

## **Immuno Informatics Inplant Training**

NTHRYS provides Immuno Informatics Inplant Training for interested candidates at its Hyderabad facility, Telangana. Please refer below for more details including Fee strctures, Eligibility, Protocols and Modules etc.,. Please do call / message / whatsapp for more details on 9014935156 [India - +91]

**Eligibility**: BSc / BTech / MSc / MTech / MPhil / PhD in any Life Sciences studying or completed students

## **Protocols / Techniques Covered**

| Topic   | Contents  | Tools  |  |  |  |
|---|---|--|--|--|--|
| Bioinformatics                                  |   |  |  |  |  |
| Bioinformatics - An Overview                    | Definition and History Information Networks Internet in Bioinformatics. Classification of amino Acids, Classification and three Dimensional structures of proteins. Overview of protein structure, Ramachandran Plot, Protein purification, Post translation modification, Protein trafficking.   |  |  |  |  |
| 2. Databases                                    | Protein Information Resources: Biological Databases, Primary Sequence, Composite Protein Sequence Databases, Secondary Databases Prosite, Prints Blocks Profiles and Identity.  Genome Information Resources: DNA sequence Databases - EMBL DDBJ Genbank GSDB (Genome Sequence Database).  Protein Data bank (PDB), Nucleic Acid Data Bank (NDB), Molecular modeling Data Bank (MMDB), Uniprot, Prosite, SCOP, CATH, BLAST, FASTA, Clusatl, Prodom. |  |  |  |  |
| 3. Gene Prediction &<br>Functional Aaalysis     | Primer designing, ESTs and Gene discovery, Restriction site detection   |  |  |  |  |
| 4. Matrix, Fold Recognition & Sequence Analysis | Pairewise sequence comparison-<br>sequence queries against biological<br>databases  | BLAST and FASTA<br>multifunctional tools for<br>analysis |  |  |  |
|   | Pair wise sequence alignment, gaps, gap- penalties, scoring matrices, PAM250, BLOSUM62, local and global sequence alignment, multiple sequence alignment.   | ClustalW, BLASTp   |  |  |  |
| 5. Secondary Structure<br>Prediction            | Propensity value.   |  |  |  |  |
| 6. Protein Structure Prediction                 | Homology modeling and Threading.<br>Prediction of protein structure from<br>sequences, functional sites   | Modeller, PROSEARCH,<br>Protoparm                        |  |  |  |

| 7. Binding Site Analysis  | Model evaluation, and Model validation  | CASTp   |  |  |  |  |
|---|---|---|--|--|--|--|
| 8. Phylogenetic Analysis  | Evolution, elements of phylogeny,<br>methods of phylogenetic analysis,<br>Phylogenetic tree of life, comparison<br>of genetic sequence of organisms   | Phylip, ClustalW                              |  |  |  |  |
| 9. Genetic Algorithm  | Algorithms in bioinformatics  |   |  |  |  |  |
| 10. Docking of Small Molecules  |   | Autodock, Vina, igemdock                      |  |  |  |  |
| 11. Drug Discovery &<br>Computer Aided Drug<br>Designing                          | Introduction, drug discovery area, pharmacogenetics and pharmacogenomics applications, SNPs, parameters in drug discovery identification of drug target molecules, drug design and its approaches, computer-aided drug designing methods; computer aided molecular design (CAMD), structure- based drug design, De novo design. |   |  |  |  |  |
| 12. Recent advances in Drug design methodologies                                  | Structure activity relationship   |   |  |  |  |  |
| 13. Virtual Screening   | Structure based pharmacophore.<br>Screening of various chemical<br>databases  | Zinc database                                 |  |  |  |  |
| Immunoinformatics   |   |   |  |  |  |  |
| 14. Introduction to Immunoinformatics & Immunological Databases                   | dbMHC-MHC database at NCBI, T-cell epitope databases, B-cell epitope databases. SYFPEITHI MHC-presented epitopes  |   |  |  |  |  |
| 15. Homology modelling of antibody  |   | Phyre 2, Modeller                             |  |  |  |  |
| 16. Prediction of Cytotoxic T<br>Cell (MHC Class I) Epitopes                      | Antigen Processing in the MHC<br>ClassI Pathway   | NetCTL, SYFPEITHI, CTL<br>Pred, NetMHC server |  |  |  |  |
| 17. MHC-II Prediction -<br>Prediction of Helper T Cell<br>(MHC Class II) Epitopes | Processing of MHC Class II<br>Epitopes  | HLApred, MHC2Pref, Propred                    |  |  |  |  |
| 18. B Cell Epitope Prediction<br>& Web Sources                                    | Recognition of Antigen by B Cells-<br>vaccine design- Web-Based Tools<br>for Vaccine Design   | PEPVAC, SVRMHC, NetCTL,<br>BIMAS etc          |  |  |  |  |

