Saliva A Diagnostic Tool

Oral diseases are one of the more common non-communicable health diseases. They pose a major health burden for many countries and affect people throughout their lifetime causing pain, discomfort, disfigurement, and even death. As per WHO, it is estimated that oral diseases affect nearly 3.5 billion people globally. In developing countries, the estimate could be still higher owing to the lack of awareness among the general public, the lack of adequate infrastructure, and less accessibility to oral health care providers, especially amongst people of lower socio-economic status. The aim of this book is to provide an overview of various oral diseases with emphasis on the pathogenesis, investigation, and the management protocol of different oral and maxillofacial diseases.

Saliva offers an alternative to serum as a biologic fluid that can be analyzed for diagnostic purposes. Whole saliva contains locally produced as well as serum-derived markers that have been found to be useful in the diagnosis of a variety of systemic disorders. Whole saliva can be collected in a non-invasive manner by individuals with modest training, including patients. This facilitates the development and introduction of screening tests that can be performed by patients at home. Analysis of saliva can offer a cost-effective approach for the screening of large populations, and may represent an alternative for patients in whom blood drawing is difficult, or when compliance is a problem . This review suggests that certain diagnostic uses of saliva hold considerable promise. Monitoring of the immune responses to viral infections, including hepatitis and HIV, may prove valuable in the identification of infected individuals, non-symptomatic carriers, and immune individuals. Saliva can also be useful in the monitoring of therapeutic drug levels and the detection of illicit drug use. Further, analysis of saliva may provide valuable information regarding certain endocrine disorders.

Saliva is a complex fluid that maintains oral health and has many physiological functions. It is a noninvasive diagnostic fluid as well. Lately, salivary diagnostics has proven its potential to reach clinical practice in the near future for the early detection, diagnosis, and monitoring of various diseases. Salivary Glands - New Approaches in Diagnostics and Treatment is a comprehensive reference, which brings together information on salivary secretion and its disorders, the novel salivary diagnostic methods for numerous diseases, and new techniques in the treatment of salivary diseases. This book contains information for a diverse audience, including dentists, oral biologists, experimental biologists, molecular biologists, oncologists, radiologists, oral and maxillofacial surgeons, and otorhinolaryngologists.

Emerging Trends in Oral Health Sciences and Dentistry is the second book on Oral Health Science. The first book is Oral Health Care-Pediatric, Research, Epidemology and clinical Practices and Oral Health Care-Prosthodontics, Periodontology, Biology, Research and systemic Conditions published in February 2012. The present book is a reflection of the progress in Oral Health Sciences, practices and dentistry indicating the direction in which this stream of knowledge and education is likely to head forward. The book covers areas of General Dentistry, Paediatric and Preventive Dentistry, Geriatric and Prosthodontics, Orthodontics, Periodontology, Conservative Dentistry and Radiology and Oral Medicine.

Saliva and Salivary Diagnostics

"Aqua Vita" of Oral Cavity & Provides an Non-invasive & Less Expensive Diagnostic Medium

Development, Adaptations and Disease

Aspiration Pneumonia

Saliva and Dental Health

Saliva as a Diagnostic Fluid

This book, now in an extensively revised second edition, provides an exhaustive review of the state of the art in the management of prostate cancer, from screening to treatment, with emphasis on a multidisciplinary approach. The editors are very excited about the outstanding new or updated contributions from the different expert authors. The opening chapters address basic aspects including epidemiology, pathology, biology, genetics, and chemoprevention. The role of individual and mass screening is carefully appraised, and extensive attention is devoted to diagnosis and clinical work-up by means of recently implemented investigations such as multiparametric MRI and choline PET-CT. The use of active surveillance is examined in detail. Subsequent chapters discuss the different therapies that may be employed: open and minimally invasive, including robot-assisted, radical prostatectomy, the various forms of radiation treatment, high-intensity focused ultrasound, cryotherapy, hormonal manipulations, chemotherapy, targeted therapies, and immunotherapy. Up-to-date results from practice-changing phase III randomized clinical trials are included and special insights are provided into the interpretation of results and the patient ' s perspective.

