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INSTRUCTIONS TO AUTHORS

Aims and Scope
Romanian Archives of Microbiology and Immunology, an international journal dedicated to original research work, publishes papers focusing on various aspects of microbiology and immunology. Romanian Archives of Microbiology and Immunology is indexed in MEDLINE. The frequency of the Journal is currently four issues per year.

Categories of manuscripts
Full-length articles are full-length descriptions of original research (up to 10 printed pages). Reviews are comprehensive appraisals of research in a field of current interest. All reviews are subject to the normal review process (up to 15 printed pages). Rapid Communications are brief, definitive reports of highly significant and timely findings in the field (up to 5 printed pages).

Submission of manuscripts
Manuscripts and all attached files (tables and illustrations) should be submitted in electronic form to the Editorial Office, e-mail address: archives@cantacuzino.ro or by regular mail (address: Redactia Revistei Romanian Archives of Microbiology and Immunology, Spl. Independentei 103, sector 5, 050096, Bucuresti, Romania) on compact disk, preferably accompanied by three copies of the manuscript, including tables and figures, printed on one side of A4 paper format, double-spaced, with 2.5 margins. The preferred software is Microsoft Word. In order to speed up the process of review, manuscripts should be prepared very carefully.

Cover letter
Each manuscript submitted to the Romanian Archives of Microbiology and Immunology must be accompanied by a Cover letter including an explicit statement by the corresponding author that:
- the manuscript represents an original work, has not been previously published, and has not been submitted simultaneously for publication elsewhere.
- the manuscript, as submitted, has been reviewed and approved by all named authors and that all authors concur with the submission and are responsible for its content.

Editorial review and acceptance
All manuscripts are subject to editorial review by professional peer reviewers (at least two). The acceptance criteria for all manuscripts are based on quality and originality. The corresponding author of a manuscript is informed within 45 days after submission that the paper is accepted for publication in the journal, needs revision or is rejected. Revised manuscripts should be re-submitted as soon as possible but not later than 14 days.

Ethical considerations
A paper describing any experimental work with humans should include a statement that the Ethics Committee of the institution in which the work was done has approved it, and that the subjects gave informed consent to the work. Experiments with animals should be done in accordance with the legal requirements of the relevant local or national authority. Procedures should be such that animals used in experiments do not suffer unnecessarily. Papers should include details of the procedures and anaesthetics used. The Editors will not accept papers where the ethical aspects are, in their opinion, open to doubt.

Preparation of manuscripts
Manuscripts should be submitted in English. American or British spelling can be used provided that only one spelling style is consistently used throughout. Manuscripts must be typewritten on A4 format (210x297 mm), with double spacing, margins of 25 mm, on one side only, consecutively numbered. Times New Roman font, 12-point size, is required.

Text headings
All headings in the text should be set over to the left hand margin, and text should begin on the next line. Type first level (sectional) headings all in capitals. Second level headings should be typed in small (lower case) letters but with the first letter of each main word a capital. For third level headings, only the first letter of the first word should be a capital. Underline first and second level headings.

First Level Text Heading
Second Level Text Heading
Third level text heading

Manuscripts should be divided into the following sections and order:
1. Title page, Abstract and key words, Introduction, Materials and Methods, Results, Discussion, Acknowledgements, References, Tables, Figures. Legends and Figures.

2. Abstract

3. Introduction

4. Materials and Methods

5. Results

6. Discussion

7. Acknowledgements

8. References

9. Tables

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Units of measurement, Symbols and abbreviations
Symbols for physical units should be those of the Système Internationale (SI) Units. Alternative or non-SI units may be used, but these must be defined at their first occurrence in the text.

Nomenclature of Microorganisms
Binary names, consisting of a generic name and a specific epithet (e.g., Escherichia coli), must be used for all microorganisms.

Genetic Nomenclature
To facilitate accurate communication, it is important that standard genetic nomenclature be used whenever possible and that deviations or stop signs on naming systems be endorsed by an appropriate authoritative body.

Proofs and reprints
Ten reprints of each article and one copy of the journal will be supplied free of charge to the corresponding author.

Romanian Archives of Microbiology and Immunology
ABSTRACT

A series of N-(1-methyl-1Hpyrazole-4-carbonyl)-thiourea derivatives were assessed for their in vitro antimicrobial and anti-pathogenic activity against twenty-two strains of Erwinia amylovora isolated from different regions in Romania. The compounds were solubilised in dimethylsulfoxide and screened for their in vitro antimicrobial activity. The qualitative screening of the susceptibility spectra of various strains to the compounds was performed by adapted diffusion techniques (distribution of the tested compound solution directly on the solid medium previously seeded with the bacterial inoculums). The quantitative assay of the minimal inhibitory concentration (MIC, μg/ml) was based on liquid medium two-fold microdilutions. The subinhibitory concentrations of the tested substances were investigated for their influence on biofilm development on inert substrata. The present study showed that six new thiourea compounds exhibited a low antibacterial activity (MIC values > 500 μg/ml), but the subinhibitory concentrations inhibited the biofilm development on inert substrata. Thus, these results could suggest the usefulness of the tested compounds as control agents for preventing the first stage (colonization) of the infection with the fire blight pathogen.