#### **Durations & Topics:**

- 5 Days Duration: Headings 1, 2, 14, 15 & 16 + A Minor Online Project (Optional)
- 10 Days Duration: Topics 1, 2, 3, 4, 5, 6, 14, 15, & 16 + A Minor Online Project (Optional)
- 20 Days Duration: Topics 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 14, 15 &16 + A Major Online Project (Optional)
- 1 Month Duration: Topics 1 to 16 + A Major Online Project (Optional)
- 45 Days Duration: All the topics mentioned above + An Online Publication Project (Optional)

# Fee Structures for Immuno Informatics Inplant Training

| Fee details in Rs per student |        |         |         |         |         |  |
|-------------------------------|--------|---------|---------|---------|---------|--|
| Fee                           | 5 Days | 10 Days | 20 days | 1 Month | 45 Days |  |
| Individual                    | 38400  | 40600   | 55000   | 66300   | 79500   |  |
| Group 2 - 4                   | 36300  | 38400   | 52200   | 63100   | 75600   |  |
| Group 5 - 7                   | 35900  | 38000   | 51600   | 62500   | 74900   |  |
| Group 8 - 10                  | 35400  | 37600   | 51000   | 61800   | 74100   |  |

#### NTHRYS REGISTRATION PROCESS

- 1. Candidates have to pay **Rs 5000/-** in the below mentioned account to complete Registration Process for selected services.
- 2. **Registration fee is NOT ADDITIONAL AMOUNT** we will reduce this from the main fee at the time of joining.
- 3. After completing the fee payment, please scan the payment receipt as well as your college identity card [ Any identity card for student proof] and email it to support@nthrys.com of whatsapp the same to the below given number
- 4. After receiving this email NTHRYS staff will send you a Registration No, Fee receipt & a Final Confirmation document to confirm the registration. For any additional queries regarding registration process please call / sms / whatsapp on +91 9014935156.

### **NTHRYS Account Information**

Account Name: NTHRYS BIOTECH LABS

Account No: 400800301000092 Bank Name: Vijaya Bank

West Marredpalli Branch - Secunderabad, Andhra Pradesh, India

Branch Under RTGS: Yes Branch Under NEFT: Yes

RTGS - IFSC Code: VIJB0004008

#### **IMP NOTE:**

- 1. Registration Fee is included in the total service fee and it is a Non Refundable Fee as its charged to confirm the selected service slot as well as for issuing Service Confirmation Document.
- 2. Total Service Fee = Registration Fee + Service Fee
- 3. Once the Service Confirmation document is issued, Students / Scholars / Clients are requested to be in touch with assigned branches.
- 4. Balance fee must be paid at assigned branches to start the selected services.

#### NTHRYS Refund Policy of Selected Service Fees

- 1. Registration Fee is Non Refundable as its charged to confirm the selected service slot as well as for issuing Legitimate Service Confirmation Document which are used by Students / Scholars / Clients to submit in respective departments.
- 2. If the Assigned branch fail to conduct all the practicals / services / modules in stipulated time period as per mentioned in the Selected Service Module, Students / Scholars / Clients can request for refund only after getting a signed copy of Fee

- Refund confirmation document from the Branch Head stating the same.
- 3. Fee refund will be calculated by excluding the Registration fee from the Total Paid Fees (Registration fee + Service fee paid at the time of joining) and the balance practicals / protocols / modules from the Selected Service Module will only be taken into account.
- 4. Students / Scholars / Clients who seek refund should email the above mentioned Branch Head signed copy of Fee Refund confirmation document to legal [at] nthrys [dot] com inorder to initiate the refund process. NTHRYS Legal Team will synchronize with the Branch and initiate the refund with in 7 working days. Emails sent to any other email id are not considered by our team for refund requests.