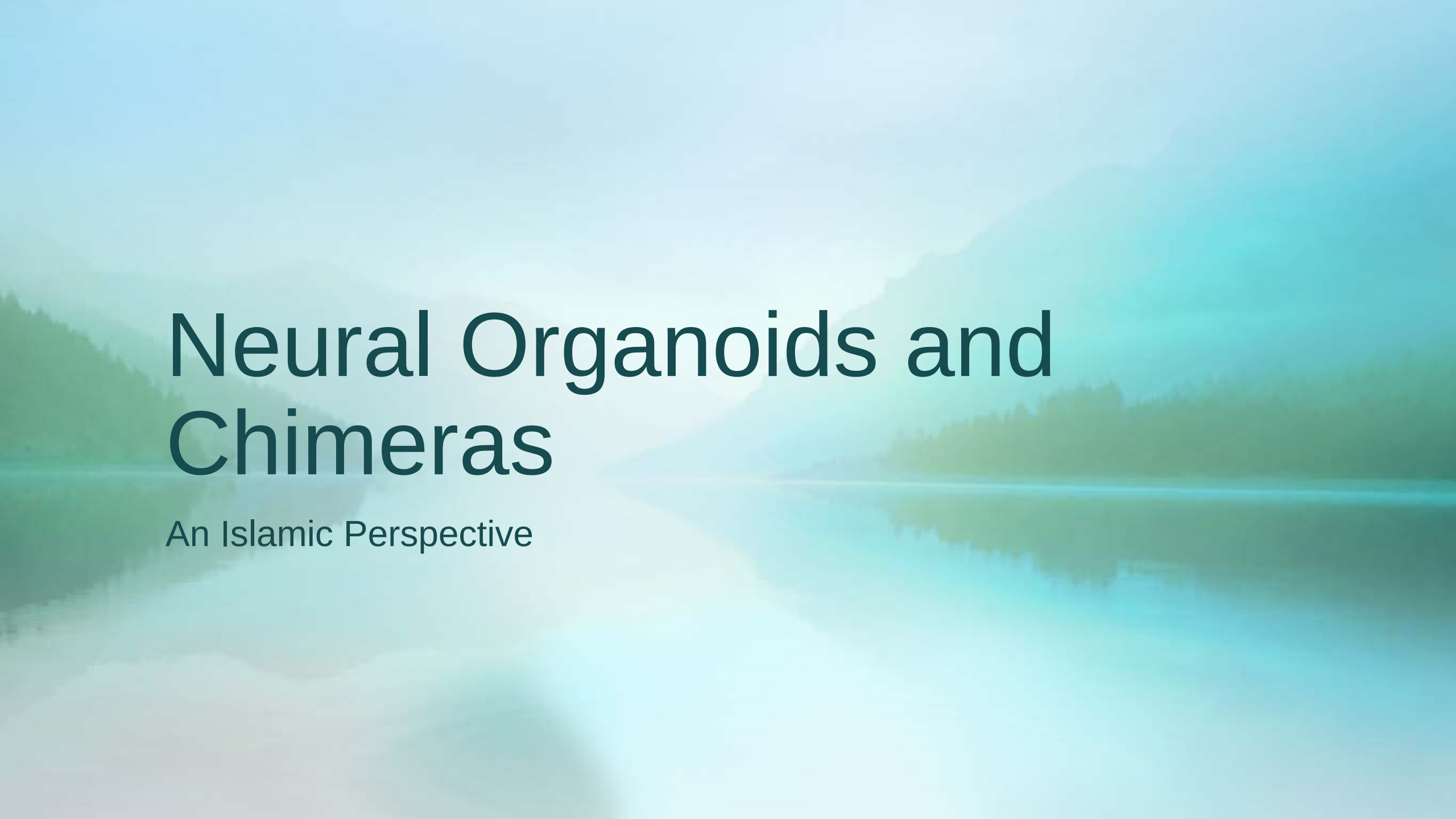


The background of the slide is a soft-focus photograph of a natural landscape. It features a still body of water in the foreground, which perfectly reflects the scene above. In the middle ground, there is a dense line of evergreen trees along the shore. Behind the trees, several layers of mountains are visible, their peaks softened by a thick mist or low-hanging clouds. The overall color palette is dominated by cool tones: various shades of blue, teal, and muted green, creating a peaceful and ethereal atmosphere.

