

Tissue Engineering, Stem Cells and Regenerative Medicine

&

International Conference on Cell and Gene Therapy

March 14-15, 2019 | London, UK

Image processing, detection of sepsis biomarkers and computation of concentration from intensity in duplex LFIA

N Phogat, C Ruppert, H-P Deigner and M Kohl
Hochschule Furtwangen University, Germany

R is a well - know open-source software for statistical analysis. The complete algorithm is developed in R-software utilizing the packages EB Image, ggplot2 and ggpmisc. The algorithm involves the image-processing of the duplex LFIA green and red quantum dots strips, through R package EB Image, followed by linearly fitted calibration plots to compute the concentration from intensity. These calibration plots also provide the quantitative analysis of the duplex LFIA assay. The calibration plots of red quantum dots at different specific concentrations of green quantum dots, followed by green quantum dots at different concentrations of red quantum dots, explain the fate and effect of green and red QDs with respect to each other's presence in duplex LFIA assay. In future, the algorithm can be implemented in an R package, utilizing a Shiny app to provide a

user-friendly stand-alone and web-based app.

Speaker Biography

N Phogat has done master's in marine biotechnology from Goa University, Goa, India. During this time, he was awarded fellowship for two years from department of biotechnology, Government of India. During master's studies, he also worked at national chemical laboratory (NCL), Pune. He worked in the fields of nanobiotechnology, bioinformatics and molecular biology. Later, he did his Master's in biomedical engineering from Furtwangen University, Germany. During this time, he worked as a programmer in the area of bioinformatics. Currently, he is pursuing his Ph.D. from Tübingen University, Tübingen, Germany. His PhD work is in the field of artificial intelligence, deep learning and neural networks to develop new algorithm and software to detect and predict the DNA nanostructures. Currently, along with PhD, he is also developing the new algorithm and software for lateral flow and biological assays, utilizing the concepts of image processing and machine learning. His research interests are in data science, artificial intelligence and cryptography.

e: N.Navneet@hs-furtwangen.de



Notes: