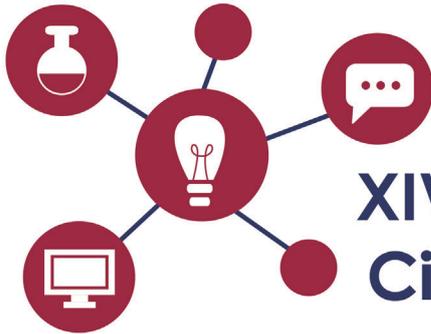




Investigação



XIV Encontro de Iniciação Científica da UNIFRAN

Data: 14 e 15 de outubro de 2021

Horário: Dia 14 das 9h às 18h e dia 27 das 9h às 13h

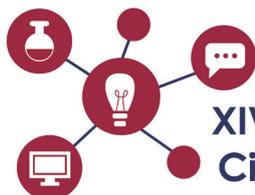
Local: Link do Ambiente Virtual Zoom

Objetivos do Evento:

Proporcionar a interação dos estudantes de iniciação científica entre os diferentes campos científicos, com o objetivo de apresentar, discutir, trocar experiências e ampliar o conhecimento dentro da Instituição.

Homepage:

<https://14encontrodeiniciacaocientifica.wordpress.com>



XIV Encontro de Iniciação Científica da UNIFRAN

COMISSÃO ORGANIZADORA

Presidente do evento:

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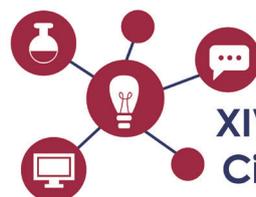
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Prof. Dr. Roberto Leiser Baronas (Centro de Educação e Ciências Humanas, Universidade Federal de São Carlos, São Carlos, SP)

Prof. Dr. Wanderlei Abadio Oliveira (Programa de Pós-graduação em Psicologia, Pontifícia Universidade Católica de Campinas, Campinas, SP)



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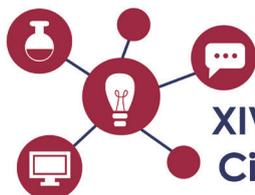
Prof. Dr. Vladimir Constantino Gomes Heleno (PPG Ciências - UNIFRAN)

Prof. Dr. Sérgio Ricardo Ambrósio (PPG Ciências - UNIFRAN)

Apoio:

Universidade de Franca (UNIFRAN)

Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq)



XIV Encontro de Iniciação Científica da UNIFRAN

PROGRAMAÇÃO XIV ENCONTRO DE INICIAÇÃO CIENTÍFICA DA UNIFRAN

Dia 14 de outubro de 2021:

9:00h – Cerimônia de abertura oficial:

Profa. Dra. Kátia Jorge Ciuffi (Reitora – UNIFRAN)

Prof. Dr. Élcio Rivelino Rodrigues (Pró-reitor de Graduação)

Prof. Dr. Ewaldo Mattos Jr. (Presidente do Evento – PPG Ciência Animal/UNIFRAN)

10:00h – Palestra de abertura:

“Ciência e Educação em Tempos de COVID”

Palestrante: Profa. Dra. Fabiana Ferreira de Souza (Faculdade de Medicina Veterinária e Zootecnia, Universidade Estadual Paulista – Júlio de Mesquita Filho, Campus de Botucatu, Botucatu, SP).

11:00 – 13:00h: Reunião com o comitê externo de avaliadores do CNPq

(Exclusivo para os membros da Comissão de Bolsas de Iniciação Científica da UNIFRAN)

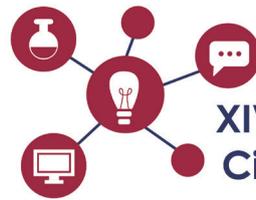
13:00 – 14:00h – Intervalo para almoço

14:00 – 18:00h – Apresentação de trabalhos dos bolsistas de iniciação científica PIBIC-CNPq, PIBIC-EM e PIBIC-Institucional

Dia 15 de outubro de 2021:

9:00 – 12:00h – Apresentação de trabalhos iniciação científica voluntários e FAPESP.

12:30h – Encerramento oficial

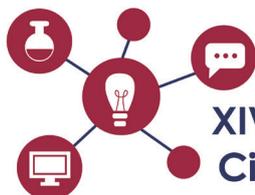


XIV Encontro de Iniciação
Científica da UNIFRAN

Anais do XIV Encontro de Iniciação Científica da Unifran



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de Franca



XIV Encontro de Iniciação Científica da UNIFRAN

(TRANS)FORMATION AND RECOGNITION IN THE OTHER/OTHER: A DISCOURSE ANALYSIS OF THE SERIES CALLED *VENENO*

Evelyn Stefani Toniato da Silva, Aline Fernandes de Azevedo Bocchi

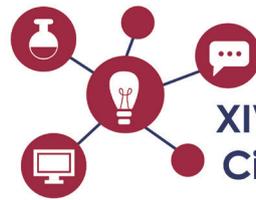
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Purpose: This study aims to analyze excerpts from the television drama series called *Veneno* (2020), focusing on the transitioning of the character Valeria Vegas. This material will be used to encourage reflections on the subject's structuring through recognition by the other/Other, encompassing the discursive analysis of the transsexual body image in the selected material. **Methods:** For the study method and theoretical foundation, we'll use the Discourse Analysis theory established by Michel Pêcheux, particularly the construction of social, historical and ideological memory of the body. We also anchor the discussion in Lacanian Psychoanalysis to understand the impacts on the constitution of the transsexual subject when identifying and recognizing themselves in/by the other/Other. **Results:** It can be inferred that recognition by the other, as such, is essential to the ideological ritual of constitution of the subject, through which they will establish their identity, that is, for this to occur, the subject must be questioned by language as a form of visibility for themselves and for the other. Thus, the enunciative processes participate in the subjection of the individual to the subject by ideology through identifications with the words that name them. In this process, naming the transgender body from designations and meanings that recognize their social existence is essential for the constitution of the trans subject as a social subject. **Conclusion:** It is expected that the research will contribute to the formulation of public policies dedicated to the transgender population, leading to consequences for social relations in terms of equal rights.

Keywords: transsexual bodies, image, identification.

Acknowledgments: CAPES.



A COLONY OF BARBARIC SCENES: ABJECT AND INELUCTABLE BODIES IN BRAZILIAN HOLOCAUST DOCUMENTARY

Ana Júlia Aparecida Chaves, Aline Fernandes de Azevedo Bocchi

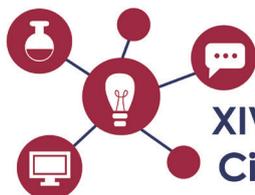
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Purpose: This research examines the processes of meaning that constitute the Brazilian Holocaust documentary by Daniela Arbex and Armando Mendz. We understand that this documentary talks about a forgotten place, Barbacena's Colony Hospital, showing its visible contours, historicizing its relationship with the city, the field of psychiatry and segregated bodies. As a specific issue, we chose to understand the ways in which society saw these abject bodies that, dehumanized by the hospital psychiatric device, became killable and unworthy of mourning. **Methods:** First, a bibliographical study was carried out on Discourse Analysis, a theory developed by Michel Pêcheux and his group, as well as its development in Brazil by Eni Orlandi, mainly concerning the notions of discourse, ideology, subject and the conditions of production that establish a necessary relationship between language and the constitutive exteriority of discourses. Parallel to theoretical studies, we constructed an analytical corpus consisting of excerpts from two moments of the documentary, analyzing mourning, precariousness, social discrepancies and the segregation-concentration device. **Results:** It was found that the documentary formulates and circulates a silenced version of the hospitalization practices concerning madness that have been in force in Brazil for more than half a century. Analyses lead to a discussion about the meanings of bodies in spaces of segregation, the consequences of hygienist policies and precarious lives. **Conclusion:** Thus, this research contributes to developing and consolidating the anti-asylum struggle, leading to consequences for the field of psychiatry regarding humanizing mental health care practices.

Keywords: abject bodies, segregation, The Colony Hospital in Barbacena, documentary.

Acknowledgments: CNPq.



XIV Encontro de Iniciação Científica da UNIFRAN

A RESEARCH ABOUT TEENAGE SECOND PREGNANCIES AND SOCIAL DISADVANTAGES

Julia Fazio Souza, Stéfanne Viverliz Leão Antunes Nunes, Regina Celia de Souza Beretta

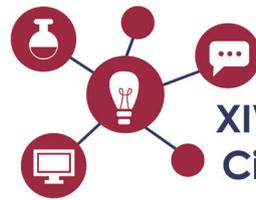
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Purpose: This work carried out a study on second teenage pregnancy and social disadvantages. This phenomenon occurs much more than people think and for this reason the subject should be widely debated and researched; to reduce risky situations of another unwanted pregnancy. **Methods:** The methodology used was qualitative research with a dialectical approach, bibliographic and documentary survey. **Results:** Based on these surveys it was possible to verify that teenage pregnancy has been decreasing, even if over a long and slow period of time. According to data collected by a historical series of the Brazilian Institute of Geography and Statistics. Among the data analyzed, it was found that some of the common factors, between teenagers who became pregnant for the second time, are lack of knowledge, low education, family vulnerability, low income, lack of access to birth control methods, carelessness, among others. **Conclusion:** The topic of teenage pregnancy must always be approach as a matter of public health, it is an expression of the broader social issue, as the disadvantages experienced by most teenagers can compromise their future and the lives of their children.

Keywords: recidivism; early pregnancy; health.

Acknowledgments: CNPq.



AFFECTIVENESS IN THE SCHOOL ENVIRONMENT: discursive construction for disciplinary and pedagogical practice

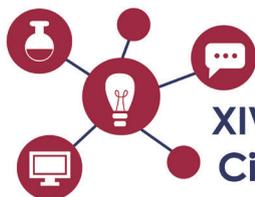
Fernanda dos Santos Nascimento, Maria Eduarda Ferreira Lemos, Marilurdes Cruz Borges

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Purpose: We sought, in this study, to explore concepts like affectiveness and discipline, and others that contemplate them in the pedagogical sphere, so that teaching practice is not intuitive, but based on knowledge that goes beyond common sense and can be applied in the daily reality of teaching. **Methods:** We use for theoretical foundation Henri Wallon and Jean Piaget, among other philosophers of education and educators who developed research on the subject. **Results:** It is necessary to develop a teaching practice based on the balance between affection and discipline, as the extremism of both affects the integral development of the student and the dynamics of the school environment, which can also compromise both the learning process and interpersonal relationships that will settle down. **Conclusion:** The responsibility of the school institution is the integral formation of the student, given that he becomes a protagonist not only in his cognitive aspect, but also in his affective one. However, for this to occur, a real understanding of affectivity is necessary, in order to promote the true affective practice in the classroom, whether in the learning process or in the teacher-student relationship.

Keywords: Affection; educational practice; discipline; indiscipline.



AFRICAN AND AFRO-BRAZILIAN THEMATIC LITERATURE IN BASIC EDUCATION: development of ethnic-racial awareness for sustainable education

Danielle Cristina Teodoro de Souza, Marilurdes Cruz Borges

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Purpose: The search for anti-racist education continues to this day and the school environment is one of the stages of this transformation, so it is necessary to be aware of the concept of racial literacy and its practice in the classroom, for example, through books. **Methods:** The aim of this study is to emphasize the study of literature on African and Afro-Brazilian themes from the book by Bell Hooks, “Meu crespo é de rainha”, which addresses the racial theme and which was published through Youtube. This paradidactic is an example of reading at school that contributes to the discussion about diversity and racial identities. The theoretical assumptions that support this study and guide education in Brazil are the Law of Guidelines and Bases for National Education (LDB), the National Curriculum Framework for Early Childhood Education (RCNEI), Common National Curriculum Base (BNCC) and National Curriculum Guidelines for the Education of Ethnic-Racial Relations and for the Teaching of Afro-Brazilian History and Culture. **Results:** This study responds to the UN 2030 Agenda, which deals in SDGs 4 and 10 on the reduction of inequalities and empowerment. **Conclusion:** All of this can be achieved through paradidactic students who are useful in teaching practice in favor of quality education and a sustainable society.

Keywords: African and Afro-Brazilian literature; basic education; ethnic-racial awareness; sustainable education.



ANTI-INFLAMMATORY AND ANALGESIC ACTIVITY OF STANDARDIZED BRAZILIAN GREEN PROPOLIS EXTRACT ON FORMALIN ASSAY IN MICE

Heloisa Ubeda¹, Poliana Marques Pereira¹, Silvio de Almeida Junior¹, Mario Ferreira Conceição Santos¹, Márcio Luis Andrade e Silva¹, Sérgio Ricardo Ambrósio¹, Jairo Kenupp Bastos², Ricardo Andrade Furtado¹

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Purpose: To evaluate the biological activity on inflammation and analgesia of standardized Brazilian green propolis extract (SBGP) on analgesic profiles caused by formalin in mice.

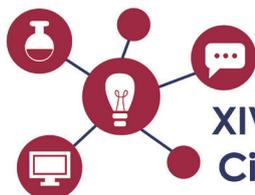
Methods: The technique consists of administering the extract in groups 1, 3, 10 and 30 mg of the standardized extract of Brazilian green propolis, in addition to the negative control (vehicle) and positive control (indomethacin and morphine). After 60 minutes of treatment, 20µL of formalin at 2.5% was applied in the plantar region and observed for 30 minutes, divided into Phase I (0-5) and Phase II (15-30). **Results:** In phase I was observed efficacy results of 60.1% to the Morphine group and 64.8% to the SBGP. In the phase II, great results were obtained, 1 mg of SBGP was not effective, 3 mg of SBGP was 78.8%, 10 mg had an efficacy of 79.1% and the 30 mg had an efficacy of 66.9%.

Conclusion: It was concluded that standardized extract of green propolis was effective on the phases I and II, showing analgesic and anti-inflammatory activities.

Keywords: green propolis, formalin, extract, inflammatory.

Approval CEPE/CEUA: 9379230320/2020 - UNIFRAN.

Acknowledgments: FAPESP, CAPES, and CNPq.



ANXIETY AND DEPRESSION IN ELDER PATIENTS WITH CHRONIC KIDNEY DISEASE IN HEMODIALYSIS TREATMENT

Leandro Bueno de Paula¹, Daniela Marcelino¹, Anna Laura Montesanti Viana¹, Danilo Candido Bulgo¹, Fabiana Giovanuni dos Santos², Lilian Cristina Gomes do Nascimento¹

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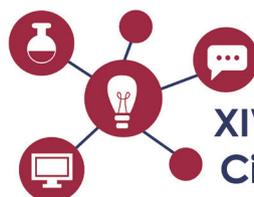
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Purpose: Verify the prevalence of anxiety and depression in patients with chronic kidney disease undergoing hemodialysis treatment. **Methods:** Quantitative, cross-sectional study carried out in a highly complex specialty clinic in the countryside of the State of São Paulo. To obtain the data, a validated instrument application nominated the Hospital Anxiety and Depression Scale was used. Data were formed by simple descriptive statistics. **Results:** Sixty-four patients participated in the present study, with a mean age of 48.03 ± 9.89 years, aged between 24 and 59 years, being 56.22% male. Regarding the prevalence of probable presence of anxiety, it was verified in 10.94% of the participants, the same detected prevalence of participants with depression, and 42.86% of the participants with depression also had concomitant anxiety. **Conclusion:** The present study identified patients on hemodialysis who may also have anxiety and/or depression disorders, which infers the need to implement care regarding the mental health of this population group. Therefore, it emphasizes the need to implement a constant interdisciplinary monitoring of patients undergoing hemodialysis treatment.

Keywords: chronic disease, health promotion, renal insufficiency, hemodialysis units.

Approval CEPE: 114833/2020.

Acknowledgments: UNIFRAN, CAPES and CNPq.



ASSESSMENT OF THE GENOTOXICITY OF TRICHOKONIN VIII IN THE CHO-K1 CELL LINE

Julia Mirian Paulino¹, Mirian Oliveira Goulart¹, Laisla Rodrigues Figueiredo¹, Ariane Fernandes Bertonha², Roberto Gomes De Souza Berlinck², Raquel Alves dos Santos¹

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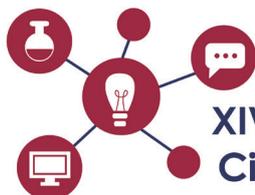
²Institute of Chemistry, University of São Paulo -USP, Brazil, 05508-000

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Purpose: This research project aims to evaluate the genotoxicity of Trichokonin VIII (TK-VIII) in the CHO-K1 cell line. **Methods:** The methodology consisted of cytotoxicity determination by XTT and clonogenic survival assays, followed by DNA damage assessment by micronucleus assay. **Results:** In the XTT assay, cells were treated with TK-VIII at the following concentrations, 2.5, 5, 10, 20, 40, and 80 μM , in which an IC_{50} of 9.89 μM of TK-VIII was observed during statistical analysis. The concentrations were established for the clonogenic survival assay, 5.0, 7.5, 10, and 20 μM , in which it was observed that only the concentrations of 10 and 20 μM resulted in a significant reduction of the survival fraction. For the micronucleus assay, TK-VIII was used at concentrations of 5.0, 7.5, and 10 μM . The results obtained for the nuclear division index (NDI) were 1.7, 1.6, and 1.4, respectively; while in the negative control NDI was 1.7. The micronucleus (MN) frequency was also determined and 2.1, 4.1 and 3.65 MN/100 binucleated cells were observed after treatment with 5, 7.5 and 10 μM of TK-VIII). In the negative control this frequency was 2.97 MN/100 binucleated cells. **Conclusion:** The results showed that TK-VIII has cytotoxic and antiproliferative activity in the CHO-K1 cell line, but it was not yet possible to show genotoxicity, since future studies are needed for a better understanding of this mechanism of action to validate the biological potential of this molecule.

Keywords: natural products, peptaibols, cancer, DNA damage.

Acknowledgments: FAPESP (2021/00944-5; 2013/50228-8).



XIV Encontro de Iniciação Científica da UNIFRAN

AWARENESS OF YOUNG PEOPLE AND CHILDREN ABOUT LEISHMANIASIS

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Purpose: This work aimed to create a comic book to raise awareness among young people and children about leishmaniasis: its cause, symptoms and prophylaxis. **Methods:** The method used was through a website called Canvas and Pixton for the creation of the comics, the program was selected due to its ease of use knowing this through research, it was created in a way that has several options, so that it can reach the target audience, as well as obtaining knowledge through scientific articles. **Results:** the expected results in the comics are the awareness of children and young people about leishmaniasis, its prophylaxis and treatments. **Conclusion:** As a neglected tropical disease, leishmaniasis should be disclosed for better prevention, as it is still a disease that affects millions of people worldwide.

Keywords: comic book, awareness, leishmaniasis, observation, prophylaxis.

Acknowledgments: FAPESP (2016/24456-1), CAPES and CNPq.



