Loop Mediated Isothermal Amplification Of Dna

Development of Loop-mediated Isothermal Amplification (LAMP) Method Using a Simple Turbidimeter for Detection of Infectious Myonecrosis Virus (IMNV) and Macrobrachium Rosenbergii Nodavirus (MrNV)
Development of Loop-mediated Isothermal Amplification (lamp) Method for Rapid Detection of Ureaplasma Diversum in Buffalo Cervico-vaginal Swabs
Biosensor Technologies, Hyperspectral Imaging and Practical Applications
Development of Loop-mediated Isothermal Amplification (LAMP) Methods Using a Simple Turbidimeter for Detection of Taura Syndrome Virus (TSV) and White Spot Syndrome Virus (WSSV)
On-chip Parallel Detection of Foodborne Pathogens Using Loop-mediated Isothermal Amplification
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Development of Loop-mediated Isothermal Amplification (lamp) of DNA in Combination with Lateral Flow Dipstick (lfd) for the Rapid Detection of Vibrio Harveyi
Principles and Applications for DNA Amplification
The Development of Reverse Transcription Loop-mediated Isothermal Amplification for Rapid Detection of Influenza Viruses
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Entwicklung und Evaluation von Loop mediated isothermal amplification (LAMP)-basierter Paratyphus-Diagnostik
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Microfluidics
Loop-mediated Isothermal Amplification Method for Detection of Foodborne Pathogens
Development of loop-mediated isothermal amplification (LAMP) for the detection of Vibrio parahaemolyticus causing acute hepatopancreatic necrosis disease (AHPND) in the Philippines
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Loop Mediated Isothermal Amplification Based Detection of Equine Respiratory Pathogens Using a Portable, Smartphone-based Setup

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Loop-Mediated Isothermal Amplification for the Detection of HLA B*58
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Development of Loop-mediated Isothermal Amplification Assay for Rapid Diagnosis of Tuberculosis
Development and Clinical Validation of a Loop Mediated Isothermal Amplification (LAMP) Method for the Rapid Detection of Neisseria Meningitidis
Development and Evaluation of Reverse Transcriptase Loop-mediated Isothermal Amplification (RT-LAMP) for Avian Influenza A and Rabies and Other Lyssaviruses
Public Health Mycobacteriology
Methods in Microbiology
Neosporosis in Animals
Rapid and Simple Colorimetric Loop-mediated Isothermal Amplification (LAMP) Assay Fpr the Detection of Bovine Alphaherpesvirus 1
A Rapid Colorimetric Peptide Nucleic Acid Loop-mediated Isothermal Amplification Assay for the Detection of the IDH1 Mutation in Glioblastoma
Loop-mediated Isothermal Amplification (LAMP) for the Diagnosis of Human Sleeping Sickness
RNA Methodologies
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Current Topics in Malaria
A Guide for the Level III Laboratory

GRIFFITH SINGLETON

Development of Loop-mediated Isothermal Amplification (LAMP) Method Using a Simple Turbidimeter for Detection of Infectious Myonecrosis Virus (IMNV) and Macrobrachium Rosenbergii Nodavirus (MrNV) CRC Press
"The IDH1 mutation is an important diagnostic and prognostic biomarker used to characterize glioblastoma (GBM). Patients harboring the IDH1 mutation have improved overall survival following maximal resection. Knowledge of the IDH1 mutation status allows the surgeon to modify the surgical plan; however, no existing molecular test can provide this information intraoperatively. We designed a novel colorimetric peptide nucleic acid loop-mediated isothermal amplification (PNA-LAMP) method that rapidly detects the IDH1 R132H mutation in GBM. PNA-LAMP amplifies target DNA under isothermal conditions with high specificity and speed. The PNA prevents amplification of wild-type IDH1 DNA, while allowing amplification of the R132H variant if present. We used a pH-sensitive colorimetric detection method for visual determination of amplification in under one hour. Characterization of the assay was performed with plasmid DNA containing the IDH1 wild-type and R132H variant sequences.Amplification was confirmed using gel electrophoresis, and this analysis suggests that the

assay is more sensitive than Sanger sequencing - the gold standard for IDH1 mutation identification. This study is the first to attempt to develop a colorimetric LAMP assay for GBM tumor characterization, and only the third application of the PNA-LAMP method to detect acquired mutations in cancer. This novel molecular assay is a simple, specific, and rapid way to identify the presence of the IDH1 R132H variant."--Abstract.

