## NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

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NPTEL Video Course - Biotechnology - NOC: Interactomics: Protein Arrays and Label-free Biosensors
Subject Co-ordinator - Prof. Sanjeeva Srivastava
Co-ordinating Institute - IIT - Bombay
Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable
Lecture 1 - Introduction to Interactomics
Lecture 2 - An overview of label-free technologies
Lecture 3 - An overview of surface plasmon resonance (SPR)
Lecture 4 - An overview of surface plasmon resonance imaging (SPRi)
Lecture 5 - Basics of SPR
Lecture 6 - Basics of SPR
Lecture 7 - Protein immobilization for protein-protein interaction studies
Lecture 8 - Protein-protein interaction study
Lecture 9 - Protein-protein interaction study
Lecture 10 - Protein-small molecule interaction study
Lecture 11 - Protein-small molecule interaction study
Lecture 12 - SPR
Lecture 13 - SPR
Lecture 14 - An overview of ellipsometry and interferometry techniques
Lecture 15 - An introduction to BioLayer Interferometry (BLI) and its applications in protein research
Lecture 16 - Kinetic analysis of protein-protein interaction using BLI
Lecture 17 - Label-free quantification of proteins using BLI
Lecture 18 - Diffraction-based biosensors - I
Lecture 19 - Diffraction-based biosensors - II
Lecture 20 - Nanotechniques in proteomics - I
Lecture 21 - Nanotechniques in proteomics - II
Lecture 22 - High throughputplatforms of interactomics
Lecture 23 - Conventional label based detection techniques for Protein microarrays
Lecture 24 - Novel detection techniques for Protein microarrays
Lecture 25 - Recombinational cloning and its application for Protein microarrays
Lecture 26 - An introduction to Cell-free protein synthesis
Lecture 27 - Cell-free synthesis based protein microarrays
Lecture 28 - Cell-free synthesis based protein microarrays
Lecture 29 - Digging deeper into NAPPA
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Lecture 30 - Digging deeper into NAPPA

Lecture 31 - Application of cell free expression protein microarrays in biomarker discovery

Lecture 32 - Application of cell free expression protein microarrays in immunological studies

Lecture 33 - Basics of microarray image scanning

Lecture 34 - Software for Image scanning and data processing

Lecture 35 - Microarray Data Analysis - Part I

Lecture 36 - Microarray Data Analysis - Part II

Lecture 37 - Application of protein microarray in biomarker discovery - I

Lecture 38 - Application of protein microarray in biomarker discovery - II

Lecture 39 - Systems biology and networks

Lecture 40 - Challenges in proteomics
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