonia, and other movement disorders present with specific syndromes in the facial musculature. An understanding of the underlying mechanism leads to appropriate diagnostic evaluation and potential treatment. The causes of hemifacial spasm include vascular compression, facial nerve compression by a mass, brainstem lesions such as stroke or multiple sclerosis plaques, and secondary causes such as trauma or Bell palsy. Although specific treatments are available for many craniofacial movement disorders, botulinum toxin (BTX) chemodenervation has proven useful in many of these disorders, supplanting surgery and medical therapy.

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Abstract 44

APOPTOSIS PATHWAYS

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Apoptosis or programmed cell death is a key regulator of physiological growth control and regulation of tissue homeostasis. One of the most important advances in cancer research in recent years is the recognition that cell death mostly by apoptosis is crucially involved in the regulation of tumor formation and also critically determines treatment response. Killing of tumor cells by most anticancer strategies currently used in clinical oncology, for example, chemotherapy, -irradiation, suicide gene therapy or immunotherapy, has been linked to activation of apoptosis signal transduction pathways in cancer cells such as the intrinsic and/or extrinsic pathway. Thus, failure to undergo apoptosis may result in treatment resistance. Understanding the molecular events that regulate apoptosis in response to anticancer chemotherapy, and how cancer cells evade apoptotic death, provides novel opportunities for a more rational approach to develop molecular-targeted therapies for combating cancer.

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Abstract 45

TREACHER COLLINS SYNDROME

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Treacher Collins is a rare, inherited, congenital craniofacial condition affecting the bones, jaws, skin and muscles of the face. A syndrome is a disease or disorder that has more than one identifying feature or symptom. Children with Treacher Collins syndrome have many facial features in common, although there is a wide variation in the severity of the condition. Because this syndrome involves a number of different areas of the face, the treatment requires the skills and experience of a craniofacial team with a coordinated treatment plan. The other names for Treacher Collins syndrome are mandibulofacial dysostosis and Franceschetti-Zwalen-Klein syndrome. Treacher Collins syndrome occurs in about one of 10,000 live births.The cause of Treacher Collins syndrome is a genetic mutation that affects the baby's facial development before birth. The affected gene is called TCOF1 and is found on chromosome 5. The mutated gene produces abnormalities in a protein called treacle. About 60% of children with Treacher Collins syndrome have it because of spontaneous mutation, a new change in the gene, rather than inheriting it from their mother or father. Treacher Collins syndrome is an autosomal dominant condition, meaning that only one parent needs to have an abnormal gene for the child to inherit the disease. A person with Treacher Collins syndrome has a 50% chance for each pregnancy of passing the syndrome on to the child. But the severity of the syndrome can vary among members of the same family.

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Abstract 46

INFERIOR ALVEOLAR NERVE

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The inferior alveolar nerve is a bundle of nerve fibers that stems from the mandibular nerve in the head. The inferior alveolar nerve is situated near the lower jawbone, known as the mandible. It crosses to the mandibular foramen (the upper side portion of the mandible) and provides a nerve extension to the mylohyoid muscle that makes up the bottom of the oral cavity. The nerve supplies an additional extension to the small muscle just below the mandible known as the digastric. The inferior alveolar nerve is also located within the mandible in an area called the mandibular canal. Its entrance is made possible by the mandibular foramen, which is an opening in the lower jawbone. The bottom row of teeth receives sensory branches from the nerve. These inferior alveolar branches comprise the network of nerve fibers known as the inferior dental plexus, which then supplies the teeth with sensory information. The nerve also provides sensation to canines and incisors. Inferior alveolar nerve injury is one of the most serious complications in implant dentistry. This nerve injury can occur during local anesthesia, implant osteotomy, or implant placement. Several methods are used to localize the IAN during treatment planning. These include conventional radiography, tomography, and computerized tomography (CT). To localize the Inferior alveolar nerve, most clinicians use conventional radiography (eg, panoramic views, periapicals), which is sufficient for most cases.16 Panoramic radiographs can be used safely for most cases but with some limitations. A 2-mm safety zone between the apical part of the implant and the upper border of the IAN canal is strongly recommended by most implant manufacturers and practitioners.

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Abstract 47

SALIVARY BIOMARKERS FOR ORAL CANCER

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Using saliva for disease diagnostics and health surveillance is a promising approach as collecting saliva is relatively easy and non-invasive. Over the past two decades, using salivary biomarkers specifically for early cancer detection has attracted much research interest, especially for cancers occurring in the oral cavity and oropharynx, for which the five-year survival rate (62%) is still one of the lowest among all major human cancers. More than 90% of oral cancers are oral squamous cell carcinoma (OSCC) and the standard method for detection is through a comprehensive clinical examination by oral healthcare professionals. Despite the fact that the oral cavity is easily accessible, most OSCCs are not diagnosed until an advanced stage, which is believed to be the major reason for the low survival rate, and points to the urgent need for clinical diagnostic aids for early detection of OSCC. Thus, much research effort has been dedicated to investigating potential salivary biomarkers for OSCC, and more than 100 such biomarkers have been reported in the literature. However, some important issues and challenges have emerged that require solutions and further research in order to find reliable OSCC salivary biomarkers for clinical use. This review article provides an up-to-date list of potential OSCC salivary biomarkers reported as of the fall of 2013, and discusses those emerging issues. By raising the awareness of these issues on the part of both researchers and clinicians, it is hoped that reliable, specific and sensitive salivary biomarkers may be found soon—and not only biomarkers for early OSCC detection but also for detecting other types of cancers or even for monitoring non-cancerous disease activity.

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Abstract 48

NATURAL KILLER CELLS

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Human cytomegalovirus (HCMV) causes a highly prevalent infection which may have a multifaceted impact on chronic inflammatory disorders. However, its potential influence in multiple sclerosis (MS) remains controversial. The HCMV-host interaction may induce an adaptive reconfiguration of the natural killer (NK) cell compartment, whose hallmark is a persistent expansion of peripheral NKG2C+ NK-cells.HCMV may exert a beneficial influence on MS, decreasing the risk of disability progression in those patients displaying a virus-driven NKG2C+ NK-cell expansion.

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Abstract 49

MITRAL STENOSIS

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Mitral stenosis (MS) is disorder in which the mitral valve does not fully open which can be characterised by obstruction to left ventricular inflow at the level of mitral valve due to structural abnormality of the mitral valve apparatus. The most common cause of mitral stenosis is rheumatic fever. The association of atrial septal defect with rheumatic mitral stenosis is called Lutembacher syndrome.Other causes which are less common etiologies for mitral stenosis include malignant carcinoid disease, systemic lupus erythematosus, rheumatoid arthritis, mucopolysaccharidoses of the Hunter-Hurler phenotype. Congenital mitral stenosis can also occur. Stenosis of the mitral valve typically occurs decades after the episode of acute rheumatic carditis. Acute insult leads to formation of multiple inflammatory foci (Aschoff bodies, perivascular mononuclear infiltrate) in the endocardium and myocardium. Small vegetations along the border of the valves may also be observed. With time, the valve apparatus becomes thickened, calcified, and contracted, and commissural adhesion occurs, ultimately resulting in stenosis. Whether the progression of valve damage is due to hemodynamic injury of the already affected valve apparatus or to the chronic inflammatory nature of the rheumatic process is unclear. A number of conditions can simulate the physiology of mitral stenosis: severe nonrheumatic mitral annular calcification, infective endocarditis with large vegetation, left atrial myxoma, ball valve thrombus, and cortriatriatum. The symptoms in adults may not occur. However, symptoms may appear or get worse with exercise or other activity that raises the heart rate. Symptoms will most often develop between ages 20 and 50.

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Abstract 50

AMYLOIDOSIS

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It is a rare disease that results from accumulation of inappropriately folded proteins. These misfolded proteins are called amyloids. When proteins that are normally soluble in water fold to become amyloids, they become insoluble and deposit in organs or tissues, disrupting normal function.The type of protein that is misfolded and the organ or tissue in which the misfolded proteins are deposited determines the clinical manifestations of amyloidosis.There are four main types of amyloidosis each due to a deposition of common protien.The most common is AL amyloidosis caused by the deposition of light cell protien produced by plasma cells in different cell States.The second most is AA Amyloidosis due to the accumulation of S amyloid A protein or SAA.other minor forms also found.

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Abstract 51

ESSENTIAL OILS IN DENTISTRY

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Thirteen essential oils (Apium graveolens, Citrus sinensis, Eucalyptus globulus, Juniperus oxycedrus, Laurus nobilis, Lavandula hybrida, Mentha microphylla, Mentha viridis, Ocimum basilicum, Origanum vulgare, Pistacia terebinthus, Rosmarinus officinalis, and Thuja orientalis) were tested in their vapour form against Acanthoscelides obtectus. Choice and no-choice tests revealed that most of them have a repellent action .The repellency of the essential oil of anti-tick pasture shrub Gynandropsis gynandra and identified constituents of the oil were evaluated against the livestock tick, Rhipicephalus appendiculatus. Methyl isothiocyanate which occurred in the G. gynandra oil at a relative percentage of 2.1 and may also contribute significantly to the repellency of the oil. Essential oils from plants like Myrtus comunis, Origanum syriacum , Laventula stoechos and pure compounds like thymol and carvacol have been documented for larvicidal activities towards Culex pipens molestus. Cymbopogan citratus essential oil toxicity to Cx. quinquefasciatus larvae.Essential oil of Z. officinalis served as a potential larvicidal and repellent agent against filarial vector C. quinquefasciatus. Artemisia vulgaris oil had high fumigant activity against adults of Tribolium castaneum and larvae with adults much more susceptible than larvae. At 8.0 µL/mL, mortality of adults reached 100%, but with 12-, 14- and 16-day larvae, mortalities were 49%, 53% and 52%, respectively. The oil also had high-fumigant activity against eggs and toxicity progressively increased with increased exposure time and concentration. At dosages of 10, 15 and 20 µL/L air and a 96 h exposure period, mortality reached 100%.

