Colloquium

Defining the resilience of hosts to infections

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My group studies resilience to infections. We want to understand the elasticity of the physiological response to infection and take two sorts of measurements to do this. First, we want to understand how far physiology will stretch when faced with series of different doses of stressors. We call this “disease tolerance” when the stressor is microbe load, and “resilience” when we are speaking more generally. Second, we want to understand how far we can stretch our physiology until it snaps, leading to a chronic condition or death. We mainly work on two systems. First, we study fruit flies infected with bacteria, fungi, and viruses. This lets us use large numbers of animals to test our models. We also study mice suffering from a model malaria caused by Plasmodium chabaudi. Here we are looking at the circulating immune cells, cytokines and metabolome as well as gross physiological markers to finely map the progression and resolution of the disease. Our overarching goal is to come up with simple and inexpensive methods of improving outcomes from all infections, without necessarily changing the rate we clear pathogens.

Monday, November 20, 2017 04:00pm - 05:00pm
Raiffeisen Lecture Hall, Central Building

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