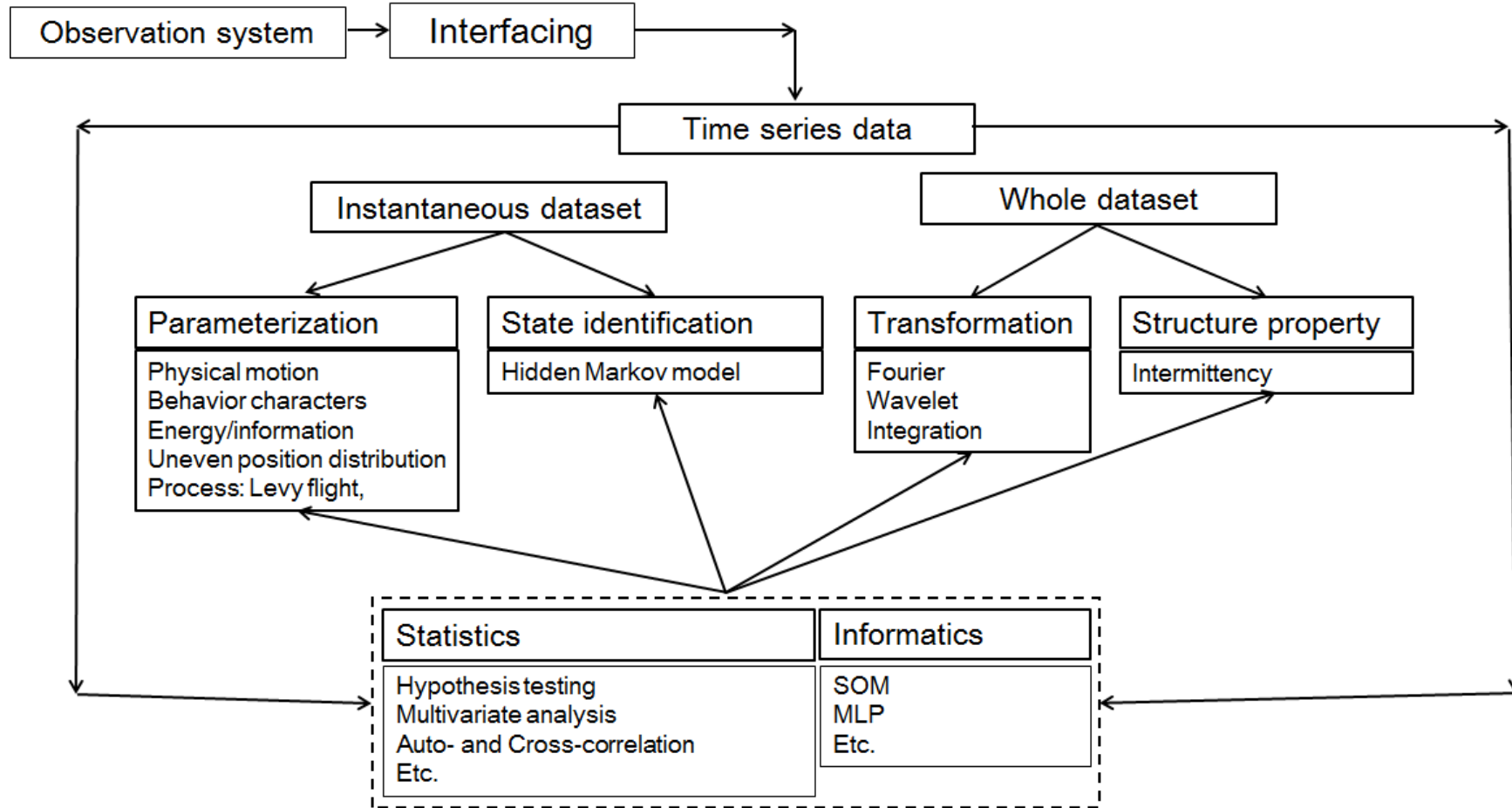


연구의 핵심 기술: 행동자료의 객관화



행동 반응을 생태계 서비스로 적용: 환경 변이 감지(바이오 센서)

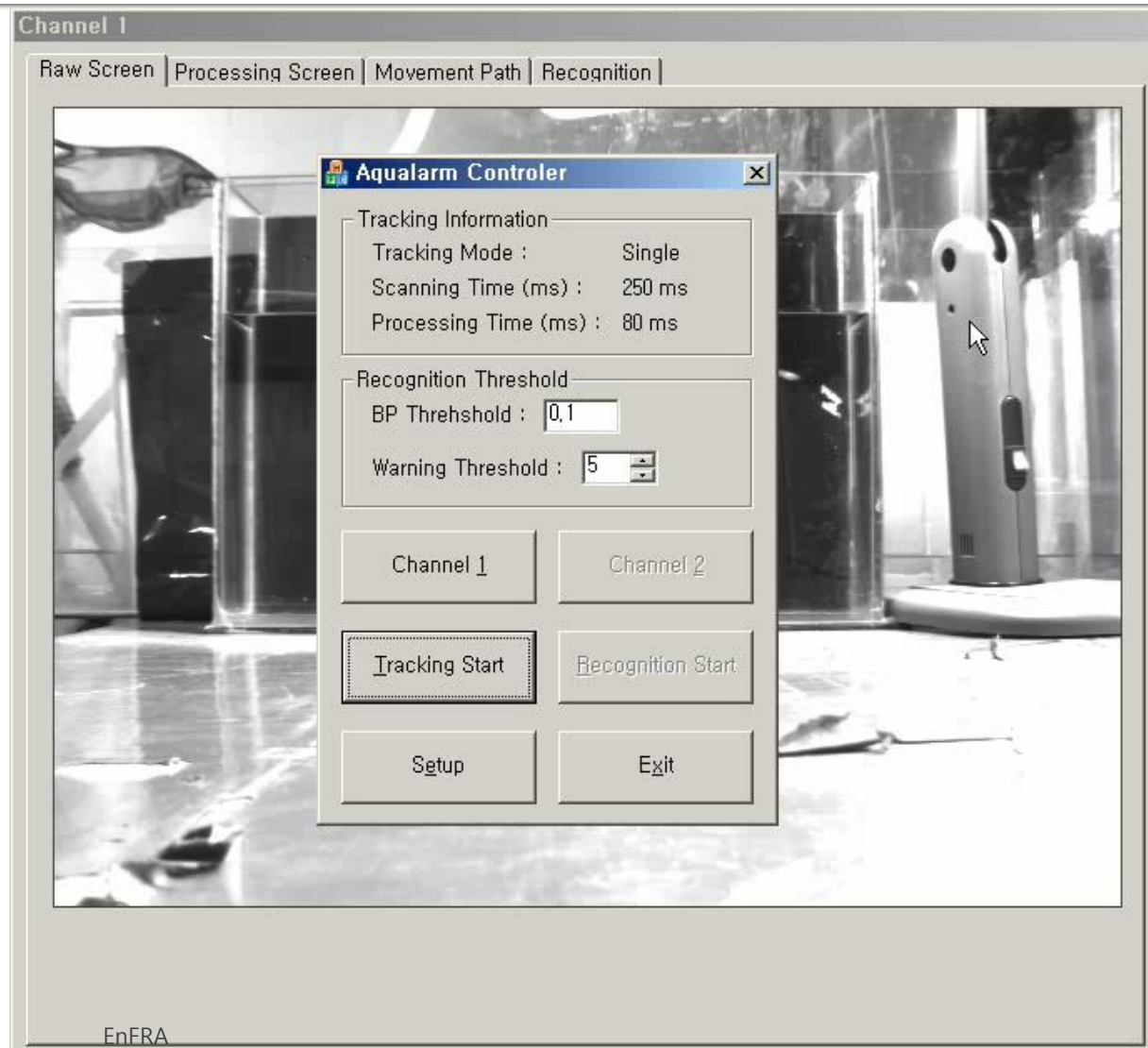


Earthquake in China

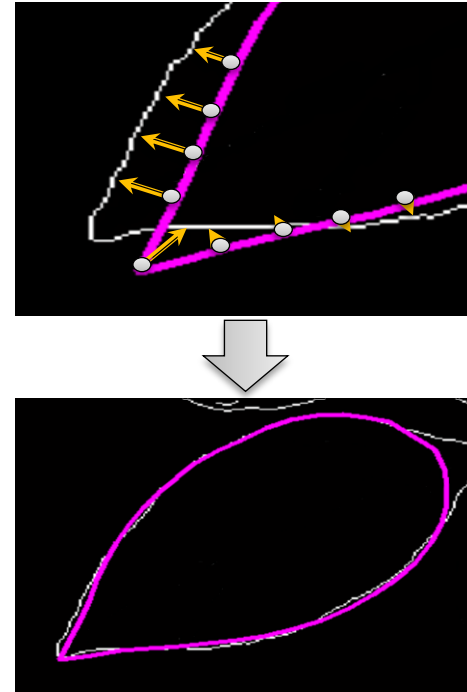
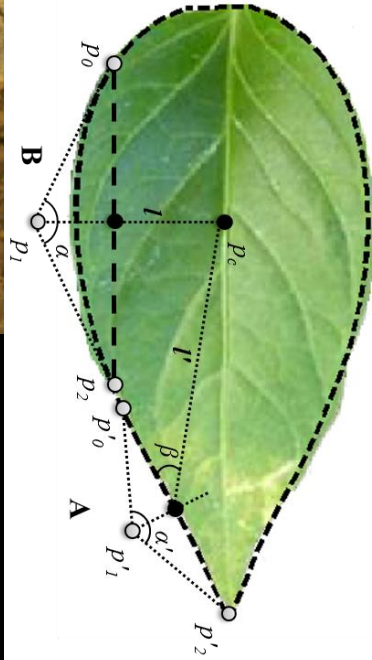
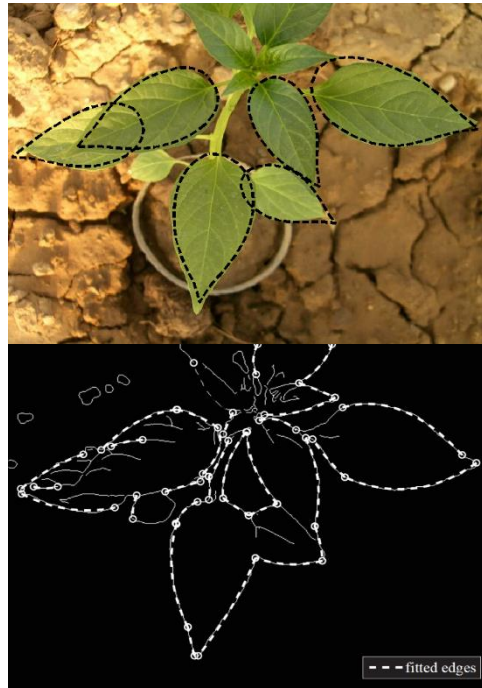