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Abstract 52

HAEMOPHILIA

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Haemophilia is an inherited disease that results in the body being unable to clot normally. The basics to this disease is the low concentration of clotting factors. As a result, a person will bleed for a longer time than an average person would. There is two types of haemophilia; which is haemophilia A and haemophillia B. Both types of haemophilia is resulted from the same causes but it differentiates based on the involvement of different types of clotting factors. Haemophilia A is the most common form of haemophilia that is inherited.This genetic is mainly caused by the mutation to the genes of coagulating factors VIII or IX. In about 70% of cases, this disease will be inherited from a parent while the other 30% is not inherited at all. This mutation is a result of spontaneous gene mutation during fertilization. In order to determine whether a person has haemophilia or not, they will experience excessive bleeding and they can get easily bruised. The severity of the symptoms highly depends on the levels of haemophilia that a person has. For people with mild hemophilia, they will normally have excessive bleeding post-dental prcedures, accidents or surgery. This from of hemophilia is normally unnoticeable and will only later be diagnosed during adolescence or adulthood. If a person has severe hemophila, they may bleed during circumcision. Some of the other common symptoms include joint bleeding, soft tissue bleeding or prolonged bleeding in the mouth as a result of a cut.With the advancement in technology and knowledge, medications that specifically contain genetically engineered clotting factor can be used as treatments to prevent as well as treat prolonged bleeding

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Abstract 53

MITRAL VALVE STENOSIS

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The mitral valve of the body functions to allow blood to pass through but in return cannot flow backwards. In this disease known as mitral valve stenosis or mitral stenosis, the opening of this valve is narrowed. As a result, not enough blood can flow through this valve. The low amount of blood wills untimely lead to problems such as fatigue, blood clots and heart failure. This heart disease is normally caused by rheumatic fever; which can normally be affected during childhood. The basic mechanism to this disease is the immune system's response in battling the infection via the usage of streptococcal bacteria. This disease is also caused by a congenital heart defect that exists since birth. Surgeries are normally done to babies that have this type of disease. It may also be caused by the build up of calcium that will result in the narrowing of the mitral valve. Some of the other rare causes to this disease is tumors, blood clots, and radiation treatments. When a person has the mitral stenosis disease, they will experience coughing, fatigue, swollen ankles, respiratory infections or plum-coloured cheeks. In most case, a person may not be able to identify the symptoms until they exercise or to strenous activities. In order to treat this disease, normally medications that are prescribed by the doctors include anticoagulants, diurects, antiarrhythmics or beta-blockers.

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Abstract 54

DIABETES RELATED TO ORAL PROBLEMS

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People with poorly controlled diabetes are more susceptible to dental problems. They are more likely to have infections of their gums and the bones that hold the teeth in place, because diabetes can reduce the blood supply to the gums. In addition, high blood sugar may cause dry mouth and make gum disease worse. The decrease in saliva can cause an increase in tooth-decaying bacteria and plaque buildup. When a person with diabetes has good blood sugar control, there's no increased risk of dental problems. If a person has diabetes, symptoms of dental problems include bleeding and sore gums, frequent infections, and bad breath. Some of the other symptoms include Dry mouth, which can lead to soreness, ulcers, infections, and tooth decay. Inflammation in your gums.Thrush. People with diabetes who often take antibiotics to fight infections are more likely to get this fungal infection of the mouth and tongue. The fungus thrives on the high levels of sugar in the saliva of people with uncontrolled diabetes. It can give your mouth and tongue a burning feeling. You can do a lot to avoid these problems, starting with the basics of taking good care of your mouth, teeth, and gums. Some everyday dental tips include; keeping blood sugar as close to normal as possible. If you have dry mouth, try a mouthwash without alcohol. Brush your teeth after every meal. Wait at least 30 minutes after eating before brushing to protect any tooth enamel that's been softened by acid in the food. Use a toothbrush with soft bristles.Floss at least once a day.If you wear dentures, remove them and clean them daily. Do not sleep in them. If you smoke, talk to your doctor about ways to quit.

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Abstract 55

ECTOPIC PREGNANCY

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An ectopic pregnancy (EP) is a condition in which a fertilized egg settles and grows in any location other than the inner lining of the uterus. The vast majority of ectopic pregnancies are so-called tubal pregnancies and occur in the Fallopian tube. However, they can occur in other locations, such as the ovary, cervix, and abdominal cavity. An ectopic pregnancy occurs in about one in 50 pregnancies. A molar pregnancy differs from an ectopic pregnancy in that it is usually a mass of tissue derived from an egg with incomplete genetic information that grows in the uterus in a grape-like mass that can cause symptoms to those of pregnancy. The major health risk of ectopic pregnancy is rupture leading to internal bleeding. Before the 19th century, the mortality rate from ectopic pregnancies exceeded 50%. By the end of the 19th century, the mortality rate dropped to five percent because of surgical intervention. Statistics suggest with current advances in early detection, the mortality rate has improved to less than five in 10,000. The survival rate from ectopic pregnancies is improving even though the incidence of ectopic pregnancies is also increasing. The major reason for a poor outcome is failure to seek early medical attention. Ectopic pregnancy remains the leading cause of pregnancy-related death in the first trimester of pregnancy. In rare cases, an ectopic pregnancy may occur at the same time as an intrauterine pregnancy. This is referred to as heterotopic pregnancy. The incidence of heterotopic pregnancy has risen in recent years due to the increasing use of IVF (in vitro fertilization) and other assisted reproductive technologies (ARTs).

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Abstract 56

PHILOMENA OF NECROSIS

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Necrosis ("death, the stage of dying, the act of killing" "dead") is a form of cell injury which results in the premature death of cells in living tissue by autolysis. Necrosis is caused by factors external to the cell or tissue, such as infection, toxins, or trauma which result in the unregulated digestion of cell components. In contrast, apoptosis is a naturally occurring programmed and targeted cause of cellular death. While apoptosis often provides beneficial effects to the organism, necrosis is almost always detrimental and can be fatal.Cellular death due to necrosis does not follow the apoptotic signal transduction pathway, but rather various receptors are activated, and result in the loss of cell membrane integrity and an uncontrolled release of products of cell death into the extracellular space. This initiates in the surrounding tissue an inflammatory response which prevents nearby phagocytes from locating and eliminating the dead cells by phagocytosis. For this reason, it is often necessary to remove necrotic tissue surgically, a procedure known as debridement. Untreated necrosis results in a build-up of decomposing dead tissue and cell debris at or near the site of the cell death.

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Abstract 57

GESTATIONAL DIABETES

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Gestational diabetesmellitus (GDM) is common diabetes that affect□7% of all pregnancies. Itis develops during pregnancy, usually around the 24th week of pregnancy. It is defined as any degree of glucose intolerance that occurs with pregnancy or is first discovered during pregnancy.GDM imposes risks on both mother and fetus. Like the other types of diabetes, gestational diabetes affects how your cells use sugar (glucose). Pregnancy confers a state of insulin resistance and hyperinsulinemia that may predispose some women to develop diabetes.GDMoccurs when a woman's pancreatic function is not sufficient to overcome the diabetogenic environment of pregnancy. Maternal complications include pre-eclampsia, hyperglycemic crisis, urinary tract infections that may result in pyelonephritis, need for cesarean sections, morbidity from operative delivery, increased risk of developing overt diabetes, and possibly cardiovascular complications later in life, including hyperlipidemia and hypertension. Mothers with GDM have a 50% chance of developing type 2 diabetes mellitus (T2DM) for the 20 years following their diagnosis of GDM. Maternal hyperglycemia causes increased glucose delivery to the fetus, resulting in fetal hyperinsulinemia and increased fetal growth. Complications of excessive fetal growth include birth trauma, increased cesarean deliveries, and the long-term risk of glucose intolerance and obesity. Other immediate fetal complications include hypoglycemia, hyperbilirubinemia, respiratory distress syndrome, cardiomyopathy, and hypocalcemia.This plethora of risks demonstrates the importance of early risk stratification with appropriate screening and diagnosis and of therapeutic interventions that maintain optimal glycemic control.

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Abstract 58

PERNICIOUS ANEMIA

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Pernicious anemia is a condition caused by too little vitamin B12 in the body. It is a form of vitamin B12 deficiency anemia. Basically, Vitamin B12 helps the body to make healthy red blood cells and helps keep nerve cells healthy. It is usually found in animal foods, including meat, fish, eggs, milk, and other dairy products. The most common cause of pernicious anemia is the loss of stomach cells that make intrinsic factor. Intrinsic factor helps the body absorb vitamin B12 in the intestine. The loss of parietal cells may be due to destruction by the body's own immune system. Pernicious anemia can cause permanent damage to nerves and other organs if it goes on for a long time without being treated. It also raises the risk for developing stomach cancer. Common signs and symptoms of pernicious anemia are feeling tired and weak, tingling and numbness in hands and feet and also bright red, smooth tongue. Pernicious anemia is diagnosed using family history and medical history, a physical exam, and diagnostic tests and procedures. Pernicious anemia is easy to treat with vitamin B12 pills or shots as well as diet changes. Life-long treatment is needed. Complications caused by untreated pernicious anemia may be reversible with treatment. Doctors don't know how to prevent pernicious anemia that is caused by the immune system destroying stomach cells. Eating foods high in vitamin B12 and folic acid can help prevent vitamin B12 deficiency caused by a poor diet.

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Abstract 59

POLYCYSTIC OVARY

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Polycystic ovarian syndrome, or PCOS, is a common endocrine system disorder among women of reproductive age.In this condition a woman's levels of the sex hormones estrogen and progesterone are abnormal or out of balance. This abnormality leads to the growth of ovarian cysts (benign masses on the ovaries), in which the ovaries enlarged and contains small collections of fluid that called as follicles, in which it is located in each ovary as seen during an ultrasound exam. According to the U.S. Department of Health and Human Services, between 1 in 10 and 1 in 20 women of childbearing age suffers from PCOS. The condition currently affects up to 5 million women in the United States. This syndrome can cause problems with a women's menstrual cycle, fertility, cardiac function, and appearance. Usually, symptoms of PCOS typically start soon after a woman begins to menstruate. The type and severity of symptoms varies from person to person. The most common characteristic of PCOS is irregular menstrual periods. In fact, PCOS is related to decrease in female sex hormones, thus this condition may causes woman to develop certain of the male characteristics, such as excess hair on the face, chest, stomach, thumbs, or toes, decrease in breast size, deeper voice and thin hair. Infrequent or prolonged menstrual periods, excess hair growth, acne, and obesity can also occur in women with polycystic ovary syndrome. In adolescents, infrequent or absent menstruation may raise suspicion for the condition. The exact cause of polycystic ovary syndrome is unknown. Early diagnosis and treatment along with weight loss may reduce the risk of long-term complications, such as type 2 diabetes and heart disease.