This book aims to provide readers with the latest updates and an informative overview of the most successful diagnostic aids for periodontal diseases. This book is divided into three sections. Section 1 discusses the periodontal disease pathogenesis and how the disease develops and the contributing factors in disease development. Section 2 includes three chapters that focus mainly on the most common and recent biomarkers that aid in diagnosis of periodontal diseases. Section 3 includes one chapter and discusses a non-surgical treatment modality that could provide definite improvement in the mild to moderate conditions in periodontal diseases.

Over the last decade, high performance Capillary electrophoresis (HPCE) has emerged as a powerful and versatile separation technique that promises to rival high performance liquid chromatography when applied to the separation of both charged and neutral species. The high speed and high separation efficiency which can be attained using any of the various modes of HPCE has resulted in the increased use of the technique in a range of analytical environments. The procedures are, however, still in the early stages of development and several barriers remain to their adoption as the technique of choice for a range of analytical problems. One such barrier is the selection and optimization of the conditions required to achieve reproducible separations of analytes and it is in this area that this new book seeks to give assistance. The book is written by an international team of authors, drawn from both academic and industrial users, and the manufacturers of instruments. At its heart are a number of tables, divided into specific application areas. These give details of published separations of a wide range of archetypal analytes, the successful separation conditions and the matrix in which they were presented. These tables are based on separations reported since 1992 and are fully referenced to the original literature. The tables are supported by discussions of the problems that a particular area presents and the strategies and solutions adopted to overcome them. The general areas covered are biochemistry, pharmaceutical science, bioscience, ion analysis, food analysis and environmental science.

Co-edited by Eugene N. Myers, a world-famous expert in the field, this has got to be the last word on salivary gland disorders. The disorders themselves cover a broad array of diseases, both benign and malignant. Thus, the contents of this book have been organized to reflect the diverse nature of salivary gland anatomy, physiology, and dysfunction in various states of disease. In this way, the evolution of the field and its diagnostic and therapeutic management are better demonstrated. Covering everything from practical diagnosis to gland tumor therapy, this really is a crucial work for any surgeon working in the facial or neck regions.

Handbook of Capillary Electrophoresis Applications

Diagnostic and Adjunctive Non-surgical Considerations

HIV and AIDS in Canada, Surveillance Report to ...

Clinical Implications of Saliva and Salivary Stimulation for Better Dental Health in the 1990s

The Detection of Biomarkers

Infrared Spectroscopy

Salivary glands are of utmost importance for several physiological functions ranging from the protection of teeth and surrounding soft tissues to the lubrication of the oral cavity, which is crucial for speech and perception of food taste. This publication highlights specific aspects of salivary gland development, investigating the mechanisms involved in embryonic development, the current research in stem cells, the ability of adult glands to regenerate and the signalling pathways involved in this process. Key stages of salivary gland development, moving from initiation to differentiation of the glands, are discussed, as well as unusual adaptations, ranging from making silk to making venom. The book finally provides new data on surgical techniques and diagnostic tools for clinicians involved in salivary gland disorders. Researchers and students with an interest in craniofacial sciences as well as clinicians dealing with salivary gland disorders will find this publication an excellent source of up-to-date information.

Since ages body fluids routinely used for diagnostic purposes are blood, urine, tears and cerebral spinal fluid but these fluids require more invasive collection procedures, potentially causing discomfort and stress to the patient during procurement. Since 2002, the National Institute of Dental and Craniofacial Research (NIDCR) created opportunities to overpower these limitations by investigating oral fluids as a diagnostic tool for assessment of health and disease status. In the past 50 years salivary research has picked up the pace with the dawn of new techniques that illuminated the biochemical and physicochemical properties of saliva embracing the multifunctional roles that saliva has in speech, lubrication, digestion of food and maintaining oral and general health.There is an opportunity of enhancing research conducted in the field and expanding the adaptability of using saliva as the diagnostic fluid in point of care diagnostics.