BRAZILIAN PROPOLIS: ANTIMICROBIAL POTENTIAL AGAINST ORAL BACTERIA

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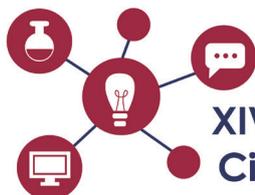
²University of São Paulo, Ribeirão Preto, Brazil, 14040-903

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Purpose: The aim of this study was to investigate the antimicrobial activity of Green and Red Brazilian propolis against oral Bacteria. **Methods:** Green and red Brazilian propolis were grounded to a fine powder with a blender and extracted with 70% ethanol for 24 h. The ethanol extracts obtained was subjected to a liquid/liquid extraction with hexane, ethyl acetate, and dichloromethane. The minimal inhibition concentration (MIC) values were investigated against a representative panel of oral microorganisms, in which are responsible for caries disease. MIC of green and red propolis extracts and their fractions were determined by microbroth dilution assay on 96-well plates according to Clinical and Laboratory Standards Institute (CLSI). The inoculum of microorganisms was prepared from 12 h broth cultures and suspensions were adjusted to 0.5 McFarland standard turbidity. Samples were dissolved in DMSO at 2.5% (v/v) and each well contained 50 µl of samples diluted two-fold serially in RPMI 1640 was inoculated with suspension of bacteria at final concentrations of 5×10^5 CFU/ml. After incubation at 35°C for 24 h the MIC was determined. DMSO solution was used to negative control of solvent activity. Chlorhexidine digluconate was used as positive reference standard. The samples tested in this study were screened three times against each organism. **Results:** The Brazilian red propolis ethanolic extract and its hexane fraction showed the most promising MIC (values lower than $10 \mu\text{g.mL}^{-1}$) values against all evaluated bacteria. **Conclusion:** The results obtained in this study suggest an important antimicrobial potential of red propolis and its hexane fraction against a representative panel of oral bacteria responsible for caries disease.

Keywords: Brazilian própolis, oral bactéria, antimicrobial activity.

Acknowledgments: FAPESP, CAPES and CNPq.



CELLULAR EFFECTS OF STANDARDIZED EXTRACT OF RED PROPOLIS IN THE CHEMORESISTANT BREAST CANCER CELL LINE MDA-MB-231

Laisla Rodrigues Figueiredo¹, Loren Monielly Pires¹, Julia Mirian Paulino¹, Rodrigo Cassio Sola Veneziani¹, Jairo Kenupp Bastos², Sérgio Ricardo Ambrósio¹, Raquel Alves dos Santos¹

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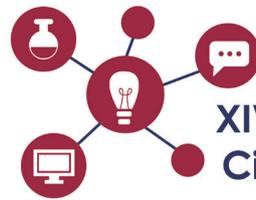
²Faculty of Pharmaceutical Sciences, University of São Paulo, Ribeirão Preto, Brazil, 14040-903

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Purpose: Triple negative chemoresistant breast cancer is the most aggressive and with lowest survival rate in young women. Aiming the search for new therapeutic alternatives, the Brazilian red propolis has been explored due to its biological potential. To evaluate the antiproliferative and cell death effects of standardized red propolis extract (SRPE) in the chemoresistant breast tumoral cell line MDA-MB-231. **Methods:** Short and long-term cytotoxic effects of SRPE were determined by XTT colorimetric assay and clonogenic survival assay, respectively. **Results:** Results from XTT assay revealed a decrease on cell viability ($p < 0.05$ vs negative control) after 24h treatment with SRPE in different concentrations (7.8 to 1000 $\mu\text{g}/\text{mL}$), but after 48 or 72h treatment this reduction occurs only at the highest concentration ($p < 0.05$). The survival fraction (SF) was also determined after treatment with 0.1, 1, 10, 50 and 100 $\mu\text{g}/\text{mL}$. All tested concentrations significantly reduced the SF 24, 48 and 72h treatment ($p < 0.01$ vs negative control). **Conclusion:** SRPE demonstrated to be a promising bioactive compound in the treatment of triple negative breast cancer cell line. Its bioactivity mechanisms will be investigated in future experiments to analyse its genotoxicity and cell death effects.

Keywords: breast cancer, cytotoxicity, chemoresistant, triple-negative, red propolis.

Acknowledgments: FAPESP (2017/04138-8), CAPES, PIBIC/CNPq.



CHARACTERISTICS AND CONSEQUENCES OF HOMOPHOBIC BULLYING EXPERIENCED DURING ADOLESCENCE: A STUDY WITH COLLEGE STUDENTS

Maria Paula Oliveira Nasser, Jorge Luiz da Silva

University of Franca, UNIFRAN, Franca, Brazil, 14404-600

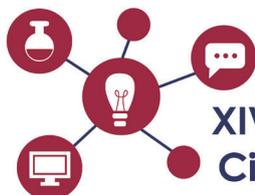
E-mail: marypolnasser@gmail.com

Purpose: To identify the characteristics and consequences of homophobic bullying experienced during adolescence. **Methods:** Qualitative, descriptive and exploratory study. The snowball sampling technique was used. Data were collected through semi-structured interviews using a script addressing the participants' perceptions regarding homophobic bullying experienced during primary, middle, and/or high school. Ten participants were interviewed: five men and five women aged between 18 and 29 attending undergraduate programs in the fields of exact sciences (Environmental engineering, Biomedical engineering), human sciences (languages: Portuguese/English/French, Advertising and Propaganda), and health sciences (Medicine, Psychology and Physical Therapy). **Results:** Most participants were bullied when they were adolescents. They experienced physical and verbal bullying and were threatened due to their sexual orientation. Different types of violence were reported, but verbal violence was the most frequent. The bullies were usually males and older than the victims. Most participants reported that they did not tell anyone about bullying and changed their way of being and behavior to prevent new forms of violence. Most participants reported that they changed their way of being and behaving to avoid aggression. Friends used to comfort and support the victims but seldom faced bullies out of fear. **Conclusion:** Encouraging non-violent interactions among students is vital to prevent and decrease homophobic bullying.

Keywords: homophobic bullying, school, exposure to violence.

Approval CEP-EERP/USP: 047/2019.

Acknowledgments: FAPESP, CAPES and CNPq.



CHARACTERIZATION OF A BIOMATERIAL MANUFACTURED WITH COLLAGEN EXTRACTED FROM THE DORSAL FIN CERATOTRICHIA OF DOGFISH (Triakidae)

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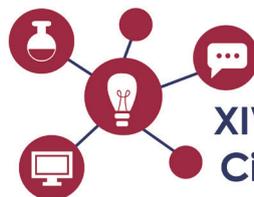
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Purpose: Residues from industrial fish processing represents an alternative source of collagen for medical use. A growing number of studies have evaluated the characteristics of biomaterials made with the skin and fins collagen of teleost fish. No study, so far, has characterized biomaterials made with collagen from cartilaginous fish ceratotrichia. This study aimed to characterize a biomaterial constructed with collagen extracted from the ceratotrichia of the first dorsal fin of commercial dogfish. **Methods:** Ceratotrichia was dissected from the first dorsal fins ($n = 5$), submerged in glacial acetic acid medium, and stored at a controlled temperature (8°C) for 72 hours. Subsequently, the acid-soluble collagen was salted out and dialyzed in dialysis bags with cutoff molecular weight 12,000-16,000 and 126-angstrom porosity. The fibrillar collagen from the dialysis was stretched onto Teflon plates and left to dry at 30°C room temperature. The biomaterials obtained were characterized via hydroxyproline assay, polarized light, Fourier transformed infrared spectroscopy (FTIR), and swelling assay. **Results:** The hydroxyproline content was $1.22 \pm 0.10\%$. Polarized light showed different sets of fibrillar collagen supra-organization in the biomaterial, corresponding to highly organized fibers and varying thickness. The FTIR spectrum showed peaks for amide I, amide II, amide III, amide A, and amide B. The swelling assay showed that the biomaterials gain mass in the first 4 h of immersion in water. **Conclusion:** The biomaterials in this study had good physicochemical stability and structural integrity; therefore, they appear to be feasible for exploration in different applications.

Keywords: bioproduct, biomembrane, marine collagen.

Approval CEPE/CEUA: not applicable.

Acknowledgments: CAPES (financial code 001) and CNPq.



CHEMICAL STUDY OF *Anacardium othonianum*

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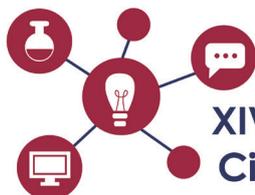
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Purpose: The objective of this work was to isolate the anacardium acid triene (AAT) from the nuts of *Anacardium othonianum*. **Methods:** The *A. othonianum* nuts (62.3 g) were extracted with ethanol by maceration, concentrated under reduced pressure, and furnished 14.3 g of crude extract. Then the crude extract (7.0 g) was subjected to an ODS solid-phase extraction column eluted with methanol-water. Fraction 1 was purified by a normal phase chromatographic column eluted with a gradient mixture of hexane and ethyl acetate. The subfraction 1-10 was purified by the ODS column eluted with water and acetonitrile, subfraction 1-10-6 (32.2 mg) yield AAT. **Results:** The use of normal and reverse phases allowed the purification of AAT from the other compounds present in the extract such as cardol and cardanol. **Conclusion:** The isolation of AAT will allow our research group to evaluate this compound in biological assays.

Keywords: Anacardiaceae, anacardic acid triene, biological assays.

Acknowledgments: FAPESP, CAPES, and CNPq.



CHOICE BEHAVIOR OF CHRYSOPIDAE BY DEVELOPMENT PHASES OF COFFEE LEAF MINER *Leucoptera coffeella* (GUÉRIN-MÈNEVILLE & PERROTTET, 1842) (LEPIDOPTERA: LYONETIIDAE)

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Purpose: The aim of this study was to analyze the of lacewing species associated with coffee (*Coffea arabica* L.) crops in the Franca region - SP and to verify which species are potential agents for the biological control of coffee leaf miner, *Leucoptera coffeella* (Lepidoptera: Lyonetiidae). **Methods:** Predators collected from coffee crops in the Franca region were taken to the laboratory and used to start rearing. Some individuals were referred to a specialist (taxonomist) for proper identification. Experiments carried out in the laboratory evaluated the choice behavior of first, second and third instar larvae, for each of the three lacewing species, in relation to *L. coffeella* larvae and pupae. The choice of each predatory species was registered by means of an olfactometer with a "Y"-shaped glass tube. **Results:** Regardless of the larval instar, predators showed a preference for plants infested with the pest over those not infested. Furthermore, when they had the option to choose between plants infested with larvae or pupae of *L. coffeella*, the larvae of the predator *Chrysoperla externa* showed no preference for the pest development stage. However, the *Ceraeochrysa cincta* and *Ceraeochrysa cornuta* third instar larvae, showed a preference for plants infested with pupae. **Conclusion:** The results presented indicate that the predator species studied have potential as an agent of biological control of coffee leaf miner. Furthermore, these predators were able to locate infested plants. So when these areas are infested with both larvae and pupae of *L. coffeella*, predators can consume both stages of pest development.

Keywords: Agroecological systems; green lacewings; coffee crops; biological control.

Acknowledgments: Coordenação de Aperfeiçoamento de Pessoal de Nível Superior –(CAPES) – Finance Code 001, Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq), Fundação de Amparo à Pesquisa do Estado de São Paulo (FAPESP grant n° 2020/02182-2).



CHRYSOPIDAE PREDATION BEHAVIOR ON THE RED MITE *Oligonychus ilicis* (MCGREGOR, 1917) (ACARI: TETRANYCHIDAE)

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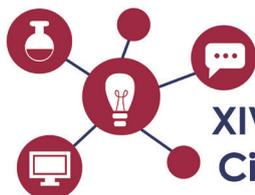
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Purpose: In order to help future biological control programs that use Chrysopidae as a control agent, this research aims to study lacewing species associated with coffee (*Coffea arabica* L.) in the region of Franca - SP and to verify which species are potentially biological agents for control of southern red mite *Oligonychus ilicis* (Acari: Tetranychidae).

Methods: In the laboratory, experiments were carried out to determine the predation behavior of *Chrysoperla externa* (Neuroptera: Chrysopidae) in arenas with different densities of *O. ilicis* adults (1, 2, 4, 8, 16, 32, 64, and 128 prey). The functional response was provided by logistic regression of the number of adults consumed as a function of the initial number of prey using polynomial logistic regression. Random equation was used to criteria the parameters of the functional response. **Results:** The predator *C. externa* showed a type II functional response consuming of *O. ilicis* adults. The highest consumption of prey was observed in 64 and 128 densities with mean of 37.5 and 42.5 consumed mites. **Conclusion:** This experiment carried out with a predatory species *C. externa* provided an observation of its predatory capacity on *O. ilicis*, showing that the predator has the potential as a biological control agent to reduce the population density of *O. ilicis* in coffee crops.

Keywords: Agroecological system, green lacewings, coffee crops, biological control.

Acknowledgments: Coordenação de Aperfeiçoamento de Pessoal de Nível Superior –(CAPES) – Finance Code 001, Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq), Fundação de Amparo à Pesquisa do Estado de São Paulo (FAPESP grant n° 2020/01861-3).



XIV Encontro de Iniciação Científica da UNIFRAN

COFFEE INSECT PESTS

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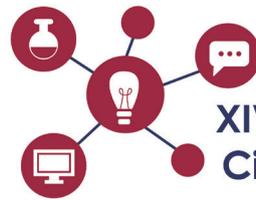
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Purpose: The aim of this book was to present the main pests that may affect the coffee crop, as well as the biology, damage, monitoring and control of such insects. The book aims to provide knowledge to the coffee grower in a practical and objective way to contribute to the recognition and management of the main insect pests of the crop.

Methods: The book was developed to provide photos and key information on each of the insect pests that occur in coffee crops. Thus, the book was prepared using the photographs collection of the Entomology Laboratory obtained from 2017 to 2021. The text was prepared by each member of the Entomology Laboratory team (doctoral, master and undergraduate students), which was organized and edited by the scholarship Maria Clara C. F. Assis (PIBIC-EM). **Results:** The book covers the biology, morphology, life cycle, injuries, sampling, action threshold, and control tactics for each of the insect pests of the coffee crop. The book even presents a description of a pest insect (Cecidomyiidae) that was reported for the first time in coffee crops in the world. **Conclusion:** The book presents illustrations and information that are essential for both technicians and growers about the insect pests that occur in coffee crops, contributing to the better management of these pests.

Keywords: Integrated pest control, entomology, *Coffea arabica*.

Acknowledgments: Coordenação de Aperfeiçoamento de Pessoal de Nível Superior –(CAPES) – Finance Code 001, Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq), Fundação de Amparo à Pesquisa do Estado de São Paulo (FAPESP grant n° 2019/18376-3).



COMPARISON BETWEEN TWO NUTRITIONAL CALCULATION SOFTWARE: DIETPRO® AND DIETBOX®

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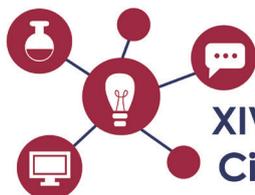
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Purpose: The study aimed to analyze and compare two nutritional clinical software, using 24-hour recalls from a group of hypertensive patients. **Methods:** The criteria adopted for the study population were: hypertensive, aged between 30 and 60 years, under medication for at least 1 year, who participated in a previous survey and who received nutritional care at the nutrition clinic of the University of Franca. The research protocol involved individual interviews to investigate the diet, through 24-hour questionnaires, which were digitized in the Dietbox® and Dietpro i5® clinical nutritional softwares. Descriptive analysis was used through the mean standard deviation for the variables analyzed in the study. **Results:** The results obtained with the comparison of not seem to demonstrate significant differences between the two softwares, for the analyzed macronutrients and micronutrients. Despite this, there was a difference for fiber in the two softwares, with an average difference of 1.7 grams for DietPro compared to Dietbox. **Conclusion:** The programs analyzed proved to be suitable for use, both for nutritional and dietary assessment of patients, but the study did not analyze the quality of the database of the programs.

Keywords: Health, Software, Nutrition.

CAAE: 03152918.1.0000.5495.

Acknowledgments: CNPq.



COMPUTATIONAL DESIGN OF PHOTOACTIVE LAYER TO POLYMERIC SOLAR CELLS

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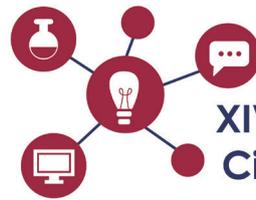
Purpose: Photoactive layers composed by *p* and *n*-type semiconductors (such as quinoxaline, Qx, and naphthalene diimide, NDI, respectively) allow that solar cells produce electricity from the light. The aim of this study was to explore the design of efficient solar cells which includes the adjust of the HOMO-LUMO energy gap in the donor structure; and LUMO orbitals in the donor and acceptor molecules (E Δ LUMO).

Methods: The geometry optimizations and the vibrational frequencies were calculated using B97D3/6-31+G(d) model. The electronic spectrum were calculated from TD-DFT theory. The bonding mechanism was elucidated from EDA-NOCV methodology.

Results: Qx and NDI structures have been modulated using ligands of different nature: -F, -NHCOCH₃, -OCH₃, -OH, -CHO, -COOCH₃, -COOH, -CN, -SO₃H and -NO₂. The HOMO-LUMO gap of the Qx is tuned to visible range of the light through of the addition of: i) electrons acceptors ligands in the anthracene derivative ring; and ii) electrons donor ligands in the benzene ring. The EDA-NOCV methodology indicated that the donor-acceptor complexes with the largest E Δ LUMO values show the most favorable interaction energies. **Conclusion:** Three compounds showed HOMO-LUMO gap lower than 3.3 eV: NO₂-Qx-NHCOCH₃, NO₂-Qx-OH and NO₂-Qx-OCH₃. The skill of these structures in transfer one electron to electrons acceptor molecules derived of the NDI was analyzed using the energy difference between the LUMO orbitals presented in the donor and acceptor compounds. In general, values of E Δ LUMO larger than 0.3 eV were observed, which ensures an efficient charge transfer.

Keywords: polymeric solar cells, photoactive layers, HOMO, LUMO.

Acknowledgments: FAPESP, CAPES and CNPq.



CONSEQUENCES OF HOMOPHOBIC BULLYING AND CYBERBULLYING ON STUDENTS' MENTAL HEALTH? A LITERATURE REVIEW

Laura Costa Pegorin, Jorge Luiz da Silva

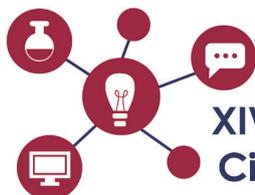
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Purpose: To identify in the literature the consequences of homophobic bullying and cyberbullying on students' mental health. **Methods:** This systematic literature review was conducted in six databases: ERIC, LILACS, PsycINFO, Scopus, Web of Science, and ScieELO using the keywords "homophobic bullying", "homophobic cyberbullying", "mental health", "mental health problems", "mental health risk", "psychological problems", "psychological outcomes". The question guiding the bibliographic search was established using the PVO (Population, Variables, and Outcomes) strategy. Only studies in the format of articles published in the last five years (2016-2020), written in Portuguese, English, or Spanish, addressing students (children and adolescents) and directly investigating the topics under study were included. **Results:** Nine out of the 58 articles identified were selected and analyzed. All the articles were cross-sectional studies, and the samples were composed of girls and boys. The studies were conducted in Spain, Italy, Portugal, Canada, and United States. Homophobic bullying and cyberbullying victimization were associated with higher levels of anxiety, depression, low self-esteem, somatization, severe psychological distress, posttraumatic stress, and suicide. LGBTQIA+ students more frequently present mental health problems compared to heterosexual students. The impact of bullying was even more severe in the absence of social support and among those with less supportive parents. **Conclusion:** Homophobic victimization harms students' mental health; thus, non-violent social interactions need to be encouraged among students, especially among LGBTQIA+ students.