Development of Loop-mediated Isothermal Amplification (lamp) Method for Rapid Detection of Ureaplasma Diversum in Buffalo Cervico-vaginal Swabs Springer Science & Business Media

This laboratory guide represents a growing collection of tried, tested and optimized laboratory protocols for the isolation and characterization of eukaryotic RNA, with lesser emphasis on the characterization of prokaryotic transcripts. Collectively the chapters work together to embellish the RNA story, each presenting clear take-home lessons, liberally incorporating flow charts, tables and graphs to facilitate learning and assist in the planning and implementation phases of a project. RNA Methodologies, 3rd edition includes approximately 30% new material, including chapters on the more recent technologies of RNA interference including: RNAi; Microarrays; Bioinformatics. It also includes new sections on: new and improved RT-PCR techniques; innovative 5' and 3' RACE techniques; subtractive PCR methods; methods for improving cDNA synthesis. * Author is a well-recognized expert in the field of RNA experimentation and founded Exon-Intron, a well-known biotechnology educational workshop center * Includes classic and contemporary techniques * Incorporates flow charts, tables, and graphs to facilitate learning and assist in the planning phases of projects

Biosensor Technologies, Hyperspectral Imaging and Practical Applications Springer

Influenza A infection is a major public health problem world wide. Four major pandemics in the past century including pandemic H1N1 2009 were caused by influenza A viruses. Different approaches of diagnosis assays have been developed to detect influenza A viruses. However, some techniques such as viral isolation, immunofluorescence assay (IFA) and other molecular assays including RT-PCR and real time RT-PCT have limitation to apply in mobile surveillance and unequipped laboratories in developing countries. In this study, one step reverse transcription loop-mediated isothermal amplification was developed as a rapid, sensitive to detect influenza A viruses. To reach the overall goal, a lamp primer set was designed by PrimerExpoler V4 and developed for a sensitive and specific amplification. The optimal amplification reaction is 63oC for 60 minutes then followed by 80oC for ten minutes. The developed assay is ten times more sensitive than conventional RT-PCR and comparable as real time RT-PCR. It is also highly specific for influenza viruses of different hosts. The colorimetric assay of LAMP products is also sensitive as gel electrophoresis. This developed one step RT-LAMP reveals comparable sensitive to detect the

Influenza A viruses in both cloacal and tracheal samples. This method is also an easy to use technique and suitable for field surveillance and screening.

Development of Loop-mediated Isothermal Amplification (LAMP) Methods Using a Simple Turbidimeter for Detection of Taura Syndrome Virus (TSV) and White Spot Syndrome Virus (WSSV)

John Wiley & Sons

Key features: Written by the scientist who named this parasite and was the first to set up proper diagnostic techniques Serves as the first ever book to provide information on the parasite structure, biology, pathogenesis, clinical signs, epidemiology, prevention, and control of neosporosis Covers both approaches toward preventing & controlling this disease: Developing an efficacious vaccine and sound cattle management practices Contains a wealth of illustrations, including many of the author's original photographs of the parasite Provides basic information on immunologic and molecular aspects of the disease Abortion is a worldwide problem in the livestock industry accounting for annual economic losses of billions of dollars, and N. caninum is a major cause of it. Neosporosis is a newly recognized disease of animals. Until 1988 it was misdiagnosed as toxoplasmosis. Considerable progress in understanding the biology of neosporosis has been made in the last 30 years, resulting in more than 2,000 scientific publications. The economic importance of abortion in cattle, and the availability of knowledge, reagents, and technology used to study toxoplasmosis, have contributed to the rapid progress in understanding the biology of neosporosis. Written by pioneers in this field, Neosporosis in Animals presents a comprehensive summary of the biology of neosporosis, starting with chapter 1 on the historical background of the discovery of the disease. Subsequent chapters deal with general aspects of the biology of N. caninum (chapter 2), techniques (chapter 3), and the disease caused by this parasite in cattle (chapter 4), dogs (chapter 5), and all other animals including sheep, pigs, primates and humans (chapters 6-18). This book provides, for the first time in a single authoritative source, a complete account of the structure, biology, clinical disease, diagnosis, epidemiology, treatment, attempts at immunoprophylaxis, and control in all hosts. There are 175 illustrations and tables devoted to the life cycle, structure of parasitic stages, and lesions. More than 2100 references are cited, allowing the reader to locate additional information on specific topics in an efficient way. This book will be useful to a broad range of researchers in biology and veterinarians.

On-chip Parallel Detection of Foodborne Pathogens Using Loop-mediated Isothermal Amplification

CABI

Acute and chronic sleeping sickness are fatal neglected tropical diseases caused by Trypanosoma brucei rhodesiense and Trypanosoma brucei gambiense respectively (members of the sub-genus Trypanozoon). Accurate diagnostics are needed to guide treatment since the symptoms of disease are non-specific and the drugs that are used for treatment are too toxic to be administered to

unconfirmed cases. Tests need to be simple enough to confirm clinical diagnosis of sleeping sickness in poorly-resourced, peripheral health centres and for use as epidemiological tools to detect T. b. rhodesiense in the zoonotic reservoirs of infection. This study focuses upon LAMP (loop-mediated isothermal amplification) as a novel diagnostic for sleeping sickness that may serve to bridge the gap between the need for sensitive, specific molecular diagnostics on the one hand and 'field-friendly' diagnostics on the other. Here, two previously published LAMP assays for Trypanozoons were compared to classic PCR based methods for the diagnosis of Trypanozoon infection status in 428 cattle blood samples. The results did not support the use of LAMP as an improved system for surveillance of T. b. rhodesiense in the zoonotic cattle reservoir. T. b. rhodesiense and T. b. gambiense subspecies specific LAMP assays were evaluated against traditional reference subspecies specific PCR tests, using DNA purified from 86 cryopreserved trypanosome isolates. Novel LAMP assays for these subspecies were also designed and evaluated. Both the published and novel assays for T. b. rhodesiense (targeting different regions of the SRA gene) were sensitive, specific and reliable when applied to purified DNAs, but were less consistent on field samples. The novel T. b. gambiense LAMP (targeting TgsGP) was sensitive and specific but this was not the case for the published LAMP assay (targeting the 5.8S rRNA gene). However reliability may be less than optimal for LAMP TgsGP. Finally, simple endpoint readout methods for LAMP were evaluated. The colour change reagent hydroxynaphthol blue was identified as the best currently available method taking cost, ease of use and reliability into consideration. In 2009 the number of reported sleeping sickness cases fell below 10,000 for the first time in 50 years. Improved LAMP diagnostics could facilitate the diagnosis of sleeping sickness and support the continued fight against this neglected, but deadly disease.

Biotechnology: Prospects and Applications LAP Lambert Academic Publishing

Tuberculosis (TB) is a global health problem and manifests in severe disease. Rapid and accurate diagnosis of symptomatic patients is a cornerstone of global tuberculosis control strategies. Difficulties in current case finding tools in disease endemic countries have made the situation more complicated to ensure access to good diagnostics at all health service levels leaving many patients undiagnosed. New nucleic acid amplification technique called Loop-mediated isothermal amplification (LAMP) has been developed, in which reagents react under isothermal condition with high specificity, efficiency and rapidity for quick detection of Mycobacterium tuberculosis complex (MTBC) in sputum samples of suspected pulmonary tuberculosis (PTB) patients. The present study aims to evaluate the efficiency of LAMP in detecting MTBC in sputum samples of suspected PTB patients under Nepalese settings.