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Abstract 60

ROLE OF APOPTOSIS IN SQUAMOUS CELL CARCINOMA

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The Rel/nuclear factor-kappaB (Rel/NF-kappaB) transcription factors have been implicated previously in control of apoptosis, cell proliferation, and oncogenesis. Here we show that selective inhibition of Rel/NF-kappaB signaling in murine skin, by targeted overexpression of a super-repressor form of IkappaB-alpha, results in an increased basal frequency of apoptotic cells and the spontaneous development of squamous cell carcinomas. Presence of hyperplasia and hair follicle degeneration demonstrate an important role for Rel/NF-kappaB signaling in normal epidermal development and homeostasis. Transgenic skin, in addition, showed an enhanced sensitivity to UV-induced apoptosis. These data suggest an involvement of the Rel/NF-kappaB signaling pathway in apoptosis and cancer development of the skong-term ultraviolet-light (UV) exposure of human skin epidermis is associated with an increased risk for the development of skin cancers, such as melanoma, basal cell carcinoma (BCC) and squamous cell carcinoma (SCC). UV radiation not only induces DNA damage in epidermal cells, it also interferes with skin homeostasis, which is maintained by a unique distribution pattern of apoptosis-inducing and -preventing molecules. If the DNA damage is not repaired or the damaged cells are not eliminated by apoptosis, the consequence can be cell transformation, uncontrolled proliferation and eventually skin tumor formation. An important ‘repair’ gene is the p53suppressor gene. Excessive UV exposure can mutate the p53 gene leading to the loss of its repair function and thus apoptosis resistance of the DNA-damaged cell.

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Abstract 61

EFFECT OF SPACEFLIGHT ON HUMAN PHYSIOLOGY

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Below is the description of the physiologic and psychological responses to the space-flight environment. First and foremost, there will be a shift in body fluid. This can be explained as the acclimation of the cardiovascular system to weightlessness is complex and not completely understood. Control mechanisms involving the autonomic nervous system, cardiac functions and peripheral vasculature all play a role. However, the primary cause of these acclimations can be attributed to a redistribution of body fluids toward the head. The supine prelaunch position with the lower limbs raised above the thoracoabdominal coronal plane initiates a fluid shift, which continues during orbit, with blood and other fluids moving from the lower limbs to the torso and head. The first 24 hours of space flight are characterized by a 17% reduction in plasma volume that results in transiently increased levels of hematocrit. This appears to cause a decrease in erythropoietin secretion, leading to a reduction in the mass of red blood cells. Next is bone demineralization. Microgravity induces a loss of bone density. In the micro-gravity environment of space, astronauts are no longer statically loaded by gravity. Skeletal impact loads typically associated with running and walking on earth are greatly reduced or absent. Other factors that may contribute to bone loss in space include low levels of light, resulting in decreased vitamin D3, and higher ambient levels of carbon dioxide, leading to respiratory acidosis. Lastly, muscle atrophy where the muscles lose both mass and strength during space flight. The fundamental cause of this muscle atrophy is the absence of gravitational loading on bones and muscles during space flight. Muscle unloading results in biochemical and structural changes. Additional factors that contribute to muscle loss may be suboptimal nutrition and stress.

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Abstract 62

FOETAL SKULL

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The foetal skull is the most difficult part of the baby to pass through the mother's pelvic canal, due to the hard bony nature of the skull. Understanding the anatomy of the foetal skull and its diameter will help you recognise how a labour is progressing, and whether the baby's head is 'presenting' correctly as it comes down the birth canal. This will give you a better understanding of whether a normal vaginal delivery is likely, or if the mother needs referral because the descent of the baby's head is not making sufficient progress. Correct presentation of the smallest diameter of the foetal skull to the largest diameter of the mother's bony pelvis is essential if delivery is to proceed normally. But if the presenting diameter of the foetal skull is larger than the maternal pelvic diameter, it needs very close attention for the baby to go through a normal vaginal delivery. It consists of vault, face and base. The vault is composed of 2 frontal bones separated by the frontal suture, 2 parietal bones separated by the sagittal suture, the occipital bone separated by the lambdoidal suture from the parietal bones, while the coronal suture separates the frontal from the parietal bones.. The vertex is the area of the vault bounded anteriorly by the anterior fontanelle and the coronal suture, posteriorly by the posterior fontanelle and lambdoidal suture, laterally by 2 lines passing by the parietal eminencies. The brow is the area from the nose and supra-orbital ridges to the anterior fontanelle and coronal suture. These are 6 areas lie at the meeting of the sutures. Four fontanelles lie at the anterior and posterior end of the temporal sutures on each side and have no obstetric importance. The anterior and posterior fontanelles are important to diagnose are the vertex presentation, the position of the occiput, the degree of flexion of the head.

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Abstract 63

TOOTH ANOMALY

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Dental anomalies are craniofacial abnormalities of form, function or position of the teeth. These range from missing or stained teeth to expressions of other, more complex disorders. Many dental anomalies are caused by inherited genetic defects or result from spontaneous genetic mutations. There are disturbances in the eruption of teeth, abnormalities in number of teeth, abnormalities in the shape of the tooth and disturbances in formation. The examples of disturbances in the eruption of teeth are natal teeth, neonatal teeth and eruption sequestrum. In the natal teeth, these are extra teeth that are present at birth, caused by developmental disturbance creates intracellular activity during the first stage of tooth development, which can result in the development of extra teeth. These teeth also make breastfeeding difficult. Abnormalities in Number of Teeth is anodontia which is a congenital abnormality where some or all of the teeth are missing i.e. the follicles needed to grow the teeth are completely absent. Anodontia can be divided into true Anodontia- Complete failure of development of primary as well as permanent teeth. Treatment is surgical separation of the tee. The teeth have a higher risk for dental cavities and are hypersensitive to temperature changes. This disorder can afflict any number of teeth.Enamel is composed mostly of mineral and regulated by the proteins in it. Amelogenesis Imperfecta is due to the malfunction of the proteins in the enamel: ameloblastin, enamelin, tuftelin and amelogenin.Crowns are sometimes used to compensate for the soft enamel. Usually stainless steel crowns are used in children, which may be replaced by porcelain once they reach adulthood. In the worst case scenario, the teeth may have to be extracted and implants or dentures are required.

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Abstract 64

CELLULAR ADAPTATIONS IN ORAL LESIONS

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The effect of phytohaemagglutinin (PHA) on the adaptation of the proximal jejunal epithelium and on the distal ileal epithelium was studied in rats. The group receiving PHA gained less weight than controls, and the enterocyte population of their jejunal villi, as well as the morphokinetic parameters (length, population, crypt cell production per crypt) of their jejunal and ileal crypts were higher than those of the controls. The proximal lesion caused by PHA (reduction of villus cell populations) stimulates hyperplasia of the crypt-villus unit of the ileal epithelium with the development of adaptation from afar. These adaptations occurred in animals that ingested PHA even in the presence of severe malnutrition.

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Abstract 65

NIOSOMES

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Drug targeting is the ability to direct a therapeutic agent specifically to desired site of action with little or no interaction with nontarget tissue. Niosomes are one of the best carriers for drug targeting. Niosomes are microscopic lamellar structures formed on admixture of non-ionic surfactant of the alkyl or dialkyl polyglycerol ether class and cholesterol with subsequent hydration in aqueous media. Niosomes are biodegradable, relatively nontoxic, more stable and inexpensive, an alternative to liposomes. Niosomes can be SUV (Small Unilamellar Vesicles), MLV (Multilamellr Vesicles) or LUV (Large Unilamellar Vesicles). The method of preparation of niosome is the based on liposome technology. The basic process of preparation is the same i.e. hydration of the lipid phase by aqueous phase. Niosomes are characterized by vesicle size, bilayer formation, number of lamellae, membrane rigidity and entrapment efficiency. A method of in-vitro release rate study includes the use of dialysis tubing. Niosomal drug delivery is potentially applicable to many pharmacological agents for their action against various diseases including cancer and leishmaniasis

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Abstract 66

MITOCHONDRIAL DNA ANALYSIS

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Mitochondrial DNA is maternally inherited therefore all of the individuals in the maternal lineage of a family (i.e. mother, daughter, sibling) will share the same mitochondrial DNA. MtDNA analysis is used in both forensic and non-forensic cases. MtDNA analysis can be used if an individual is missing or unable to provide a biological sample and a living maternal relative is available to provide the necessary DNA sample for comparison purposes. mtDNA analysis is also used if a biological sample is degraded or has failed to yield enough DNA for nuclear (STR) analysis. The higher sensitivity of mtDNA analysis is due to the large number of mtDNA copies in each cell (approximately 100-1000 copies of mtDNA, compared to only two copies of each STR marker).Samples suitable for mtDNA analysis are human hair shafts, skeletal remains (bones and teeth), or any biological sample that is degraded or failed to produce STR results. Mtdnaprovides a valuable focus for forensic dna typing in certain circumstances. The high number of nucleotide variants in the two hyper variable portions of the non-coding control region can allow discrimination among individuals and or biological samples. Mtdna is inherited from the mother only so that in situations where an individual is not available may provide a reference sample.

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Abstract 67

XERODERMA PIGMENTOSA

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Xerodermapigmentosum (XP) is a hereditary condition characterized by extreme sun sensitivity, leading to a very high risk of skin cancer. Eye problems are also common. Neurologic problems—including learning disabilities, progressive hearing loss, progressive neuromuscular degeneration, loss of some reflexes, and occasionally, tumors in the central nervous system—occur in some people with XP. People with XP are extremely sensitive to ultra-violet (UV) radiation. This includes UVA and UVB. Exposure to even a very small amount of UV radiation leads to severe sunburn and blistering, beginning at a very young age. The sensitivity to UV radiation results in increased freckling, as well as areas of lighter (hypo) skin pigmentation. They also have very dry skin. There is a high risk of squamous cell and basal cell skin cancers and melanoma. People with XP also have eye problems, especially with the eyelids. Like their skin, their eyes are also very sensitive to light, which gives them a slightly increased risk of cancer of the eye. Cancers of the lips, mouth, and the tip of the tongue have also been reported. In addition, people with XP may have neurological complications, including developmental disabilities, mental handicap, and high-frequency hearing loss that leads to deafness. Signs of sun sensitivity include severe burning and blistering with only a small amount of sun exposure or even exposure to fluorescent lights. These signs can be present in infancy. Young children may also be suspected of having XP if they have a large number of freckles on their face. The characteristic eye and neurologic problems may also increase the doctor's suspicion that a person has XP. The clinical signs of XP vary widely, depending on the type of mutations involved and the extent of

sun exposure that a person with XP has had genetic testing for mutations in the genes associated with XP is available, mainly as part of research studies.

