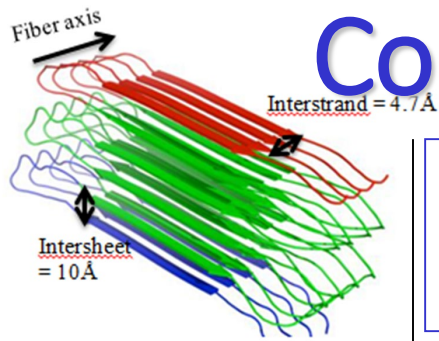
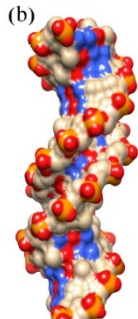
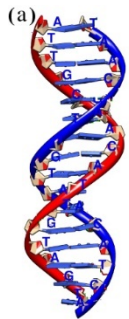


Community of Cells

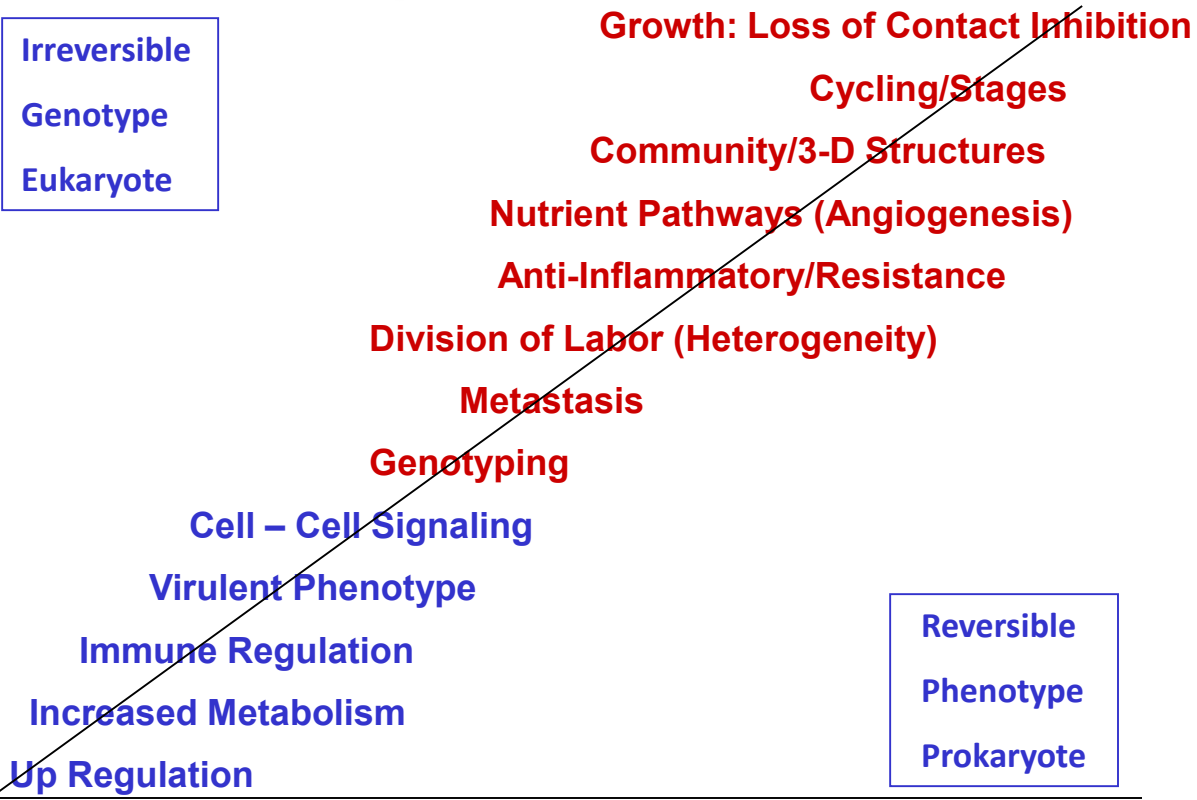


Amyloid / DNA



**N
E
O
P
L
A
S
I
A**

**Irreversible
Genotype
Eukaryote**



Growth: Loss of Contact Inhibition

Cycling/Stages

Community/3-D Structures

Nutrient Pathways (Angiogenesis)