Molecular Methods in Plant Disease Diagnostics

Elsevier
The first book offering a global overview of fundamental microfluidics and the wide range of possible applications, for example, in chemistry, biology, and biomedical science. As such, it summarizes recent progress in microfluidics, including its origin and development, the theoretical fundamentals, and fabrication techniques for microfluidic devices. The book also comprehensively covers the fluid mechanics, physics and chemistry as well as applications in such different fields as detection and synthesis of inorganic and organic materials. A useful reference for non-specialists and a basic guideline for research scientists and technicians already active in this field or intending to work in microfluidics.
Development of Loop-mediated Isothermal Amplification (lamp) of DNA in Combination with Lateral Flow Dipstick (lfd) for the Rapid Detection of Vibrio Harveyi Academic Press
Recent advances in array-based detectors and imaging technologies have provided high throughput systems that can operate within a substantially reduced timeframe and other techniques that can detect multiple contaminants at one time. These technologies are revolutionary in terms of food safety assessment in manufacturing, and will also have a significant impact on areas such as public health and food defence. This book summarizes the latest research and applications of sensor technologies for online and high throughput screening of food. The book first introduces high throughput screening strategies and technology platforms, and discusses key issues in sample collection and preparation. The subsequent chapters are then grouped into four sections: Part I reviews biorecognition techniques; Part II covers the use of optical biosensors and hyperspectral imaging in food safety assessment; Part III focuses on electrochemical and mass-based transducers; and finally Part IV deals with the application of these safety assessment technologies in specific food products, including meat and poultry, seafood, fruits and vegetables. Summarises the latest research on sensor technologies for online and high-throughput screening of food Covers high-throughput screening and the current and forecast state of rapid contaminant detection technologies Looks at the use of optical and electrochemical biosensors and hyperspectral imaging in food safety assessment and the application of these technologies in specific food products
Principles and Applications for DNA Amplification John Wiley & Sons
Using molecular methods for plant disease diagnosis provides diagnosticians with a number of advantages over more traditional methods. They can allow the identification of morphologically similar species, for example, or the detection of infection prior to symptom formation. Not only can molecular tools help by increasing the efficacy, accuracy and speed of diagnosis; their common technological basis provides further benefits, especially where resources are limited and traditional skills are hard to sustain. This book provides protocols for nucleic acid-based methods currently applied

to plant pathogen detection and identification. It takes the practitioner through the full range of molecular diagnostic and detection methods and, as these generic techniques are appropriate for use on any target with minimal modification, also provides a useful resource for students of plant pathology and plant pathologists. Beginning with the background and future directions of the science, it then addresses DNA barcoding, microarrays, polymerase chain reactions (PCR), quality assurance and more, forming a complete reference on the subject. *The Development of Reverse Transcription Loop-mediated Isothermal Amplification for Rapid Detection of Influenza Viruses* Current Topics in MalariaLoop-mediated Isothermal Amplification (LAMP) for the Diagnosis of Human Sleeping SicknessTowards a Point-of-care Diagnostic TestAcute and chronic sleeping sickness are fatal neglected tropical diseases caused by Trypanosoma brucei rhodesiense and Trypanosoma brucei gambiense respectively (members of the sub-genus Trypanozoon). Accurate diagnostics are needed to guide treatment since the symptoms of disease are non-specific and the drugs that are used for treatment are too toxic to be administered to unconfirmed cases. Tests need to be simple enough to confirm clinical diagnosis of sleeping sickness in poorly-resourced, peripheral health centres and for use as epidemiological tools to detect T. b. rhodesiense in the zoonotic reservoirs of infection. This study focuses upon LAMP (loop-mediated isothermal amplification) as a novel diagnostic for sleeping sickness that may serve to bridge the gap between the need for sensitive, specific molecular diagnostics on the one hand and 'field-friendly' diagnostics on the other. Here, two previously published LAMP assays for Trypanozoons were compared to classic PCR based methods for the diagnosis of Trypanozoon infection status in 428 cattle blood samples. The results did not support the use of LAMP as an improved system for surveillance of T. b. rhodesiense in the zoonotic cattle reservoir. T. b. rhodesiense and T. b. gambiense subspecies specific LAMP assays were evaluated against traditional reference subspecies specific PCR tests, using DNA purified from 86 cryopreserved trypanosome isolates. Novel LAMP assays for these subspecies were also designed and evaluated. Both the published and novel assays for T. b. rhodesiense (targeting different regions of the SRA gene) were sensitive, specific and reliable when applied to purified DNAs, but were less consistent on field samples. The novel T. b. gambiense LAMP (targeting TgsGP) was sensitive and specific but this was not the case for the published LAMP assay (targeting the 5.8S rRNA gene). However reliability may be less than optimal for LAMP TgsGP. Finally, simple endpoint readout methods for LAMP were evaluated. The colour change reagent hydroxynaphthol blue was identified as the best currently available method taking cost, ease of use and reliability into consideration. In 2009 the number of reported sleeping sickness cases fell below 10,000 for the first time in 50 years. Improved LAMP diagnostics could