Keywords: homophobic bullying, homophobic cyberbullying, mental health, literature review.

Acknowledgments: FAPESP, CAPES and CNPq.



CONSTRUCTION OF AN EXPONENTIAL FUNCTION OF THE NUMBER OF COVID-19 CASES

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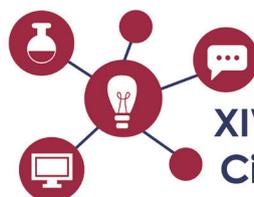
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Purpose: The aim of this study was to model the number of cases of COVID-19. **Methods:** A total of 3513 new cases of COVID-19 were evaluated for the city of Franca-SP from April 2020 to September 2020. An exponential model was chosen to fit the observed data. The model was fitted using the exponential function of the Microsoft Excel software. The dataset was downloaded from the Painelecoronavirus website (<https://covid.saude.gov.br/> in 19/09/2020). **Results:** The estimated model had the formula: $y=0,69e^{0,026x}$ where y is the number of new cases and x is the time in days. It estimated less than one the number of new cases in day zero and a rate of growth of 0,026 per day. **Conclusion:** The model coefficients were accurately estimated and can be used to describe growth rate of the number of new cases of COVID-19.

Keywords: COVID-19, epidemiology, mathematics.

Acknowledgments: CNPq.



CORRELATION BETWEEN PERIODONTAL TREATMENT AND ECHOCARDIOGRAPHIC CHANGES IN ADULT DOGS

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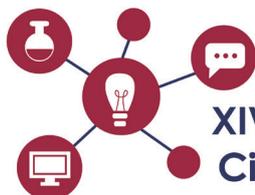
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Purpose: Periodontitis is common in dogs and has been associated with systemic lesions. However, studies correlating oral condition with heart disease are scarce. The objective was to evaluate such correlation in adult dogs through serial echocardiographic exams and analyze the influence of dental treatment on cardiac function. **Methods:** The dogs were distributed in control group (CG, n=30: have periodontitis, not submitted to treatment) and treated group (TG, n=30: have periodontitis and submitted to treatment). The GC and TG were homogeneous for breed, weight, age, and degree of periodontitis. Echocardiographic examinations were performed at baseline (D0) and after 30 days (D30) in the CG. The dogs of the TG also underwent examinations on D0 and D30, however, they underwent periodontal treatment after D0. The examinations were performed at the Cardiology Laboratory of the Veterinary Hospital of the University of Franca to analyze the interventricular septum in diastole (SIVd) and systole (SIVs), the diameter of the left ventricle in diastole (DVEd) and systole (DVEs), left ventricular free wall in diastole (PVEd) and systole (PVEs), shortening fraction of left ventricle (FS), final diastolic volume (VDF), final stroke volume (VSF), ejection fraction (FE), maximum pulmonary artery pressure gradient (GP máx. AP) and left atrial and aortic artery diameter ratio (AE-AO). **Results:** Compared to GC, the TG showed lower mean values of SIVs, DVEd and PVEs ($p < 0.05$, ANOVA) in D30. **Conclusion:** Periodontal treatment had improved some parameters related to cardiac function in adult dogs.

Keywords: veterinary cardiology, systemic diseases, ecocargiogram, periodontitis.

Approval CEUA: 4182260917.

Acknowledgments: CAPES, CNPq, and University of Franca.



CORRELATION OF THE HEMATOLOGICAL AND URINARY PROFILE OF ADULT DOGS WITH DIFFERENT DEGREES OF PERIODONTAL DISEASE

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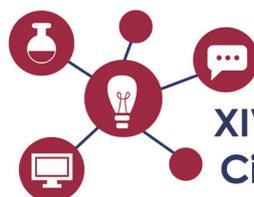
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Purpose: Periodontal disease is the most commonly diagnosed oral condition in dogs, having bacterial plaque like cause. Is characterized by inflammation and destruction of periodontal tissues protectors (gingiva) and sustains (cementum, alveolar bone and periodontal ligament) of those dental elements. It is classified according to the involvement degree of the periodontium in degree 0 (absence of symptoms); I (accumulation of bacterial plaque and mild gingivitis); II (accumulation of bacterial plaque, gingivitis and gingival edema); III (gingivitis, gingival edema and beginning of periodontal pocket formation); IV (deep periodontal pocket, beginning of bone loss and tooth mobility) and V (bone loss, significant tooth mobility and predisposition to fracture of the mandible and/or maxilla). Given the high incidence of periodontal disease and possible local and systemic changes, the aim of this study will be to present the average results of hematological and urinary parameters of adult patients and, furthermore, to analyze the correlation of these complementary tests between the different degrees of periodontal disease. **Methods:** 60 dogs from the Small Animal Dentistry Sector of the Veterinary Hospital at University of Franca will be used, with different breeds, weights, ages and grades of periodontal disease. Blood samples will be obtained for analysis of the values of red blood cells, hematocrit, total leukocytes, albumin, total protein, alanine aminotransferase, alkaline phosphatase, urea and creatinine. Urine samples will be analyzed for density, red blood cells, leukocytes, cells, casts, proteins and urinary protein-creatinine ratio. **Results:** The data will be submitted to analysis of variance. **Conclusion:** Waiting for results.

Keywords: complementary exams, periodontitis, systemic diseases, veterinary odontology.

Approval CEUA: 4182260917.

Acknowledgments: CAPES and University of Franca.



CYTOTOXICITY EVALUATION OF THE TRICHOKONINS TK-VI AND TK-VIII ON THE BREAST CANCER CELL LINES MCF-7 AND MDA-MB-231

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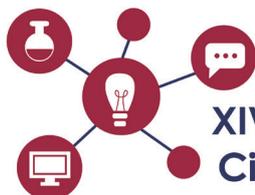
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Purpose: The purpose of this study is the cytotoxicity evaluation of trichokonins TK-VI and TK-VIII on the breast cancer cell lines MCF-7 and MDA-MB-231. **Methods:** To determine the cytotoxicity of both compounds, the XTT assay was performed using the concentrations of 2.5; 5; 10; 20; 40 and 80 μM for the treatment of MCF-7 and MDA-MB-231 cancer cells. By that assay, the clonogenic survival concentrations were established, which were 5, 7.5, 10 e 20 μM for both substances, upon the MCF-7 cells. **Results:** TK-VI presented an IC_{50} of 7.9 μM in both cell lines, while TK-VIII exhibited as IC_{50} of 5.4 and 10 μM in MDA-MB-231 and MCF-7 cell, respectively. Based on these results, clonogenic survival assay was conducted and revealed that the trichokonins VI and VIII reduced the survival fraction in MCF-7 cells in concentrations $\geq 5 \mu\text{M}$ ($p < 0.05$). Clonogenic survival assay experiments in MDA-MB-231 are in progress. **Conclusion:** The trichokonins TK-VI and TK-VIII exhibited cytotoxic activity on the breast cancer cell lines MCF-7 and MDA-MB-231, as well as reduced the survival fraction on MCF-7 cells. Therefore, we concluded that the trichokonins VI and VIII have a cytotoxic potential but further experiments are needed to clarify if cell death and/or cell cycle arrest are the mechanisms involved on the antiproliferative effects of both compounds.

Keywords: Peptaibols, Cytotoxicity, Breast adenocarcinoma

Acknowledgments: FAPESP, CAPES and CNPq.



CYTOTOXICITY OF RED PROPOLIS EXTRACT ON THE CERVICAL CANCER CELL LINES HELA AND SIHA

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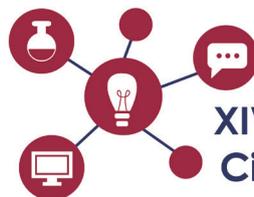
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Purpose: The aim of this study is to evaluate the cytotoxicity of Brazilian red propolis standardized extract (RPSE) two cervical cell cancer lines HeLa (cervical adenocarcinoma) and SiHa (cervical squamous carcinoma HPV positive). **Methods:** To evaluate the cytotoxicity, the XTT assay was performed in both lines after 24h treatment with RPSE in the following concentrations: 7.8, 15.6, 31.25, 62.5, 125, 250 and 500 µg/mL. **Results:** The preliminary results of cytotoxicity analysis demonstrated a statistically significant reduction of cell viability in HeLa cells in concentrations higher than 250 µg/mL, with an IC₅₀ of 219 µg/mL. However, in SiHa cell line even the highest concentration (500 µg/mL) did not reduce the number of viable cells. **Conclusion:** In conclusion RPSE is more cytotoxic to HeLa than to SiHa cell line, probably because the HPV genome copies present in SiHa cells impose resistance to cytotoxicity of RPSE. Ongoing experiments will clarify this question.

Keywords: HPV, red propolis extract, cervical cancer, cytotoxicity.

Acknowledgments: FAPESP (2017/04138-8), CAPES and CNPq.



DEVELOPING POLYUREA GEL LOADED WITH DICLOFENAC FOR POTENTIAL TRANSDERMAL DRUG DELIVERY VEHICLE

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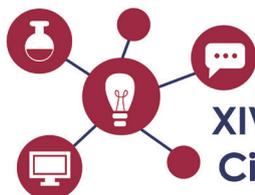
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Purpose: The main objective of this work is to evaluate the use of polyureas as new controlled drug delivery system. **Methods:** By the reaction between a polyether (PEO) and an isocyanate crosslinker (HDI) was possible to obtain homogeneous, flexible and transparent polyurea (PUr) membranes. Diclofenac sodium drug (DCF) was incorporated into the PUr during the reactions of the PEO-HDI to obtain loaded polyurea (PUr-DCF). The final materials were characterized by techniques such as Differential Scanning Calorimetry (DSC), UV-vis and infrared spectroscopy (FTIR). **Results:** The formation of urea groups was confirmed by FTIR. Moreover, the presence of DCF into the PUr change the thermal features of the materials. The release of DCF could be controlled due to the swelling properties of the PUr matrix and DCF amount loaded. **Conclusion:** Polyureas used as drug delivery systems shows unique properties, such as high mechanical strength, transparency, biocompatibility and flexibility. This study represents a broader application of these polyurea materials that have the ability to incorporate a wide range of therapeutic compounds into the matrix for delivery purposes.

Keywords: diclofenac sodium, sol-gel, polyetheramine.

Approval CEPE/CEUA: not applicable.

Acknowledgments: Coordenação de Aperfeiçoamento de Pessoal de Nível Superior –(CAPES) – Finance Code 001, Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq) – n°306271/2017-6, Fundação de Amparo à Pesquisa do Estado de São Paulo (FAPESP grant n°2013/20455-2 and 2019/17860-9).



DEVELOPMENT OF INFORMATION MATERIAL ON HEALTHY FOOD IN THE FIRST MONTHS OF LIFE

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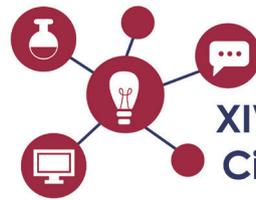
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Purpose: to develop informative material about healthy eating in the first months of life to be applied by health professionals with pregnant and postpartum women. **Methods:** the information material was prepared from data previously collected in a survey from November 2018 to February 2019, in a hospital in a city in the interior of the state of São Paulo. On this occasion, 100 mothers who were still in the maternity unit were interviewed, who answered a questionnaire to investigate their knowledge about breastfeeding and complementary feeding. Based on the mistakes found in the study, the booklet was created. For the review of content and graphic design, the collaboration of a nutritionist was available. **Results:** through the results obtained in the 2019 survey, a booklet was created with information on the steps for breast milking, correct breast handle, adequate time for offering liquids to the baby, introduction of complementary feeding, among others. All information was obtained from the Food Guide for Brazilian children under 2 years old, published by the Ministry of Health. After the preparation of the booklet, there was a meeting with the hospital staff to assess the content and develop the graphic design. **Conclusion:** the information booklet on healthy eating in the first months of life is a response to misconceptions about breastfeeding and complementary feeding found in previous research. It is intended that this material is applied with the hospital's postpartum women, improving knowledge about child nutrition and contributing to the health of mothers and babies.

Keywords: food, nutrition, postpartum women, maternal-infant.

Acknowledgments: CAPES.



DISTRIBUTION AND INSTRUCTION OF INFORMATIVE BOOKLET ABOUT FOOD MANAGEMENT IN DOGS

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Most dog and cat owners generally do not recognize obesity in their animals, nor are they aware of the harms of this nutritional disorder. Therefore, it is of paramount importance to identify and understand that the excessive accumulation of body fat impairs organic functions and causes potentially serious disturbances to human as well as animal health.

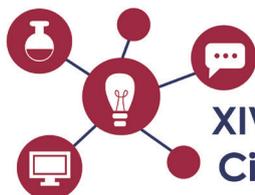
Purpose: Thus, this study proposed the distribution of an informative booklet about canine obesity that, in a simple way, explains its causes and consequences, as well as identifying and reversing the problem. **Methods:** The data contained in the questionnaires applied in an academic way to 160 owners of dogs that frequent the "Viva o Parque" Program in the city of Franca were used for a substantiation of what the population knew about food management and obesity. Allied to this, a literature review was performed in order to gather the main information on the subject and the best way to convey the correct information with illustrations to facilitate understanding and using simple language. After the distribution of the booklets, a quick questionnaire is carried out to quantify in a simple way if it was useful for the understanding and clarification of the guardians.

Results and Conclusion: Due to the pandemic, an extension was requested to carry out the distribution of the questionnaires physically and on line.

Keywords: food, booklet, dogs, fat.

Approval CEPE: 55474916.4.0000.5495.

Acknowledgments: CNPq.



DIVERSITY EFFECTS ON PARENTALITY: A DISCURSIVE ANALYSIS OF #TRANSPARENTALITY IN INSTAGRAM

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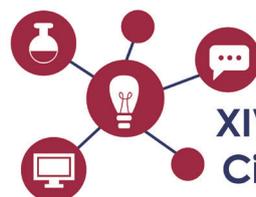
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Purpose: In this present work, the results of a Scientific Research are contemplated, which intends to start a debate on the theme of parenting, defined as the figures that individuals fit to raise child, then allowing and articulating the discourses of motherhood, fatherhood and family. The production conditions of #transparentality are examined specifically, whose availability in digital networks allows us to verify the existence of new family dispositions, families with gender configurations or sexual orientation apart of heterosexual pattern. These new configurations make us doubt an ideological model of parenting. **Methods:** The theoretical-analytical orientations we've worked are based on Lacanian Psychoanalysis and Speech Analysis with materialist hue, contemplating productions by Lacan, Pêcheux, Orlandi, Lagazzi, etc., for understanding of selected hashtag. Another issue that will be part of discussion is writing by digital to get #transparentality, which show process of purpose like a social movement, as it's published with this hashtag to achieve specific groups. The analytical corpus was built with clippings from posts with #transparentality. **Results:** It's through pictures from technology that was verified #transparentality in circulation with different ways of subjects existence in relation to parental social figures. Therefore, technology makes possible the circulation of diversity parents, allowing subjects and bodies that don't match with heteronormative pattern to have visibility for their equality matters of positions. **Conclusion:** This work concludes with examination of how trans bodies breaks the sense of diversity to the supposed normality of family, with consequences for social relations and the construction of public on subject.

Keywords: parenting, family, discourse analysis.

Acknowledgments: CNPq.



DIVERSITY OF CHRYSOPIDAE SPECIES IN COFFEE AGROECOSYSTEMS IN THE FRANCA REGION, SP, BRAZIL

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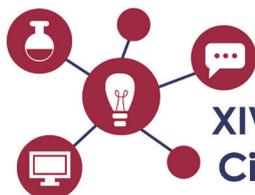
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Purpose: In order to assist future biological control programs that use Chrysopidae as a control agent, this research aimed to understand the diversity of Chrysopidae species in coffee (*Coffea arabica* L.) crops in the region of Franca – SP. **Methods:** The studies were conducted in four areas, organic, shaded (cedar and mahogany) and conventional coffee crops in the Franca region and collections were carried out monthly from June 2020 to January 2021. The specimens collected were taken to the Unifran entomology laboratory and transferred to plastic vials (ependorfs), preserved with 70% alcohol, for later identification of the species. The predators collected until January 2021, in the four areas assessed, were sent to a taxonomist for proper identification. **Results:** The following quantities of lacewings were collected in the areas: 1) 93 adults, 1 larva and 35 eggs; in area 2) 109 adults, 1 pupa and 49 eggs; in area 3) 190 adults and 76 eggs and in area 4) 65 adults, 32 eggs. Considering all the individuals collected, only three species of green lacewings were identified, *Chrysoperla externa*, *Ceraeochrysa cincta*, and *Ceraeochrysa silvano* (Neuroptera: Chrysopidae), which were mostly found in the driest period of the year, the most abundant species being *Ch. externa*. **Conclusion:** *Ch. externa* is the most abundant species in coffee crops in the Franca region. The highest occurrence of adults in the field is during drier periods of the year.

Keywords: biological control, natural enemy, sustainable tactics.

Acknowledgments: Coordenação de Aperfeiçoamento de Pessoal de Nível Superior –(CAPES) – Finance Code 001, Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq), Fundação de Amparo à Pesquisa do Estado de São Paulo (FAPESP grant nº 2020/02142-0).



EFFECT OF ACERA® BIOINSECTICIDE ON THE CONTROL OF COFFEE LEAF MINER LARVAE, *Leucoptera coffeella* (LEPIDOPTERA: LYONETIIDAE)

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Purpose: The objective of this research was to study the action of the bioinsecticide Acera® on newly hatched larvae of *Leucoptera coffeella* (Lepidoptera: Lyonetiidae). **Methods:** In this research, the bioinsecticide Acera® (500 mL cp/ha) was compared alone and mixed with Routen® (500 mL cp/ha Acera® + 150 mL cp/ha Routen®) and Ravel® (500 mL cp/ha Acera® + 800 mL pc/ha Ravel®), in addition to the control treatment (only water, negative control) and treatment with synthetic chemical insecticide (Sivanto®, flupyradifurone, positive control). A total of five treatments were conducted in the trial. **Results:** The hatching percentage of larvae was significantly affected when eggs were treated with the bioinsecticide. The number of mines formed by *L. coffeella* larvae on coffee leaves was influenced by the bioinsecticide. The bioinsecticide Acera®, mixed with Ravel®, showed higher control efficiency of *L. coffeella* larvae. **Conclusion:** The bioinsecticide Acera® used in mixture with Ravel® has high larvicidal activity on the coffee leaf miner, *L. coffeella*.