Escaping behavior of toads

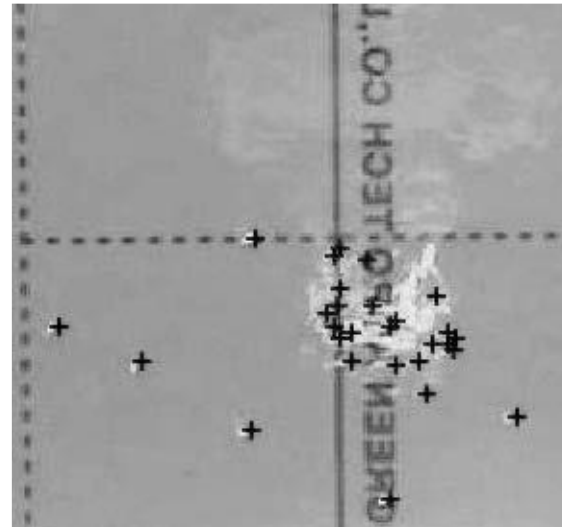
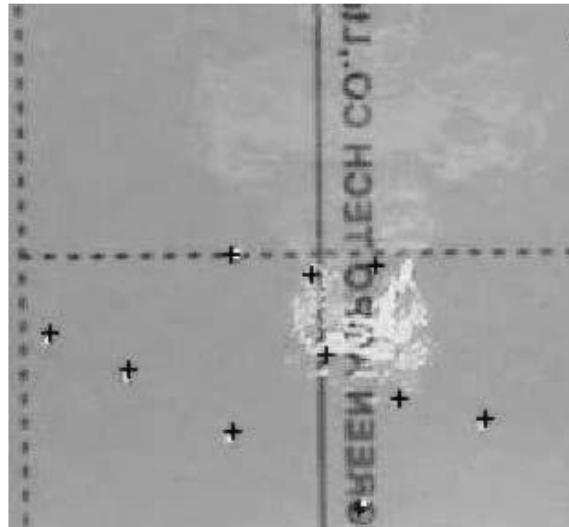
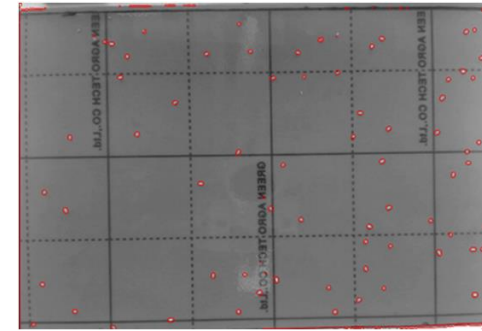
온라인 행동 추적 (예, BVision)