Historically, disorders of salivary glands tend to be 'underdiagnosed and overtreated'. In the vast body of literature on this subject, emphasis has usually been put on therapeutic modalities of various diseases of the salivary glands. Whereas therapy and pathology have been treated in numerous thorough studies, the (patho)physiology of the salivary glands has remained rather poorly understood. Even less attention has been given to the diagnostic methods. Until a few decades ago, diagnosis consisted mainly of a clinical examin ation which included the patient's history, inspection, and palpation. These methods remain crucial, but a variety of new diagnostic tools have appeared since then. Their clinical value is still subject to controversy; each method has its advocates and opponents. The indications for enrolling a patient at a given point in a series of diagnostic procedures are interpreted differently. One of the most striking examples is the use of sialography. This has become a classic diagnostic procedure. Although sialography is still a useful method, it has considerable disadvantages, limitations, and even contraindications. In the major teaching hospitals, residents still tend to consider sialography as a panacea for the majority of their diagnostic problems, whereas the infor mation provided is actually rather restricted. Other modern methods such as CT and MRI have taken over the role of sialography to a certain extent. This also applies to ultrasonography and scintigraphy. Moreover, microbiol ogy, sialometry, sialochemistry, cytology, and histopathology may give super ior information in certain cases.

Periodontitis is an infection-induced inflammatory disease of the tooth supporting tissues. Treatment of periodontal diseases and regeneration of the effected tissues can be possible only in the early diagnosis of the disease. If left undiagnosed or untreated, periodontitis leads to irreversible soft and hard tissue destruction and finally to tooth loss. Saliva is known to contain inflammatory mediators, host tissue and cell degradation products as well as microbial metabolites and enzymes, reflecting the health status of the oral cavity. In this topic, in collaboration with the well-known scientists working on the field of salivary diagnostics, we demonstrate evidence on monitoring periodontitis by salivary analysis.

What's Cool about Drool

Oral Diseases

Periodontal Disease

Management of Prostate Cancer

Past, Present, and the Future Prospects

Spit

Health professionals are more and more aware of the importance of saliva for oral health and well-being. As saliva secretion is steadily compromised with advancing age, it becomes a factor of concern in societies with an aging population, especially with a growing number of people who keep their own teeth. The numerous functions of saliva, like antimicrobial activity, lubrication, wound healing and its role in taste experience are only truly recognized when saliva secretion is hampered. In medical diagnostics, saliva shows its value as a safe and economical alternative to blood. This publication provides a comprehensive overview of the latest developments in salivary research by some of the world's leading experts in the field. Chapters deal with various aspects: anatomy and physiology, e.g. regeneration of salivary glands, saliva functions, e.g. its protective and rheological properties, and diagnostics and disorders, e.g. xerostomia and hypersalivation. This book is not only recommended to basic scientists working in the field of oral biology, but also to dental students, dentists and health professionals who want to know more about one of the most underestimated bodily fluids.

Pathogenesis and Treatment of Periodontitis includes comprehensive reviews on etiopathogenic factors of periodontal tissue destruction related to microbial dental plaque and also host response components. Adjunctive treatment modalities are also addressed in the book. Topics covered range from microbial pathogenic factors of P. gingivalis to the relationship between metabolic syndrome and periodontal disease, and from management of open gingival embrasures to laser application in periodontal treatment.

Salivary DiagnosticsJohn Wiley & Sons

The title says it all. It's yucky. It's gooey It makes your food chewy Ptooey! Ptooey! Oh, spit. Ew! Nasty! Ew! Gross! But spit is no spitball joke. Drool is cool! It's one of the most amazing fluids in your body. In Spit, renowned science writer and children's author Mary Batten examines everything that's cool about drool. Spit keeps your mouth moist. It begins digesting food the minute you take a bite. It keeps your teeth from wearing away. It keeps your tongue from choking you to death! But it isn't just humans that rely on spit, anything with a mouth needs saliva to keep functioning. A vampire bat has special saliva that stops its victim's blood from clotting. A spitting spider can trap prey in gooey saliva that it can spit in 1/700th of a second -- that's fast! And, if spitballs are your thing, perhaps try your hand at spitting antelope dung; the record, set in South Africa, is 51 feet! In Spit, Batten's informative and informal text is paired with humorous illustrations and real-life photos to help tell the important story hiding in this gross-out subject. From the DNA in human mouths to the science behind Pavlov's dogs to the astounding wonders of saliva in the animal kingdom, Spit uncovers the secrets secreting in the many mouths on the globe.