Keywords: microbial control, coffee crop, Integrated Pest Management.

Acknowledgments: Coordenação de Aperfeiçoamento de Pessoal de Nível Superior –(CAPES) – Finance Code 001, Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq), Fundação de Amparo à Pesquisa do Estado de São Paulo (FAPESP grant nº 2019/18376-3).



EFFECT OF MIXING PLANT EXTRACTS WITH BIOINSECTICIDE ON THE CONTROL OF MINER LARVAE, *Leucoptera coffeella* (LEPIDOPTERA: LYONETIIDAE)

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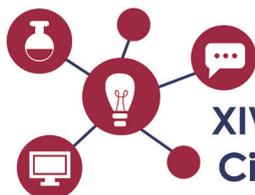
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Purpose: The objective of this research was to study the mixing plant extracts with bioinsecticide on the control of miner larvae, *Leucoptera coffeella* (Lepidoptera: Lyonetiidae). **Methods:** Routen[®] at a dose of 0.375 mL/L (150 mL c.p./ha, microemulsion of vegetable oils with allicin), and Cimmus[®] at a dose of 2 mL/L (800 mL c.p./ha, vegetable extract alkaloid) were mixed to Acera[®] bioinsecticide at a dose of 1.25 mL/L (500 mL c.p./ha, *Bacillus thuringiensis* strains 1641 and 1644). In addition to the control treatment (only water, negative control) and treatment with synthetic chemical insecticide (Sivanto[®], flupyradifurone, positive control). **Results:** Larval survival and pupal survival of coffee leaf miner *L. coffeella* were influenced by the mixture of plant extract with bioinsecticide. Both the mixture of Acera[®] + Cimmus[®] and the synthetic chemical insecticide flupyradifurone did not allow the formation of pupae and, consequently, adults of *L. coffeella* were not obtained. **Conclusion:** The bioinsecticide Acera[®] used in mixture with Cimmus[®] has high larvicidal activity on the coffee leaf miner, *L. coffeella*.

Keywords: microbial control, coffee crop, Integrated Pest Management.

Acknowledgments: Coordenação de Aperfeiçoamento de Pessoal de Nível Superior –(CAPES) – Finance Code 001, Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq), Fundação de Amparo à Pesquisa do Estado de São Paulo (FAPESP grant n° 2019/18376-3), and Ballagro Agro Tecnologia.



EFFECTS OF THREE DOSES OF DEXMEDETOMIDINE USED IN PRE-MEDICATION ON THE PROPOFOL SPARING FOR ANESTHETIC INDUCTION IN SHEEP

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Purpose: The aims of this study will be verify the effects of three doses of dexmedetomidine used in pre-medication on propofol sparing for anesthetic induction, as well as cardiorespiratory effects in sheep. **Methods:** Eight females sheep, non-pregnant, aged between 1 to 5 years and weighing 30 to 50 kg will be used in a prospective, randomized, blinded and "crossover" study, respecting the minimum interval of seven days between treatments. The animals will be assigned in random order in three treatments designate as C, D_{2.5}, D_{5.0} and D₁₀, where they will receive, respectively, 2 mL of saline solution, 2.5, 5.0 and 10.0 µg/kg of dexmedetomidine injected intramuscularly. After 10 minutes of injection, they will receive propofol in a dose sufficient to orotracheal intubation. Heart and respiratory rates, rectal temperature, blood gas analysis, sedative effects, quality of intubation, extubation and anesthetic recovery time, and necessary dose of propofol for intubation will be evaluated. The evaluation times will be baseline or T0 (prior pre-medication), 10 minutes after pre-medication, immediately after induction and every 5 minutes until extubation and after complete anesthetic recovery. **Expected results:** It is expected to determine the dose of dexmedetomidine to promote good sedative effects, with no or few cardiorespiratory depressant effects and to reduce the dose of propofol required for anesthetic induction.

Keywords: alpha2-agonists, ovine, sedation.

Acknowledgments: FAPESP, CAPES e CNPq.



Er³⁺ AND Yb³⁺ UP CONVERSION IN GADOLINIUM VANADATE MATRIX OBTAINED BY NON-HYDROLYTIC SOL-GEL METHODOLOGY: APPLICATION IN NANOTHERMOMETER

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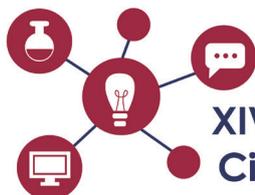
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Purpose: The goal of this work was to prepare the gadolinium-vanadium oxide (GdVO₄) by sol-gel methodology and doped with Er³⁺/Yb³⁺ ions in different molar ratio.

Methods: The samples were obtained by using their respective chlorides and alkoxides, which remained under agitation for 48 hours in room temperature. After 48 hours, the solvent was evaporated, and the samples were obtained in the powder form. The sample containing Er³⁺/Yb³⁺ in the molar ratio 1:1 related to the gadolinium were thermally treated at 800°C during 4 h and characterized by X-rays diffraction (XRD) and up conversion photoluminescence (PL). **Results:** The X-rays diffraction presented diffraction peaks characteristic of the phase GdVO₄: Er³⁺;Yb³⁺ proving the formation of the phase. The sample was submitted to photoluminescence measurement, excited to laser system with wavelength fixed at 980 nm and varying the power. The emission spectrum of the sample containing the pair Er³⁺ /Yb³⁺ presented intense emission in the green region (525 nm e 545 nm) of the electromagnetic spectrum, corresponding to the transitions 2H_{11/2} → 4I_{15/2} and 4S_{3/2} → 4I_{15/2}, with intensities dependent on the laser power. The ratio between the integrals of these bands areas showed an increase, this is an indicative of the increase in system temperature depending on the laser power. **Conclusion:** The levels 2H_{11/2} and 4S_{3/2} present small energy difference between them, which can be excited through small temperature difference, thus, the system presents itself with good perspectives for applications such as nanothermometers for temperature measures of healthy and sick cells.

Keywords: luminescence, GdVO₄, nanothermometers, diagnostics.

Acknowledgments: FAPESP, CAPES and CNPq.



EVALUATION OF SANITARY EDUCATION IN REDUCING THE NUMBER OF FECES OF DOGS AND CATS IN THE POLYSPORTS OF FRANCA

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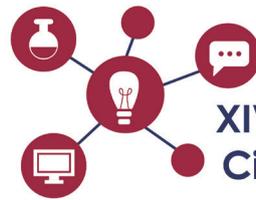
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Dogs and cats are often hosts to many external and internal parasites, many of which are related to the transmission of zoonoses. Among them, worms and protozooses can contaminate the environment where humans live and cause zoonoses, such as visceral larva migrans, cutaneous larva migrans and toxoplasmosis. **Purpose:** Thus, the present study was designed with the purpose of verifying the effect of health education on the number of feces found in the Franca of Polysports. **Methods:** For this, the counting of the number of feces, before and after the sanitary approach, will be performed in the visitation areas of the Polysports. Fecal collections will be carried out before and after health education, specifically in September, November and January and February. Health education will be carried out in the interspersed months of December and January, through informational materials such as folders, posters and pamphlets distributed in the social areas of the Polysports. Posters will be made containing information on zoonotic diseases transmitted by feces, as well as their prevention and ways to avoid them. Collections and educational approaches will take place on the first weekend of each month mentioned above, aiming to reach as many visitors as possible. **Results and Conclusion:** It is hoped that this project will promote awareness of the risks of zoonoses and thus reduce the rate of feces left in the visitation areas of the Polysports.

Keywords: education, parasites, society.

Acknowledgments: CAPES, CNPq, and FAPESP.



EVALUATION OF THE DIET QUALITY INDEX OF PATIENTS UNDERGOING ONCOLOGICAL TREATMENT

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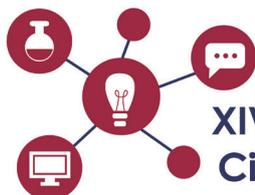
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Purpose: We know that eating habits can directly influence the individual's health status, contributing to increased rates of obesity and NCDs. One of the main risk factors for the development of NCDs and cancer is an inadequate eating lifestyle. Objective: To evaluate the quality index of the diets of individuals undergoing cancer treatment. **Methods:** This study was conducted with 50 individuals undergoing cancer treatment. To evaluate the diet quality of these patients, the R24H were analysed and the Diet Quality Index Associated with the Digital Food Guide (IQD-GAD-2019) was applied. With indexes calculated by patients, their correlation with the study variables was evaluated using the t-Student Test and ANOVA. **Results:** The study evaluated 50 individuals undergoing oncological treatment, predominantly female and with a mean age equal to 58 years \pm 12.0 years. The most common type of cancer among women was breast (32%) and among men, bowel (6%). According to the IQD, the majority of the study population was classified as intermediate diet quality (66%), while 28% were classified with low quality and only 6% good quality. Of the total sample 48% of patients were overweight and overweight and the most reported symptom was hyporexia, followed by nausea and vomiting. **Conclusion:** The dietary quality of oncology patients, as assessed by the IQD-GAD-2019, overall were classified with an intermediate quality index, indicating that interventions focused on dietary changes are needed to improve food intake and improve treatment response and quality of life of these patients.

Keywords: quality of the diet, side effects, healthy eating, nutrition.

Approval CEPE/CEUA: 17466319.8.0000.5438.

Acknowledgments: FAPESP, CAPES and CNPq.



EVALUATION OF THE EFFECT OF STANDARDIZED GREEN PROPOLIS ON COLON CARCINOGENESIS

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Purpose: The objective of this study was to evaluate the chemopreventive potential of the standardized green propolis extract on colon carcinogenesis in rodents. **Methods:** After a week of acclimatization (1st week), the rats were treated by gavage, once a day, with different doses of the standardized extract of green propolis (10 and 30 mg/kg) for three consecutive weeks (2nd, 3rd and 4th week). The carcinogen 1,2 dimethylhydrazine (DMH) was administered subcutaneously twice a week during the 3rd and 4th weeks to induce colon carcinogenesis. Animals were observed for further two weeks after the end of the treatments and then euthanized. Colon carcinogenesis was assessed using the aberrant crypt foci (ACF) test. Animal body weight and water consumption were measured throughout the experimental period. Additionally, serum alanine-aminotransferase (ALT) and creatinine levels were also analyzed to assess hepatotoxicity and nephrotoxicity, respectively. **Results:** The animals treated with the standardized extract of green propolis, at a dose of 30 mg/kg, showed significantly lower frequency of ACF than those of the DMH group, with a 61.2% reduction of pre-neoplastic lesions. No significant differences were observed regarding the parameters of body weight gain, water consumption, ALT and creatinine levels, revealing toxicity absence. **Conclusion:** The standardized extract of green propolis showed a chemopreventive effect under the experimental conditions used. Therefore, this extract may be a promising candidate in anticancer/preventive therapies for colon carcinogenesis.

Keywords: natural products, chemoprevention, aberrant crypts.

Approval CEPE/CEUA: 9155210520.

Acknowledgments: CNPq, FAPESP and CAPES.



EVALUATION OF THE EFFECTIVENESS OF DIALYSIS MACHINE DISINFECTION

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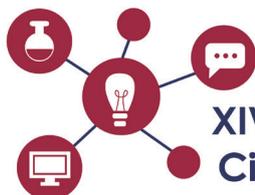
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Purpose: This study evaluated the fungicidal action of disinfectants used in the dialysis services against fungal *Aspergillus* biofilms, mimicking the dialysis machine microenvironment. **Methods:** Fungal strains previously recovered from the hydraulic circuit of a hospital hemodialysis unit were used. Biofilms were formed in an aqueous medium poorly supplemented with minerals and carbon as recommended by the International Organization for Standardization (ISO 16954), mimicking the interior environment of an equipment with a low amount of microorganism in the biofilm lifestyle. Disinfectants were used in concentration and exposure time recommended by the legislation/manufacturer. After exposure, biofilm cell viability was obtained by the agar plating methodology. **Results:** Exposure to peracetic acid at 0.1% (30 min) and 0.2% (10 min), 1% acetic acid (30 min), sodium hypochlorite 0.1% (10 min) and 2.5% (30 min) showed fungicidal activity against all strains tested. Citric acid 1% (120 min), 21% (40 min) and 50% (15 min), 0.05% sodium hypochlorite (30 min), and 0.1% sodium metabisulfite (120 min) did not inhibit fungal growth. Although the disinfectant recommended by legislation – 0.05% sodium hypochlorite, was not 100% fungicide, 0.1% peracetic acid, widely used in Brazilian dialysis centers, proved to be 100% fungicidal. **Conclusion:** The results emphasizes the importance of using methodologies that identify the health risks of exposed populations in order to guide the intra- and intersectoral actions that promoting and protecting health, improving social and life conditions.

Keywords: biofilm, dialysis machine, disinfectants, fungicidal activity.

Acknowledgments: FAPESP, and CNPq.



XIV Encontro de Iniciação Científica da UNIFRAN

FOLDER: A USABLE INSTRUMENT IN PHYTOTHERAPY CARE IN THE SCHOOL ENVIRONMENT

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Purpose: use textual genre (folder) to prepare a bulletin on Medicinal Plants to be used in activities to consolidate the attention in phytotherapy for students and teachers in the school environment. **Methods:** Based on the review of the theme “Medical Plants in Common Use by the Population”, the material was prepared using a graphic design computer program available online (Canva.com). **Results:** As a result, the elaborated folder shows information about parsley (*Petroselinum crispum* (Mill.), Fuss, 1866), an herbaceous plant cultivated as a condiment or vegetable belonging to the *Apiaceae* family and rich in vitamins A, complex B, C, D and E and in iron, with antioxidant, diuretic, and anti-inflammatory properties. **Conclusion:** Thus, it was verified the feasibility and importance of using literary genres as an instrument that can provide the reformulation of habits, the acceptance of new values and encourages creativity. Spaces for the production and application of knowledge destined to the development and well-being of individuals can be related to education and health.

Keywords: folder, health promotion, medicinal plants, parsley.

Acknowledgments: CNPq and Cruzeiro do Sul.



GASTROINTESTINAL SYMPTOMS AND HOSPITAL DIET ACCEPTANCE: ANALYSIS OF DATA FROM 2017 TO 2019 IN A PUBLIC HOSPITAL

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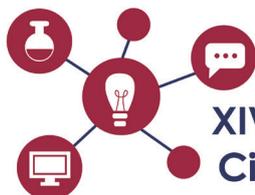
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Purpose: To evaluate the presence of gastrointestinal symptoms and the acceptance of the hospital diet of patients admitted in a hospital in the state of São Paulo. **Methods:** This is a study with retrospective data from 2017 to 2019, carried out with 557 patients of both genders. The following information was collected: presence of gastrointestinal symptoms, type of hospital diet received and percentage of diet acceptance. For the anthropometric assessment, Body Mass Index (BMI), arm circumference and calf circumference were analyzed. Data were expressed as means and standard deviations, or absolute values and percentages. Analysis was performed using Student's t and chi-square test. **Results:** A total of 51.9% of patients were female, the average length of stay in hospital was 2 days. According to the BMI, 51.16% of participants were overweight. The calf circumference was adequate in most of patients. The average acceptance of the hospital diet was $78.25 \pm 27.26\%$. Gastrointestinal symptoms reported by 32.49% patients in order of occurrence were: constipation, nausea, loss of appetite, vomiting, xerostomia, dysphagia, diarrhea, epigastric pain, hyporexia, odynophagia, flatulence, oral changes, pain when evacuating and gastralgia. The variables: calf circumference, BMI and gastrointestinal symptoms were statistically different between groups with more than 75% of diet acceptance and less than 75% of diet acceptance. **Conclusion:** It was observed that most patients were overweight and had preserved muscle mass, according to calf circumference. Although about a third of sample reported some gastrointestinal symptoms, there was a satisfactory average acceptance of the diet.

Keywords: Nutritional Status, Nutrition Assessment; Diet Therapy; Symptom Assessment; Inpatients.

Approval CEPE/CEUA: 3.985.726 (CAAE: 30617120.0.0000.5438).

Acknowledgments: FAPESP, CAPES and CNPq.



HEALTH CARE IN THE SCENARIO OF VERTICAL TRANSMISSION OF SYPHILIS: AN INTEGRATIVE LITERATURE REVIEW

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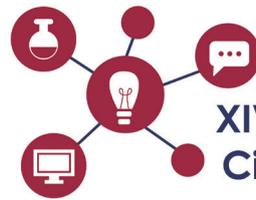
Purpose: To assess public health care in the context of reproductive health for women diagnosed with syphilis and identify variables associated with vertical transmission.

Methods: This is an integrative literature review with a qualitative approach to identify the theme of congenital syphilis and the structure of preventive actions in the context of prenatal care. The identification and selection of studies were the search for publications indexed in the Latin American and Caribbean Literature in Health Sciences (LILACS) and CAPES Journal Portal databases. The following inclusion criteria were adopted: all article categories, articles with abstracts and full texts available; those published in Portuguese, English and Spanish, between the years 2013-2018, and articles with the following descriptors in health sciences (DeCS): congenital syphilis, health care, prenatal care.

Results: Nine articles were selected and it can be seen that the incidence of syphilis is high and higher than the goal of eliminating the disease. In addition, there is late diagnosis of congenital syphilis and inadequate treatment of infected pregnant women and partners, making it possible to highlight the axes that would be vulnerable, including the individual, social, operational and management. **Conclusion:** It is perceived that the early identification of gestational syphilis and its adequate treatment depend on successful prenatal care. Through the investigation, it is possible to characterize the epidemiological profile of congenital syphilis, being able to detect the axes that would be vulnerable and, consequently, directing actions in the field of health to result in improvements in congenital syphilis indicators.

Keywords: Congenital syphilis. Delivery of health care. Prenatal care.

Acknowledgments: CNPq.



HEMATOLOGICAL PARAMETERS OF WILD CATS OF THE SPECIES *Puma concolor*, *Panthera onca*, AND *Panthera leo* KEPT IN A ZOO

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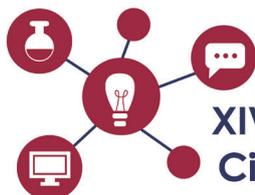
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Purpose: The objective of this study was to quantify and compare complete hematological parameters of puma (*Puma concolor*), jaguar (*Panthera onca*), and lion (*Panthera leo*) kept in a zoo in the city of Ribeirão Preto (SP). **Methods:** Six animals were included in the research, four of the species *P. concolor* (two females and two males), one of the species *P. onca* (male), and one of the species *P. leo* (male). All individuals were adults (2 to 18 years), castrated and intact, clinically healthy, weighing between 45 kg and 180 kg. The animals were anesthetized and underwent a complete physical examination immediately before blood collection via the jugular vein. The results were compared to those established as the standard for healthy domestic cats. **Results:** The blood count parameters obtained for wild cats, compared to parameters referenced in the literature for domestic cats, showed lower mean numbers of segmented neutrophils and lymphocytes. However, they revealed more monocytes and elevated platelet and globulin values. The mean values of aspartate aminotransferase, gamma-glutamyl transferase, urea, total creatinine, cholesterol, and iron were higher in the studied wild cats. The mean value of amylase obtained for wild cats are lower than those described for domestic cats. **Conclusion:** The results obtained in this study can be used as a reference for individuals of *P. leo*, *P. onca*, and *P. concolor* kept in captivity.