인터페이싱(생물 인지): Leaf recognition



인터페이스: 곤충 인지(Multi-fractal 등 이용)



유전자 변이에 따른 행동 반응 (Behavior Variation in *Drosophila* Mutants) : 실내 환경 호르몬 감지

Test specimens:

Fruitfly (*Drosophila melanogaster*)

Wild type (S7)

Mutants: p38b and p53

Chemicals

Toluene ($100 \mu\text{g}/\text{m}^3$, T),

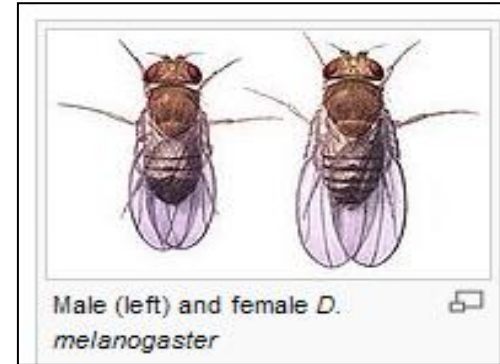
Formaldehyde ($10 \mu\text{g}/\text{m}^3$, F),

Observation period :

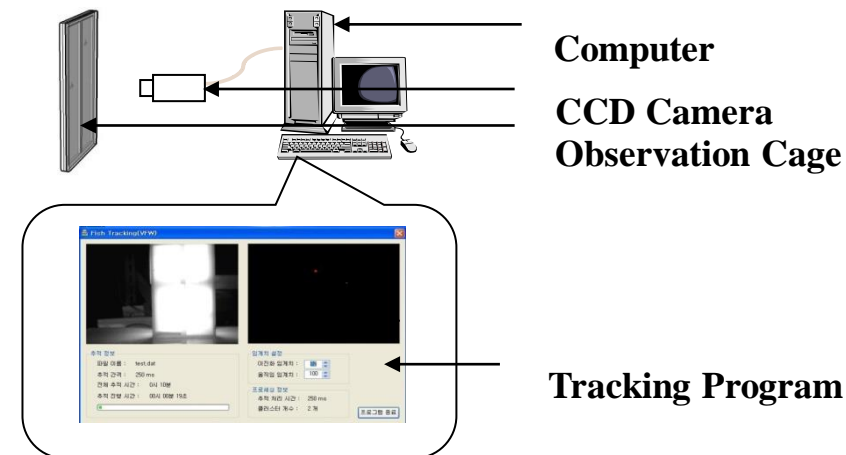
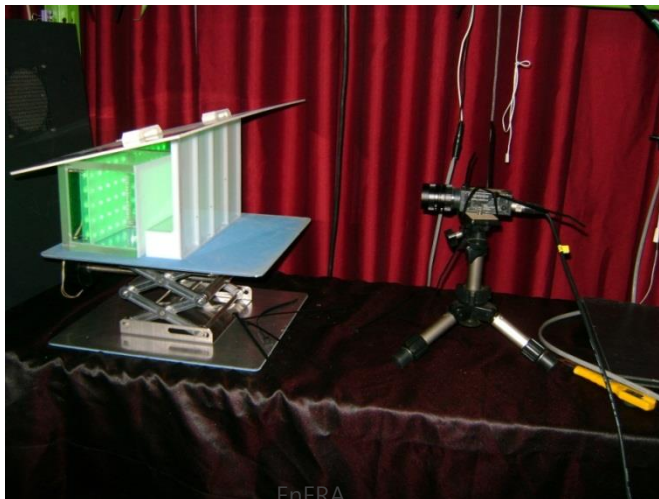
6 hours before and 6 hours after treatments (25°C)