Saliva in Health and Disease

A Multidisciplinary Approach

COVID19 Detection Strategies

Pathogenesis and Treatment of Periodontitis

Estimation of Whole Saliva in Diabetic Patients

Cariology

Saliva as a unique sample for health assessment is gaining attention among researchers of different fields in the last 20 years; being reflected in an impressive increase in the number of papers published studying saliva from different biological aspects in human and veterinary species. Once deemed merely a digestive juice is now considered a biological fluid capable of communicating information about physiopathological processes occurring in organisms, since saliva has been shown to contain molecular and bacterial compounds that can change in response to local and systemic pathologies. Furthermore, the interest of saliva as a diagnostic, prognostic and monitoring biofluid is forced by its non-invasive nature being of easy and inexpensive sampling, involving only minimal discomfort and allowing the collection of multiple/repeated specimens at anytime, anywhere and without need for specialized staff. In this contributed volume, the authors bring together, summarize and reflect the generated knowledge about saliva as a source of biomarkers for health and welfare evaluation in humans and animal models. This volume also highlights the importance of confounding factors, such as sampling methods, flow, total protein content, contamination, or storage. This book will serve as a manual for graduates, practitioners and researchers by providing general ideas about the possibilities and utilities of saliva in clinical practice or investigation, and indicating the main cautions each should have in mind before saliva usage.

THE ESSENTIAL WORK IN TRAVEL MEDICINE -- NOW COMPLETELY UPDATED FOR 2018 As unprecedented numbers of travelers cross international borders each day, the need for up-to-date, practical information about the health challenges posed by travel has never been greater. For both international travelers and the health professionals who care for them, the CDC Yellow Book 2018: Health Information for International Travel is the definitive guide to staying safe and healthy anywhere in the world. The fully revised and updated 2018 edition codifies the U.S. government's most current health guidelines and information for international travelers, including pretravel vaccine recommendations, destination-specific health advice, and easy-to-reference maps, tables, and charts. The 2018 Yellow Book also addresses the needs of specific types of travelers, with dedicated sections on: · Precautions for pregnant travelers, immunocompromised travelers, and travelers with disabilities · Special considerations for newly arrived adoptees, immigrants, and refugees · Practical tips for last-minute or resource-limited travelers · Advice for air crews, humanitarian workers, missionaries, and others who provide care and support overseas Authored by a team of the world's most esteemed travel medicine experts, the Yellow Book is an essential resource for travelers -- and the clinicians overseeing their care -- at home and abroad.

COVID-19 pandemic has immensely influenced the healthcare and economic status of every country in the world. The morbidity and mortality caused by this pandemic have led to the emergence of various SARS-CoV-2 detection methods. Improved detection technologies make way for early, rapid, and accurate diagnosis of the disease. The knowledge of the operating principle of each diagnostic technique gives perspective on analyzing the most appropriate diagnostic tool for the present scenario. The potential areas of diagnosis include population screening, testing in under-served populations, school testing, vaccine trials, and epidemiological research. This book focuses on the current status of COVID-19 diagnostic methodologies highlighting point-of-care tests that utilize saliva specimens as the testing matrix. Saliva research has emerged globally as a boon to diagnose the deadly virus because it aids in early detection of SARS-CoV-2. This book is an attempt to create awareness in the scientific community about the global market scenario for salivary diagnostics and to elucidate the promising futuristic role of saliva in the accurate diagnosis of COVID-19.

Reports on recent advances in detecting drugs, hormones, antibodies, and other molecules of diagnostic importance; research has been going on in such fields as dentistry, clinical chemistry, and steroid hormones, but the researchers have not been talking to each across the disciplinary back fence. A

With Or Without Periodontal Disease

Oral Cancer Detection

Biomarkers in Periodontal Health and Disease

Novel Strategies and Clinical Impact

An Insight

Fundamentals and Applications

This book examines all aspects of the progress being made towards the development of highly specific and sensitive biomarkers that will overcome the shortcomings of clinical assessments in periodontics. The opening chapters present the basic anatomic features of periodontal tissues, outline the nature and pathogenic mechanisms of periodontal diseases, and discuss both conventional and novel methods of diagnosis with reference to their specificity and sensitivity. The potential role of biomarkers in periodontal diagnosis is then presented in the light of the published data. The biological samples in which potential biomarkers are sought are evaluated comparatively, drawing attention to their strengths and weaknesses, and the available technologies for biomarker studies are reviewed. The potential benefits of biomarkers are also discussed with regard to the possible bidirectional interactions between periodontal diseases and systemic health. Finally, the past, present, and future of periodontics are examined from a broader perspective. Readers will find the book to be an ideal summary of the state of the art in the field as biomarkers emerge that promise to facilitate periodontal diagnostics and permit timely, personally tailored interventions.

Scores of talented and dedicated people serve the forensic science community, performing vitally important work. However, they are often constrained by lack of adequate resources, sound policies, and national support. It is clear that change and advancements, both systematic and scientific, are needed in a number of forensic science disciplines to ensure the reliability of work, establish enforceable standards, and promote best practices with consistent application. Strengthening Forensic Science in the United States: A Path Forward provides a detailed plan for addressing these needs and suggests the creation of a new government entity, the National Institute of Forensic Science, to establish and enforce standards within the forensic science community. The benefits of improving and regulating the forensic science disciplines are clear: assisting law enforcement officials, enhancing homeland security, and reducing the risk of wrongful conviction and exoneration. Strengthening Forensic Science in the United States gives a full account of what is needed to advance the forensic science disciplines, including upgrading of systems and organizational structures, better training, widespread adoption of uniform and enforceable best practices, and mandatory certification and accreditation programs. While this book provides an essential call-to-action for congress and policy makers, it also serves as a vital tool for law enforcement agencies, criminal prosecutors and attorneys, and forensic science educators.

Textbook and Color Atlas of Salivary Gland Pathology: Diagnosis and Management provides its readers with a new, landmark text/atlas of this important discipline within oral and maxillofacial surgery, otolaryngology/head and neck surgery, and general surgery. Written by well-established clinicians, educators, and researchers in oral and maxillofacial surgery, this book brings together information on the etiology, diagnosis and treatment of all types of salivary gland pathology. Clear and comprehensive, the Textbook and Color Atlas of Salivary Gland Pathology offers complete explanation of all points, supported by a wealth of clinical and surgical illustrations to allow the reader to gain insight into every facet of each pathology and its diagnosis and treatment.

Salivary Diagnostics surveys one of the most exciting areas of research in oral biology. Regarded as the mirror of the body, saliva has immense potential to yield real clinical improvements in our ability to diagnose, and hence treat, oral and systemic conditions. The composition of saliva and other oral fluids reflects the tissue fluid levels of therapeutic, hormonal, and immunological molecules, as well as the presence of markers for systemic and oral disease.

Prevention of Oral Diseases

From Lab to Clinics

CDC Yellow Book 2018: Health Information for International Travel

Strengthening Forensic Science in the United States
The Current Clinical Giant for Respiratory Physicians
Salivary Glands

Provides an introduction to those needing to use infrared spectroscopy for the first time, explaining the fundamental aspects of this technique, how to obtain a spectrum and how to analyse infrared data covering a wide range of applications. Includes instrumental and sampling techniques Covers biological and industrial applications Includes suitable questions and problems in each chapter to assist in the analysis and interpretation of representative infrared spectra Part of the ANTS (Analytical Techniques in the Sciences) Series.

Reliable, precise and accurate detection and analysis of biomarkers remains a significant challenge for clinical researchers. Methods for the detection of biomarkers are rather complex, requiring pre-treatment steps before analysis can take place. Moreover, comparing various biomarker assays and tracing research progress in this area systematically is a challenge for researchers. The Detection of Biomarkers presents developments in biomarker detection, including methods tools and strategies, biosensor design, materials, and applications. The book presents methods, materials and procedures that are simple, precise, sensitive, selective, fast and economical, and therefore highly practical for use in clinical research scenarios. This volume situates biomarker detection in its research context and sets out future prospects for the area. Its 20 chapters offer a comprehensive coverage of biomarkers, including progress on nanotechnology, biosensor types, synthesis, immobilization, and applications in various fields. The book also demonstrates, for students, how to synthesize and immobilize biosensors for biomarker assay. It offers researchers real alternative and innovative ways to think about the field of biomarker detection, increasing the reliability, precision and accuracy of biomarker detection. Locates biomarker detection in its research context, setting out present and future prospects Allows clinical researchers to compare various biomarker assays systematically Presents new methods, materials and procedures that are simple, precise, sensitive, selective, fast and economical Gives innovative biomarker assays that are viable alternatives to current complex methods Helps clinical researchers who need reliable, precise and accurate biomarker detection methods

