# NJIT TECHNOLOGY AND SOCIETY FORUM

## THE VERTICAL FARM: AGRICULTURE FOR THE 21ST CENTURY AND BEYOND

#### **SPEAKER** DICKSON D. DESPOMMIER

Professor of Environmental Health Sciences Mailman School of Public Health, Columbia University

### WEDNESDAY, SEPTEMBER 30, 3:00 – 4:30 P.M. NJIT CAMPUS CENTER ATRIUM



A farm on the 40th floor? That's a distinct possibility according to Dickson Despommier, an advocate of "vertical farming." Despommier, who has a PhD in microbiology from the University of Notre Dame, has long been interested in the environment and the ecology of infectious disease transmission. This has led to his engagement in a project to produce food crops in tall, specially constructed urban buildings (www.verticalfarm.com). Using hydroponic and aeroponic technologies, no fertilizers of any type would be necessary.

As Despommier wrote in a *New York Times* op-ed on August 24, climate change and population growth could make farming as we know it today untenable in another half century. While a reliable food supply has benefited most of the civilized world, traditional farming has also damaged natural ecozones and created new health hazards. Infectious diseases occur with devastating regularity at the tropical and sub-tropical agricultural interface. Exposure to toxic levels of some agrochemicals is another associated health risk. Further, with the world's population expected to rise to at least 8.6 billion over the next 50 years, the farmland available will not produce adequate food using current technologies.

Vertical urban farms could help to repair many of the world's damaged ecosystems and moderate global climate change. Social benefits include fostering a sustainable urban environment that encourages good health, new employment opportunities, fewer abandoned lots and buildings, cleaner air, and an abundant supply of safe drinking water.

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