Replication :

15 individuals for each chemical

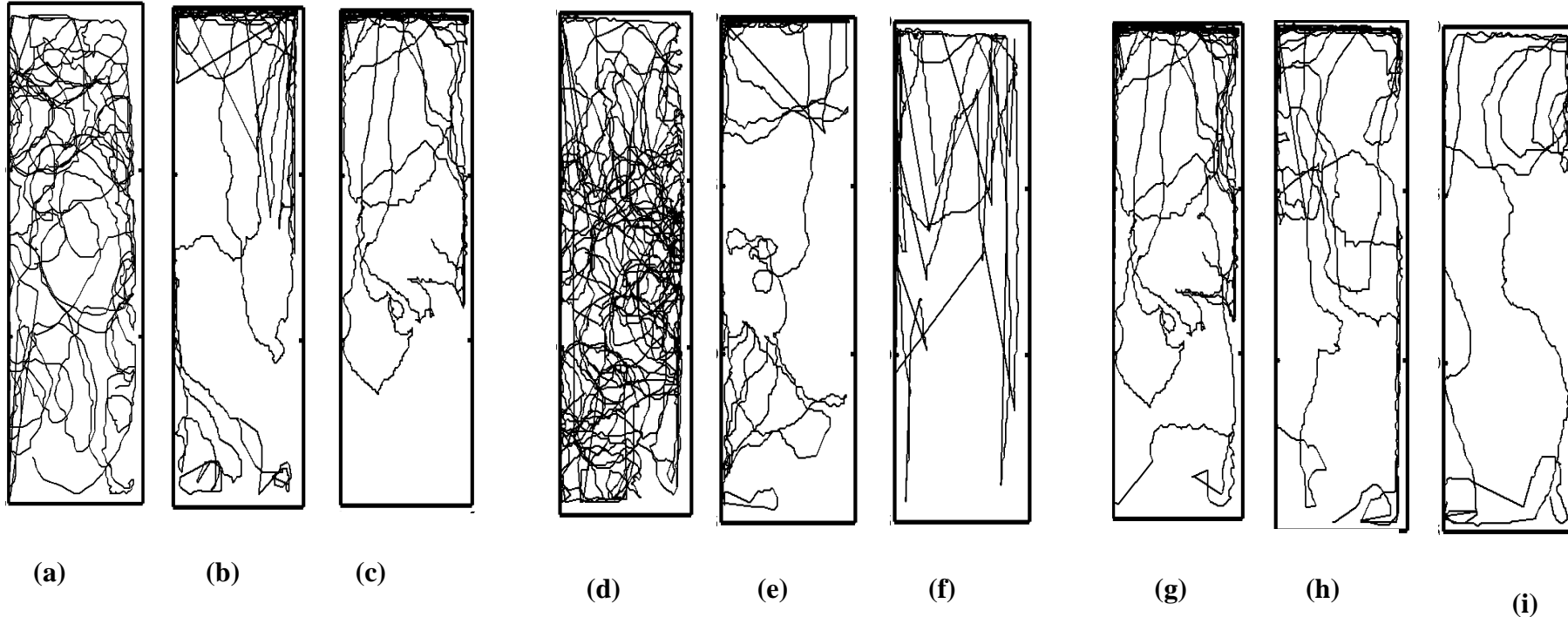


From http://en.wikipedia.org/wiki/Drosophila_melanogaster



Yuedan Liu

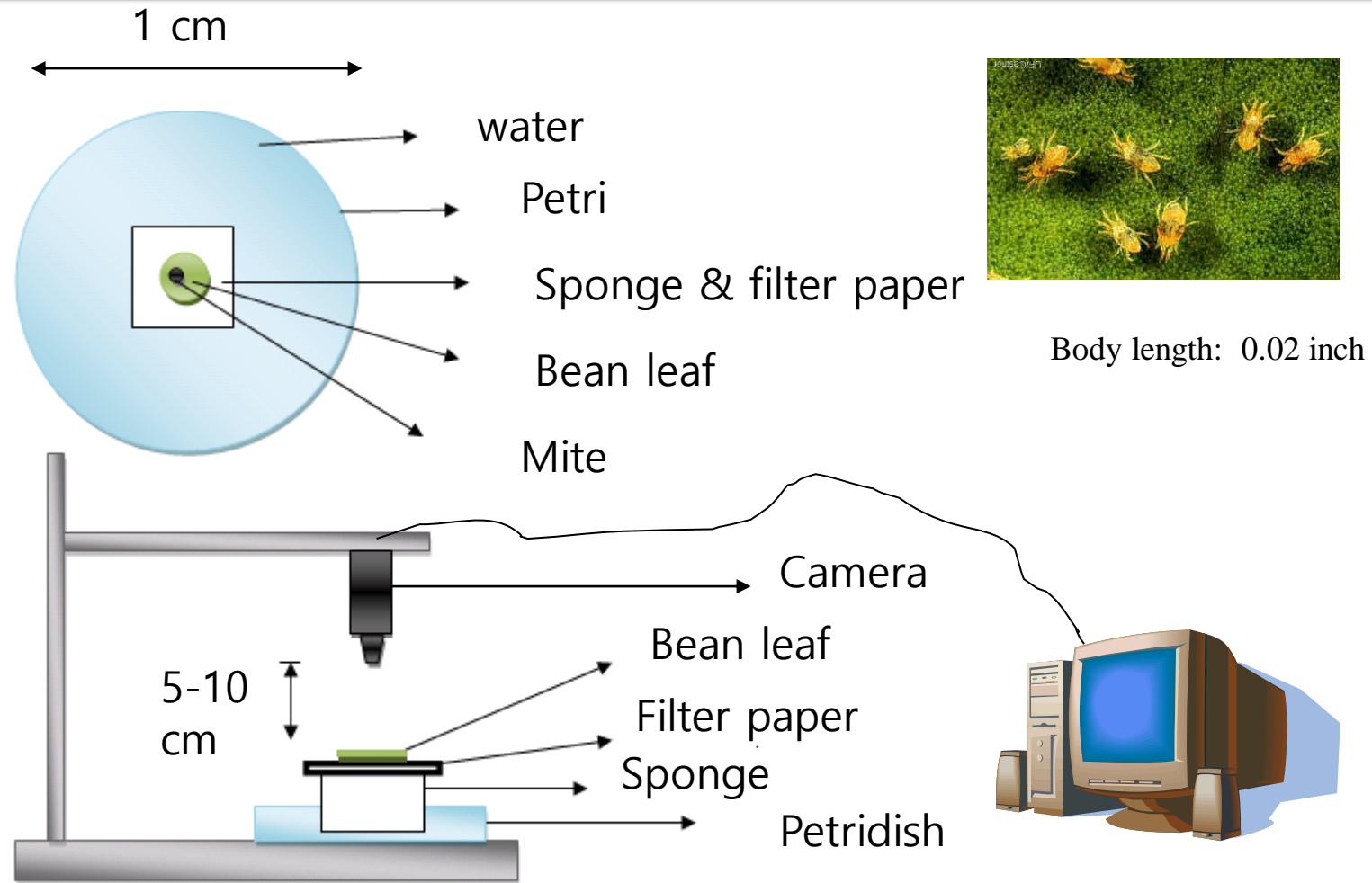
Movement tracks of *Drosophila melanogaster* in different strains responding to chemicals



The movement tracks of *D. melanogaster*. s7: (a) before treatments, after treatments with (b) toluene and (c) formaldehyde, p38b: (d) before treatments, after treatments with (e) toluene and (f) formaldehyde, p53: (g) before treatments, after treatments with (h) toluene and (i) formaldehyde.

