



# HLA epitopes hands-on session

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# Where to find the instructions and files?

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- <https://github.com/espierin/cases-workshop>

# A warm-up: NetSurfP-2.0

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- Go to the **IPD/IMGT HLA repository** and open de MICB protein sequences [https://github.com/ANHIG/IMGTHLA/blob/Latest/fasta/MICB\\_prot.fasta](https://github.com/ANHIG/IMGTHLA/blob/Latest/fasta/MICB_prot.fasta)
- Pick the full sequence of one of the alleles and copy it.
- Mark the allele.
- Go to the online **NetSurf server** and paste the sequence <https://services.healthtech.dtu.dk/services/NetSurfP-2.0/>
- While waiting, select another MICB sequence of choice.
- Mark the allele.
- Go to <https://www.ebi.ac.uk/jdispatcher/psa/lalign> and use the two protein sequences to align

# A warm-up: NetSurfP-2.0

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- Check the NetSurf output and mark the polymorphic amino acids
- How many accessible amino acids did you find for your combination?

# Case 1: Multiple living related donors for a patient without antibodies

- **PIRCHE → SOT → Single patient**
- Recipient
- Four candidate donors
- Enter them into the SOT system and calculate the PIRCHE. Compare the outcomes
- Add an uncle and evaluate again
- PM: show the heath plots and hover over the items

## Case 2: One DCD donor with multiple candidate recipients (no antibodies)

- **PIRCHE → SOT → Donor Allocation**
- DCD donor
- Four candidate recipient, create four first
- Enter them into the SOT system and calculate the PIRCHE. Compare the outcomes and store them

# Case 3: RAMP evaluation

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- **PIRCHE → SOT → RAMP**
- Use the data from recipient 1, 2, 3, and 4 from case 2 and plot a RAMP
- Evaluate whether this donor is good or bad donor in a relative way. Do this by checking the actual PIRCHE scores from case 2 with the RAMP histograms

# Case 4: Adding unacceptables to the RAMP for a patient without antibodies

- **PIRCHE → SOT → RAMP**
- Enter the typing (recipient 4)
- Create a RAMP
- Select unacceptables to get into a vPRA of ~ 50%
- Check the distribution of the risk classifications



# Case 5: Adding unacceptables to the RAMP for a patient with antibodies

- **PIRCHE → SOT → RAMP**
- Enter the typing
- Add the MFI data → get from file epitopes\_class\_I.csv
- Select from which run you want to evaluate the data
- Select unacceptables to create a pattern that suits you
- Evaluate the RAMP

A photograph showing the back of several people's heads in the foreground, looking towards a man in a white shirt in the background who is smiling and gesturing with his hands. Other people's hands are also raised in the air, suggesting an interactive workshop or meeting.

# HLA antibody epitopes in organ transplantation

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Epitope workshop ABHI  
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[image by master1305 on Freepik](#)