Keywords: Erwinia amylovora, thiourea derivatives, chemical control

REFERENCES

PROBIOTICS - AN ALTERNATIVE TREATMENT FOR VARIOUS DISEASES

Nicoleta Vasile*, Raluca Ghindea, Tatiana Vassu

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ABSTRACT
Modulating the microbiota of the gastrointestinal tract through probiotics is an alternative to the conventional treatment of various diseases, based on synthetic drugs. The lifestyle, nutrition and stress of the present modern society could be among the factors responsible for modifications in the intestinal microbiota, correlated with specific diseases. The present study describes the positive effects of probiotics use, with special reference to the yeasts use in several frequently encountered diseases, such as hypercholesterolemia, the irritable bowel syndrome, gastritis and several uro-genital disorders.

Keywords: probiotics, yeasts, human microbiota

REFERENCES


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Probiotics - an alternative treatment for various diseases


**HELICOBACTER PYLORI CULTIVATION FROM GASTRIC BIOPSIES AND SUSCEPTIBILITY TO ANTIBIOTICS USED IN EMPirical THERAPY**

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**ABSTRACT**

*Helicobacter pylori* is one of the most common among the numerous bacterial species of the stomach. It is classified as a class 1 carcinogen because of its causal relationship to gastric adenocarcinoma. The epidemiology of *H. pylori* infection is characterized by a marked difference between developing and developed countries. Treatment of *H. pylori* still remains a challenge due to the high rate of antibiotic resistance. The aim of this study was to investigate the susceptibility of *H. pylori* strains isolated from gastric biopsies to different antibiotics currently used in the *H. pylori* infection treatment schemes. **Materials and methods.** Upper gastrointestinal GI endoscopy was performed, followed by the rapid urease test on gastric biopsies. The positive samples were cultivated on specific media under microaerophilic conditions and the antibiotic susceptibility assay was performed on the isolated strains. **Results.** A positivity rate of 70% was obtained for cultures performed from the biopsy samples positive for the urease test. The resistance rates for the antibiotics used in the classic triple therapy proved to be high, i.e. 92.8% for metronidazole, 50% for amoxicillin and 32% for clarithromycin. The isolated strains proved to be sensitive to ciprofloxacin and levofloxacin. **Conclusions.** The role of gastric microbiota and its contribution to the *H. pylori* associated pathology need to be established. The problem of antibiotic treatment failure in case of resistant *H. pylori* strains can be surpassed by routine culture and antibiotic susceptibility testings.

**Keywords:** *Helicobacter pylori*, gastrointestinal endoscopy, culture, resistance

**REFERENCES**


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REFERENCES


ABSTRACT

We examined group B streptococcus (GBs) isolates colonizing women at the 35-37 weeks of pregnancy. A total of 257 group B streptococcus (GBs) isolates were serotyped using direct agglutination with a set of commercially available antisera (Ia, Ib, II, III, IV, and V) and tested for susceptibility to antimicrobials (penicillin, macrolides, lincosamides, fluoroquinolones and tetracyclines). Fourteen isolates could not be serotyped with the antisera set used in the study. Serotype III was the predominant serotype (33%), followed by serotypes V (23%), and Ia (20%). Whereas all isolates were susceptible to penicillin, the rates of susceptibility to the other antimicrobials tested were the following: 91% for ofloxacin, 80% for clindamycin, 77% for erythromycin, and 4% for tetracycline. More than half (67%) of the macrolide resistant isolates belonged to serotypes V and III. A systematic surveillance of the autochthonous GBs serotypes, performed at the level of laboratories processing a high number of human specimens, is mandatory for strengthening the national epidemiological GBs surveillance. While penicillin remains the drug of choice for intrapartum prophylaxis, the resistance of autochthonous GBs isolates to other antibiotics should be actively monitored.

