experiments have been performed in the presence of negatively charged SDS micelles to determine the three-dimensional structure of the peptide. The structure confirmed the helical conformation throughout the linear chain of ecPis-4s. Proton-decoupled 15N and 2H solid-state NMR of macroscopically oriented lipid bilayers have been used to determine the peptide topology in membranes made of POPC:POPG or E. coli lipid extract. The chemical shift around 70 ppm indicates that the peptide adopts a surface orientation with a tilt angle close to 90°. Carboxyfluorescein (CF) release experiments demonstrate a lytic activity of this peptide in the presence negatively charged vesicles made of POPC:POPG.
CONCLUSION
In conclusion, the ecPis-4s peptide presents a high affinity to anionic membranes where it adopts an amphipathic helical conformation that aligns parallel to the phospholipid bilayer surface. This mode of interaction suggests a membrane-lytic activity once the local concentration or peptide reaches a threshold.
Keywords: antimicrobial peptide, peptide-membrane interaction, peptide topology

08460 - Poster Session

CA.01 - Luminescence of complex cis-[Ru(phen)2(3,4Apy)2]2+ in model membranes
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INTRODUCTION
The study of the interaction between the transition metal complex cis-$[Ru(phen)_2(3,4Apy)_2]^{2+}$ (RuApy) and cell model membranes was motivated by previous studies from our laboratory that demonstrate that RuApy has spectroscopic properties (in physiological environment pH 7,4: λ_{abs}=480nm, ε_{480nm}=9500 mol $^{-1}$ Lcm $^{-1}$, λ_{em}=655 nm, τ_{em}=120ns) that allow its use as a luminescent probe for the β-amyloid peptide(Aβ).
OBJECTIVES
These properties are important as the toxicity of Aβ can be influenced by those in neuronal cell membranes. In this context, this work investigates the interaction between RuApy and cell model membranes such as large unilamellar vesicles (LUVs) and giant unilamellar vesicles (GUVs) prepared with the negatively charged lipid DOPG
MATERIALS AND METHODS
The luminescence auto suppression studies of RuApy in aqueous solution pH 7.4 (phosphate buffer) indicated a limit for the steady state luminescence studies
DISCUSSION AND RESULTS
at 60 μM. The complex was a sensitive probe in the presence of the DOPG(LUVs) vesicle, and this can be observed by the continuous suppression of RuApy emission at 655 nm. Studies carried out to determine the sensitivity of the RuApy complex against the LUV vesicle of DOPG indicated that 10 μM of complex is sensitive to a concentration of 5μM of vesicle.
CONCLUSION
The results obtained so far indicate an electrostatic interaction between RuApy and DOPG(LUVs).
Keywords: fluorescence, model membranes, ruthenium complex
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08780 - Poster Session

CA.02 - Improvement of the Methodological Strategies to Product Functionalizes Antibodies using Small Angle Neutron Scattering (SANS)
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INTRODUCTION
Antibodies are used by jawed vertebrates for defense against invading pathogens. Usage of those versatile tools in a plethora of settings in clinics and biomedical sciences hinges on functionalization strategies that retain native antibody reactivity. To this date, antibody functionalization is performed by trial and error.
OBJECTIVES
We aim to reduce costs by providing general principles to allow the full spectrum of antibody functionalization by correlating functionalized antibody reactivity to cognate antigen by small angle neutron scattering, SANS, measurements and mathematical modeling of antibody and antibody-antigen super-complexes, obtained by titration experiments.
MATERIALS AND METHODS
For this research we have used for as antibody pure goat anti rabbit immunoglobulin, and for the antigen, pure Horseradish Peroxidase Preliminary results show that the systems (antibody and antibody-antigen complexes) do not change in the range of a temperature related to storage temperature (25º C), body temperature (37º C) and 40º C.
DISCUSSION AND RESULTS
These results will give us the pair distribution function of these systems and the results will be viewed in light of published precedence to highlight areas where future effort is needed to refine such versatile tools and improve their production. However, between the antibody and the complexes structure, different conformations were observed. The antibody has a globular structure with a radius of gyration around 33 Å, and the complexes display an elongated cylindrical shape with radius of gyration around 63 Å.
CONCLUSION
This study shows how the scattering techniques (SANS) can provide useful information about the conformation of the antibody and antibody-antigen formation and help to shed light in the understanding the physical, chemical, and structural changes on the organization of these important antibody functionalization for the immunological system.
Keywords: Antibody-Antigen, Biophysics, SANS
Supported by: CNPq

08343 - Poster Session

CA.03 - Evaluation of Photoinduced Membrane Damage by Substituted Magnesium Porphyrazines
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INTRODUCTION
Photodynamic Therapy (PDT) is an innovative and efficient treatment modality for a wide array of diseases, including infectious and many types of cancer. PDT is usually based on a photosensitizer (PS), its excitation by light and the subsequent energy or electron transfer to molecular oxygen (^{3} O_2), generating reactive oxygen species (ROSs), specially singlet oxygen (^{1} O_2). However, new