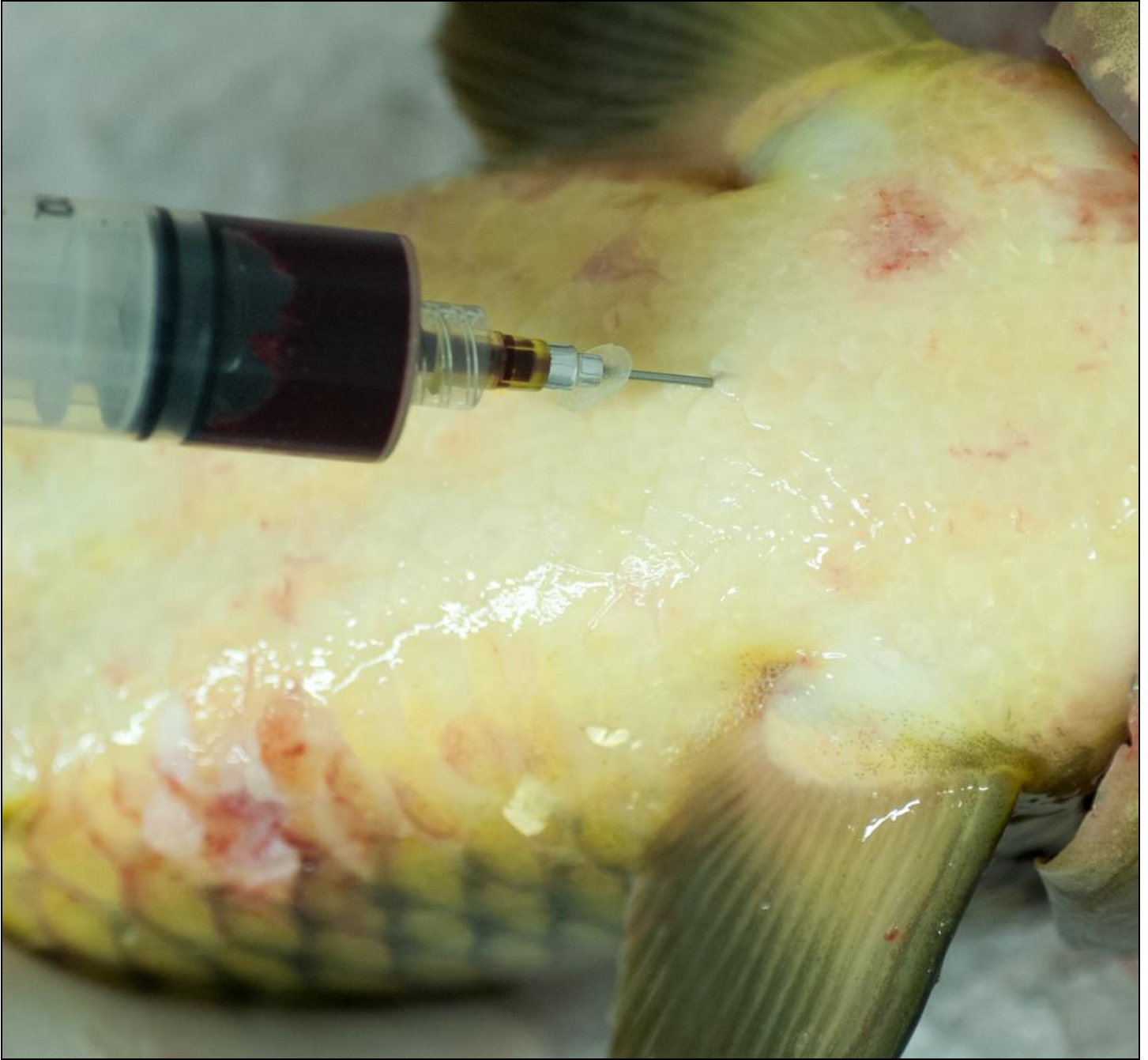


**Supplementary Figure 1**

Selection of optimal fish sera that support growth and survival of zebrafish HSPCs.