Keywords: feline, hematology, wild animal.

Approval CEUA: 9615071020

Acknowledgments: CAPES (financial code 001) and CNPq.



XIV Encontro de Iniciação Científica da UNIFRAN

HOUSE OF THE TEENAGER: A PUBLIC POLICY IN THE MAKING

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Purpose: Analyze the social impact of the Houses of the Teenager in the prevention of early pregnancy and show them as a possible alternative to fill gaps in assistance of the teenager's health in Sao Paulo's counties. **Methods:** The methodology used was the qualitative research with the dialectical approach, through bibliographic and documental surveys. **Results:** The data found indicates that the pregnancy in adolescence has been slowing decreasing, but the number of cases still makes the question worrying. In 2018, the children of teenager moms represent 14,94% of all births in the country. **Conclusion:** The Houses of the Teenager contribute for the improvement to the vulnerability of the teenager populace as they promote: bigger demand and adhesion to prenatal consultations from pregnant teenagers, a boost in the breastfeeding index, a decrease in early pregnancy and relapse. It is expected that this study stimulate other researches about the subject and contribute to demonstrate the importance of spaces where the teenagers find support so they can be protagonists in the programs and projects about their health.

Keywords: earlypregnancy; house of theteenager; juvenile; protagonism.

Acknowledgments: FAPESP



HYBRID MICROSPHERES CHITOSAN/POLYVINYL KAOLIN AS ADSORBENTS

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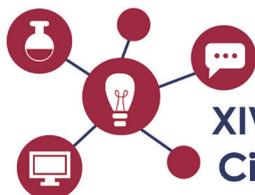
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Purpose: This project goals study the development of hybrid microspheres composed by kaolinite/ polyvinyl(PVAL)/ chitosan aiming to improve the clay mineral adsorption capacity for heavy metals. **Methods:** Chitosan solutions will be made 2 and 5% (m/V) by solubilizing its powder into a 5%(v/v) aqueous solution of acetic acid, keeping agitation for 24 h and maintaining at constant pH = 4. The PVAL solution will be made with 2,5g of PVAL into 1% (m/V) aqueous solution keeping under magnetic stirring at 50°C during 24h. Simple layered microspheres will be made mixing 25mL of the PVAL solution added to 25mL of the 2% chitosan solution maintaining the vigorous mechanical stirring and heating, thereafter 7g of Kaolinite will be added to the polymer solution and maintaining under reaction during 24 h. The solution will be dripped separately into a 8% (m/V) sodium hydroxide solution under magnetic agitation, thereafter the microspheres will be washed with distilled water until pH= 7.5 and dried in vacuum oven at 30°C, these processes will be made also with purified kaolinite to match results. **Results:** The expected is that double layered kaolin microspheres will have better results in adsorption of metal due the higher amount of adsorption sites generated by amine groups from chitosan and OH groups from PVAL. **Conclusion:** This project will prove the potential of the clay minerals microspheres act as efficient adsorbents of heavy metals under continuous process.

Keywords: kaolinite, adsorbent, heavy metals, hybrid microspheres.

Approval CEUA: not applicable.

Acknowledgments: Coordenação de Aperfeiçoamento de Pessoal de Nível Superior –(CAPES) – Finance Code 001, Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq) – n°303135/2018-2, Fundação de Amparo à Pesquisa do Estado de São Paulo (FAPESP grant n°2017/15482-1).



HYDROXYAPATITE INCORPORATED IN POLYAMIDE 12 MEMBRANE IMPLANTED AT INTRACORPOREAL SITES OF RODENTS: ANALYSIS BY SCANNING ELECTRON MICROSCOPY

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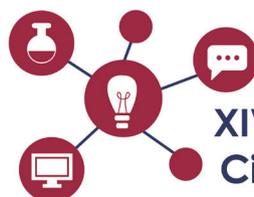
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Purpose: Scanning electron microscopy (SEM) provides high-resolution information on the surface topography and microstructural characteristics. The contribution of this study will be to use SEM to evaluate the deposition and morphological organization of powdered hydroxyapatite incorporated in a prototyped polyamide 12 (nylon) membrane (implant) that was surgically implanted in different intracorporeal sites (subcutaneous tissue, omentum, and bone) of rodents. The goal is to verify both the osteogenic and osteoinductive capacities of the implanted material. **Methods:** After 30, 45, and 60 days of implantation, tissue samples from rodent intracorporeal sites that received hydroxyapatite incorporated into a polyamide 12 membrane will be biopsied and fixed in 2.5% glutaraldehyde in 0.1M sodium cacodylate buffer for 4 hours. In the sequence, the sample will be washed in 0.1M sodium cacodylate buffer, dehydrated in an increasing series of ethylic alcohol (50%, 60%, 70%, 80%, 90%, and 100%), dried to the critical point and gold-sputtered. Later, the material will be affixed in stubs and photographed on a TESCAN scanning electron microscope (Vega 3SBH Easy Probe). Data relative to deposition and morphological organization of hydroxyapatite will be scored as absent (0), slight (+), moderate (++), or intense (+++), using softwares. Results: Project in progress. **Results and Conclusion:** Waiting for results.

Keywords: three-dimensional imaging, nylon, veterinary orthopedics, osteogenesis, osteoinduction.

Approval CEUA: 6134300818.

Acknowledgments: FAPESP, CAPES, CNPq and University of Franca.



IDENTIFICATION MANUAL OF MEDIUM AND LARGE SIZED MAMMALS OF “RECANTO ECOLÓGICO VALE DO CÉU”

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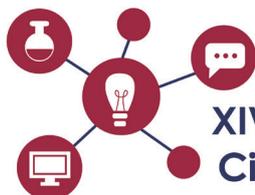
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Purpose: The objective of this study was to develop a manual for the identification of species of medium and large mammals in the “Recanto Ecológico Vale do Céu”. **Methods:** The manual was developed from August 2020 to July 2021, with photos captured in the study area, which had been identified by specialist. Information of registered species, such as feeding habits, conservation status, among others, were searched in a database available on digital platforms and also in print, to be added to the manual. **Results:** The manual was developed with photos recorded in the corner, totaling 23 species of medium and large mammals identified in the area. **Conclusion:** This material is of wide value for disseminating knowledge, seeking to raise awareness among tourists and the local population, aiming at the medium and long-term conservation of these species and the Cerrado.

Keywords: Environmental education, ecological tourism, Serra da Canastra.

Acknowledgments: CAPES and CNPq.



IN VITRO ANTIFUNGAL EVALUATION OF MARINE FUNGI *PENICILLIUM CITRINUM*-4A14 METHANOLIC EXTRACT

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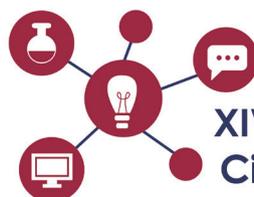
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Ascidians are marine invertebrate harboring several microorganisms, such as fungi and bacteria. These microorganisms can, in turn produce several specialized metabolites with remarkable biological and pharmacological properties. In this study, the fungal strain *Penicillium citrinum*-4A14, associated with the ascidian *Didemnum perlucidum* was isolated and its methanolic extract obtained after cultivation in solid medium. **Purpose:** This work proposal was to analyze the antifungal potential of the methanolic extract 4A14 against six *Candida* species. **Methods:** The fungus *P. citrinum*-4A14 was cultivated in rice medium for 30 days. After extraction with methanol, the fungal extract was obtained, dried and submitted to the antifungal assay. The *in vitro* antifungal susceptibility assays were performed by the broth microdilution method, against the strains *C. albicans* SC 5314, *C. glabrata* ATCC 2001, *C. parapsilosis* ATCC 22019, *C. krusei* ATCC 6258, *C. tropicalis* ATCC 13803 and *C. orthopsilosis* ATCC 9614. The analyzes of 4A14 extract (3.90 to 2,000 µg/mL) were performed in triplicate, using amphotericin B (0.03 to 16 µg/mL) as a positive control. The minimum inhibitory concentration (MIC) was determined with the fluorometric indicator resazurin at 0.01% (w/v). **Results:** The 4A14 extract when evaluated against different *Candida* strains did not show antifungal activity, as it presented a minimum inhibitory concentration (MIC) >2000 against all strains investigated. **Conclusion:** Even though 4A14 extract has not shown antifungal activity under the evaluated conditions, the studies will continue aiming to isolate the chemical constituents to better explore its biological potential.

Keywords: *Candida*, *Didemnidae*, *Didemnum perlucidum*.

Acknowledgments: CAPES, CNPq and FAPESP



IN VITRO EVALUATION OF BIOLOGICAL EFFECT OF THE STANDARDIZED EXTRACT OF BRAZILIAN RED PROPOLIS AND ITS MAJOR ISOLATED COMPOUNDS AGAINST *Schistosoma mansoni* PARASITE

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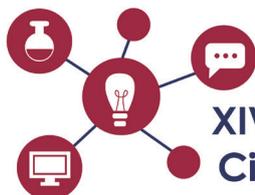
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Purpose: This project aims to evaluate the antiparasitic activity of the standardized extract of Brazilian Red Propolis (SEBRP) as well as its major isolated compounds Guttiferone and Oblongifolin B on *Schistosoma mansoni* worms *in vitro*. **Methods:** Adult worms of *S. mansoni* were recovered by perfusion of livers and mesenteric veins of infected mice and the worms were transferred to a 24-well culture plate containing 2 mL of RPMI 1640 medium. The standardized extract of Brazilian red propolis (SEBRP), as well as its major compounds and Praziquantel (PZQ) were dissolved in dimethyl sulfoxide (DMSO) and added at various concentrations. The worm's viability was determined by visual analysis using an inverted microscope according to their movements at 24, 48 and 72h after treatments. The EC₅₀ values (effective concentration against 50% of worms) were calculated from a non-linear regression dose-response inhibition graph using GraphPad Prism (version 8.0). **Results:** The SEBRP was active by displaying an EC₅₀ value of 32.92, 19.94 and 6.14 µg.mL at 24, 48 and 72h against adult worms of *S. mansoni*. The major isolated compounds were active displaying EC₅₀ values of 5.84 and 19.92 µg.mL to Guttiferone and Oblongifolin B at 24h, respectively. The extract and isolated compounds induced alterations in the tegument of *S. mansoni*. **Conclusion:** The extract and isolated compounds exhibited *in vitro* activity against adult worms of *S. mansoni*, which opens new perspectives to better understand the synergistic and/or additive effects promoted by both SEBRP and praziquantel against schistosomiasis features.

Keywords: Schistosomiasis, Red propolis, association, *in vitro*.

Acknowledgments: FAPESP (2017/04138-8), CAPES and CNPq.



IN VITRO EVALUATION OF THE LEISHMANICIDAL ACTIVITY OF CRUDE EXTRACT AND FRACTIONS OBTAINED FROM *COPAIFERA OBLONGIFOLIA*.

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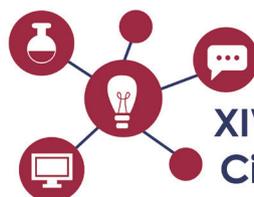
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Purpose: The aim of this work was to evaluate the leishmanicidal activity of crude extract and fractions obtained from *Copaifera oblongifolia* (Leguminosae). **Methods:** The leaves of *Copaifera oblongifolia* were collected from a specimen located at Usina Santo Ângelo, in the city of Pirajuba-MG. The collected leaves were dried in a circulating air oven (40°C) and pulverized in a knife mill resulting in 913.7g of powder. This material was submitted to five successive extractions with ethanol/water (75:25 v/v). After drying, 64.84g of crude extract was obtained. A liquid-liquid partition was carried out with approximately 40g of the hydroalcoholic extract. The mass was dissolved in 300mL of an ethanol/water solution (80:20 v/v) and placed in a separating flask, partitioning with n-hexane, dichloromethane, ethyl acetate and n-butanol. To evaluate the leishmanicidal activities, the samples were submitted to an in vitro assay against the promastigote forms of *Leishmania amazonensis* (MHOM/BR/PH8). **Results:** The best results of the leishmanicidal activity were obtained with the fraction in dichloromethane and ethyl acetate that presented % lysis of 71.17% (48 h) and 75.8% (48 h), respectively. **Conclusion:** The n-hexane fraction showed moderate % lysis, 58.31% after 48h. After 24 h, the % lysis results obtained were not satisfactory for the crude extract and fractions.

Keywords: *Copaifera oblongifolia*, Copaibas, *Leishmania*.

CEUA: no. 3830250919.

Acknowledgments: FAPESP, CAPES and CNPq.



IN VITRO LEISHMANICIDAL ACTIVITY OF EXTRACT OF BRAZILIAN RED PROPOLIS AND ITS BOTANIC SOURCES

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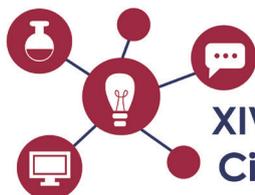
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Purpose: This work aimed to evaluate the leishmanicidal activity of the extract of Brazilian red propolis (EBRP), and its botanic sources, *Dalbergia ecastophyllum* (EDE) and *Symphonia globulifera* (ESG), against promastigote and intracellular amastigote forms of *Leishmania amazonensis*. **Methods:** Promastigote and intracellular amastigote forms were cultivated in a 96 or 24-well culture plates, respectively containing 2 mL of RPMI 1640 medium. The extract of Brazilian red propolis (EBRP), as well as its botanic source extracts (EDE, ESG) were dissolved in dimethyl sulfoxide (DMSO) and added at concentrations 6.25 to 200 µg/mL and anfotericin B at concentrations from 0.25 to 1.56 µg.mL. The leishmanicidal activity was determined by visual analysis using an inverted microscope according to the promastigote flagellar movement (promastigote) and number of amastigote per cells. The EC50 values (effective concentration against 50% of worms) were calculated from a non-linear regression dose-response inhibition graph using GraphPad Prism (version 8.0). **Results:** The EBRP displayed an EC50 value of 67.42 µg.mL and 0.98 µg.mL against promastigote and intracellular amastigote at 24 or 48 h, respectively, and both botanic source extracts displayed EC50 values higher than 10 µg.mL against promastigote forms and lower than 10 µg.mL against amastigote. **Conclusion:** The leishmanicidal activity of EBRP and its botanic sources opens new perspectives to better understand the synergistic and/or additive effects promoted with anfotericin B against leishmaniasis features.

Keywords: (*Leishmania*) *amazonensis*; *Dalbergia ecastophyllum*; leishmanicidal; red propolis; *Symphonia globulifera*.

Acknowledgments: FAPESP (2017/04138-8), CAPES, CNPq and University of Franca.



INSECTICIDE ACTIVITY OF *Handroanthus impetiginosus* EXTRACTS, IN *Plutella xylostella* (LEPIDOPTERA: PLUTELLIDAE) LARVAE

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Purpose: The Brassicaceae family comprises several economically important vegetables, and occupies a prominent place in horticulture in south-central Brazil. Among the pest insects that attack brassicaceous crops, the diamondback moth, *Plutella xylostella* (Linnaeus, 1758) (Lepidoptera: Plutellidae) stands out. *Handroanthus impetiginosus* belongs to the Bignoniaceae family and is a species known as the purple ipe. The objective of this study was to evaluate the insecticidal activity of extracts obtained from barks, flowers and leaves of *H. impetiginosus* in diamondback moth, *P. xylostella*.

Methods: In order to identify the most promising extracts for the control of *P. xylostella*, preliminary tests were carried out with ethanol extracts from bark, flowers and leaves. The treatments were applied to leaf discs at a concentration of 2000 ppm. As a negative control, deionized water and a solvent solution [acetone/methanol (1:1, v/v)] were used. The most promising extracts were used to estimate the CL_{50} and CL_{90} . The effectiveness of the extracts in a greenhouse was tested using a commercial insecticide based on chlorantraniliprole, as a positive control, while the ethanol extracts of *H. impetiginosus* were used in the LC_{90} values. **Results:** The flower extract of *H. impetiginosus* showed the best result with 90% mortality. The extracts of flowers ($0.01288 \text{ mg L}^{-1}$) and leaves ($0.13816 \text{ mg L}^{-1}$) showed higher toxicity for CL_{50} values for *P. xylostella* larvae. In cabbage plants, the extracts showed similar toxicity, with mortality ranging from 59.0 to 63.0%, for *P. xylostella* larvae. **Conclusion:** *H. impetiginosus* extracts have insecticidal activity against *P. xylostella* larvae.

Keywords: Bignoniaceae, Brassicaceae, purple ipe, integrated pest management, diamondback moth.

Acknowledgments: Coordenação de Aperfeiçoamento de Pessoal de Nível Superior –(CAPES) – Finance Code 001, Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq), Fundação de Amparo à Pesquisa do Estado de São Paulo (FAPESP grant n° 2020/02483-2).



INTRAOCULAR PRESSURE MEASUREMENTS IN HEALTHY RABBITS WITH DIFFERENT TONOMETERS AND EVALUATORS

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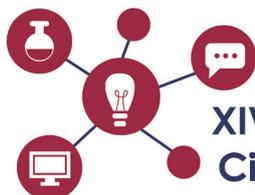
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Purpose: The measurement of intraocular pressure (IOP) is an essential step in the complementary ophthalmological exam to detect eye disorders that can affect animals, especially uveitis and glaucoma, which can compromise quality of life and economic losses. Therefore, the aim of this study is to compare the values obtained in measuring the IOP by two different tonometers and two different evaluators. **Methods:** Thirty rabbits, of the New Zealand White breed, male, whole, healthy and young will be used. With the animals in station position and physically restrained, the IOP measurements (in mmHg) will be performed, from both eyes of all animals, with a rebound tonometer (portable TD-8000, Apramed Indústria e Comércio de Apparatus Médicos Ltda). Then, a previous desensitization of the corneal surfaces with a drop of anesthetic eye drops (proxymetacaine hydrochloride at 0.5%) will be performed for subsequent measurement of the IOP (in mmHg), with the applanation tonometer (Tono-Pen Avia™ laptop, Reichert Technologies®, USA). All measurements will be performed by gently touching the devices in the central region of the corneas. Both tonometry devices will be calibrated before the measurements of each animal and, in each tonometer, three consecutive measurements will be made of each eye, with a significance value less than 5%, considering the average of these. IOP measurements will always be performed in the same shift, by a veterinary ophthalmologist and a non-specialist veterinarian. **Results:** In progress. The results obtained in mmHg will be statistically verified by simple analysis of variance. **Conclusion:** Waiting for results.

Keywords: glaucoma, veterinary ophthalmology, applanation tonometry, rebound tonometry, uveitis.

Approval CEUA: 9725071117.

Acknowledgments: University of Franca, CAPES, and CNPq.