facilitate the diagnosis of sleeping sickness and support the continued fight against this neglected, but deadly disease.Neosporosis in Animals
Provides the latest QMRA methodologies to determine infection riskcause by either accidental microbial infections or deliberateinfections caused by terrorism • Reviews the latest methodologies to quantify at everystep of the microbial exposure pathways, from the first release ofa pathogen to the actual human infection • Provides techniques on how to gatherinformation, on how each microorganism moves through theenvironment, how to determine their survival rates on variousmedia, and how people are exposed to the microorganism • Explains how QMRA can be used as a tool to measure theimpact of interventions and identify the best policies andpractices to protect public health and safety • Includes new information on genetic methods • Techniques use to develop risk models for drinkingwater, groundwater, recreational water, food and pathogens in theindoor environment
Development of Loop-Mediated Isothermal Amplification Assay for Rapid Diagnosis of Tuberculosis Elsevier
Nucleic acid diagnostic tests can complement existing tools to improve the diagnosis of diseases. However, the requirement of laboratory infrastructure limits their use in developing countries as routine tests. Isothermal amplification techniques such as loop-mediated isothermal amplification bridge such challenges because they require simpler infrastructure. In this study, we evaluated a commercial H5N1 Avian influenza virus (AIV) detection kit using isothermal amplification with Bsm DNA polymerase. We also developed a one-step RT-LAMP assay using two strand displacing DNA polymerases for the detection of two zoonotic viruses, avian influenza A virus and lyssaviruses. During the evaluation of the commercial H5N1 detection kit, A/H9N2, two A/H7N3 isolates and Influenza B were also detected indicating non-specific detection. After optimising reaction temperature and time only the Influenza B was non-specifically detected. In addition, a reverse-transcription LAMP assay was developed focusing on the matrix gene of avian influenza A virus. The detection limit and specificity of the assay was tested using serially diluted in vitro transcribed RNA and the different subtypes of influenza virus using optimal reaction conditions. Restriction enzyme digestion and nucleotide sequencing was used to confirm the identity of the amplified RT-LAMP product. Two detection methods, agarose gel electrophoresis and realtime fluorescence using a fluorescence reader, ESE-Quant tube scanner (ESE Gmbh, Stockach, Germany), were evaluated. The sensitivity of these two detection methods was similar; however, the real-time monitoring of amplification is more suitable for field application of the RT-LAMP assays. A reverse-transcription loop-mediated isothermal amplification assay was also developed for the specific detection of rabies and other lyssaviruses. The assays used specifically designed primers to target the

partial nucleoprotein (N) gene and were able to amplify all 12 lyssavirus species; representing a wide diversity of lyssaviruses present in Africa. RT-LAMP reaction was confirmed by restriction enzyme analysis and sequencing. The use of melting curve analysis was also attempted. The assay was about 1000 times more sensitive compared to the RTPCR assay. The RT-LAMP assays described here have great potential as a diagnostic tool as well as an on-site molecular tool especially in resource-limited settings.

Real-time Loop-mediated Isothermal Amplification Assay for Rapid Detection of Rift Valley Fever Virus

Academic Press Current Topics in MalariaLoop-mediated Isothermal Amplification (LAMP) for the Diagnosis of Human Sleeping SicknessTowards a Point-of-care Diagnostic Test

Entwicklung und Evaluation von Loop mediated isothermal amplification (LAMP)-basierter Paratyphus-Diagnostik

The book "Methods in Silkworm Microbiology" is the first ever publication that provides in-depth reviews on the latest progresses about silkworm –pathogen interactions, diseases and management practices for sustainable development of sericulture. Different molecular and immunodiagnostic methods for the detection of pathogens have been comprehensively addressed. Most recent advancements on the role of Micro RNAs in silkworm and pathogen interactions are provided with suitable illustrations. Recent technological advances and emerging trends in exploring silkworm gut microbial communities towards translation research, particularly to understand microbiome functions have been highlighted. Information on various immune mechanisms of silkworm against invading pathogens is summarized. The book further highlights the silkworm gut microbiota as a potential source for biotechnological applications. Provide comprehensive reviews and valuable methods from the selected experts on the topic "Methods in silkworm microbiology/pathology" Provides latest information on application of genomics and transcriptomics to decipher silkworm gut microbial communities. Different molecular and immunodiagnostic methods for the detection of pathogens have been comprehensively addressed. Provides up to date information on silkworm-pathogen interactions, different silkworm diseases and immune mechanisms

