Characterization of AP2/ERF superfamily in response to abiotic stress and their specificity to Tapping Panel Dryness in *Hevea brasiliensis*

**Objective:** Understanding of molecular mechanism of latex harvesting and in the occurrence of TPD

1. Practice of latex harvesting: stimulation by *ethylene* releaser + tapping (wounding)
2. **OVER-EXPLOITATION**
   - Morphological and biochemical aspect of TPD
3. Molecular aspect: 114 members of *Hevea* AP2/ERF superfamily - *Ethylene Response Factors* (ERFs)
   - RNA sequencing
   - Candidate key genes
   - Gene expression
   - Latex production and TPD

**Molecular aspect:** 30,342 contigs

**Need of new tolerant clone to TPD**

12-20% loss production

**Short-term application** – molecular markers for TPD

**Long-term application** – breeding of new tolerant rubber tree clone to TPD

**PhD subject 2011-2014 – Riza A. Putranto**

**Reversible Dry cut**

**Irreversible Brown bark**