Abstract 68

ADIPONECTIN

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Adiponectin is a novel adipocyte-specific protein, which, it has been suggested, plays a role in the development of insulin resistance and atherosclerosis. Although it circulates in high concentrations, adiponectin levels are lower in obese subjects than in lean subjects. Apart from negative correlations with measures of adiposity, adiponectin levels are also reduced in association with insulin resistance and type 2 diabetes. Visceral adiposity has been shown to be an independent negative predictor of adiponectin. Thus, most features of the metabolic syndrome's negative associations with adiponectin have been shown. Adiponectin levels seem to be reduced prior to the development of type 2 diabetes, and administration of adiponectin has been accompanied by lower plasma glucose levels as well as increased insulin sensitivity. Furthermore, reduced expression of adiponectin has been associated with some degree of insulin resistance in animal studies indicating a role for hypoadiponectinaemia in relation to insulin resistance. The primary mechanisms by which adiponectin enhance insulin sensitivity appears to be through increased fatty acid oxidation and inhibition of hepatic glucose production. Adiponectin levels are increased by thiazoledinedione treatment, and this effect might be important for the enhanced insulin sensitivity induced by thiazolidinediones. In contrast, adiponectin levels are reduced by pro-inflammatory cytokines especially tumour necrosis factor-alpha. In summary, adiponectin in addition to possible anti-inflammatory and anti-atherogenic effects appears to be an insulin enhancer, with potential as a new pharmacologic treatment modality of the metabolic syndrome and type 2 diabetes.

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Abstract 69

ATOPENS

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Sensitization to atopens is an early phenomenon that overlaps with the onset of atopic dermatitis (AD) in infancy. Early epidermal barrier impairment may facilitate the epicutaneous penetration of atopens.To correlate transepidermal water loss (TEWL) and aeroallergen sensitization in infants with AD. In this cross-sectional study we enrolled 59 AD children and 30 controls aged 3-12 months. Transepidermal water loss in uninvolved skin, specific immunoglobulin E, atopy patch test (APT) and skin prick tests were performed with respect to seven aeroallergens, i.e., Dermatophagoides pteronyssinus, D. farinae, cat, dog, birch pollen, ambrosia, and cockroach. Environmental conditions were assessed by a questionnaire, and the house dust mite (HDM) concentration was determined in dust samples. Eighty-nine percent of AD infants had a positive APT vs one out of eleven controls. AD infants had a significantly higher mean TEWL than controls (27.4 vs 11.1 g/m(2)/h, P < 0001). Children with two or more positive APT had higher TEWL than the others (31.1 vs 19.0 g/m(2)/h, P < 0.025). No correlation was found between indoor APT results and exposure to HDM, cats, and dogs at home. This study confirms the high prevalence of delayed sensitization to indoor and outdoor aeroallergens in AD infants, and shows that the higher the TEWL, the higher the prevalence of sensitization to aeroallergens. These data are in favor of a major role of aconstitutive epidermal barrier impairment in determining early atopen sensitization in infants with AD. Expression of Melan-A (MART1) in Benign Melanocytic Nevi and Primary Cutaneous Malignant Melanoma

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Abstract 70

PIGMENTATION IN OCCUPATIONAL HAZARDS

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The main threats to human health from heavy metals are associated with exposure to lead, cadmium, mercury and arsenic. These metals have been extensively studied and their effects on human health regularly reviewed by international bodies such as the WHO. Heavy metals have been used by humans for thousands of years. Although several adverse health effects of heavy metals have been known for a long time, exposure to heavy metals continues, and is even increasing in some parts of the world, in particular in less developed countries, though emissions have declined in most developed countries over the last 100 years. Cadmium compounds are currently mainly used in re-chargeable nickel–cadmium batteries. Cadmium emissions have increased dramatically during the 20th century, one reason being that cadmium-containing products are rarely re-cycled, but often dumped together with household waste. Cigarette smoking is a major source of cadmium exposure. In non-smokers, food is the most important source of cadmium exposure. Recent data indicate that adverse health effects of cadmium exposure may occur at lower exposure levels than previously anticipated, primarily in the form of kidney damage but possibly also bone effects and fracturesTherefore, measures should be taken to reduce cadmium exposure in the general population in order to minimize the risk of adverse health effects. The general population is primarily exposed to mercury via food, fish being a major source of methyl mercury exposure, and dental amalgam. The general population does not face a significant health risk from methyl mercury, although certain groups with high

fish consumption may attain blood levels associated with a low risk of neurological damage to adults.

Abstract 71

PLACENTA PREVIA

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Placenta previa is a complication of pregnancy in which the placenta (the organ that joins the mother and fetus and transfers oxygen and nutrients to the fetus) is implanted either near to or overlying the outlet of the uterus (womb). Placenta previa is found in approximately four out of every 1000 pregnancies beyond the 20th week of gestation. The main symptom of placenta previa is bleeding. Several terms have been used to characterize placenta previa. The types of placenta previa include: Complete placenta previa refers to the situation in which the placenta completely covers the opening from the womb to the cervix. Partial placenta previa refers to the placenta that partially covers the cervical opening (since the cervical opening is not dilated until time for delivery approaches, bleeding may occur after the cervix has begun to dilate).Marginal placenta previa refers to a placenta that is located adjacentto, but not covering, the cervical opening. The term low-lying placenta or low placenta has been used to refer both to placenta previa and marginal placenta previa. The terms anterior placenta previa and posterior placenta previa are sometimes used after ultrasound examination to further define the exact position of the placenta within the uterine cavity.

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Abstract 72

DENTAL MANAGEMENT WITH RESPIRATORY PROBLEM

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Many respiratory disorders can compromise routine dental care and require special treatment for the affected pa- tients. Patients often visit the dental clinic with respiratory problems already diagnosed by other specialists. The dental professional therefore must provide correct dental care in the context of such a diagnosis. The present study offers a literature review of those respiratory disorders which can have implications for dental care. Chronic obs- tructive pulmonary disease (COPD) and asthma require special measures, such as working with the patient in the vertical position, since some of these subjects do not tolerate decubitus. On the other hand, patients with COPD can suffer infectious lung diseases secondary to the aspiration of microorganisms in the presence of deficient periodon- tal conditions. The treatments received by patients with respiratory diseases can also influence their oral health. In this sense, it has been shown that inhalatory medication used for asthma can cause oral disorders such as xerosto- mia, oropharyngeal candidiasis and an increased presence of caries (due to the action of β-agonists), as well as gin- givitis. In contrast, oral manifestations of tuberculosis are infrequent. The clinical appearance of the lesions is very similar to that of squamous cell carcinoma; it is therefore important to establish a correct differential diagnosis in such cases. Mention also will be made of patients with obstructive sleep apnea syndrome (OSAS), characterized by critical narrowing and occlusion of the upper airways during sleep. In this context, the dental professional is often directly implicated in the management of such patients by preparing and fitting oral devices designed to advance the mandible. Lastly, mention will be made of dental management in the

event of foreign body aspiration, where rapid intervention by the dental professional is critical. The basic approach in such cases is adequate prevention.

Abstract 73

AMALGAM TATTOOING

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Amalgam tattoo is an iatrogenic lesion caused by traumatic implantation of dental amalgam into soft tissue. Amalgam tattoo is the most common localized pigmented lesion in the mouth. In a study of a mass screening oral examination in the United States, it was found in about 0.4-0.9% of the adult population and in Sweden in about 8%. Clinically, amalgam tattoo presents as a dark gray or blue, flat macule located adjacent to a restored tooth. Most are located on the gingiva and alveolar mucosa followed by the buccal mucosa and the floor of the mouth. Microscopic examination reveals that amalgam is present in the tissues in two forms: as irregular dark, solid fragments of metal or as numerous, discrete fine, brown or black granules dispersed along collagen bundles and around small blood vessels and nerves. In most lesions, it is presented in both forms. The biologic response to the amalgam is related to particle size, quantity and elemental composition of the amalgam. Smaller particles are associated with mild to moderate chronic inflammatory response with individual macrophages engulfing small amalgam particles. Diagnosis of amalgam tattoo is usually obvious from the location and clinical appearance. A radiograph is recommended to confirm the presence of metallic particles, but absence of radiographic evidence does not rule out the possibility, since particles are often too fine or widely dispersed to be visible on radiographs. When there is no radiographic evidence or an adjacent restored tooth, biopsy is recommended to rule out an early melanoma. Once the diagnosis of amalgam tattoo has been established, no additional treatment is necessary except for cosmetic reasons. If the pigmentation is cosmetically unacceptable, surgical excision and

transplantation of oral mucosal tissue has been suggested. Q-switched ruby laser and Q-switched alexandrite laser have also been used with favorable results.

Abstract 74

ORAL PROBLEMS IN MENOPAUSE

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Numerous oral changes can occur as a consequence of advanced age, the medications taken to combat diseases and hormonal changes due to the menopause. These oral changes can include altered taste, burning sensations in the mouth, greater sensitivity to hot and cold foods and drinks, and decreased salivary flow that can result in dry mouth. Dry mouth, in turn, can result in the development of tooth decay and gum disease because saliva is not available to moisten and cleanse the mouth by neutralising acids produced by plaque. Dry mouth can also result from many prescription and over-the-counter medications that are commonly prescribed to older adults. The decline in oestrogen that occurs with menopause also puts women at greater risk of loss of bone density. Loss of bone, specifically in the jaw, can lead to tooth loss. Receding gums can be a sign of bone loss in the jawbone. Receding gums also expose more of the tooth surface to potential tooth decay.

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Abstract 75

RH INCOMPATIBILITY

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During pregnancy, red blood cells from the unborn baby can cross into the mother's bloodstream through the placenta. If the mother is Rh-negative, her immune system treats Rh-positive foetal cells as if they were a foreign substance and makes antibodies against the foetal blood cells. These anti-Rh antibodies may cross back through the placenta into the developing baby and destroy the baby's circulating red blood cells.When red blood cells are broken down, they make bilirubin. This causes an infant to become yellow (jaundiced). The level of bilirubin in the infant's bloodstream may range from mild to dangerously high because it takes time for the mother to develop antibodies, firstborn infants are often not affected unless the mother had past miscarriages or abortions that sensitised her immune system. However, all children she has afterwards who are also Rh-positive may be affected. Rh incompatibility develops only when the mother is Rh-negative and the infant is Rh-positive. Thanks to the use of special immune globulins called RhoGHAM, this problem has become uncommon in places that provide access to good prenatal care. Rh incompatibility can cause symptoms ranging from very mild to deadly. In its mildest form, Rh incompatibility causes the destruction of red blood cells without other effects. After birth, the infant may have yellowing of the skin and whites of the eyes (jaundice) and Low muscle tone (hypotonia) and lethargy. Before delivery, the mother may have an increased amount of amniotic fluid around her unborn babyThere may be a positive direct

Coombs test results. Higher-than-normal levels of bilirubin in the baby's umbilical cord blood and Signs of red blood cell destruction in the infant's blood.