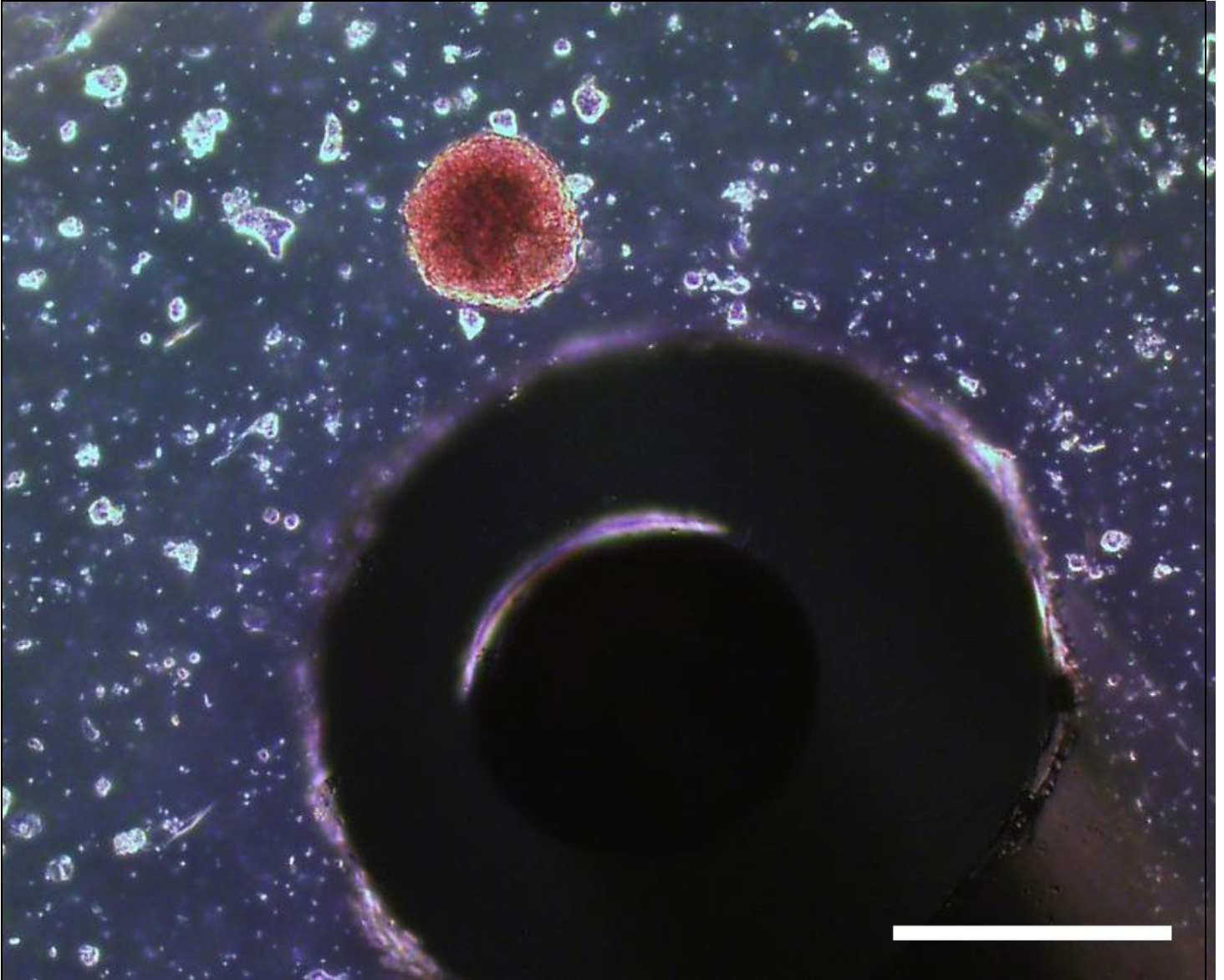
Representative images of cells, grown in the absence of fish serum (no serum) or in the presence of either bass, carp, pike or trout serum for three days. Suspension cells were visualized using phase contrast microscopy and adherent cells were stained with May-Grünwald Giemsa. Scale bars (left) represent 100  $\mu$ m.



**Supplementary Figure 2**

Blood collection from euthanized carp.

