

Indo Finn Diagnostics Research Group

Principal Investigator(s) and affiliation(s), contact information

Sheikh M. Talha, PhD
Indo-Finnish post-doctoral researcher/Senior Researcher
University of Turku
Indo-Finnish Diagnostic Research Centre
Department of Biochemistry/Biotechnology
Tykistökatu 6 A 6. krs, 20520 TURKU
Phone +358 2 333 8061
E-mail: talshe@utu.fi

Kim Pettersson, Ph.D.,
Professor in Biotechnology
University of Turku
Department of Biochemistry/Biotechnology
Tykistökatu 6 A 6. krs, 20520 TURKU
Phone: +358 2 333 8087
E-mail: kim.pettersson@utu.fi

Members of the research group

Doctoral candidate:

Etv Juntunen, MSc
Teppo Salminen, MSc

Post-doc:

Sheikh M. Talha, PhD
Parvez Syed, PhD

Senior researchers:

Tiina Myyryläinen, MSc

Description of the scientific aims

The research group aims to develop comprehensive diagnostic solutions for infectious diseases e.g. HIV, hepatitis C virus, hepatitis B virus, syphilis, malaria and dengue etc to be used in small decentralized low-resource laboratories and for use at point-of-care. The main focuses of the group have been to develop (A) diagnostic assay concepts, (B) diagnostics intermediates (reagents), (C) novel assay devices for point-of-care diagnostics and (D) portable reader device for up-converting signal measurement. The group has close collaboration with Indian academic research groups and is closely working with Finnish and Indian diagnostic companies.

Selected publications 2010-

1. Talha SM, Juntunen E, Salminen T, Sangha A, Vuorinen T, Khanna N, Pettersson K. (2015) All-in-one dry-reagent time-resolved immunofluorometric assay for the rapid detection of HIV-1 and -2 infections. *Journal of Virological Methods* 226:52-59. doi: 10.1016/j.jviromet.2015.10.004.
2. Talha SM, Hytönen J, Westhorpe A, Kumar S, Khanna N, Pettersson K. (2013) Europium nanoparticle-based high performing immunoassay for the screening of treponemal antibodies. *PLoS ONE* 8(12): e84050. doi:10.1371/journal.pone.0084050
3. Talha SM, Nemani SK, Salminen T, Kumar S, Swaminathan S, Soukka T, Pettersson K, Khanna N. (2012) *Escherichia coli*-expressed near full length HIV-1 envelope glycoprotein is a highly sensitive and specific diagnostic antigen. *BMC Infectious Diseases* 12:325. doi:10.1186/1471-2334-12-325
4. Talha SM, Salminen T, Swaminathan S, Soukka T, Pettersson K, Khanna N. (2011) A highly sensitive and specific time resolved fluorometric bridge assay for antibodies to HIV-1 and -2. *Journal of Virological Methods* 173(1):24-30. doi: 10.1016/j.jviromet.2011.01.001
5. Myyryläinen T*, Talha SM*, Swaminathan S, Vainionpää R, Soukka T, Khanna N, Pettersson K. (2010) Simultaneous detection of Human Immunodeficiency Virus 1 and Hepatitis B Virus infections using a dual-label time-resolved fluorometric assay. *Journal of Nanobiotechnology* 8:27. doi: 10.1186/1477-3155-8-27
*Contributed equally