IRONPORPHYRINS SUPPORTED ON CLAYS AS PHOTOCATALYSTS FOR HYDROGEN PEROXIDE PRODUCTION

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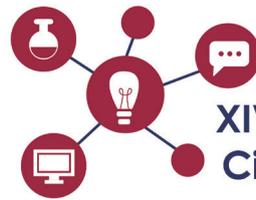
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Purpose: The demand for hydrogen peroxide is increasing worldwide. Although it is considered a "green" chemical, its synthesis is environmentally unfriendly; direct hydrogen peroxide synthesis is the most effective way to overcome this issue. The goal of this study is to prepare efficient and selective photocatalysts that can produce hydrogen peroxide directly, thus avoiding its deactivation and optimizing the properties and advantages of TiO_2 . **Methods:** First, we will functionalize TiO_2 by sol-gel method with organosilanes, APTES, and covalently bind an a second-generation ironporphyrin, FeTFPP, to the resulting material. Next, the hybrid ironporphyrin- or porphyrin- TiO_2 nanoparticles will be dispersed in porous solid supports such as kaolinite to increase exposure of the photoactive species (TiO_2 and ironporphyrin) in the photocatalyst to the reactants. The photocatalysts will be characterized by chemical analysis, X-ray diffraction, physisorption methods, scanning electron microscopy, thermal analysis, absorption spectroscopy in the infrared and UV-Vis regions. **Results:** By means of the powder X-ray diffractograms of the solids was observed that the treatment with Ti(IV) isopropoxide does not produce an increase in the basal distance of kaolinite (7.14°A). Direct insertion of the alkoxide into the interlayer region of kaolinite is not expected, due the difficult swelling of this clay because of the hydrogen bonds that maintain the structure of this clay mineral. The remaining diffraction effects, namely, those not depending on the stacking of the layers in the c-dimension, do not change, indicating that the treatment does not alter the structure of each individual layer.

Keywords: clay, sol-gel, hydrogen peroxide, porphyrin.

Acknowledgments: FAPESP, CAPES and CNPq.



LIFE HISTORY OF *Chrysoperla externa* (NEUROPTERA: CHRYSOPIDAE) CONSUMING *Leucoptera coffeella* (LEPIDOPTERA: LYONETIIDAE)

Agda Braghini, Jonas Mendes Rodrigues Souza, Wesley Bordinhon da Silva Paula, Alessandra Marieli Vacari

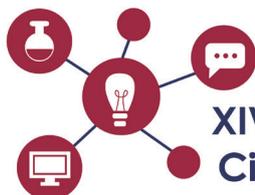
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Purpose: The aim of this study was evaluate biological aspects of *Chrysoperla externa* (Neuroptera: Chrysopidae) consuming *Leucoptera coffeella* (Lepidoptera: Lyonetiidae) pupae. **Methods:** Coffee leaves containing viable pupae were collected from organic areas of in the Franca region, SP. The leaves were taken to the laboratory where they were cut leaving only the area where the pupa was located. The green lacewing adults collected in the coffe crop were sent to the taxonomist for confirmation of the species (Prof. Francisco José Sosa Duque, UFRA, Capitão Poço, PA, Brasil). **Results:** *C. externa* is able to complete its pre-imaginal development and reproducing, increasing its population, consuming *L. coffeella*. The results were compared with other natural prey, sugarcane borer *Diatraea saccharalis* (Lepidoptera: Crambidae), and the alternative prey, *Anagasta kuehniella* (Lepidoptera: Pyralidae), commonly used in mass rearing of natural enemies. Where, the survival of *C. externa* until the end of the pre-imaginal period, that is, from egg to adult, was influenced by the consumption of different prey and was higher when the predators consumed *A. kuehniella* eggs. **Conclusion:** : In conclusion, our results show that *C. externa* can complete the develop and reproduce successfully consuming the three species of prey, especially *L. coffeella* pupae.

Keywords: Integrated pest management, green lacewing, biological control, coffee crop.

Acknowledgments: Coordenação de Aperfeiçoamento de Pessoal de Nível Superior –(CAPES) – Finance Code 001, Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq), Fundação de Amparo à Pesquisa do Estado de São Paulo (FAPESP grant n° 2020/10686-0).



MAINTENANCE AND SYNCHRONIZATION OF *Caenorhabditis elegans* AS A MODEL FOR ASSESSING THE POTENTIAL OF STANDARDIZED EXTRACTS AND ISOLATED COMPOUNDS

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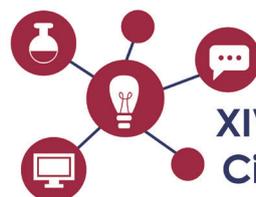
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Purpose: This work aimed to standardize the maintenance and synchronization of the life cycle of *Caenorhabditis elegans* in order to carry out future experiments with this nematode, for screening of compounds. **Methods:** *Escherichia coli* (strain OP50), previously cultivated in Luria-Bertani (LB) agar, it was sown in petri dishes containing nematode growth medium (NGM) and incubated at different temperatures. The culture plates, which already contained *C. elegans*, were washed with phosphate saline buffer and the liquid was transferred to a tube with 5% sodium hypochlorite solution. The sample was centrifuged, and the nematode eggs were obtained from the pellet. These eggs were transferred to plates with NGM medium, previously sown with *E. coli* (strain OP50), obtaining synchronous cultures at the end. The plates were kept in a biochemical oxygen demand (BOD) incubator at different temperatures. **Results:** The synchronicity of the cultures was observed with the method of obtaining eggs used and also the need for weekly peaks to maintain the life cycle. It was observed that the *E. coli* strain OP50 lawn showed better growth in 24 hours when incubated at 37°C. The nematode incubation showed better adaptation in a BOD at 20°C. **Conclusion:** The evaluated conditions allowed the maintenance and synchronization of the life cycle of *C. elegans* and of the bacterial lawn, enabling the standardization of the screening of compounds as the next step of the work.

Keywords: *Caenorhabditis elegans*, maintenance, screening, synchronization.

Acknowledgments: FAPESP (2016/24456-1), CAPES, CNPq and University of Franca.



MAKING A BOOKLET ON THE USE OF HERBAL MEDICINE IN ANIMALS

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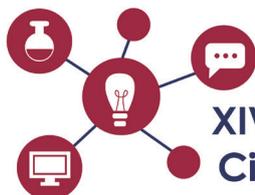
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Purpose: The objective was to identify the main natural products used in domestic animals and prepare a booklet with scientific-academic content. **Methods:** To obtain the data, a search was carried out on research sites using the words: natural products, herbal medicines, pets and domestic animals. The most mentioned products were presented in the booklet prepared in a didactic way for the community in general. The cited natural products were compared with the scientific literature. After obtaining the results, socio-educational material aimed at the needs of the population was prepared. **Results:** The selected herbal medicines were marigold tincture, euphrasia tincture, chamomile tea, propolis, boldo tea, passion flower, melissa, arnica, copaiba and mint, as they were described as being widely used by the population. In addition, the advantages and precautions regarding the use of herbal medicines were added. Thus, for all these characteristics, the production of teaching material turned to the use of herbal medicines for pets. **Conclusion:** It was concluded that the herbal medicines presented here are widely used by the pet population and the production of booklets can help the community regarding the correct use of these products, as well as bring important contraindication information.

Keywords: phytotherapy, pets, integrative medicine.

Acknowledgments: FAPESP, CAPES, and CNPq.



XIV Encontro de Iniciação Científica da UNIFRAN

NAPROXEN RELEASE BY POLYUREA GEL: STRUCTURAL AND *IN VITRO* STUDIES

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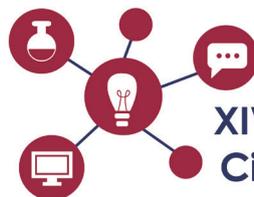
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Purpose: Preparation and characterization of polyurea-based materials (PU). **Methods:** by sol-gel process at mild temperature the polyurea was obtained using a polyetheramine-PEO and a poliisocyanate HDI. Naproxen drug was incorporated during the hydrolysis and condensation reactions to form the loaded polyurea sample (PU-Nap). The materials were characterized by Fourier Transform Infrared Spectroscopy (FTIR), and Differential Scanning Calorimetry (DSC). In vitro drug release assay was conducted by UV-vis experiment. **Results:** The analyze of the characteristics bands of the PU gels containing or not drug suggested that Naproxen was incorporated without specific interactions (weak interactions) with the functional groups of the polyurea matrix. The incorporation of Naproxen into the PU affects the rigidity (glass transition T_g) and the crystallinity degree of polyether phase. The presence of drug causes appreciable changes in the swelling behavior during the hydration of the polyurea. The dissolution and release of naproxen by PU was facilitated due to the hydrophilic characteristic of the matrix, reaching 100% of drug released after 12h. **Conclusion:** polyurea gel was able to incorporate and release naproxen drug, opens potential perspectives as versatile drug delivery systems.

Keywords: polyetheramine, isocyanate linker, UV-vis.

Acknowledgments: Acknowledgments: Coordenação de Aperfeiçoamento de Pessoal de Nível Superior –(CAPES) – Finance Code 001, Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq) – n°306271/2017-6, Fundação de Amparo à Pesquisa do Estado de São Paulo (FAPESP grant n°2013/20455-2 and 2020/06531-1).



NATURAL DITERPENES AS PROTOTIPES TO REACH BIOACTIVE COMPOUNDS

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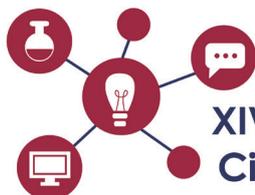
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Purpose: The aim of this study was to obtain a natural diterpene to be used as starting block to achieve active analogue molecules through structural modifications. Kaurenoic acid (KA) is a kaurane-type diterpene which stands out for displaying several interesting biological activities. This diterpene is the major component of *Mikania glomerata* extract and is used in this work as a substrate to obtain structural analogues to be biologically evaluated. **Methods:** The isolation of KA from plant sample was performed using a 2.5 kg portion of ground aerial parts. A suspension of the plant powder in dichloromethane is stirred in portions under ultrasound for 15 minutes, filtered, and the solvent removed by rotary evaporation. The procedure was repeated three times, giving 80 g of crude dichloromethane extract. Extract was suspended in 750mL of a 9:1 (v/v) Ethanol/H₂O mixture and filtered. The soluble part was partitioned with hexane and with dichloromethane. Samples were subjected to thin layer chromatography (TLC), to find the fraction of interest. This fraction was subjected to vacuum liquid chromatography, and the resulting fractions were analyzed by TLC, to detect kaurenoic acid. Finally, the last purification was performed through classical column chromatography. **Results:** A good yield (2,4g) of kaurenoic acid was obtained with high purity. The sample was completely identified by NMR. **Conclusion:** *M. glomerata* really yielded a considerable amount of kaurenoic acid, ensuring the subsequent steps of the work with an expressive amount of starting material.

Keywords: diterpenes, kaurenoic acid, structural modifications.

Acknowledgments: FAPESP, CAPES and CNPq.



XIV Encontro de Iniciação Científica da UNIFRAN

OZONAZED POLYUREA AS ANTIMICROBIAL AND ANTIBIOFILM AGENT

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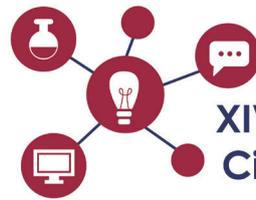
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Purpose: The aim of the present study is to describe the antimicrobial and antibiofilm actions of four ozonized polyurea formulations. **Methods:** Four increasing volumes of ozonized sunflower oil were added to the liquid form of a polyurea-based hydrogel (G1, G2, G3 and G4). Pure polyurea was used as a control group (CG). The antimicrobial and antibiofilm activity were evaluated against *Staphylococcus aureus* ATCC 6538, *Escherichia coli* ATCC 14948, *Candida albicans* ATCC 90028 and *Candida tropicalis* ATCC 13803. The hydrogels were submerged in microbial suspensions in a 24-well plate and the suspensions were cultured to enumerate the colony forming units (CFU mL⁻¹). Formulations showing germicidal action were tested for antibiofilm ability and were stored for 12 months, when the antimicrobial activity was re-evaluated. Biofilms were grown in 96-well plates. Hydrogel samples were placed on the biofilms for 24h and culture of the suspension was performed to enumerate the CFU mL⁻¹. **Results:** Similar to the CG, groups G1, G2 and G3 were shown to be inefficient in the antimicrobial test. However, the G4 hydrogel showed germicidal effect against fungi and bacteria. Partial antimicrobial action was detected after 12 months of storage. Finally, the G4 hydrogel reduced the number of CFU mL⁻¹ from the biofilms of *S. aureus*, *E. coli*, *C. albicans* and *C. tropicalis*. **Conclusion:** Considering its antimicrobial and antibiofilm potentials, the hydrogel formulation containing ozonized sunflower oil is promising to the medical community.

Keywords: bacteria, biofilm, fungi, hydrogel, ozone.

Acknowledgments: FAPESP (2020/06265-0), CAPES (001), OZONE&LIFE®.



PARODY IN JOURNALISM FROM THE BAKHTINIAN PERSPECTIVE: A STUDY OF SENSACIONALISTA'S POSTS ON FACEBOOK

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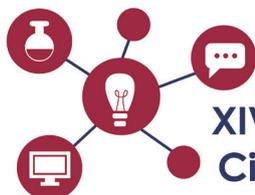
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Purpose: The aim of this study was to analyze and understand the parody present in the Sensacionalista's Facebook posts in comparison with the headlines of so-called serious newspapers, such as Folha de São Paulo and O Estado de São Paulo. **Methods:** FPosts from Sensacionalista's Facebook social network were analyzed during the months of November and December 2020, along with news collected from the websites of Folha de São Paulo and O Estado de São Paulo newspapers that related to the topic of the posts. These analyzes were made from concepts studied by the Russian philosopher Mikhail Bakhtin (1895-1975), such as Dialogism, Discourse Genres and Parody, in addition to being also based on the concept of Intertextuality. **Results:** As a result of this study and the analyses, we could see that the relationships established between the parody of the Sensationalist in comparison with the seriousness of the so-called serious newspapers are dialogic and intertextual. It was also possible to determine the characteristics of these texts in modalities according to thematic content, compositional construction and style of genres. **Conclusion:** The study demonstrated the dialogic and intertextual character of parody in relation to other discourses, subverting them, and expanded the understanding of serious journalism and humorous text based on journalistic language.

Keywords: Bakhtin, journalism, parody, Sensacionalista.

Acknowledgments: FAPESP, CAPES and CNPq.



XIV Encontro de Iniciação Científica da UNIFRAN

PERIODONTAL DISEASE IN DOGS AND CATS: FROM CAUSE TO PREVENTION

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Purpose: Periodontal disease is the most commonly diagnosed oral condition in dogs and cats, having bacterial plaque like cause. This oral disease is characterized by inflammation and progressive destruction of periodontal tissues, protectors (gingiva) and sustains (cementum, alveolar bone and periodontal ligament) of those dental elements. Given the high incidence of periodontal disease and the possible local and systemic changes that it can cause in canine and feline species, the aim of the present study was to develop didactic, instructive and educational materials about this oral disease for tutors of pet animals company, in order to improve the quality of life and survival. **Methods:** Two educational brochures (printed and digital) were prepared, beyond a editing video about periodontal disease emphasizing the cause (bacterial plaque), clinical signs (bad breath, gingivitis, bleeding, retraction and gingival ulcers, bone resorption, mobility and tooth loss), aggravating factors (age, race, immunity, type of diet and not brushing teeth), diagnosis (clinical examination and oral x-rays), systemic impairment (hepatic, renal, cardiac, joint and nervous), treatment (dependent on each case) and prevention (periodic toothbrushing). **Results:** With the companies support, Virbac and Special Dog, the educational leaflet (ISBN 978-65-88194-13-3) was available for dog and cat tutors at the Veterinary University Hospital of Franca; it was also deposited in that Institution Library. The educational leaflet (ISBN 978-65-88194-12-6) can be accessed by the entire external community interested (<https://biblioteca.unicid.edu.br/pergamumweb/vinculos/000049/0000496a.pdf>), just like the video (<https://youtu.be/gfo7T4nRQcU>). **Conclusion:** All the elaborated materials will provide life quality and survival for the animals affected by periodontal disease.

Keywords: toothbrushing, periodontitis, bacterial plaque, veterinary dentistry.

Approval CEUA: Not applicable.

Acknowledgments: CAPES, University of Franca, Virbac and Special Dog.



POTENTIAL OF *Cordyceps fumosorosea* AS BIOLOGICAL CONTROL AGENT OF COFFEE LEAF MINER *Leucoptera coffeella* (LEPIDOPTERA: LYONETIIDAE) AND SELECTIVITY OF *Chrysoperla externa* (NEUROPTERA: CHRYSOPIDAE) PREDATOR

Fabírcia Cristina de Paula, Vinícius de Oliveira Lima, Wesley Bordinhon da Silva Paula, Josy Aparecida dos Santos, Alessandra Marieli Vacari

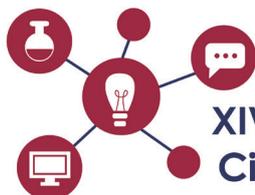
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Purpose: The applied biological control with the use of entomopathogenic agents, such as the *Cordyceps fumosorosea* (Wize) fungus, which has insecticidal activity against several species of lepidopteran pests, can be a promising and efficient control tactic for these insects. The objective will be to study the control of *Leucoptera coffeella* (Lepidoptera: Lyonetiidae) using a bioinsecticide based on *C. fumosorosea* and, in addition, to verify the selectivity of this bioinsecticide to the *Chrysoperla externa* (Neuroptera: Chrysopidae) predator, commonly found in coffee crops. **Methods:** For this, the effect of the bioinsecticide on eggs, larvae, pupae and adults of *L. coffeella* will be studied, as well as on eggs and larvae of first, second instars of *C. externa*. **Results:** The percentage of egg hatching of *L. coffeella* was significantly affected when the eggs were treated with insecticides ranging from 86.2 to 97.6%. The formed mines were influenced by the tested insecticides, reducing by 69.4% the formation of injuries on the leaves. The development of larvae of the predator *C. externa* was not influenced by treatments with insecticides, showing similar developmental stages of the predator after treatments with the tested insecticides. **Conclusion:** The bioinsecticide based on the *C. fumosorosea* fungus can be a viable alternative for the sustainable management of the coffee leaf miner, a key pest of the coffee crop.

Keywords: microbial control; green lacewings; coffee crops; IPM.

Acknowledgments: Coordenação de Aperfeiçoamento de Pessoal de Nível Superior –(CAPES) – Finance Code 001, Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq), Fundação de Amparo à Pesquisa do Estado de São Paulo (FAPESP grant n° 2020/12967-7).



XIV Encontro de Iniciação Científica da UNIFRAN

POTENTIAL OF ORANGE OIL TO CONTROL COFFEE LEAF MINER *Leucoptera coffeella* (LEPIDOPTERA: LYONETIIDAE) AND SELECTIVITY FOR *Chrysoperla externa* (NEUROPTERA: CHRYSOPIDAE) PREDATOR

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Purpose: Insect Pest Control Strategies, such the use of plant extracts, which has insecticidal activity against several species of lepidopteran pests, can be a promising and efficient control sustainable tactic for these insects. The objective will be to study the control of *Leucoptera coffeella* (Lepidoptera: Lyonetiidae) using a botanical insecticide based on orange oil and, in addition, to verify the selectivity of this plant extract to the *Chrysoperla externa* (Neuroptera: Chrysopidae) predator, commonly found in coffee crops. **Methods:** For this, the effect of the orange oil on eggs and larvae of *L. coffeella* will be studied, as well as on eggs and larvae of first instar of *C. externa*. Orange oil was compared with neem oil (positive control), chemical insecticide (flupyradifurone, positive control) and control (negative control). **Results:** The percentage of egg hatching of *L. coffeella* was significantly affected when the eggs were treated with orange oil reducing by 75.0%. The formed mines were influenced by the orange oil, reducing by 46.9% the formation of injuries on the leaves. The development of larvae of the predator *C. externa* was not influenced by treatments with orange oil, showing similar developmental stages to control treatment. **Conclusion:** The botanical insecticide based on the orange oil can be a viable alternative for the sustainable management of the coffee leaf miner, a key pest of the coffee crop.

Keywords: Botanical insecticide, green lacewings, coffee crops, IPM.

Acknowledgments: Coordenação de Aperfeiçoamento de Pessoal de Nível Superior –(CAPES) – Finance Code 001, Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq), Fundação de Amparo à Pesquisa do Estado de São Paulo (FAPESP grant n° 2020/14019-9).



PREDATION BEHAVIOR OF *Chrysoperla externa* (NEUROPTERA: CHRYSOPIDAE) IN TWO-SPOTTED SPIDER MITE, *Tetranychus urticae* (ACARI: TETRANYCHIDAE)

Marina Barbosa de Jesus, Enes Pereira Barbosa, Fabrícia Cristina de Paula, Maiko de Paulo Celestino, Alessandra Marieli Vacari

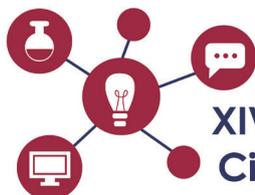
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Purpose: To assist future biological control programs that use Chrysopidae as a control agent, the objective of this research was to study the behavior of the lacewing species, *Chrysoperla externa* (Neuroptera: Chrysopidae), consuming two-spotted spider mite, *Tetranychus urticae* (Acari: Tetranychidae). **Methods:** In the laboratory, experiments were carried out to determine the predation behavior of *C. externa* on different densities of adults of the two-spotted spider mite, *T. urticae* (1, 2, 4, 8, 16, 32, and 64 prey). For comparison purposes, the behavior of *C. externa* was also studied using eggs from the alternative prey, *Anagasta kuehniella* (Lepidoptera: Pyralidae). The functional response was determined by logistic regression of the number of mites consumed as a function of the initial number of prey using polynomial logistic regression. The random equation was used to describe the parameters of the functional response. **Results:** The predator *C. externa* showed a type II functional response consuming both *A. kuehniella* eggs and *T. urticae* adults. The results obtained will allow to define the best strategy for the use of green lacewings in the biological control of the two-spotted spider mite, *T. urticae*. **Conclusion:** The predator *C. externa* presents a functional type II response when consuming adults of *T. urticae*. Thus, it is possible to highlight the potential of this natural enemy as a biological control agent for the spider mite, a key pest in strawberry crops.

Keywords: agroecological system; green lacewings; strawberry; biological control.

Acknowledgments: Coordenação de Aperfeiçoamento de Pessoal de Nível Superior –(CAPES) – Finance Code 001, Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq), Fundação de Amparo à Pesquisa do Estado de São Paulo (FAPESP grant n° 2019/18376-3), and Sustenagil Desenvolvimento Sustentável.



PROPOSAL OF AN HPLC-DAD ANALYTICAL METHOD FOR STANDARDIZATION OF RED PROPOLIS EXTRACT

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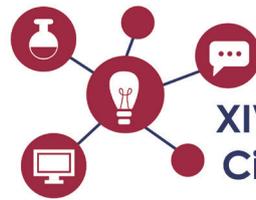
Purpose: The purpose of the present work is to develop and to validate an HPLC-DAD analytical method to evaluate the quality of a standardized red propolis extract.

Methods: The red propolis sample were provided by Apis Flora (Ribeirão Preto-SP) and the standards (gutiferone E, xanthocymol and obologifolin A) were previously isolated and identified by our research group. The analytical method was developed and validated in a high-efficiency liquid chromatography system (Shimadzu,) with three model LC-20AR Prominence pumps composed of a SIL-10AF automatic injector, CTO-20A column oven, CBM-20A control module, DGU-20A3R degasser and SPD-M20A diode photoarray detector. Analyzes were performed on a Shim-pack VP-ODS column (250 X 4.6 mm Shimadzu) and data processing will be performed with the LAB solution[®] software. The developed and validated analytical method complies with the Brazilian National Health Surveillance Agency guidelines. **Results:** The linear regression coefficients (r^2) achieved for each compound showed that the analytical curves proved to be linear in the range. Moreover, the values obtained for limits of detection (LOD) and limits of quantification (LOQ) indicated that the developed method is sensitive and suitable for the quantification of compounds in the extract. In the next phase, other analytical parameters Will be achieved. **Conclusion:** It is considered to be of great interest to develop a standardized red propolis extract wich is rich in gutiferone E, xanthocymol and obologifolin A with high biological potential, whose quality can be assured through a validated analytical method and based on an analytical tool of great versatility, sensitivity, high capacity for resolution (HPLC-DAD).

Keywords: Red propolis, HPLC-DAD, standardized extract.

Approval CEPE/CEUA: not applicable.

Acknowledgments: FAPESP, CAPES and CNPq.



QUALITY OF LIFE OF PATIENTS WITH CHRONIC KIDNEY DISEASE IN HEMODIALYSIS TREATMENT

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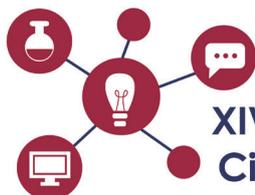
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Purpose: To assess the quality of life of patients with chronic kidney disease undergoing hemodialysis treatment. **Methods:** All patients undergoing hemodialysis treatment at a clinic in the interior of the state of São Paulo were invited to participate in this study. After the acceptance to participate, data were collected through the application of two forms, one referring to questions about sociodemographic data and the second regarding quality of life (WHOQOL -BREF) of the participants. The data were analyzed and are expressed in descriptive statistics. **Results:** The sample consisted of 64 participants, with a mean age of 48.03 ± 9.93 years, of which 34 (52.31%) are male. Regarding the analysis of the quality of life of the participants, there was a lower score in the physical aspect domain (51.34%), followed by similar scores in relation to the other domains: psychological (65.6%), social relationships (63.28%) and environment (60.44%). **Conclusion:** assessing the quality of life of patients with chronic non-communicable diseases is in line with the implementation of the 2030 Agenda goals. Results from quality of life domains above 60% represent a good quality of life, with the physical domain below this cutoff value demanding more attention. In the face of the verified data, we can see the real need to outline strategies and actions primarily focused on relieving pain and discomfort, increasing energy, improving sleep, rest, mobility, in addition to encouraging the performance of daily activities and work capacity, in addition to trying to reduce dependence on medication or treatments.

Keywords: chronic disease, health promotion, renal insufficiency, hemodialysis units.

Approval CEPE: 114833/2020.

Acknowledgments: UNIFRAN, CAPES, and CNPq.



RELATIONSHIP OF PHYSICAL ACTIVITY LEVEL WITH SLEEP QUALITY AND HEALTH OF MILITARY POLICE: AN INTEGRATIVE REVIEW

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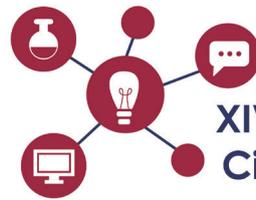
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Purpose: The aim of this review was to analyze the scientific evidence on the beneficial effects of physical activity levels on the sleep quality and health indicators of military police officers. **Methods:** It is an integrative literature review conducted in the databases Pubmed, Scielo and Google Scholar. Only intervention scientific articles published between 2017 and 2021 were included. The initial search totaled 41 records. After exclusion by title, abstract, duplicates and full reading, there were 04 publications left. **Results:** The mean age of military police officers found was 36.36 ± 6.81 , with the predominance of the study population being composed of men. About the practice of physical activity, two studies demonstrate high practice (79.5 and 100% of police officers). As for sleep quality, all studies reported poor sleep quality among the investigated military police. Regarding the influence of practice on sleep quality, only one study concluded that physical activity is associated with changes in the mental health of the police officers evaluated. **Conclusion:** These results reveal a trend towards the prevalence of sleep disorders among military police officers. In this sense, further research is suggested to investigate the association between level of physical activity and sleep quality, especially in military police officers who perform different functions, in the administrative and operational sectors.

Keywords: sleep, physical activity, health, military police.

Acknowledgments: FAPESP.



RETROSPECTIVE STUDY OF NEOPLASMS IN DOGS ATTENDED AT THE VETERINARY HOSPITAL OF THE UNIVERSITY OF FRANCA (2018–2020)

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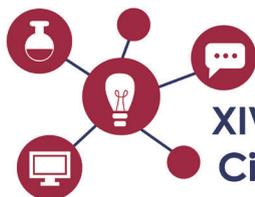
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Purpose: The present study aimed to perform a retrospective analysis of a database created from the histopathological analyses performed in dogs treated at the Veterinary Hospital of the University of Franca, describing the frequencies of different diagnosed neoplasms and correlating them with the breeds. **Methods:** The study used classification data referring to the histogenesis and malignancy of neoplasms and the animal breeds. 238 cases of biopsies referring to dogs treated between 2018 and 2020 were reviewed. All morphological diagnoses contained in the records were considered. **Results:** Some dogs had more than one pathological process, totaling 297 diagnoses included in the research. Neoplasms, regardless of type, were more frequent among mixed breed dogs (47.48%). Breast carcinomas represented the most frequent neoplasms (27.33%) in the casuistic, emphasizing grade I mixed tumor breast cancer (7.42%), mainly affecting mixed-breed dogs and poodles. Hemangiosarcomas represented the second most frequent neoplasm in the study (6.06%) and affected mainly mixed breed and fila dogs. Mast cell tumors represented 5.05% of the casuistic, affecting mainly boxer dogs (40% of cases). Osteosarcomas represented 1.34% of the casuistic and affected mainly large breed dogs, such as rottweilers and labradors. **Conclusion:** The results of this study contribute to the literature with data on the incidence of different cancers in dogs.

Keywords: carcinoma, oncology, tumor.

Acknowledgments: CAPES (financial code 001) and CNPq.



SEDENTARY LIFESTYLE AND THE EMERGENCE OF CHRONIC DISEASES: A VIEW OF BRAZIL AND THE WORLD

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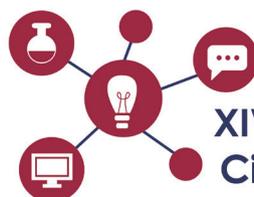
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Purpose: This study aims to investigate the Brazilian and world panorama of sedentary lifestyle and Non-Transmissible Chronic Diseases (NCDs). **Methods:** A narrative bibliographic review of the last 5 years was carried out in the following scientific search bases: Pubmed, Google Academic and in the data available on the websites of the Ministry of Health and the World Health Organization (WHO). The search included the descriptors: sedentary behavior, chronic disease, healthy lifestyle, exercise and health promotion. **Results:** After arbitrary choice of articles, this review scored 12 current studies on thematic lifestyle and chronic diseases. This review pointed out that in Brazil, 44.8% of the Brazilian population does not reach the minimum recommendation regarding the practice of physical activity and 13.8% of Brazilians are completely sedentary. In relation to the world population, recent global estimates show that one in four adults is sedentary and more than three quarters do not meet the recommendations regarding the practice of exercise. Regarding the presence of chronic diseases in the world population, the WHO points out that NCDs constitute seven of the 10 leading causes of death in the world, with heart disease being the main cause. **Conclusion:** Finally, it is possible to verify a high prevalence of sedentary lifestyle and the presence of non-communicable chronic diseases, such as cardiovascular diseases, diabetes mellitus, hypertension and cancer. In this sense, the implementation and implementation of public policies that encourage the adoption of an active lifestyle is essential for promoting the health of the world population.

Keywords: sedentary lifestyle, chronic diseases, physical activity, health promotion.

Acknowledgments: CNPq.



SELECTIVITY OF FLUPYRADIFURONE AND ORANGE OIL TO THE POLLINATOR *Apis mellifera* (HYMENOPTERA: APIDAE)

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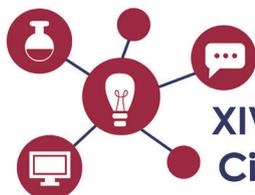
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Purpose: Bees are essential for the maintenance of ecosystems, as through pollination they ensure the survival of numerous species of native plants. Many production plants, too, depend on pollinators to produce their fruit. Therefore, studies on insecticide effects on bees are necessary to better prepare the integrated pest management plan.

Methods: *Apis mellifera* (Hymenoptera: Apidae) workers were collected in the apiary of the Sol Nascente farm, in Cristais Paulista, SP, Brazil. The cages that were used for the experiments were made in plastic container (1L), the caps perforated and covered by voile for ventilation. Three treatments were used: 1) flupyradifurone (Sivanto®), 2) orange oil and 3) control (water). The cages were treated with the respective treatment and left to dry in the shade. Each treatment contained 10 replicates, with 10 bees each replicate. Bee mortality was evaluated every hour during the first 6 hours, after which they were evaluated every 6 hours. **Results:** The synthetic chemical insecticide flupyradifurone caused 100% bee mortality after. Orange oil was similar to the control treatment and the bees survived up to an average of 23 days. **Conclusion:** Flupyradifurone reduced the survival of *A. mellifera*, while orange oil was selective for pollinator.

Keywords: Apidae, chemical control, integrated pest management.

Acknowledgments: Coordenação de Aperfeiçoamento de Pessoal de Nível Superior –(CAPES) – Finance Code 001, Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq), Fundação de Amparo à Pesquisa do Estado de São Paulo (FAPESP grant n° 2019/18376-3).



STUDY OF THE N-BUTANOL FRACTION FROM *Fridericia speciosa* LEAVES EXTRACT.

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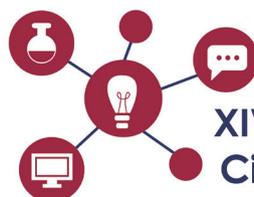
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Purpose: The aim of this work was to isolate glycosylated terpenes from *Fridericia speciosa* Mart leaves *n*-butanol fraction. **Methods:** The *F. speciosa* leaves (1.16 kg) were extracted with ethanol 95% by maceration, concentrated under reduced pressure, and yielded 29.5 g of crude extract. The crude extract (20.0 g) was dissolved in methanol/water (2:8 v/v), then extracted with *n*-hexane, ethyl acetate, and *n*-butanol. After the solvent removal, we obtained the fractions: *n*-hexane (5.8 g), ethyl acetate (5.2 g), *n*-butanol (3.3 g), and hydromethanol (4.6 g). Fraction *n*-butanol (1.9 g) was purified by Sephadex LH-20 chromatographic column eluted with methanol, furnishing fifty-four fractions. The subfraction 18-24 (305 mg) was purified by the ODS column eluted with water and methanol, subfraction 9-13 (34 mg) yield compound **1** (4.2 mg), after purification by preparative-TLC with mobile phase CHCl₃-CH₃OH (8:2, v/v). **Results:** Compound **1** was identified as a new *norsesquiterpene* 1-methyl-2-hydroxy-3-[2,4-dihydroxy-2,6,6-trimethylcyclohexyl] propyl β-glucopyranoside based on the NMR data. **Conclusion:** The isolation of **1** will allow our research group to expand knowledge about the chemical composition of the genus *Fridericia*.

Keywords: Bignoniaceae, terpenes, lipoxygenase.

Acknowledgments: FAPESP, CAPES, and CNPq.



SYNTHESIS AND CHARACTERIZATION OF MEMBRANES CONTAINING PERSISTENT LUMINESCENCE NANOPARTICLES

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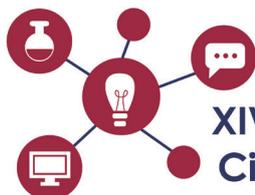
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Purpose: The objective of this work is the synthesis and characterization of flexible organic-inorganic composites based on Poly(Vinyl Alcohol) and photopolymerizable resin for 3D printing containing of MAl_2O_4 ($\text{M} = \text{Ca}, \text{Ba}$ and Sr) doped with Eu^{2+} and Dy^{3+} ions. **Methods:** initially, the luminescent particles will be prepared by the combustion method. For this, the salts of $\text{M}(\text{NO}_3)_2$, $\text{Al}(\text{NO}_3)_3$, $\text{Eu}(\text{NO}_3)_3$ e $\text{Dy}(\text{NO}_3)_3$ will be homogenized in aqueous solutions containing urea according to the desired stoichiometry. Subsequently, the alumina crucible containing the precursor solution will be transferred to the muffle, previously heated to $500\text{ }^\circ\text{C}$ for 5 minutes. After the combustion reaction, the material obtained in powder form will be characterized by X-ray Diffraction (XRD), photoluminescence (PL), Scanning Electron Microscopy (SEM) and Vibrational Spectroscopy in Infrared (FTIR). **Results:** By XRD and SEM measurements, we expect to observe crystalline phases for all samples and MAl_2O_4 particles with a mean diameter below 100 nm respectively. By the PL measurement, we will analyse the excitation and emission spectra of powders and composites (membrane + powder). We expect to observe broad bands at 340 and 520 nm in the excitation and emission spectra, respectively. **Conclusion:** We expect prepare persistent luminescent composites using different oxides and membranes which can be applied in 3D printing to give new characteristics to printed materials; UV radiation sensors, among others.

Keywords: combustion method, europium II, dysprosium III, 3D printing.

Approval CEUA: not applicable.

Acknowledgments: FAPESP and CNPq. This study was financed in part by the CAPES-Finance code 001.



XIV Encontro de Iniciação Científica da UNIFRAN

SYNTHESIS OF POLYUREA AS VERSATILE MATRIX FOR EMBEDDED DRUGS

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Purpose: The aim of this study was to prepare polyurea as potential vehicle for drug delivery purposes. **Methods:** Polyurea was obtained by the reaction between a polyetheramine-PEO and crosslinker isocyanate HDI to form transparent and flexible xerogels. After that, the incorporation of different drugs with distinct pharmacological characteristics was evaluated. **Results:** by the sol-gel reactions at mild temperatures, drugs such as cyclosporine, diclofenac, naproxen, and 5-Fluorouracil was easily embedded in the polyurea network. All the samples demonstrating good dispersability of the drugs, transparency and flexibility. The formation of polyurea was confirmed by Attenuated Total Reflectance-Fourier Transform Infrared Spectroscopy (ATR-FTIR). Due to the hydrophilic nature of PEO, a high swelling macroscopic degree was observed after contact with aqueous medium – water. **Conclusion:** The synthesized polyurea containing different drugs open a large potential for applications of these polyurea-based materials in different fields of knowledge included health.

