



EARLOBE ARTERIALISED BLOOD COLLECTOR

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SPACENAUTICS

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the Problem

- * Blood collection = arterial, venous or capillary
 - * skilled personnel
 - * multiple pieces of equipment
 - * Collection - syringe, needle, collecting tube, reagent strip, slide
 - * Disposal - sharps bin
 - * Needle stick injury
 - * Patient factors - blood vessels, needle phobia, pain



the Solution

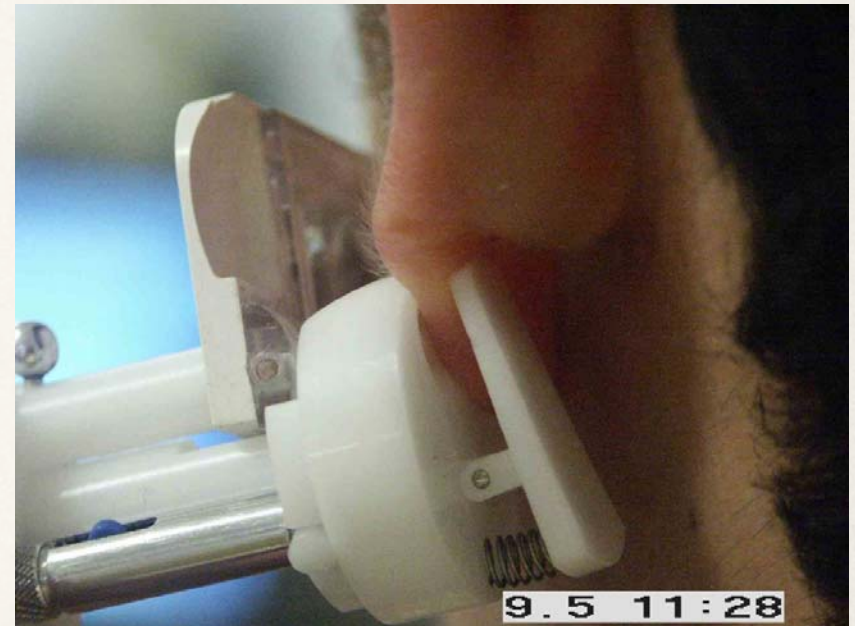
- ✦ Earlobe arterialised blood collection: (Lilienthal JL & Riley RL, 1944)
- ✦ a single combined device that
 - ✦ cuts the earlobe
 - ✦ contains the blood (no environmental exposure)
 - ✦ channels the blood
 - ✦ stores or analyses



Earlobe Arterialised Blood Collector

blood Collection

- * Blood Analysis - Collection + Analysis
 - * ~~identification of site~~
 - * ~~preparation of site and equipment~~
 - * ~~puncture of skin~~
 - * ~~collection of blood~~
 - * ~~transfer of blood to collector~~
 - * ~~disposal of waste + sharps~~
 - * Transfer of collected blood for analysis



EABC MOVIE



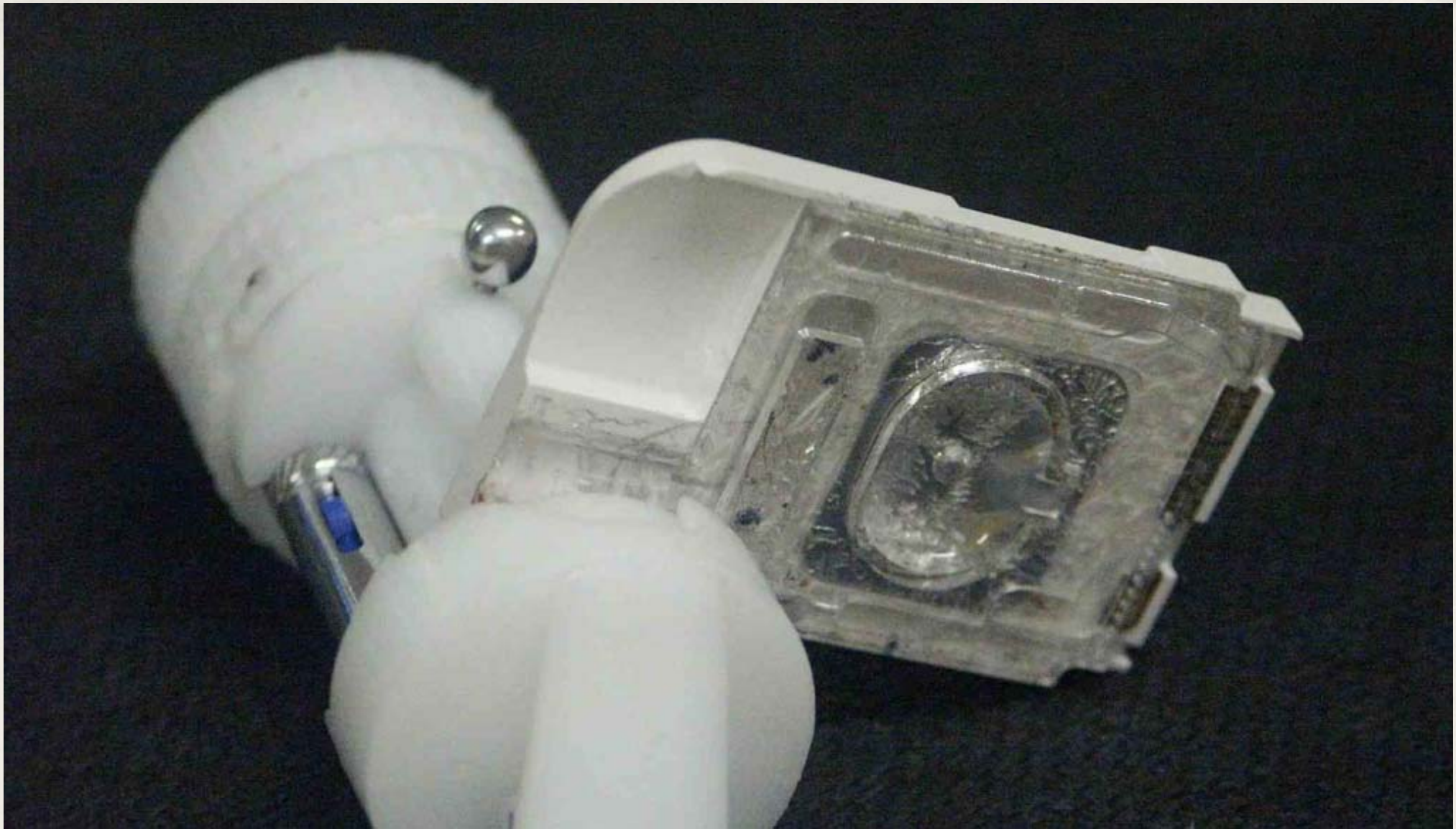
Advantages

- ✦ EABC

- ✦ reduces skill level
- ✦ reduces time needed
- ✦ reduces pieces of equipment
- ✦ increases patient comfort
- ✦ safety (sterility, contamination, needle stick injury)

further Development

- ✦ **Blood Collection can by ANYONE + ANYWHERE**
- ✦ Adapting for
 - ✦ paediatrics
 - ✦ veterinary
 - ✦ intrauterine



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