Conducator doctorat: C.S.I. Dr. Habil. Vlad Cojocaru

Tematica concursului de admitere la doctorat (loc cu bursa):

1. Principiile ce stau la baza structurilor tri-dimensionale ale biomoleculelor (proteine, acizi nucleici, lipide, glucide)
2. Tehnici experimentale si computationale pentru determinarea structurilor biomoleculelor
3. Concepte de baza in imunologie
4. Anticorpi si antigeni
5. Concepte de baza in Linux si programare
6. Concepte de baza in Modelare Moleculara

Bibliografie:

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8. Punt, J. et. al (2018): *Kuby Immunology.* Freeman.
9. Stigliano A.F. (2020): *Biomolecular Interfaces*. Springer Verlag
10. Leach, A. R. (2001): *Molecular Modeling: Principles and Applications. (2nd or 3rd edition)*
11. Schlick, T. (2013): *Molecular Modeling and Simulation: An Interdisciplinary Guide*
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Software tutoriale recomandate:

VMD (https://www.ks.uiuc.edu/Research/vmd/)

Amber (www.ambermd.org)

Haddock (https://www.bonvinlab.org/software/)

Chimera (https://www.cgl.ucsf.edu/chimera/)

Pymol: (https://github.com/schrodinger/pymol-open-source)

Conducator doctorat: C.S.I. Dr. Habil. Vlad Cojocaru

Tematica concursului de admitere la doctorat (locul 2 cu bursa):

1. Principiile ce stau la baza structurilor tri-dimensionale ale biomoleculelor (proteine, acizi nucleici, lipide, glucide)
2. Tehnici experimentale si computationale pentru determinarea structurilor biomoleculelor
3. Elemente de glicobiologie: glicarea si glicozilarea proteinelor;
4. Stresul oxidativ si glicativ si activitatea metaloproteinazelor matriceale
5. Metode de investigare a interacțiunilor ligand-proteina: UV-vis, Raman, IR, FPLC, electroforeza, dicroism
6. Concepte de baza in Linux si programare
7. Concepte de baza in Modelare Moleculara

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