Neural Organoids and Chimeras

An Islamic Perspective

Outline

- Provide context

- Nature and status of humans
- Nature and status of other animals
- Describe some principles that govern human-animal relations which can help with the committee's questions

- Address the questions posed in the committee's statement of task

The nature and status of the human being

- Human dignity: Qur'anic foundation

“We (God) have **honored** the children of Adam. We carry them on the land and the sea, and have made provision of good things for them, and have favored them markedly over many of those whom We created.” (17/al-Isra': 70)



The nature and status of other animals

- The Qur'an emphasizes similarity between humans and other animals:

“There is not a living being moving on the earth, nor a bird flying with its two wings, but they are nations like you (humans).” (6/al-An'am: 38)

- All agree that animals have cognitive faculties, at least enough to account for this qur'anic theme
- Most argue that animals
 - Have knowledge
 - Skill to manage their lives in ways that are suitable for their needs and lifestyles
 - Are accountable to God, which suggests that they have moral faculties



Humans-animal relations



- It is **permissible** to benefit from other animals
- It is **impermissible** to abuse them

The Qur'an reports the devil as saying, "And I (Satan) will mislead them, and I will arouse in them [sinful] desires, and I will command them so they will slit the ears of cattle, and I will command them so they will change God's creation. Whoever takes Satan as an ally instead of God has certainly sustained a clear loss." (4/al-Nisa:119)



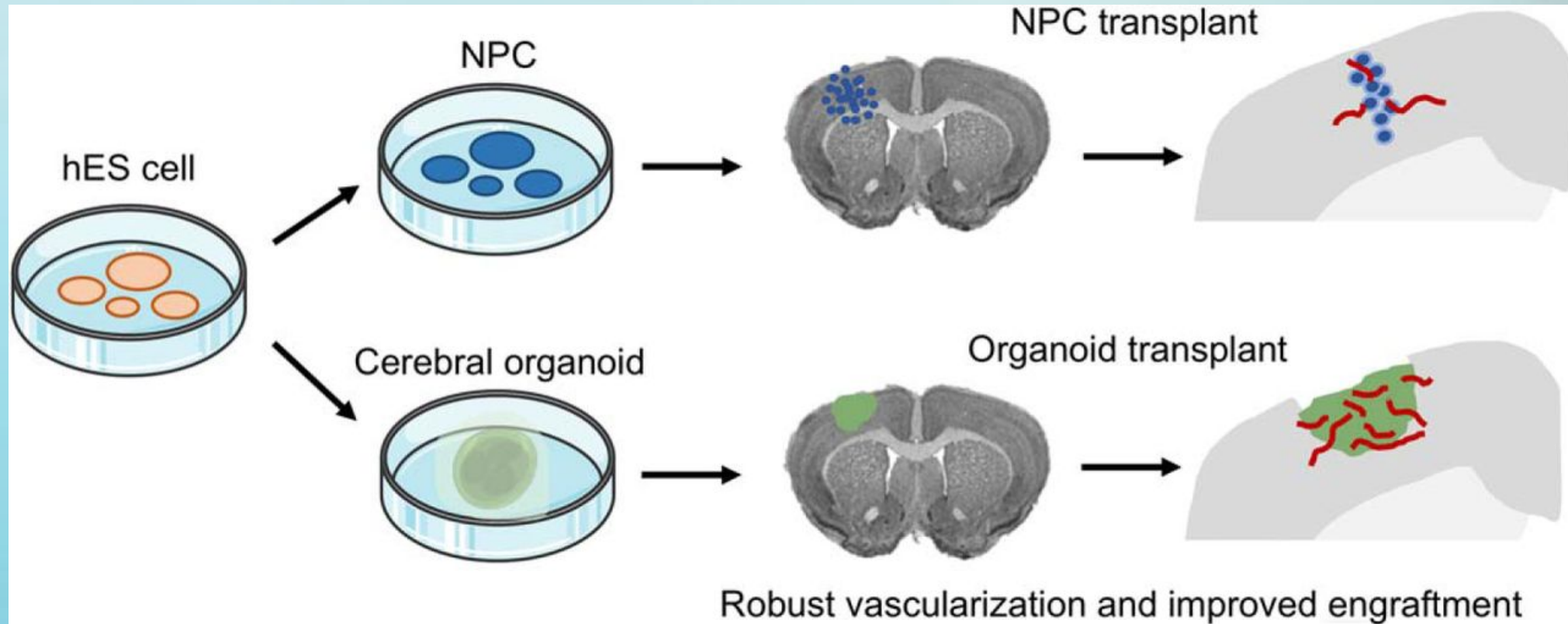
How would
researchers define or
identify **enhanced** or
human awareness
in a chimeric animal?