This book offers an essential overview of aspiration pneumonia, and focuses on four major aspects: epidemiology, pathophysiology, new preventive strategies, and trending topics. Each part presents detailed findings and insights into critical issues for the treatment of the disease including its diagnosis, assessment, selecting antibiotics, similarities and differences between aspiration risk and aspiration pneumonia risk, different therapeutic approaches and so on. The book also discusses emerging topics concerning the definition of NHCAP and sleep apnea. Special attention is given to therapeutic and preventive approaches for the elderly, highlighting recent advances and the evidence on their positive outcomes. Since the patients with this disorder are often in a post-stroke state and elderly, the book is highly relevant for neurologists and geriatric physicians. Further, many surgeons also face this type of pneumonia in association with postoperative complications and cancer therapy related complications. Lastly, the definition of aspiration pneumonia and its therapeutic strategy have yet to be established in many countries, and the data presented here should serve as a guideline for its future diagnosis and treatment. As such, the book offers a valuable resource for primary physicians, pulmonologists, gerontologists, respiratory nurses, physical therapists, dentists and otolaryngologists alike.

This monograph equips clinicians with the knowledge required to detect oral cancer at the earliest possible stage while simultaneously inspiring researchers to work on novel methods of detection. All the methods employed in the oral cancer context are considered, from simple ones like oral screening to more complex emerging optical methods and biomarker identification strategies. Individual chapters focus on conventional oral screening and application of vital stains, optical methods like white light based fluorescence-reflectance imaging, narrow band imaging, direct-oral-microscopy, and more advanced methods like optical coherence tomography, an in-vivo optical biopsy technique, and photo-acoustic imaging that allows visualization of deeper tissue changes. Novel electrical methods like bio-impedance assessment, occult biophysical methods like crystallization test, and the most promising salivary biomarkers and point-of-care opportunities are covered. Helpful information is also provided on essential topics including, oral potentially malignant disorders, biological aspects and molecular mechanisms underlying oral cancer progression, global epidemiology, concept of diagnostic delays, traditional imaging, and classic histopathology and microscopic features. The newer techniques are currently of active research interest, and can soon become powerful chair-side tools with potential to reduce diagnostic delays and improve survival.

Salivary Diagnostics
The Present and Future of a Unique Sample for Diagnosis
Skin and Arthropod Vectors
Rationale, Benefits, and Future Directions
A Path Forward
Saliva: Secretion and Functions

Recent research on skin immunity and the skin microbiome reveals the complexity of the skin and its importance in the development of immunity against arthropod-borne diseases. In diseases such as malaria, borreliosis, leishmaniasis, trypanosomiasis, etc., the skin interface has been shown as an essential site for pathogens to hide from the immune system, and as a potential site of persistence. Only very few vaccines have been successfully developed so far against these diseases, likely because of an insufficient understanding on the development of skin immunity against pathogens. Skin and Arthropod Vectors expands our knowledge on the role of the skin interface during the transmission of arthropod-borne diseases and particularly its immunity. This work may support researchers who strive for developing more efficient diagnostic tools and vaccines. It also gives scientists and advanced students working in related areas a better insight on how humans and animals are attractive to arthropods to develop better repellents, or to set up transgenic arthropods. Offers the only compilation of research focusing on both the skin interface and arthropod vectors, with contributions from international experts Advances research in the effort toward generating more effective diagnostic tools and vaccines focusing on the skin interface Can also serve as supplemental material for dermatology lectures or specialized lectures on medical entomology and skin immunity