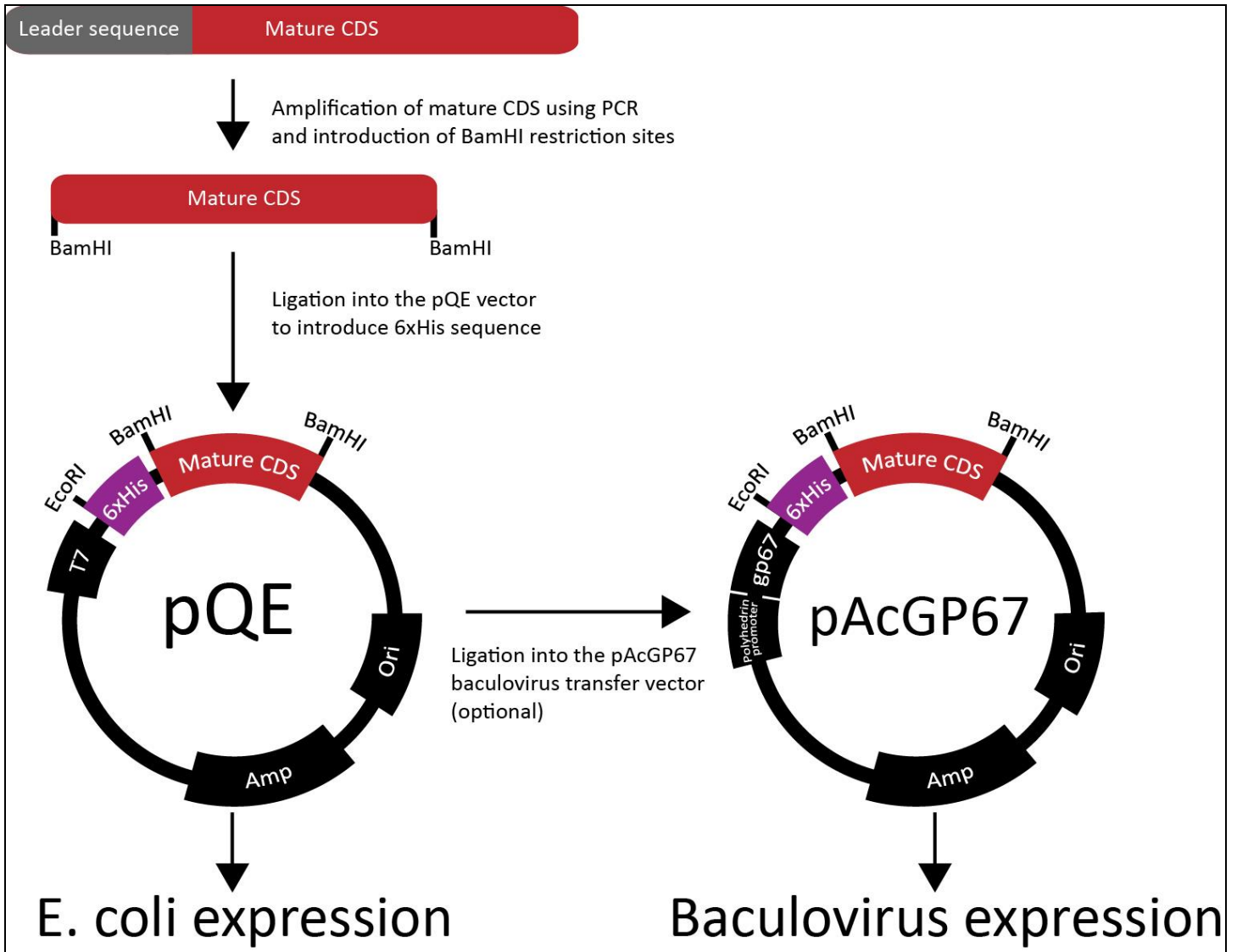
Needle should be positioned perpendicularly to the ventral surface and in the midline between pectoral fins. Pull the syringe plunger out to collect the blood.



**Supplementary Figure 3**

Plucking colony from methylcellulose using fine 30ul tip.

Find the colony, to be plucked out from the methylcellulose. Use the 30ul tip and reach the bottom of the plate. Move the tip above the colony and suck off the colony inside the tip using the pipetman. Photomicrograph was taken at original magnification x40, scale bar represents 500um.



#### Supplementary Figure 4

Experimental strategy for recombinant protein expression using E. coli or baculovirus expression system.

Amplify the mature coding sequence (red box) using polymerase chain reaction (PCR). Ligate the PCR product into the prokaryotic expression vector pQE. This leads to introduction of 6xHis sequence within the CDS (violet box). Optionally use EcoRI and PstI restriction enzymes to transfer the insert containing 6xHis and mature CDS into the baculovirus expression vector pAcGP67.