Instead of “enhanced”, “altered”?

Do research animals with enhanced capabilities require different treatment compared to typical animal models? What are appropriate disposal mechanisms for such models?

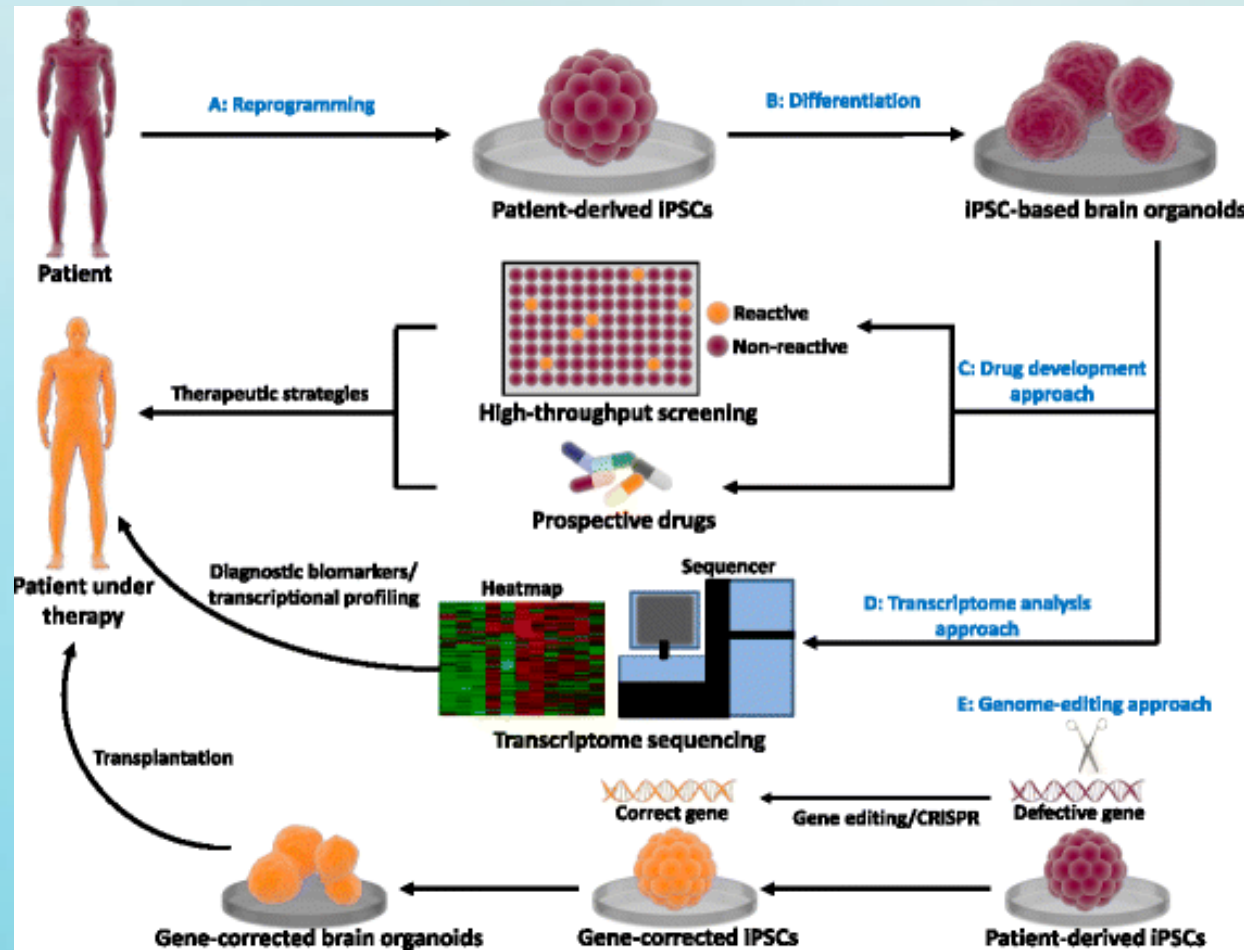


What types of brain tissue are appropriate for use as neural organoids?



How large or complex would the ex vivo brain organoids need to be to attain enhanced or human awareness?

What kind of “humanized” brain, in size and structures, would be acceptable in a research animal?



Should patients give explicit consent for their cells to be used to create neural organoids?



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What regulatory mechanisms relating to organoid and chimeric animal research are currently in place? Are there gaps in the current regulatory framework?

What regulatory mechanisms exist for similar research?



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What further regulatory mechanisms might be appropriate?

