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NPTEL

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Courses » Applications of interactomics using Genomics and proteomics technologies

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Unit 2 - Week 1

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Course outline

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Week 1

- Interactive Session - Welcome Note
- Lecture 1 : Introduction to Interactomics and Protein Arrays
- Lecture 2 : NAPPA Technology and Protein Arrays-I
- Lecture 3 : NAPPA Technology and Protein Arrays-II
- Lecture 4 : Biomarkers: Harnessing the immune system for early detection of disease-I
- Lecture 5 : Biomarkers: Harnessing the immune system for early

Assignment 1

The due date for submitting this assignment has passed.

As per our records you have not submitted this assignment. **Due on 2019-03-13, 23:59 IST.**

1) You want to study the function of a particular protein. Which type of microarray platform would you NOT prefer? **1 point**

- NAPPA
- MIST
- Peptide arrays
- Antibody arrays

No, the answer is incorrect.

Score: 0

Accepted Answers:

Antibody arrays

2) Which one of the following does not involve cell-free expression? **1 point**

- PISA
- MIST
- Reverse phase
- DAPA

No, the answer is incorrect.

Score: 0

Accepted Answers:

Reverse phase

3) Which of the following statement(s) about protein arrays is/are **NOT** true? **1 point**

1. Can be used to study substrate specificity of protein kinases
2. Enable us to study post-translational modifications
3. Tissue, cell lysates can be directly spotted on a glass slide
4. Three dimensional (3D) conformation of proteins can never be preserved

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Assignment 1: Solutions

Week 2

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Week 8

Interaction Session

No, the answer is incorrect.
Score: 0
Accepted Answers:
Only 4

4) Which one of the following statements about NAPPA array is/are NOT true? **1 point**

1. Involves a process of printing DNA
2. Full length proteins cannot be printed using NAPPA
3. Can be used for serum screening
4. All cDNAs append a common epitope tag to all of the proteins

1 and 2

Only 4

1 and 3

Only 2

No, the answer is incorrect.
Score: 0
Accepted Answers:
Only 2

5) You have just printed a microarray slide. Your next step is to test whether the printing has worked. What of the following would you choose? **1 point**

Anti-protein antibody

Picogreen stain

Malachite green stain

Anti-GST antibody

No, the answer is incorrect.
Score: 0
Accepted Answers:
Picogreen stain

6) What would you choose to know if your proteins are expressed on the slide? **1 point**

Anti-protein antibody

Picogreen stain

Malachite green stain

Anti-GST antibody

No, the answer is incorrect.
Score: 0
Accepted Answers:
Anti-GST antibody

7) What does LIMS mean? **1 point**

Laboratory instrument used for robotic plating

Software that automates workflows and manage samples and associated information

Machine commonly found in labs used for large-scale plasmid preps

Integrated laboratory system for expression of fusion proteins in cells

No, the answer is incorrect.
Score: 0
Accepted Answers:
Software that automates workflows and manage samples and associated information

8) You are a doctor and your friend tells you about his family's medical history for a particular disease. Which type of biomarker would you choose to test if he also has the disease at that moment? **1 point**

- Early detection marker
- Prognostic marker
- Disease progression marker
- Risk marker

No, the answer is incorrect.

Score: 0

Accepted Answers:

Early detection marker

9) You are a scientist who is trying to study immune responses to a particular disease X using NPPA arrays. Which of the following statements cannot be true? **1 point**

1. Patients with disease X show signals for antigen A along with other antigens
2. Normal patients who do not have the disease also show signals for antigen A
3. Patients with disease Y (similar to disease X) will never show signals for antigen A
4. Two patients with disease X will always show signals for antigen A

- 2 and 4
- 1 and 2
- 1 and 3
- 3 and 4

No, the answer is incorrect.

Score: 0

Accepted Answers:

3 and 4

10) You have identified a possible biomarker for X disease. What will you do next to be very sure that it is indeed a biomarker? **1 point**

- Compare cases and controls from the same population
- Compare age and gender matched cases and controls
- Perform a blinded study on patients from the population
- All of these

No, the answer is incorrect.

Score: 0

Accepted Answers:

All of these

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