Abstract 76

COENZYME - Q10 - IT'S THERAPEUTIC ROLE IN PERIODONTITIS

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Coenzyme Q10 is a naturally occurring coenzyme formed from the conjugation of a benzoquinone ring with a hydrophobic isoprenoid chain of varying chain length, depending on the species. The chemical nomenclature of CoQ10 is 2,3-dimethoxy-5-methyl-6-decaprenyl-1,4-benzoquinone that is in the trans configuration (natural). It is found in every plant and animal cell, and is located in the inner membrane system of the mitochondria, other membranes, and in plasma lipoproteins. The other important function is that it acts as a primary scavenger of free radicals. Chronic periodontitis is the direct result of accumulation of subgingival plaque. The microflora of this plaque is extremely complex causing problems in establishing which organisms are responsible for tissue destruction associated with the disease. A deficiency of coenzyme Q10 at its enzyme sites in gingival tissue may exist independently of and/or because of periodontal disease. If a deficiency of coenzyme Q10existed in gingival tissue for nutritional causes and independently of periodontal disease, then the advent of periodontal disease could enhance the gingival deficiency of coenzyme Q10. On exogenous CoQ10 administration, an increase in the specific activity of this mitochondrial enzyme was found in deficient patients. Not only succinate dehydrogenase CoQ10 reductase, but also succinate cytochrome c reductase and NADH cytochrome c reductase showed decreased specific activity in periodontitis patients.On exogenous administration of CoQ10 showed improved specific activity of these enzymes with significant reduction of motile rods and spirochetes. Clinical study with interpocket application

has shown CoQ10 is an effective adjunctive in the treatment of chronic periodontitis and also found to enhance the resistance of the periodontal tissues to periodontopathic bacteria

Abstract 77

SICKLE CELL ANAEMIA

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Sickle cell disease is a group of disorders that affects hemoglobin, the molecule in red blood cells that delivers oxygen to cells throughout the body. People with this disorder have atypical hemoglobin molecules called hemoglobin S, which can distort red blood cells into a sickle, or crescent, shape.Signs and symptoms of sickle cell disease usually begin in early childhood. Characteristic features of this disorder include a low number of red blood cells (anemia), repeated infections, and periodic episodes of pain. The severity of symptoms varies from person to person. Some people have mild symptoms, while others are frequently hospitalized for more serious complications.The signs and symptoms of sickle cell disease are caused by the sickling of red blood cells. When red blood cells sickle, they break down prematurely, which can lead to anemia. Anemia can cause shortness of breath, fatigue, and delayed growth and development in children. The rapid breakdown of red blood cells may also cause yellowing of the eyes and skin, which are signs of jaundice. Painful episodes can occur when sickled red blood cells, which are stiff and inflexible, get stuck in small blood vessels. These episodes deprive tissues and organs of oxygen-rich blood and can lead to organ damage, especially in the lungs, kidneys, spleen, and brain. It is most common among people whose ancestors come from Africa; Mediterranean countries such as Greece, Turkey, and Italy; the Arabian Peninsula; India; and Spanish-speaking regions in South America, Central America, and parts of the Caribbean.Sickle cell disease is the most common inherited blood disorder in the United States, affecting 70,000 to 80,000 Americans. The disease is estimated to occur in 1 in 500 African Americans and 1 in 1,000 to 1,400 Hispanic Americans.

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Abstract 78

WHAT IS ALS?

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ALS, or amyotrophic lateral sclerosis, is a progressive neurodegenerative disease that affects nerve cells in the brain and the spinal cord.When a muscle has no nourishment, it wastes away. "Lateral" identifies the areas in a person's spinal cord where portions of the nerve cells that signal and control the muscles are located. As this area degenerates it leads to scarring or hardening in the region. Motor neurons reach from the brain to the spinal cord and from the spinal cord to the muscles throughout the body. The progressive degeneration of the motor neurons in ALS eventually leads to their demise. When the motor neurons die, the ability of the brain to initiate and control muscle movement is lost. With voluntary muscle action progressively affected, people may lose the ability to speak, eat, move and breathe. The motor nerves that are affected when you have ALS are the motor neurons that provide voluntary movements and muscle control. Examples of voluntary movements are making the effort to reach for a smart phone or step off a curb. These actions are controlled by the muscles in the arms and legs.

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Abstract 79

MITOCHONDRIAL DNA ANALYSIS

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Mitochondrial DNA is maternally inherited therefore all of the individuals in the maternal lineage of a family (i.e. mother, daughter, sibling) will share the same mitochondrial DNA. MtDNA analysis is used in both forensic and non-forensic cases. MtDNA analysis can be used if an individual is missing or unable to provide a biological sample and a living maternal relative is available to provide the necessary DNA sample for comparison purposes. mtDNA analysis is also used if a biological sample is degraded or has failed to yield enough DNA for nuclear (STR) analysis. The higher sensitivity of mtDNA analysis is due to the large number of mtDNA copies in each cell (approximately 100-1000 copies of mtDNA, compared to only two copies of each STR marker).Samples suitable for mtDNA analysis are human hair shafts, skeletal remains (bones and teeth), or any biological sample that is degraded or failed to produce STR results. Mtdnaprovides a valuable focus for forensic dna typing in certain circumstances. The high number of nucleotide variants in the two hyper variable portions of the non-coding control region can allow discrimination among individuals and or biological samples. Mtdna is inherited from the mother only so that in situations where an individual is not available may provide a reference sample.

Abstract 80

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DNA REPAIR – DEFICIENCY DISORDER

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Neurologic problems—including learning disabilities, progressive hearing loss, progressive neuromuscular degeneration, loss of some reflexes, and occasionally, tumors in the central nervous system—occur in some people with XP. People with XP are extremely sensitive to ultra-violet (UV) radiation. This includes UVA and UVB. Exposure to even a very small amount of UV radiation leads to severe sunburn and blistering, beginning at a very young age. The sensitivity to UV radiation results in increased freckling, as well as areas of lighter (hypo) skin pigmentation. They also have very dry skin. There is a high risk of squamous cell and basal cell skin cancers and melanoma.People with XP also have eye problems, especially with the eyelids. Like their skin, their eyes are also very sensitive to light, which gives them a slightly increased risk of cancer of the eye. Cancers of the lips, mouth, and the tip of the tongue have also been reported. In addition, people with XP may have neurological complications, including developmental disabilities, mental handicap, and high-frequency hearing loss that leads to deafness.XP is a genetic condition. Signs of sun sensitivity include severe burning and blistering with only a small amount of sun exposure or even exposure to fluorescent lights. These signs can be present in infancy. Young children may also be suspected of having XP if they have a large number of freckles on their face. The characteristic eye and neurologic problems may also increase the doctor's suspicion that a person has XP. The clinical signs of XP vary widely, depending on the type of mutations involved and the extent of sun exposure that a person with XP has had.Genetic testing for mutations in the genes associated with XP is available, mainly as part of research studies. Because there are at least eight genes associated with XP, laboratory screening tests are recommended to help determine which of the eight genes is likely to be causing XP in a family.

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Abstract 81

ADIPONECTIN

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Adiponectin is a novel adipocyte-specific protein, which, it has been suggested, plays a role in the development of insulin resistance and atherosclerosis. Although it circulates in high concentrations, adiponectin levels are lower in obese subjects than in lean subjects. Apart from negative correlations with measures of adiposity, adiponectin levels are also reduced in association with insulin resistance and type 2 diabetes. Visceral adiposity has been shown to be an independent negative predictor of adiponectin. Thus, most features of the metabolic syndrome's negative associations with adiponectin have been shown. Adiponectin levels seem to be reduced prior to the development of type 2 diabetes, and administration of adiponectin has been accompanied by lower plasma glucose levels as well as increased insulin sensitivity. Furthermore, reduced expression of adiponectin has been associated with some degree of insulin resistance in animal studies indicating a role for hypoadiponectinaemia in relation to insulin resistance. The primary mechanisms by which adiponectin enhance insulin sensitivity appears to be through increased fatty acid oxidation and inhibition of hepatic glucose production. Adiponectin levels are increased by thiazoledinedione treatment, and this effect might be important for the enhanced insulin sensitivity induced by thiazolidinediones. In contrast, adiponectin levels are reduced by pro-inflammatory cytokines especially tumour necrosis factor-alpha. In summary, adiponectin in addition to possible anti-inflammatory and anti-atherogenic effects appears to be an insulin enhancer, with potential as a new pharmacologic treatment modality of the metabolic syndrome and type 2 diabetes.

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Abstract 82

HYPOTHYROIDISM

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Hypothyroidism is a condition in which the thyroid gland does not make enough thyroid hormone. This condition is often called underactive thyroid.The thyroid gland is an important organ of the endocrine system. It is located at the front of the neck, just above where your collarbones meet. The thyroid makes hormones that control the way every cell in the body uses energy. This process is called metabolism. Hypothyroidism is more common in women and people over age 50.The most common cause of hypothyroidism is thyroiditis. Swelling and inflammation damage the thyroid gland's cells. Causes of this problem include, The immune system attacking the thyroid gland,Viral infections (common cold) or other respiratory infections,Pregnancy (often called postpartum thyroiditis). Other causes of hypothyroidism include Certain medicines, such as lithium and amiodarone, Congenital (birth) defects,Radiation treatments to the neck or brain to treat different cancers,Radioactive iodine used to treat an overactive thyroid gland, Surgical removal of part or all of the thyroid gland Sheehan syndrome, a condition that may occur in a woman who bleeds severely during pregnancy or childbirth and causes the destruction of the pituitary gland pituitary surgery. Early symptoms, Hard stools or constipation, Increased sensitivity to cold temperature, Heavier and irregular menstrual periods, Paleness or dry skin, Sadness or depression. Late symptoms, if untreated, Decreased taste and smell,Hoarseness,Puffy face, hands, and feet,Slow speech,Thickening of the skin,Thinning of eyebrows.The health care provider will do a physical exam and find that your thyroid gland is enlarged. Sometimes, the gland is normal size or smaller-than-normal. The exam may also reveal Brittle nails, Coarse features of the face,Pale or dry skin, which may be cool to the touch,Reflexes that are abnormal,Swelling of the arms and legs,Thin and brittle hairBlood tests are also ordered to measure your thyroid hormones TSH and T4.

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Abstract 83

BURKHOLDERIA CEPACIA COMPLEX BEYOND PSEUDOMONAS AND ACINETOBACTER

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The Gram-negative bacteria Pseudomonas aeruginosa and Burkholderia cepacia are opportunistic human pathogens that are responsible for severe nosocomial infections in immunocompromised patients and are the major pathogens in cystic fibrosis (CF). The two bacteria not only inhabit the same environmental niches but can also form mixed biofilms in the lungs of CF patients. Hence, it appears very likely that the two organisms are capable of interacting with each other. Work of the past few years has shown that both bacteria utilize quorum-sensing systems, which rely on N-acyl-homoserine lactone signal molecules, to control the expression of virulence factors and biofilm development. Most importantly, evidence has been presented that these signal molecules also serve as a universal language for communication between the two organisms. Moreover, analyses of the diversity in P. aeruginosa revealed the presence of genome islands that contain genes that are highly homologous to genes identified in strains of Burkholderia sp. This finding suggests that there is a frequent exchange of genetic material between the two organisms.

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Abstract 84

CALCIFICATION IN ORAL LESIONS

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Calcifying fibrous pseudotumor (CFT) is a rare distinct soft-tissue lesion characterized histologically by lymphoplasmacytic aggregates in a rich collagenized background with abundant psammomatous and dystrophic calcifications. Occurring most often in children and young adults, CFTs are clinically benign lesions that can form over a broad anatomic distribution, including in subcutaneous and deep soft tissues, as well as in serosal and visceral locations. The cause and mechanisms of pathogenesis of CFT are unknown. Simple excision with a margin of normal tissue is the treatment of choice. The risk for local recurrence is low.Calcifying fibrous pseudotumor (CFT) is a rare lesion histologically characterized by abundant hyalinized collagen tissue with focal lymphoplasmacytic infiltrate and psammomatous and dystrophic calcifications .This tumor was recognized first in peripheral axial soft tissues. In the head-and-neck region, the most common location is the neck .CFT was originally described by Rosenthal and Abdul-Karim in 1988; they called the lesion childhood fibrous tumor(s) with psammoma bodies. Both sexes are equally affected, and although the age distribution ranges from 1 to 65 years, children and young adults are affected most often. Tumor diameters have ranged from 0.6 to 15 cm, and the tumors have been present from 2 months to 10 years at diagnosis. A wide range of anatomic locations, including the extremities, trunk, neck, mesenterium, mediastinum, and paratesticular area, has been observed. Recently, the tumor has been reported to involve the soft palate ,gastrointestinal tract ,lung, pleura, and myocardium .Rarely, CFT may occur as multiple lesions. Malignant transformation has not been reported. Simple excision with a margin of normal tissue has been curative.

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Abstract 85

MITOCHONDRIAL DNA (MTDNA OR MDNA)

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It is the DNA located in mitochondria, cellular organelles within eukaryotic cells that convert chemical energy from food into a form that cells can use, adenosine triphosphate (ATP). Mitochondrial DNA is only a small portion of the DNA in a eukaryotic cell; most of the DNA can be found in the cell nucleus and, in plants, in the chloroplast. In humans, mitochondrial DNA can be assessed as the smallest chromosomecoding for 37 genes and containing approximately 16,600 base pairs. Human mitochondrial DNA was the first significant part of the human genome to be sequenced. In most species, including humans, mtDNA is inherited solely from the mother.The DNA sequence of mtDNA has been determined from a large number of organisms and individuals (including some organisms that are extinct), and the comparison of those DNA sequences represents a mainstay of phylogenetics, in that it allows biologists to elucidate the evolutionary relationships among species. It also permits an examination of the relatedness of populations, and so has become important in anthropology and field biology.

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Abstract 87

ANTIOXIDANT VITAMIN E

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Vitamin E is the major lipid-soluble antioxidant in the cell antioxidant defence system and is exclusively obtained from the diet. The term “vitamin E” refers to a family of eight naturally occurring homologues that are synthesised by plants from homogentisic acid. Vitamin E is an example of a phenolic antioxidant. Such molecules readily donate the hydrogen from the hydroxyl (-OH) group on the ring structure to free radicals, which then become unreactive. On donating the hydrogen, the phenolic compound itself becomes a relatively unreactive free radical because the unpaired electron on the oxygen atom is usually delocalised into the aromatic ring structure thereby increasing its stability .The major biologic role of vitamin E is to protect PUFAs and other components of cell membranes and low-density lipoprotein (LDL) from oxidation by free radicals. This suggests that after its reaction with free radicals it is rapidly regenerated, possibly by other antioxidants.

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Abstract 88

ATP SYNTHASE

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It is an important enzyme that provides energy for the cell to use through the synthesis of adenosine triphosphate (ATP). ATP is the most commonly used "energy currency" of cells from most organisms. It is formed from adenosine diphosphate (ADP) and inorganic phosphate (P_i), and needs energy.The overall reaction sequence is: ADP + P_i → ATP, where ADP and P_i are joined together by ATP synthaseEnergy is often released in the form of hydrogen ions (H^+), moving down an electrochemical gradient, such as from the lumen into the stroma of chloroplasts or from the inter-membrane space into the matrix in mitochondria.

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Abstract 89

MICROBIOLOGY OF DENTAL CARIES

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Dental caries is one of the most prevalent chronic diseases of people worldwide. The disease process may involve enamel, dentin and cement, causing decalcification of these tissues and disintegration of the organic substances. It is believed that bacteria of the species *Streptococcus mutans*is the main factor that initiates caries, and the bacteria of the genus Lactobacillus are important in further caries development, especially in the dentin. Caries can also be caused by other bacteria, including members of the mitis, anginosus and salivarius groups of streptococci, Enterococcus faecalis, Actinomyces naeslundii, A. viscosus, Rothia dentocariosa, Propionibacterium, Prevotella, Veillonella, Bifidobacterium and Scardovia.About 700 different bacteria species have been identified from the human oral microbiome . In the pathogenesis of dental caries an important role play cariogenic bacteria, i.e. oral streptococci, especially of group mutans and lactic acid bacteria (Lactobacillus spp.). It is believed that bacteria of the species Streptococcus mutans is the main factor that initiates caries and very important factor of enamel decay. Lactobacillus are important in further caries development, especially in the dentin. Mutans streptococci and lactobacilli are characterized by the ability to grow in an acid environment and the property of rapid metabolism of sugars supplied in the diet to organic acids, including lactic acid .The microbial community from dentinal lesions is diverse and contains many facultatively- and obligately-anaerobic bacteria belonging to the genera Actinomyces, Bifidobacterium, Eubacterium, Lactobacillus, Parvimonas and Rothia. Streptococci are recovered less frequently .Caries can also be caused by other bacteria, including members of the mitis, anginosus and salivarius groups of streptococci, Propionibacterium, Enterococcus faecalis and Scardovia.

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Abstract 90

INCREASING PREVALENCE OF ESBL-PRODUCING ENTEROBACTERIACEAE IN EUROPE

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Extended-spectrum beta-lactamases (ESBLs) have been increasingly reported in Europe since their first description in 1983. During the 1990s, they were described mainly as members of the TEM- and SHV-beta-lactamase families in Klebsiella pneumoniae causing nosocomial outbreaks. Nowadays, they are mostly found in Escherichia coli that cause community-acquired infections and with increasing frequency contain CTX-M enzymes. Dissemination of specific clones or clonal groups and epidemic plasmids in community and nosocomial settings has been the main reason for the increase in most of the widespread ESBLs belonging to the TEM (TEM-24, TEM-4, TEM-52), SHV (SHV-5, SHV-12) and CTX-M (CTX-M-9, CTX-M-3, CTX-M-14 or CTX-M-15) families in Europe. Co-selection with other resistances, especially to fluoroquinolones, aminoglycosides and sulfonamides, seems to have contributed to the problem. The emergence of epidemic clones harbouring several beta-lactamasessimultaneously (ESBLs, metallo-beta-lactamases or cephamycinases) and of new mechanisms of resistance to fluoroquinolones and aminoglycosides warrants future surveillance studies.

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Abstract 91

ORAL TREPONEMES

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Periodontal disease is clinically observed as an inflammatory condition of the tooth supporting structures that leads to a progressive degradation of periodontal tissues and then tooth loss .The oral flora found in patients with chronic periodontitis consists of a variety of oral bacterial species. Among these organisms, oral treponemes, which are gram-negative, anaerobic, motile, and helical rods, have been shown to be closely associated with various types of periodontal diseases such as gingivitis, acute necrotizing ulcerative gingivitis, and adult periodontitis.Human immunodeficiency virus-positive subjects with gingivitis and adult periodontitis also have elevated numbers of oral treponemes in their subgingival plaque .Oral treponemes have been observed to adhere to and invade connective tissues, as well as gingival epithelial cells ,and also induce cytokine production from human gingival fibroblasts. Therefore, it is suggested that they play an important role in causing periodontal diseases.

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Abstract 92

ORAL MANISFESTATION OF ANTICANCER DRUGS

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The use of oral anticancer drugs has increased during the last decade, because of patient preference, lower costs, proven efficacy, lack of infusion-related inconveniences, and the opportunity to develop chronic treatment regimens. Oral administration of anticancer drugs is, however, often hampered by limited bioavailability of the drug, which is associated with a wide variability. Since most anticancer drugs have a narrow therapeutic window and are dosed at or close to the maximum tolerated dose, a wide variability in the bioavailability can have a negative impact on treatment outcome. There are several strategies to reduce or overcome these limitations. First, pharmaceutical adjustment of the formulation or the physicochemical characteristics of the drug can improve the dissolution rate and absorption. Second, pharmacological interventions by combining the drug with inhibitors of transporter proteins and/or pre-systemic metabolizing enzymes can overcome the physiological endogenous limitations. Third, chemical modification of a drug by synthesis of a derivative, salt form, or prodrug could enhance the bioavailability by improving the absorption and bypassing physiological endogenous limitations. Although the bioavailability can be enhanced by various strategies, the development of novel oral products with low solubility or cell membrane permeability remains cumbersome and is often unsuccessful. The main reasons are unacceptable variation in the bioavailability and high investment costs. Furthermore, novel oral anticancer drugs are frequently associated with toxic effects including unacceptable gastrointestinal adverse effects. Therefore, compliance is often suboptimal, which may negatively influence treatment outcome.