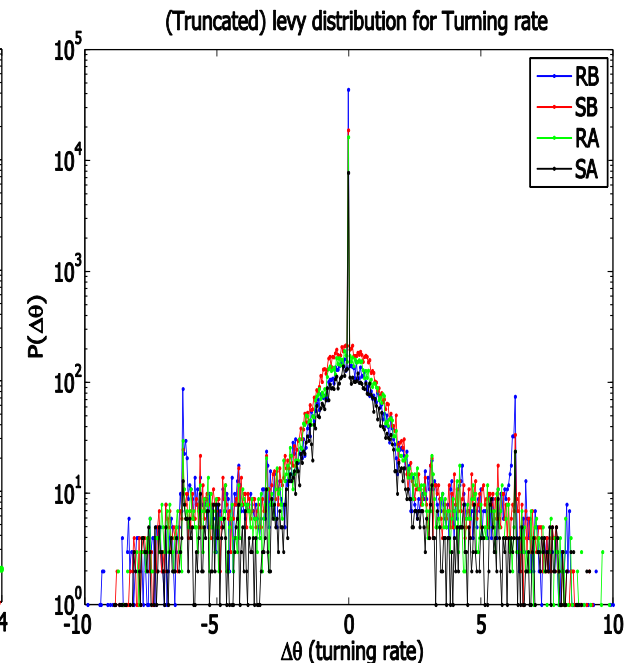
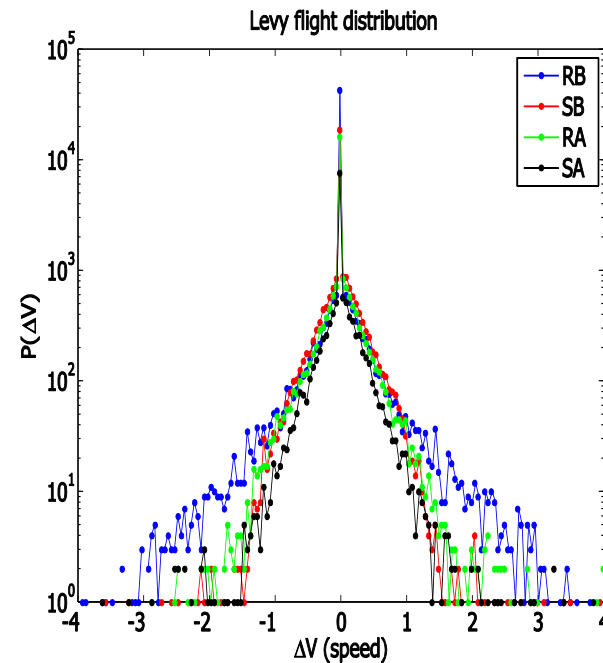
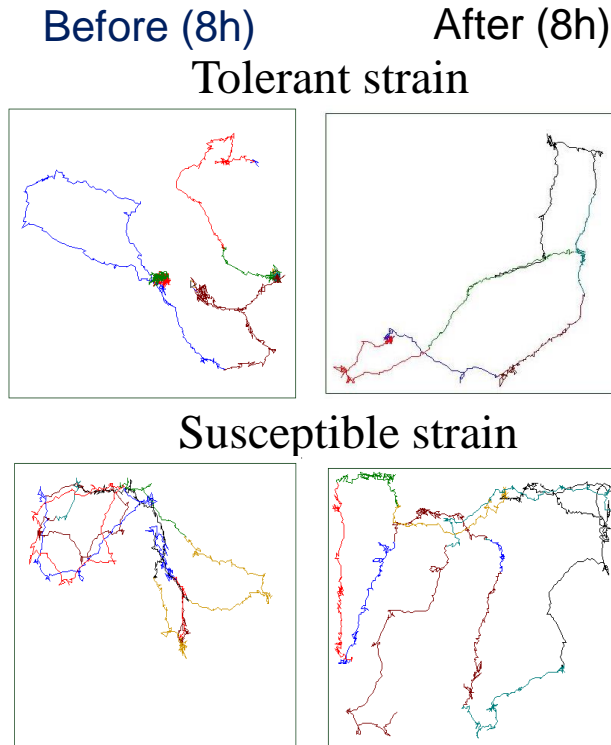
살충제 저항성 해충 행동 인지

:Behavior of two spotted spider mite resistant to chemicals



Mite Movement in Levy Flight Distribution: Susceptible and tolerant strains to pesticides

- Movement tracks : two-spotted spider mite



RB = Resistant-before; SB = Susceptible-before;
RA = Resistant-after; SA = Susceptible-after

(Nguyen van Tuyen)