**DNA & PROTEIN DETECTION BASED ON MICROBEAD AGGLUTINATION**

Rimantas Kodzius, David Castro, Sumanpreet Chhina, Ash M. Parameswaran and Ian G. Foulds

---

**Problem 1:** Self-termination of protein and DNA assay

**Solution:** Three-component assay, better sensitivity

---

**Problem 2:** Saturation at high concentrations

**Solution:** Stepped process, wider detection range

---

Agglutination example

Agglutination is obtained rapidly (5 minutes) and at room temperature.

---

Agglutinated beads in channel

---

Concentration

Agglutination

- Stepped
- 3-part
- 2-part