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Abstract 93

STANDARDIZED METHOD FOR IN VITRO ANTIFUNGAL SUSCEPTIBILITY TESTING OF *CANDIDA ALBICANS*BIOFILMS

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Candida albicans is implicated in many biomaterial-related infections. Typically, these infections are associated with biofilm formation. Cells in biofilms display phenotypic traits that are dramatically different from those of their free-floating planktonic counterparts and are notoriously resistant to antimicrobial agents. Consequently, biofilm-related infections are inherently difficult to treat and to fully eradicate with normal treatment regimens. Here, we report a rapid and highly reproducible microtiter-based colorimetric assay for the susceptibility testing of fungal biofilms, based on the measurement of metabolic activities of the sessile cells by using a formazan salt reduction assay. The assay was used for in vitro antifungal susceptibility testing of several*C. albicans* strains grown as biofilms against amphotericin B and fluconazole and the increased resistance of *C. albicans*biofilms against these antifungal agents was demonstrated. Because of its simplicity, compatibility with a widely available 96-well microplate platform, high throughput, and automation potential, we believe this assay represents a promising tool for the standardization of in vitro antifungal susceptibility testing of fungal biofilms.

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Abstract 94

MAXILLARY NERVE VARIATIONS AND ITS CLINICAL SIGNIFICANCE

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The aim of this review is to collect data from the literature and gives a detailed description of the innervation of the Maxilla. We carried out a search of studies published in PubMed up to 2014, including clinical and anatomical studies. This article gives an overview of the main anatomical variations of the maxillary nerve supplies, describing the anatomical variations that should be considered by the clinicians to understand pathological situations better and to avoid complications associated with anaesthesia and surgical procedures.

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Abstract 95

EVALUATION OF OCCURRENCE OF GOLDEN STANDARD VALUES AND GOLDEN PROPORTION IN THE MAXILLARY CENTRAL INCISORS

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The aim of this study is to evaluate the occurrence of golden standard values and golden proportion in the maxillary central incisors. The width and length of maxillary left and right incisors of 100 dentistry students (50 males and 50 females) are taken for studies. The ratios were compared with golden standard. Data was analysed using SPSS 14 software .The results of mean differences for single samples showed that the mean differences between the proportion of width-to- length of left and right central teeth was statistically significant by golden standard ($P<0.001$). Therefore ,considering the width - to - length proportion of maxillary central incisor , it is found that no golden standard exists .In the evaluation of width - to-width and width -to - length proportions of maxillary incisors no golden proportions and standards were detected .Several authors have presented guidelines regarding anterior aesthetics in order to achieve excellent aesthetics.

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Abstract 96

PLASTINATION

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Plastination, developed by Gunther von Hagens in 1977 is described as a technique to preserve bodies or body parts in anatomy. During this process, the water is replaced by certain plastics that can be easily touched and do not cause decay, and even retain most properties of the original sample. Plastination is therefore, been proved to be very useful in anatomy as well as serving as models in teaching tools, plus, several educational and research purposes.

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Abstract 97

ACCESSORY INFRAORBITAL FORAMEN

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Introduction: The knowledge of anatomy of infraorbital foramen in adult is essential for performing facial surgeries. This study was aimed to study the occurrence of infraorbital foramen in adult skull. This study was conducted inSaveetha University in Department of anatomy. The material for present study was the collection of dried adult skulls from the dissection hall of Saveetha University. In 97 died skulls 58 were male and 39 were female. Accessory foramen was present in 4 skulls. Out of which 3(3.09%) skulls were male that had 2(2.06%) skulls with accessory foramen on the right side of the skull and 1 in the left side. Accessory foramen was present only in 1(1.03%) female skull and the accessory foramen was in the left side. This study shows the presence of accessory infraorbital foramen in adult and thereby assist the clinician in performing Maxillo-facial surgeries, especially in the trunk block of the infraorbital nerve.

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Abstract 98

GIFT OF SPEECH

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James strikingly contrasts the two ways we can use our tongues to speak: "With it we bless the Lord and Father, and with it we curse those who are made in the likeness of God. From the same mouth come blessing and cursing. My brothers and sisters, this ought not to be so. But it is not only the way we speak that's important. We also need to be sure that the particular words we choose are meaningful, and faithful to the truth. Empty words, meaningless chattering words, are a waste of the gift of speech, and lies of course are violations of the purpose of speech. The *power of speech* is simply incalculable. Think of the words of Jesus, for example, spoken while he went about over the country — and then try to estimate the blessings to the world from their influence. Someone has compared these words to a handful of sweet spices, cast into a bitter sea, to sweeten its waters. The words of Jesus have sweetened, and are still sweetening the world's bitterness, wherever they go. No other words have such power as these words, and yet there is not one of us who could not enrich the world and scatter blessings through the words which we drop from our lips, day after day. Our speech is an *index of our character*. Our words approve us — or condemn us. The wisest of all teachers said, "Out of the abundance of the heart, the mouth speaks." So our speech reveals what is in us, whether good or bad. We sometimes see people whose appearance is attractive. We are much biased in their favor, while we only look at their features. But when they open their mouths and begin to speak — the *pleasant illusion* vanishes. Perhaps the *tones* of the voice are enough — they are harsh, or angry, or fretful, or denunciatory. Or the tone may be unobjectionable — and yet the *words* they speak may be ungentle, bitter, censorious, defamatory. "Your speech betrays you."

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Abstract 99

PRIONS

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Prions are infectious agent consists only of protein with no nucleic acid genome. Prions are the only known example of infectious pathogens that are devoid of nucleic acid. The infectious agent (Prion) consists primarily of a protein found in the membranes of normal cells, but in this case the protein has an altered shape or conformation – PrP(Sc) – called scrapie isoform. A major feature that distinguishes prions from viruses is that PrP(Sc) is encoded by a chromosomal gene. The structure of PrP(C) and PrP(Sc) have been studied by manufacturing these proteins in E. coli bacteria that were altered through recombinant DNA techniques. Prions have been implicated as a causative factor in a number of fatal neurodegenerative diseases in humans – such as Creutzfeldt - Jakob disease (CJD), Kuru, and Gerstmann-Sträussler-Scheinker (GSS) disease. Prion diseases may be manifested as infectious, genetic, or sporadic disorders. Prion diseases in humans have clinical manifestations like dementia , ataxia, insomnia, paraplegia, paraesthesia and deviant behaviour.

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Abstract 100

HERBAL MEDICINES

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Herbal medicine is still the mainstay of about 75 - 80% of the world population, mainly in the developing countries, for primary health care. Herbal medicine -- also called botanical medicine or phytomedicine -- refers to using a plant's seeds, berries, roots, leaves, bark, or flowers for medicinal purposes. Herbalism has a long tradition of use outside conventional medicine. It is becoming more mainstream as improvements in analysis and quality control along with advances in clinical research show the value of herbal medicine in treating and preventing disease. Whole herbs contain many ingredients, and they may work together to produce a beneficial effect. Many factors determine how effective an herb will be. For example, the type of environment (climate, bugs, soil quality) in which a plant grew will affect it, as will how and when it was harvested and processed. Herbal medicine is used to treat many conditions, such as allergies, asthma, eczema, premenstrual syndrome, rheumatoid arthritis, fibromyalgia, migraine, menopausal symptoms, chronic fatigue, irritable bowel syndrome, and cancer, among others. It is best to take herbal supplements under the guidance of a trained health care provider. For example, one study found that 90% of arthritic patients use alternative therapies, such as herbal medicine.

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Abstract 101

LIPOSOMES

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Liposomes are small artificial vesicles of spherical shape that can be created from cholesterol and natural nontoxic phospholipids. Due to their size and hydrophobic and hydrophilic character(besides biocompatibility), liposomes are promising systems for drug delivery. Liposomes are extensively used as carriers for numerous molecules in cosmetic and pharmaceutical industries. Additionally, food and farming industries have extensively studied the use of liposome encapsulation to grow delivery systems that can entrap unstable compounds. Because of their biocompatibility, biodegradability, low toxicity, and aptitude to trap both hydrophilic and lipophilic drugs and simplify site-specific drug delivery to tumor tissues, liposomes have increased rate both as an investigational system and commercially as a drug delivery system. Applications of liposomes in medicine and pharmacology can be divided into diagnostic and therapeutic applications of liposomes containing various markers or drugs, and their use as a tool, a model, or reagent in the basic studies of cell interactions, recognition processes, and mode of action of certain substances. Liposomes with modified surfaces have also been developed using several molecules, such as glycolipids or sialic acid.

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Abstract 102

EDIBLE VACCINES: CURRENT STATUS AND FUTURE

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Edible vaccines hold great promise as a cost-effective, easy-to-administer, easy-to-store, fail-safe and socioculturally readily acceptable vaccine delivery system, especially for the poor developing countries. It involves introduction of selected desired genes into plants and then inducing these altered plants to manufacture the encoded proteins. Introduced as a concept about a decade ago, it has become a reality today. A variety of delivery systems have been developed. Initially thought to be useful only for preventing infectious diseases, it has also found application in prevention of autoimmune diseases, birth control, cancer therapy, etc. Edible vaccines are currently being developed for a number of human and animal diseases. There is growing acceptance of transgenic crops in both industrial and developing countries. Resistance to genetically modified foods may affect the future of edible vaccines. They have passed the major hurdles in the path of an emerging vaccine technology. Various technical obstacles, regulatory and non-scientific challenges, though all seem surmountable, need to be overcome. This review attempts to discuss the current status and future of this new preventive modality.