Keywords: group B streptococcus, serotyping, macrolide resistance

SCREENING FOR GROUP B STREPTOCOCCUS: A PRIVATE LABORATORY EXPERIENCE

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Keywords: group B streptococcus, serotyping, macrolide resistance

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ABSTRACT

Multiplex polymerase chain reaction (PCR) allows simultaneous detection of two or more genes, using the same reaction conditions, and so it is possible the rapid detection of methicillin resistant Staphylococcus aureus strains (MRSA) in clinical specimens. This study aimed to implement, for the first time in our laboratory, a triplex real time PCR (RT-PCR) technique for detection of genes encoding resistance to oxacillin and synthesis of Panton Valentine leukocidin (pvl), a pathogenicity factor characteristic for community acquired strains (CA-MRSA). The application of this method will permit the epidemiological surveillance of circulating strains and early application of prevention measures.

Keywords: Staphylococcus aureus, pvl, mecA, multiplex PCR.

REFERENCES


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ABSTRACT

Background: Pseudomonas aeruginosa is an important bacterial pathogen which causes different infectious diseases such as wound and skin lesion infections. The main goal of this study was to induce eventual apoptotic reactions in ultraviolet-exposed colonies of Pseudomonas aeruginosa.

Materials and Methods: The colonies of Pseudomonas aeruginosa were irradiated by UVB light; then, the DNA molecules of control and UVB-exposed colonies were extracted. Eventually, the extracted DNA molecules mixed in loading dye were run in 1% agarose gel containing ethidium bromide.

Results: No unusual pattern like DNA laddering bands or smear, were detected upon the 1% agarose gel.

Discussion: Through the applied protocol in this survey, the UVB radiation is not able to trigger apoptosis pathway in UV light exposed colonies of Pseudomonas aeruginosa. It seems that the cytoprotective property of Heat shock proteins inhibit the inducing effect of UVB light in irradiated colonies of Pseudomonas aeruginosa.

Keywords: in vitro, Pseudomonas aeruginosa, Apoptosis, Electrophoresis, Agar gel
A study on apoptosis inducing effects of UVB irradiation in *Pseudomonas aeruginosa*


ABSTRACT
The ability of H5N1 Avian Influenza Virus (AIV) to survive in surface water has been assessed in experimental laboratory conditions, based on non-pathogenic avian reassortant model, by titration of infectivity (TCID₅₀) at different time intervals, in three different types of water. The effect of different chemicals on AIV’s survival was assessed using the same type of experimental model. After exposure to the chemical, followed by growth on a suitable substrate, the AIV was quantified by a real-time quantitative reverse transcriptase PCR (qRT-PCR).

The reassortant virus persisted, and remained infective in aquatic environments, for 12 days at 22-35°C and up to 20 days at 4°C, irrespective of the type of water, supporting the hypothesis of a potential risk for transmitting the virus among birds and contaminating the household water via common sources of water. A significant decrease for AIV persistence models was recorded for sea water, after 12 days, at 35°C.

An effective inactivation has been shown when using commercially available products based on glutaraldehyde and penta potassium bis (peroxy mono sulphate) bis(sulphate), respectively. This rapid and safe method for decontamination, developed in this study, might be helpful in implementation of biosafety measures in laboratory and farms against AIV.

Keywords: avian influenza, H5N1 reassortant, disinfectants, persistence, water

REFERENCES

*Corresponding author: Adrian Onu - aonu@cantacuzino.ro
Survival of H5N1 influenza virus in water and its inactivation by chemical methods

NEW INTERFERONS IN THE TREATMENT OF CHRONIC HEPATITIS C

Simona Rută1,2* and Costin Cernescu2

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2Ştefan S Nicolau Institute of Virology, Bucharest, Romania

ABSTRACT

The current standard therapy for chronic HCV infection is a combination of pegylated–interferon (PEG–IFN) and weight-based ribavirin, administered for 24-48 weeks, according to the viral genotype. Although the weekly administration of pegylated interferons provides superior antiviral efficacy over standard interferon alpha, the rate of sustained virological response rarely overpasses 50% in patients infected with HCV genotypes 1 and 4. Consequently, multiple clinical trials with congeners of interferon (consensus interferon, interferon lambda, albinterferon, and controlled-release interferons) are ongoing. Their main advantages consist in maintenance of viral suppression across a longer dosing interval, avoidance of interdose trough and reduced dosing frequencies (twice or even once per month compared to once per week for the actual PEG-IFNs). Along with these superior pharmacokinetic properties, new interferons are expected to have improved side-effect profiles and better tolerability compared with the currently available formulations, providing an option for otherwise difficult to treat, challenging populations. New interferon formulation can be incorporated into future combination with direct acting antivirals, in order to maintain viral suppression over longer periods and minimize the development of viral resistance.

Keywords: hepatitis C treatment, pegylated interferons, albumin interferon, consensus interferon, lambda IFN, controlled - release interferons

REFERENCES


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New interferons in the treatment of chronic hepatitis C