Keywords: sol-gel, ocular drug delivery, cyclosporine, ophtalmic lenses, polyetheramine.

Approval CEPE/CEUA: 003/14.

Acknowledgments: FAPESP 2019/17860-9 and 2020/06531-1, CAPES, Finance Code 001, and CNPq 306271/2017-6.



THE APPLICABILITY OF OZONE IN TRADITIONAL AND COMPLEMENTARY MEDICINE TO CONTROL INFECTIONS CAUSED BY *Candida spp.* and *Streptococcus mutans* BIOFILMS

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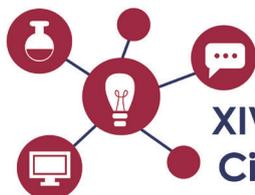
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Purpose: This study explored the bacteria-fungal interactions in the mixed biofilms formation as well as the effect of ozonized oil on the same biofilms. **Methods:** The microorganisms *Candida albicans* ATCC 90028, *C. glabrata* ATCC 2001, *C. krusei* ATCC 6258, *C. orthopsilosis* ATCC 96141, *C. parapsilosis* ATCC 22019, *C. tropicalis* ATCC 13803 and *Streptococcus mutans* ATCC 25175 were used. Biofilms were developed from cell suspensions (10^6 cells/mL and 10^8 cells/mL, for yeast and bacteria, respectively) in a 96-well microtiter plate for 24 h at 37°C and treated with ozonized oil for 5 to 120 minutes. Cell viability was determined by the agar plating methodology. **Results:** *Candida* species benefited from the association with *S. mutans* since the count of colony forming units per milliliter (CFU/mL) was higher compared to monospecies biofilms. *S. mutans* benefited only in association with *C. krusei* and *C. orthopsilosis*, where there was an increase in CFU/mL counts. Mixed biofilms exposure to ozonized oil during 120 minutes resulted in a reduction of approximately 11 Log CFU/mL and 13.43 Log CFU/mL of *Candida spp.* and *S. mutans*, respectively, showing remarkable fungicidal and bactericidal activity of the ozonized oil. **Conclusion:** The ability to form biofilms hinders the access of drugs and immune defenses to infection sites. However, ozone therapy, inserted in the Unified Health System through the National Policy on Integrative and Complementary Practices, can be explored as a strategy to control diseases associated with biofilms formed by *Candida spp.* and *S. mutans*.

Keywords: *Candida spp.*, *Streptococcus mutans*, biofilm, ozone, complementary medicine.

Acknowledgments: FAPESP (2019/26418-8), CAPES, Cruzeiro do SuL.



THE CONSTRUCTION OF RACIST DISCOURSES IN MEDIA TEXTS

Daniela Silva Lopes, Vera Lucia Rodella Abriata

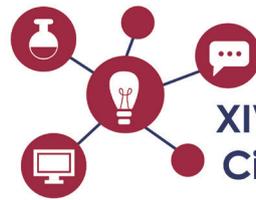
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Purpose: This research analyzes texts from the newspaper *El País* and posts from the social network *Facebook*, with the aim of examining how the themes of intolerance and racial prejudice against blacks are expressed in contemporary media discourses, on the one hand, and, on the other, how meanings are constructed in texts that denounce racial prejudice. Another objective is to apprehend the thematic-figurative paths of the texts, in order to analyze the sanction to which the subjects who suffer prejudice are submitted, the place of insertion of the socio-historical-ideological in the texts and the bad and good passions that suffer the actors. **Methods:** We use the theoretical framework of French semiotics, with the purpose of analyzing the way in which are constructed both intolerant discourses against blacks and those who engage in a controversial relationship of criticism of racism. **Results:** There was a similarity in racist posts on *Facebook*, revealing discrimination against blacks, according to the characteristics of intolerant discourses systematized by Barros, while in reports by the newspaper *El País*, we observed the enunciator's strategies to persuade the enunciatee, simulacrum of the reader, about the need to reflect on racist discourses and their consequences, in order not only to denounce racism but also to surpass it. **Conclusion:** The enunciative strategies led us, finally, to observe how the semiotic theory enables the discourse analyst to arrive at the values inscribed in the texts, based on their internal structure.

Keywords: French semiotics, route generative sense; passion; racial prejudice.

Acknowledgments: CNPq.



THE IMPORTANCE OF PSYCHOLOGIST'S ROLE IN PALLIATIVE CARE IN ADULT ONCOLOGY PATIENTS

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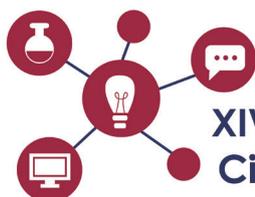
Purpose: This work consists of a review of integrative literature, with the aim of studying the role of the psychologist from the application of palliative care in adult cancer patients.

Methods: Scientific articles were researched between the years 2010 to 2021, withdrawn from SciELO and Pepsic databases, with keywords: palliative care, oncology, psychology and humanization.

Results: Palliative care consists of humanized assistance to the patient and their relatives, providing comfort for the last days of this sick person, relief from their pains, as well as a quiet death, always aiming at the patient's desires. 35 articles were found initially, and after evaluation of the inclusion criteria, 6 articles were selected. In the articles we have found themes related to hospital psychology and the considerations of the role of the psychologist before the terminality. In them were analyzed and studied the performance of psychologists in a perspective of palliative care with oncological patients. **Conclusion:** The thematic about palliative care focused on cancer patients is still quite current in Brazil, then highlighting how much professionals in the area are constantly need to update and specialize, in order to improve their knowledge and offer an ethical performance. Palliative assistance offers the patient dignity, relief and well-being at a time when there are no perspectives of improvements in the framework of the disease..

Keywords: palliative care, oncology patients, psychology, humanization.

Acknowledgments: CAPES and UNIFRAN.



THE POTENTIAL USE OF APITHERAPY TO CONTROL CANDIDIASIS

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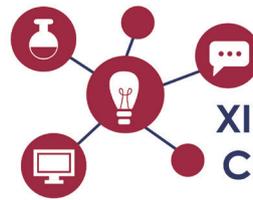
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Purpose: The present study aimed to evaluate the Brazilian propolis extracts effects on growth of yeast species belonging to the genus *Candida*. **Methods:** Strains tested included *Candida albicans* ATCC 90028, *Candida glabrata* ATCC 2001, *Candida krusei* ATCC 6258, *Candida metapsilosis* ATCC 96143, *Candida orthopsilosis* ATCC 96141, *Candida parapsilosis* ATCC 22019, *Candida parapsilosis* ATCC 90028, *Candida tropicalis* ATCC 13803 and *Candida rugosa* ATCC 10571. Red propolis extracts obtained with different solvents such as acetate, dichloromethane, phenol, hexane, N-butanol, in addition to the crude extract, standardized extract and the isolated compound Guttiferone, were used. The Brazilian green propolis crude and standardized extracts were also evaluated. The minimum inhibitory concentration (MIC) was obtained with the broth microdilution methodology with revelation by resazurin. **Results:** The standardized extract of red propolis was the most effective in inhibiting yeast growth, followed by the extract obtained with acetate as solvent. The most sensitive species, to both propolis types of products tested, was *C. glabrata* which exhibited a MIC at 7.8 µg/mL with the Brazilian red propolis standardized extract. **Conclusion:** The results show the propolis effectiveness in the candidiasis control and emphasize the importance of the apitherapy availability to the Unified Health System through the National Policy on Integrative and Complementary Practices.

Keywords: Brazilian propolis, *Candida sp.*, alternative medicine, apitherapy.

Acknowledgments: FAPEPS (processo), CAPES, CNPq and Cruzeiro do Sul Educacional.



THE RHETORIC OF PASSIONS AMID PANDEMIC: THE PRESIDENTIAL PRONOUNCEMENT ON COVID-19

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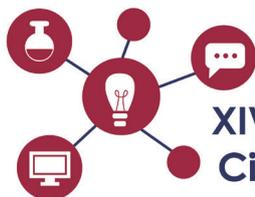
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Purpose: The aim of this research was to analyse a presidential speech, delivered by President Jair Bolsonaro on March 24, 2020, based on the Rhetoric of Aristotle's passions and the Trajectory of passions proposed by Figueiredo (2018). **Methods:** Coronavirus or COVID-19, a disease caused by the Sars-CoV-2 virus that emerged in China, spread around the world in 2020. The President of Brazil, as well as several world leaders, made several pronouncements about the arrival of the virus in the country and one of his speeches had great repercussion due to the arguments used by the speaker, which made him fruitful for analysis. For the Greek philosopher, Aristotle, rhetoric is the art of well-argued with the intention of persuading, and Aristotelian passions represent human emotions that can be awakened by the speaker in his auditorium. The trajectory of the passions proposed by Figueiredo is about the path taken between the awakening of passion and persuasion. **Results:** In view of this context, the object of study was transcribed and analysed based on this theoretical framework. **Conclusion:** Considering the vast auditorium reached by the speech, since the speech was broadcast on national network, two were selected, from the numerous possible auditoriums, a favourable auditorium and an opposed to the speech. Because a speech leads to the persuasion of your auditorium, it is necessary that the speaker knows the terrain of the emotions of his auditorium, so that there is an identification of the same with the speech.

Keywords: Rhetoric; Presidential pronouncement; Persuasion; Trajectory of passions; COVID-19.

Acknowledgments: CAPES and CNPq.



THE SUBJECTIVITY IN SPEECH MOTHERS OF PREMATURE BABIES

Larissa Xavier Correia Silva, Luciana Carmona Garcia Manzano

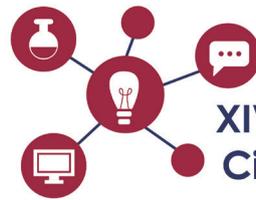
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Purpose: The proposal prioritizes listening to mothers of premature babies, considered vulnerable or silenced groups, in a discursive analysis of the history of the present. Our objective was to create a political space for registration for the formulation and circulation of reports on the motherhood of premature babies, with effects that aim at social transformation through the production of memory. **Methods:** Data provided by researchers who develop research using the Universo Prematuro application were collected. Motherhood experiences were analyzed, considering the specificities of their experiences. We work with the hypothesis that the meanings of motherhood deduced from this saying coincide with the socially dominant meanings. Through Discourse Analysis, a survey of life stories was carried out, in order to understand the subjectivity in the participants' speech. The notion of archive was used to undertake the analyses. **Results:** Based on the structure of formulating the mother's statement about prematurity, one can observe issues involving suffering in testimony and issues related to memory constructions about what it means to be a mother historically in society. **Conclusion:** We realized that most mothers do not talk about themselves and shift the issue from the issue to the child's well-being, which is in line with our hypothesis. However, it is interesting to note how, historically, the subject mother was placed as the main (and at times, the only) being responsible for this child, inserted in a collective imagination that subjectifies motherhood, crystallizing itself as a truth today.

Keywords: subjectivity, prematurity, motherhood

Acknowledgments: CNPq.



THEATER OF THE OPPRESSED AND HEALTH: AN INTEGRATIVE LITERATURE REVIEW

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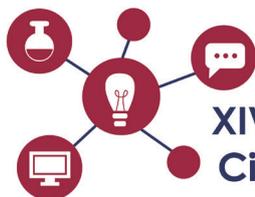
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Purpose: To identify in the literature interventions that adopted Theater of the Oppressed in the health field and analyze their effect in improving the population's health conditions.

Methods: Literature integrative review. The question guiding the bibliographic search was established according to PICO (Population or Problem, Intervention, Comparison, and Outcomes) strategy. The search was conducted in September 2020 in two databases: BVS (Virtual Health Library) and SciELO (Scientific Electronic Library Online/Brazil), using the following keywords: "Theatre of the Oppressed" AND "health". Only papers published in Spanish, English, or Portuguese that met the inclusion criteria and answered the guiding question were included. **Results:** Eight out of the 21 papers identified met the inclusion criteria and were included in the analysis. All the studies were conducted in Brazil and addressed male and female participants. In general, the interventions improved the participants' knowledge, mental health self-care, empathy, and expression ability. Additionally, the interventions promoted reflections regarding how to prevent the consumption of alcohol and other drugs among Indigenous populations, decreased school bullying, and promoted healthy behaviors. **Conclusion:** Theater of the Oppressed implemented within the health field was important to improve knowledge, autonomy, and living conditions without oppression.

Keywords: Theatre of the Oppressed, health, literature review.

Acknowledgments: FAPESP, CAPES, and CNPq.



TREND ESTIMATION OF THE AMOUNT OF GENETIC RESOURCES USED IN FOOD PRODUCTION FROM 1995 TO 2021

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Purpose: The objective of this study was to verify whether the trend in the amount of plant genetic resources throughout the year collaborates to the SDG2 “end hunger, achieve food security and improve nutrition and promote sustainable agriculture”. Food is a basic need and fulfilling it as a human right has been one of the greatest challenges in human history. Currently, not only the lack, but also the qualitative aspects of food, have raised concerns regarding the food and nutrition transition. **Methods:** In this study, the FAO database was used, which contains 102 countries from the United Nations Public Databases. Where the database has the variables: Country, year and amount of plant resources available. Then the trend line is estimated through simple linear regression. Descriptive statistics of the studied variables were estimated using arithmetic mean, standard deviation, minimum and maximum values. The level of significance considered was 0.1. **Results:** Although the regression line was not significant ($p > 0.1$) some countries did increase the amount of genetic resources. That suggests the amount of genetic resources is stable. **Conclusion:** In the past, the rapid increase in productivity, together with the expansion of the agricultural frontier, managed to avoid the general lack of food. Through the results found, it was possible to verify how the preservation of genetic diversity and resources is going around the world, and whether it is being beneficial or not. The results presented in the study represent important information for scientists and managers that can help to comply with SDG2.

Keywords: trend line; food production; Genetic Resources.

Acknowledgments: CNPq.



USE OF ESSENTIAL OILS OF *Mentha piperita*; *Melaleuca* spp. and *Citrus sinensis* IN CONTROL OF *Rhipicephalus (Boophilus) microplus* - IN VITRO TEST

Tiely Cristina da Paixão Martori, Isabela Ferreira Junqueira, Renato Alves de Freitas, Guilherme Cecílio Lima, Gabriel Nunes de Oliveira, Thuany Martins Ferreira, Silvio de Almeida Junior, Rafael Paranhos de Mendonça

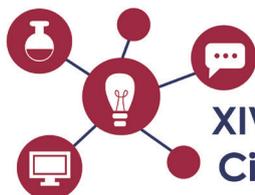
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Purpose: Among the parasitosis, the tick, *Rhipicephalus (Boophilus) microplus*, is the ectoparasite that causes the greatest financial damage to milk and meat production in Brazil, so the correct control of this parasite is of paramount importance to reduce the impact on milk and meat production. Conventional control of ticks with synthetic products has become a major problem, due to increased resistance of organisms to the active ingredients of chemical acaricides and food contamination. In this context, the present work aims to evaluate the efficacy of *Mentha piperite* oils; *Melaleuca sp* and *Citrus sinensis* in the control of the tick *R. microplus* by in vitro test. **Methods:** For this, the immersion test of adult females (TIA) of *R. microplus* will be performed. The teleogins will be divided into four experimental groups, composed of 3 groups treated in dilutions of 1.0%; and a control group. Each group will be evaluated in triplicate totaling 30 teleogins per group. The efficacy of each study will be evaluated by comparing the groups treated in relation to the control group in the methodology of the Adult Immersion Test and, with this, it is expected that the present study will bring information on the discovery of new therapeutic alternatives for the control of bovine ticks. **Results and conclusion:** In progress.

Keywords: Cattle, Tick, Phytotherapy, Treatment.

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USE OF OZONE ASSOCIATED WITH PHOTODYNAMIC THERAPY IN THE INACTIVATION OF CANINE AND EQUINE *Pythium insidiosum*

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Purpose: The aim of this study was to describe the antimicrobial ability of the photodynamic therapy and ozone (PDT-O₃) association against *Pythium insidiosum*.

Methods: *P. insidiosum* hyphae plugs, obtained from horses and dog, were distributed into four experimental groups: PDT, O₃, PDT-O₃ and control (n=12 plugs/group). PDT samples were irradiated for 160 seconds with an iodine laser (light absorption wavelength of 660nm and final fluence of 80 J cm²). In the O₃ group, the hyphae plugs were exposed to an atmosphere containing 50µg O₃ mL⁻¹ for 15 minutes. Samples from the PDT-O₃ group were subjected to both treatments. Hyphae plugs were cultivated in Petri dishes with 4% ASD during the first 8 days post-treatment. No growth samples were recultured for additional 14 days to determine the germistric or germicidal action of the respective therapy. **Results:** Growing areas were detected in all cultures from PDT and control groups. Similarly, 10 hyphae plugs showed growth area in O₃ group. In the opposite, *P. insidiosum* growth was not detected in 11 of the 12 hyphae plugs in the PDT-O₃ group. As in the control group, pathogen growth was detected 24 hours post-treatment in all light-irradiated samples (PDT group). Plugs of *P. insidiosum* group O₃ grew from 45.6±6.7 h after treatment. The recultured PDT-O₃ samples did not show growth (germicidal efficiency of 91.7%). **Conclusion:** The present study demonstrated the effectiveness of the PDT-O₃ association against canine and equine *P. insidiosum*.

Keywords: Light, integrative medicine, ozone therapy, pythiosis.

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VALIDATION OF HEMATOLOGICAL PARAMETERS, KIDNEY AND LIVER PROFILE OF NEW ZEALAND RABBITS KEPT IN THE MAINTENANCE VIVARIUM OF THE UNIVERSITY OF FRANCA

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Purpose: Standardize hematological and biochemical reference values for New Zealand Rabbits installed in the Experimental Animal Facility of the University of Franca. **Methods:** Blood was collected by venous access from a tube containing EDTA K2 for hematological tests and a tube with separating gel for biochemical tests. The determination of hematological values was performed by MEK 6550J/K (Nihon Kohden) and the biochemist by ChemWell 2910 (labtest kit) of 30 male rabbits, with 20 weeks of life. For the calculation of the value, mean and standard deviation were performed for standardization and for the creation of reference values, therefore -2DP for minimum value determination and +2DP for maximum value were used. **Results:** Blood count results were obtained, being evaluated the red series referring to red blood cells (4.8 to 6.7 $10^3/\text{mm}^3$), hemoglobin (10.4 to 13.7 g/dL) and hematocrit (30 to 40%); hematometric indices such as VCM (60.6 to 69.2 fL), HCM (19.3 to 22.5 pg), CHCM (30% to 32%), and global white blood cell count (4.4 to 8.2 mm^3). In the biochemist, the standards showed ALT (2.45 to 216.41 U/L), Alkaline Phostatase (4.56 to 251 U/L), Creatinine (1.11 to 2.35 mg/dL), Urea (24, 7 to 44.6 mg/dL) and total proteins (5.4 to 9.1 g/dL). **Conclusion:** The biochemical and hematological profile of the rabbits was determined, in order to have baseline values of these parameters, thus offering a baseline parameter for future studies.

Keywords: biochemical; parameters; rabbits; hematological.

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