Anti-Inflammatory/Resistance

Division of Labor (Heterogeneity)

Metastasis

Genotyping

Cell – Cell Signaling

Virulent Phenotype

Immune Regulation

Increased Metabolism

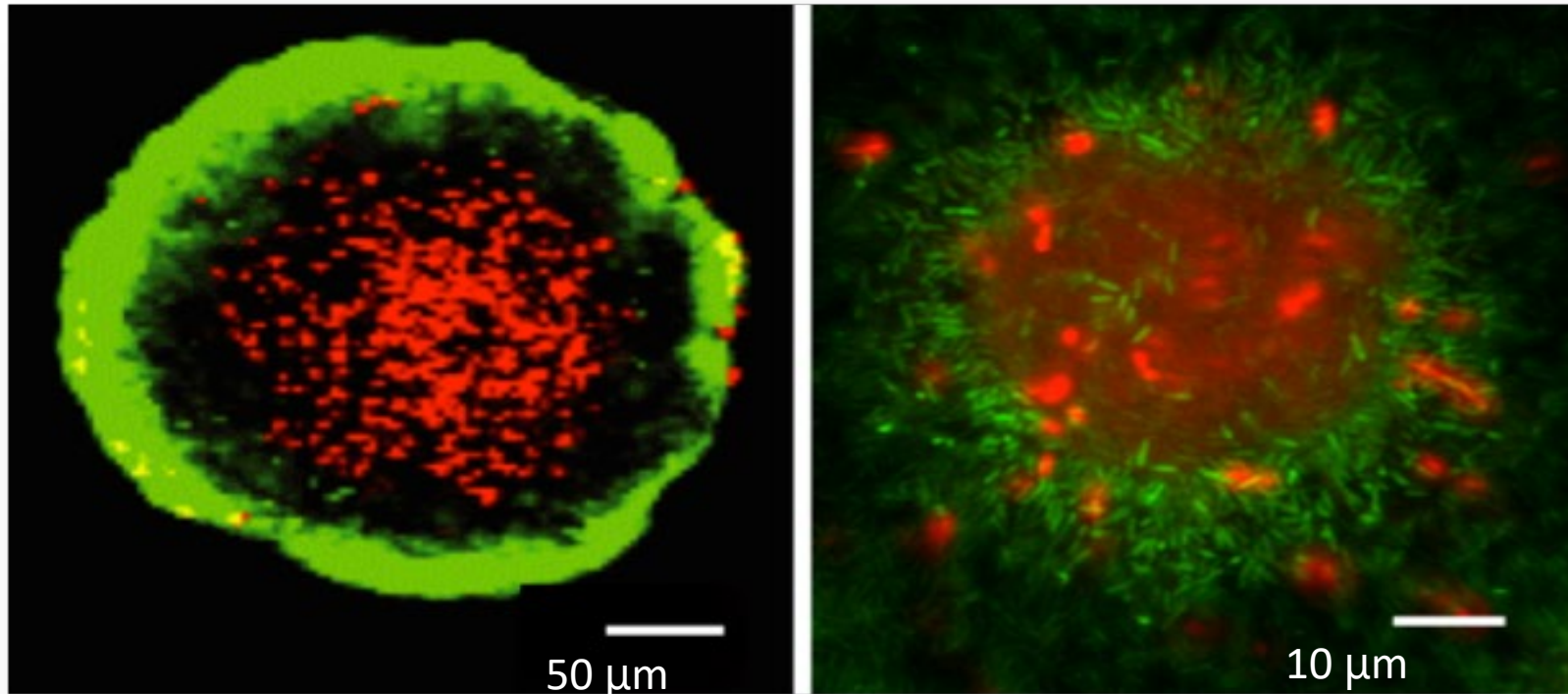
Up Regulation

**Reversible
Phenotype
Prokaryote**

BIOFILM

Structural & Developmental Similarities: Biofilms to Tumors

Gradients of proliferation, cell death and lysis in cancer spheroid foci and biofilm microcolonies



Spheroid model

P. aeruginosa microcolony

Visualized using LIVE/DEAD staining
(Webb et al., 2003)

BioPOD

BioTUMOR

BIOFILM
WEB

BioPLAQUE