The oral cavity is said to be the mirror of systemic diseases and many systemic diseases may be identified on the basis of oral manifestation alone. With the advent of sensitive immunochemical assay, the composition profile of human salivary secretion has been expanding considerably. The establishment of range of normal values for a variety of intrinsic and extrinsic salivary components represents an initial step to use saliva as a diagnostic tool to assess oral health status. Diabetes mellitus is one such complex, multifactorial genetic disorder of unknown etiology characterized by increased insulin secretion. The oral manifestations in diabetic patients are decreased salivation, painful burning mouth and increased severity and prevalence of periodontal disease. The following study was conducted to estimate whole saliva constituents in patients with diabetes mellitus and to find a possible correlation with periodontal disease. The results obtained from the study showed a marked increase in the concentrations of the whole salivary parameters studied in the diabetic group with periodontal disease in comparison to the nondiabetic groups with and without periodontal disease.

Early diagnosis of cancer and other non-oncological disorders gives a significant advantage for curing the disease and improving patient's life expectancy. Recent advances in biosensor-based techniques which are designed for specific biomarkers can be exploited for early diagnosis of diseases. Biosensor Based Advanced Cancer Diagnostics covers all available biosensor-based approaches and comprehensive technologies; along with their application in diagnosis, prognosis and therapeutic management of various oncological disorders. Besides this, current challenges and future aspects of these diagnostic approaches have also been discussed. This book offers a view of recent advances and is also helpful for designing new biosensor-based technologies in the field of medical science, engineering and biomedical technology. Biosensor Based Advanced Cancer Diagnostics helps biomedical engineers, researchers, molecular biologists, oncologists and clinicians with the development of point of care devices for disease diagnostics and prognostics. It also provides information on developing user friendly, sensitive, stable, accurate, low cost and minimally invasive modalities which can be adopted from lab to clinics. This book covers in-depth knowledge of disease biomarkers that can be exploited for designing and development of a range of biosensors. The editors have summarized the potential cancer biomarkers and methodology for their detection, plus transferring the developed system to clinical application by miniaturization and required integration with microfluidic systems. Covers design and development of advanced platforms for rapid diagnosis of cancerous biomarkers Takes a multidisciplinary approach to sensitive transducers development, nano-enabled advanced imaging, miniaturized analytical systems, and device packaging for point-of-care applications Offers an insight into how to develop cost-effective diagnostics for early detection of cancer

Is saliva important? Secretion is a reflex response controlled by both parasympathetic and sympathetic secretomotor nerves. It is "specimen of choice" & offers a cost-effective approach for the screening of large populations. Barriers to salivary diagnostics includes 1) Associated with research, 2) With product development, 3) With third party acceptance and associated legal issues. Whole saliva can be collected in a non-invasive manner by individuals with modest training, including patients. It is useful in the monitoring of therapeutic drug levels and the detection of illicit drug use. Salivary diagnosis provides an attractive alternative to more invasive, time-consuming, complicated and expensive diagnostic approaches. With the continued advancement in technology and biomedical science, the day is not far when saliva would become the "mirror" and monitor of body's health.

Saliva as a Diagnostic Tool
Emerging Trends in Oral Health Sciences and Dentistry
Textbook and Color Atlas of Salivary Gland Pathology
Salivary Gland Disorders
Diagnosis of salivary gland disorders
"Saliva" - a Diagnostic Tool

This book reviews the progress made in salivary diagnostics during the past two decades and identifies the likely direction of future endeavors. After an introductory section describing the histological and anatomical features of the salivary glands and salivary function, salivary collection devices and diagnostic platforms are reviewed. The field of "salivaomics" is then considered in detail, covering, for example, proteomics, the peptidome, DNA and RNA analysis, biomarkers, and methods for biomarker discovery. Salivary diagnostics for oral and systemic diseases are thoroughly discussed, and the role of salivary gland tissue engineering for future diagnostics is explored. The book closes by considering legal issues and barriers to salivary diagnostic development. Advances in Salivary Diagnostics will be an informative and stimulating reference for both practitioners and students.

Saliva and Oral Health
New Approaches in Diagnostics and Treatment
Advances in Salivary Diagnostics

Swab to Saliva
Diagnosis and Management