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Abstract 103

BACTERIAL IDENTIFICATION IN THE DIAGNOSTIC LABORATORY

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The major impetus for bacterial identification came after the advent of solid culture media. Morphological appearance of bacterial colonies was often sufficient for their identification in the laboratory. Even in modern times, preliminary identification of most cultivable bacteria is based on such morphological characters. Advances have been made media for the presumptive identifi cation of common organisms encountered in clinical samples. Phenotypic characterisation of bacteria with, physiological tests with a battery of biochemical tests differentiate related bacterial genera as well as confirm their identity. . Each laboratory can select its own method(s) of identification, provided they are based on scientific / epidemiological evidence; clinical laboratory and standards institute (CLSI) is a widely accepted organization and laboratories in many parts of the world follow its recommendations for bacterial identification. Some of the latest advances in identification include Matrix Assisted Laser Desorption Ionization - Time of Flight Mass Spectroscopy (MALDI-TOF) is a state of art facility used for fast and reliable species-specific identification of bacteria including Mycobacteria and fungi including yeasts. However the single most important factor that decides the method of bacterial identification in any laboratory is the cost involved. In the final analysis, selection of tests for bacterial identification should be based on their standardization with proper scientific basis. Considering the cost and lack of easy availability of commercial kits, we have put forward a simplified and rapid method of identification for most commonly encountered bacterial pathogens causing human infection in India

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Abstract 104

ANTIMICROBIAL RESISTANCE IN TYPHOID CAUSING SALMONELLA

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Infections with Salmonella are an important public health problem worldwide. On a global scale, it has been appraised that Salmonella is responsible for an estimated 3 billion human infections each year. The World Health Organization (WHO) has estimated that annually typhoid fever accounts for 21.7 million illnesses (217,000 deaths) and paratyphoid fever accounts for 5.4 million of these cases. Infants, children, and adolescents in south-central and South-eastern Asia experience the greatest burden of illness. In cases of enteric fever, including infections with S. Typhi and S. Paratyphi A and B, it is often necessary to commence treatment before the results of laboratory sensitivity tests are available. Hence, it is important to be aware of options and possible problems before beginning treatment. Ciprofloxacin has become the first-line drug of choice since the widespread emergence and spread of strains resistant to chloramphenicol, ampicillin, and trimethoprim. There is increase in the occurrence of strains resistant to ciprofloxacin. Reports of typhoidal salmonellae with increasing minimum inhibitory concentration (MIC) and resistance to newer quinolones raise the fear of potential treatment failures and necessitate the need for new, alternative antimicrobials. Extended-spectrum cephalosporins and azithromycin are the options available for the treatment of enteric fever. The emergence of broad spectrum β-lactamases in typhoidal salmonellae constitutes a new challenge. Already there are rare reports of azithromycin resistance in typhoidal salmonellae leading to treatment failure. This review is based on published research from our centre and literature from elsewhere in the world. This brief review tries to summarize the history and recent trends in antimicrobial resistance in typhoidal salmonellae.

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Abstract 105

PANDEMIC INFLUENZA A (H1N1) VACCINE: AN UPDATE

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The world witnessed the first influenza pandemic in this century and fourth overall since first flu pandemic was reported during the World War I. The past experiences with influenza viruses and this pandemic of H1N1 place a considerable strain on health services and resulted in serious illnesses and a large number of deaths. Developing countries were declared more likely to be at risk from the pandemic effects, as they faced the dual problem of highly vulnerable populations and limited resources to respond H1N1. The public health experts agreed that vaccination is the most effective ways to mitigate the negative effects of the pandemic. The vaccines for H1N1 virus have been used in over 40 countries and administered to over 200 million people helped in a great way and on August 10, 2010, World Health Organization (WHO) announced H1N1 to be in postpandemic period. But based on knowledge about past pandemics, the H1N1 (2009) virus is expected to continue to circulate as a seasonal virus and may undergo some agenic-variation. As WHO strongly recommends vaccination, vigilance for regular updating of the composition of influenza vaccines, based on an assessment of the future impact of circulating viruses along with safety surveillance of the vaccines is necessary. This review has been done to take a stock of the currently available H1N1 vaccines and their possible use as public health intervention in the postpandemic period.

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Abstract 106

CLINICAL MICROBIOLOGY IN THE INTENSIVE CARE UNIT

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Infection is a major cause of morbidity and mortality among patients admitted in intensive care units (ICUs). The application of the principles and the practice of Clinical Microbiology for ICU patients can significantly improve clinical outcome. The present article is aimed at summarising the strategic and operational characteristics of this unique field where medical microbiology attempts to venture into the domain of direct clinical care of critically ill patients. The close and strategic partnership between clinical microbiologists and intensive care specialists, which is essential for this model of patient care have been emphasized. The article includes discussions on a variety of common clinical-microbiological problems faced in the ICUs such as ventilator-associated pneumonia, blood stream infections, skin and soft tissue infection, UTI, infection control, besides antibiotic management.

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Abstract 107

MIRROR NEURONS

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This article argues that mirror neurons originate in sensorimotor associative learning and therefore a new approach is needed to investigate their functions. Mirror neurons were discovered about 20 years ago in the monkey brain, and there is now evidence that they are also present in the human brain. The intriguing feature of many mirror neurons is that they fire not only when the animal is performing an action, such as grasping an object using a power grip, but also when the animal passively observes a similar action performed by another agent. It is widely believed that mirror neurons are a genetic adaptation for action understanding; that they were designed by evolution to fulfill a specific sociocognitive function. In contrast, we argue that mirror neurons are forged by domain-general processes of associative learning in the course of individual development, and, although they may have psychological functions, they do not necessarily have a specific evolutionary purpose or adaptive function. The evidence supporting this view shows that 1) mirror neurons do not consistently encode action 'goals'; 2) the contingency- and context-sensitive nature of associative learning explains the full range of mirror neuron properties; 3) human infants receive enough sensorimotor experience to support associative learning of mirror neurons ('wealth of the stimulus'); and 4) mirror neurons can be changed in radical ways by sensorimotor training. The associative account implies that reliable information about the function of mirror neurons can be obtained only by research based on developmental history, system-level theory, and careful experimentation.

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Abstract 108

PHOTOTHERAPY – A REVIEW

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Phototherapy is a process of reducing high bilirubin content in babies body using blue light. During this process the bilirubin in then babies body is changed in to another form that can be easily excreted in the stool and urine. Since it affects retina, The eyes are closed during treatment. The fetus has a high RBC count to compensate the low PO2. After birth there is excessive hemolysis and bilirubin is produced. Due to the immaturity of the fetal liver, Bilirubin accumulate and lead to jaundice. The physiological jaundice is the common cause of neonatal jaundice which is usually mild. There are also many other causes which are associated with high bilirubin levels. These may also be corrected by phototherapy. When the bilirubin levels are high exchange transfusion is indicated.

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Abstract 109

INTERPRETATION OF EEG IN EPILEPTIC PATIENTS

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The aim of this review is to interpret EEG in epileptic patients. It is the recording of electrical activity of the scalp.. It measures the voltage fluctuations across the brain. It is the important test to diagnose epilepsy, sleep disorder, come and brain death. The recording of EEG is done by placing electrodes on the scalp each one connected to the amplifier. The recording withdrawn may be computersied or recorderd on the paper. The interpretation of EEG mainly involves the inspection of wave forms and patterns, mentally reconstructing spatial and anatomical origins of electrical sources and also determining the physiological basis.

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Abstract 110

ACCUPUNCTURE AND LOWER BACK PAIN

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The aim of this article is to describe the effect of acupuncture on the treatment of lower back pain. It is the form of alternative medicine and key component of traditional Chinese medicine. It is mainly effective in relieving pain. Dry needling is the useful adjunct for chronic low back pain. Dry needling refers to use of filiform or hollow core needles for therapy of muscle pain and is also known as intramuscular stimulation. Low back pain is a common muscular skeletal disorder, defined as pain in soreness, muscle tension which does not have a specific cause.

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Abstract 111

OBSESSIVE-COMPULSIVE DISORDER (OCD) IN ADOLESCENCE

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Obsessive-compulsive disorder (OCD) in adolescence is an impairing condition, associated with a specific set of distressing symptoms incorporating repetitive, intrusive thoughts (obsessions) and distressing, time-consuming rituals (compulsions). This review considers current knowledge of causes and mechanisms underlying OCD, as well as assessment and treatment. Issues relating to differential diagnosis are summarised, including the challenges of distinguishing OCD from autism spectrum disorders and tic disorders in youth. The recommended treatments, namely cognitive behaviour therapy and serotonin reuptake inhibiting/selective serotonin reuptake inhibitor medications are outlined along with the existing evidence-based and factors associated with treatment resistance. Finally, novel clinical developments that are emerging in the field and future directions for research are discussed.

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Abstract 112

HERBAL TUMOUR INHIBITORS

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Herbal drugs having anti tumour activity are studied and made use for the treatment of lung cancer , breast cancer , prostate cancer , oral cancer and ovarian cancer. This review article deals on herbal drugs that are used to treat the above mentioned tumours. Cancer therapeutic agents can often provide temporary relief of symptoms , the prolongation of life and occasionally cures. The main forms of the treatment of cancer in human beings are surgery , radiation and drugs . Plant materials have been used in the treatment of malignant diseases for centuries ; a comprehensive survey of literature describing plants used against cancer . The tumour inhibitor principles isolated in screening tests were usually new natural products , spamming a wide range of structural types . Herbal plants like Catharanthus roseus , Podophyllum and Podophyllum resin , Indian podophyllum , Phyllanthus amarus , Azadirachta indica and curcumin are used to inhibit cancer.

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Abstract 113

DENTAL USES OF GRAPE SEED EXTRACT

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Grape seed extract(GSE) known as Vitis vinifera.L.These natural extracts are observed to possess various therapeutic uses.This is attributed to the presence of proanthocyanins.Various researches have been conducted to assess their medicinal uses across various fields of Health sciences. Oral diseases and conditions, including dental caries, periodontal disease, orofacial disorders, and tooth loss, affect more persons than any other disease .Oral diseases and/or disorders can affect a person's overall health Recent research has shown that oral bacteria like S.mutans ,L.acidophilusmay contribute to increased risk of heart attacks, strokes, and lung disease and may be associated with premature childbirth in some women.The following summarizes some of the studies related to grape seed extract and their potential oral health benefits.

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Abstract 114

PHARMACOLOGICAL ASPECTS OF BIXA ORELLANA

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Bixa orellana, commonly known as lipstick tree, an evergreen shrub grown not only because of its beautiful red flowers and ornamental red spiny fruits, but also for its economic value. *Bixa orellana* also known Annatto , is native to tropical America and Malaysia. *Bixa orellana* is well known for its colouring agent and medicinal value .The seeds are sources of food colouring and a dye called annatto.

Besides that , they are also used or the treatment of illnesses like gonorrhea and asthma and have been traditionally used as a gargle for sore throats. The bark and root can be used to treat fever, the leaves are used to cure snakebites, jaundice, diabetes and hypertension. the leaves of *bixa orellana* have been reported to have antimicrobial, anti-leishmanial, anticonvulsant , analgesic and anti-inflammatory activities.

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Abstract 115

ANTIOXIDANT ACTIVITY OF *ACHYRANTHES ASPERA*

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Antioxidants present in food are very important for human health since the reactive oxygen species are recognized as aging and carcinogenesis factor. Plant components are antioxidants play vital role in foods and living organisms because of the radicals scavenging ability and reducing cells degradation in human body. Polyphenols are recognized as great scavengers of free radicals, hydroxyl radicals and superoxide anion radicals. Antioxidant effect of plant products is mainly attributed to phenolic compounds such as flavonoids and phenolic acids *Achyranthes aspera* is a species of plant in the *Amaranthaceae* family. The plant is used for a great many medicinal purposes, especially in obstetrics and gynecology, also to treat malaria

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