Towards a Point-of-care Diagnostic Test

Laboratory Techniques in Rabies Diagnosis, Research and Prevention provides a basic understanding of the current trends in rabies. It establishes a new facility for rabies surveillance, vaccine and antibody manufacturing. It offers clarity about the choice of laboratory methods for diagnosis and virus typing, of systems for producing monoclonal and polyclonal antibodies and of methods for testing potency of vaccines and antibodies. The book covers advancements in the classical methods described as well as recent methods and approaches pertaining to rabies diagnosis and research. Supplies techniques pertaining to rabies diagnosis and research Provides an update on the

conventional and modern vaccines for rabies prevention Offers updates on the full length antibodies and antibody fragments for post exposure prophylaxis of rabies Presents technique descriptions that can be used to be compared to industry protocols to identify and establish potential new techniques

Microfluidics

Biotechnology: Prospects and Applications covers the review of recent developments in biotechnology and international authorship presents global issues that help in our understanding of the role of biotechnology in solving important scientific and societal problems for the benefit of mankind and environment. A balanced coverage of basic molecular biology and practical applications, relevant examples, colored illustrations, and contemporary applications of biotechnology provide students and researchers with the tools and basic knowledge of biotechnology. In our effort to introduce students and researchers to cutting edge techniques and applications of biotechnology, we dedicated specific chapters to such emerging areas of biotechnology as Emerging Dynamics of Brassinosteroids Research, Third generation green energy, Bioremediation, Metal Organic Frameworks: New smart materials for biological application, Bioherbicides, Biosensors, Fetal Mesenchymal Stem Cells and Animal forensics. Biotechnology: Prospects and Applications will be highly useful for students, teachers and researchers in all disciplines of life sciences, agricultural sciences, medicine, and biotechnology in universities, research stations and biotechnology companies. The book features broader aspects of the role of biotechnology in human endeavor. It also presents an overview of prospects and applications while emphasizing modern, cutting-edge, and emerging areas of biotechnology. Further, it provides the readers with a comprehensive knowledge of topics in food and agricultural biotechnology, microbial biotechnology, environmental biotechnology and animal biotechnology. The chapters have been written with special reference to the latest developments in above broader areas of biotechnology that impact the biotechnology industry. A list of references at the end of each chapter is provided for the readers to learn more about a particular topic. Typically, these references include basic research, research papers, review articles and articles from the popular literature.

Loop-mediated Isothermal Amplification Method for Detection of Foodborne Pathogens

This is an introduction to the methods and applications of polymerase chain reaction (PCR) technology, a technology developed by Erlich's group at Cetus and Cetus, and is expected to be used in all biology laboratories worldwide within the next few years.

Development of loop-mediated isothermal amplification (LAMP) for the detection of Vibrio parahaemolyticus causing acute hepatopancreatic necrosis disease (AHPND) in the Philippines

In the recent years, massive losses in shrimp production were observed

due to acute hepatopancreatic necrosis disease (AHPND) related outbreaks. There are currently no available cure for this disease and early detection methods remain as the primary way to combat effects of the disease. Since AHPND is a relatively new disease in shrimps, available detection methods remain limited to histopathological analyses and polymerase chain reaction (PCR). Another method explored to detect the disease is Loop-mediated isothermal amplification (LAMP) which is known for specific and fast diagnosis. Here, the development of alternative LAMP primers specifically designed for the Philippine strain of Vibrio parahaemolyticus causing AHPND was discussed. The sensitivity of the established LAMP protocol was found to be at 4ug/mL of bacterial DNA. At the same time, it exhibited high specificity to AHPND-causing V. parahaemolyticus. Using the locally designed LAMP primers AHPND was detected in 78% of samples from Luzon, 46% in Visayas and 71% in Mindanao . In comparison with PCR, LAMP was able to detect 54% of samples positive for AHPND while only 40% tested positive in PCR. In summary, AHPND is still a crippling disease in terms of shrimp production in the Philippines and that the developed AHPND-LAMP primers in this study could be of great alternative in the detection of the disease.

Application of LAMP (Loop-Mediated Isothermal Amplification) for the Diagnosis of Malaria Infections in Clinical Samples from Central and Western Provinces of Thailand

Principles and Protocols

Einheitliches Loop-mediated Isothermal Amplification Protokoll (LAMP) Zur Vereinfachten Molekularen Diagnose Der Leishmaniose