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```



Industriales Research Meeting

Escuela Técnica Superior de Ingenieros Industriales
Universidad Politécnica de Madrid
April 4 - 5, 2017

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Escuela Técnica Superior de Ingenieros Industriales
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28006 Madrid

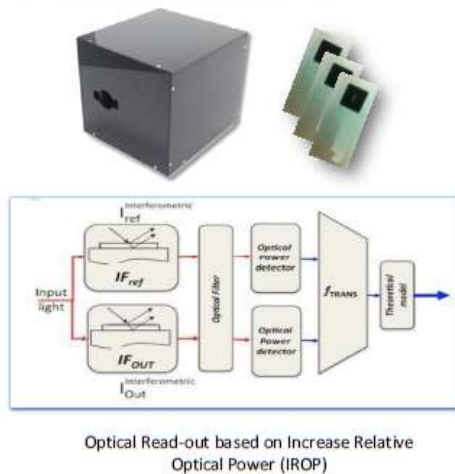
ISBN: 978-84-16397-58-7

Abstract

The aim of this work was to adapt the BIOD Point of Care technology in order to evaluate immunologic system inhibitors through a chemical assay that is able to identify the inhibition ability of new drugs for treatment of autoimmune disease. For that purpose, the GST protein, which behaves as an abnormal T-cell, was immobilized onto Biokits based on label-free sensors. The GST protein has been optimized varying incubation times and incubation concentrations to obtain a homogenous surface.

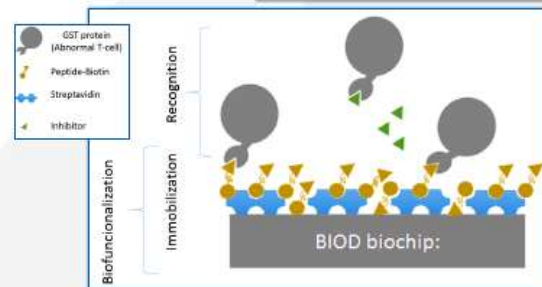
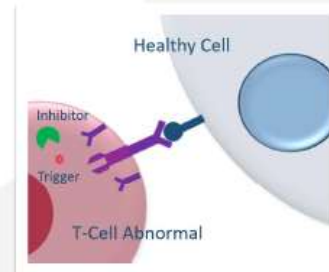
The read-out signal for GST, not being attacked for the drug, serve as a positive blank and comparing the response between GST and GST blocked by the inhibitors, it is possible to obtain a dose-response curve for each inhibitor. The proposed assay allows evaluating different types of inhibitors with good results.

Label-free optical biosensor:



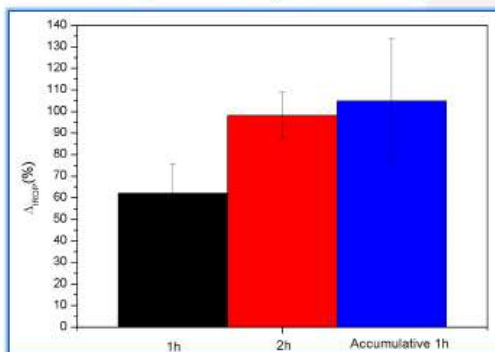
Assay Model:

Inhibitor Behaviour:

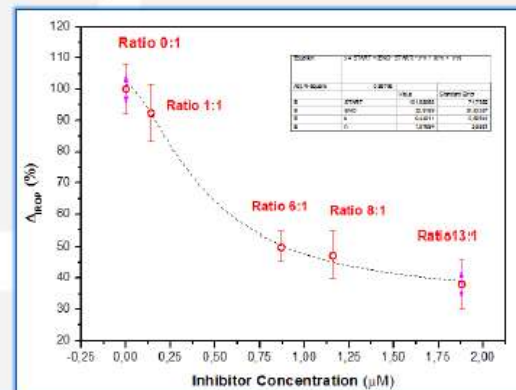


Results

GST Protein Optimization (Positive Blank):



Dose-Response Curve:



Conclusions:

- The assay methodology to obtain a dose-response curve has been developed
- The accuracy and reliability of the device and Biokits have been demonstrated in order to test the inhibition ability of the new drugs.



For more information



CERTIFICADO DE ASISTENCIA

El Comité Organizador del

INDUSTRIALES RESEARCH MEETING 2017

celebrado en Madrid los días 4 y 5 de abril de 2017 y organizado por la Escuela Técnica Superior de Ingenieros Industriales de la Universidad Politécnica de Madrid

CERTIFICA que

Rocío López Espinosa

ha asistido al IRM17, presentando el siguiente trabajo dentro del programa científico:

Título:

BIOCHEMICAL ASSAY DEVELOPMENT FOR OPTIMIZATION OF IMMUNOLOGICAL SYSTEM INHIBITORS

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Madrid, 5 de abril de 2017

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