

# **Illustrated instructions**

- regarding the collection of umbilical cord blood and umbilical cord tissue

A complete stem cell collection is made in 6 simple steps.

If you have any questions please contact Cellaviva, whose medically trained staff is avaliable around the clock.

FOR ON-CALL SUPPORT AND ORDERING OF MEDICAL COURIER, CALL: +46 70-286 14 20



#### **STEP 5** FILL IN THE COLLECTION REPORT



#### **STEP 6** PACK THE BOX & CALL CELLAVIVA



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### **STEP 1 PREPARATIONS:**

- Open the cellaviva box and take out the sampling material. 1a. Remove the Collection report, the waybill and the orangecolored Biohazard label and set them aside.
- 1b. Place the blue cloth on the table/bench. Prepare for collection of umbilical cord blood by laying out sterile gauze, disinfectant wipes, blood bag and sterile gloves.
- Remove the blood bag from its package and paste the 1c. provided label with batch number on the front of the blood bag. Fill in the hospital and the last two digits of the currant year in the SEC-code. See red marking in picture A below.
- 1d. Close the blue clamp (marked 1 in the illustration below) on the blood bag tubing of the needle not to be used. Do not close the other blue clamps. Note! The red clamp (2) remains opened - if closed the red clamp can not be re-opened.
- Prepare for collection of umbilical cord tissue by laying 1e. out sterile gauze, tissue jar, flask with sodium chloride (NaCl) solution, disposable scissors and tweezers.
- 1f. Ask the midwife to clamp the umbilical cord as close to the baby as possible, i.e. leave the main length of umbilical cord untouched. Do not attach a clamp or a hemostat close to the placenta and do not cut the umbilical cord from the placenta until the cord blood is collected!



**BLOOD BAG ILLUSTRATION:** 





### **STEP 2** THE MOTHER'S BLOOD SAMPLES:

- Two purple top blood tubes must be filled and sent with the 2a. box for the cord tissue to be handled according to current laws.
- Venous samples is preferably taken before birth, e.g. in 2b. connection with insertion of an intravenous line, otherwise when given the opportunity after birth. Write date and time on the blood tube labels.

#### **STEP 3** CORD BLOOD COLLECTION: VAGINAL AND CESAREAN DELIVERY

- 3a. The collection is made immediately after the cord is clamped and cut or when the placenta is expelled. Let the cord clamp or hemostats remain on the cord. If blood grouping or blood gas is needed, take the test in a way that avoids unnecessary blood spillage, preferably between two hemostats.
- 3b. Select a needle insertion site above the clamp and thoroughly wipe the umbilical cord with a supplied sterile gauze. Then disinfect the insertion site with the supplied disinfectant wipes to prevent bacterial contamination.
- Remove the needle cap on the needle you are about to use. 3c. Make sure that the blue clamp of the needle <u>not</u> to be used, is closed.
- 3d. Place the bag below the insertion site, allowing drainage by gravity into the bag. Insert the needle through a visable blood-filled vessel. When the needle is inside the cord, you can gently rotate the needle back and forth, allowing a smooth flow and counteracting the needle to be clogged. While the bag fills, knead it lightly to mix the blood with the anticoagulants (CPD) in the bag.



During the collection, the umbilical cord can be gently 3e. "massaged" with downward movements to stimulate cord blood flow and collect as much as possible of the blood.

> If the needle or vein is clogged, a new insertion is made closer to the placenta. Move the hemostat closer towards

the placenta. Disinfect a new area, above the hemostat, see step 3b. Close the blue clamp belonging to the used needle, open the blue clamp of the new needle you are about to use and make a new insertion with the blood bag reserve needle according to 3d.

Continue the collection until the cord 3f. is completely emptied of blood. The success of the collection is directly dependent upon volume, so please collect as much as possible. Vessels in the placenta can also be used. Once the collection is complete, pull the used needles back into to the protective cover until you hear a click.



# UMBILICAL CORD BLOOD & CORD TISSUE COLLECTION INSTRUCTIONS

**3g.** Open the small bag with extra CPD by cracking the white plastic part inside the tubing (located below the Y junction, marked with 3 in the illustration on page 2). Hold the tubing so the blood bag hangs down towards the floor, allowing CPD from the small bag to flow into the blood bag.

Roll the small CPD bag up on itself in order to empty the contents into the tubing. Press any remaining blood and CPD in the tubing into the blood bag using the third blue clamp. Close the blue clamp and then pull it down towards the blood bag, placing it about 10 cm from the bag.

**3h.** Close all blue clamps (1). Do **NOT** close the red clamp (2). Gently invert the bag several times to mix the anticoagulant with the blood. Fill in date and time of the collection on the label on the bag.

#### STEP 4 CORD TISSUE COLLECTION: VAGINAL AND CESAREAN DELIVERY

- **4a.** To prevent bacterial contamination, wipe the umbilical cord with dry sterile gauze. Then wipe with the supplied disinfectant wipes.
- **4b.** Take the supplied disposable scissors. If possible, select a section of cord which is free from the puncture sites, cut a section of cord approximately 20-30 cm long.
- **4c.** Place the umbilical cord tissue into the tissue jar using the tweezers.
- **4d.** Fill up the tissue jar with the provided NaCl solution so that the umbilical cord is completely covered with liquid. Fill the tissue jar with as much liquid as possible and tighten the lid firmly.
- Fill in date and time of the collection and the last two digits of the currant year in the SEC-code, in the label on the tissue jar. See red marking in the picture B on page 2.
   NOTE! Always store at room temperature.

#### **STEP 6** PACK THE BOX & CALL CELLAVIVA: PREPARE FOR TRANSPORT TO THE LABORATORY

- **6a.** Ensure that the blood bag and tissue jar (with NaCl) are tightly closed, that the labels are filled in and put on the two blood tubes, blood bag and tissue jar.
- **6b.** Ensure that the collection report is filled in and signed.
- **6c.** Put the blood bag and tissue jar in the smaller supplied plastic bag (A5 size) together with the mother's blood samples, let the absorption cloth remain in the bag. The bag also contain a temperature log, that must be located next to the samples for temperature monitoring purposes of the stem cells during transport. Seal the bag.
- **6d.** The bag is inserted adjacent to the absorption cloth in the larger plastic bag (A4 size), which is then sealed. Place the bag between the 2 pieces of temperature stabilizing gel pads in the box.
- 6e. Place any unused material in the box, except for the Biohazard label and the waybill. Put the styrofoam lid on the inner box and place the Collection report on top. See packing illustration below.
  Close the carton lid and seal with the Biohazard label; Fill in

the date and time for closing the box on Biohazard label. Place the supplied waybill on the top of the Cellaviva box, covering any previously used waybill. Make sure that the shipping information on the short side is clearly visible.

**6f.** Call Cellaviva on phone number +46 70 – 286 14 20 to arrange for medical courier pick-up and further transport to the laboratory. State your name, hospital, room number and the box number of the box.

#### PACKING ILLUSTRATION:







Collection report



Sealed plastic bags with stem cells and mother's blood samples

Temperature stabilizing gel pads

#### **STEP 5** FILL IN THE COLLECTION REPORT:

**5a.** The collection report must be filled in and signed.

# **NOTE! Store box at room temperature**

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Cellaviva have a long and unique experience from cell therapy

# CAN WE HELP YOU IN ANY WAY?

Cellaviva is the largest biobank for family saving of stem cells in Scandinavia. We are approved by Swedish authorities and an important part of the global stem cell research. With HQ and research laboratory located next to Karolinska University Hospital in Huddinge.



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