EuroSciCon

EuroSciCon Joint Event On
Biotechnology , Biochemistry and Aquaculture

August 08-09, 2019
Paris, France

Biochem Mol biol J 2019, Volume: 5

# AGENT-BASED MODELS FOR INFLUENZA EPIDEMIC DYNAMICS AND ITS DECISION-MAKING CAPABILITY

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**Agents-based models (ABM) become more and more popular in applied mathematics. During last 15 years a large number of ABM have been created and used in different scientific area (ecology, economy, epidemiology, human behavior to name a few), but in this paper, only ABM for influenza epidemic/pandemic dynamics in cities are considered in detail. Based on a critical review of currently accepted ABM of such special type new ABM has been proposed. Unlike the old ABM, it can be used for analysis of efficiency and cost of all interventions (how for ones had been carried out before and during epidemic or pandemic under consideration and ones that could be implemented but had not been carried out for some reasons). Moreover, under some conditions, new ABM gives us an opportunity to analyze efficiency and cost of different interventions for future oncoming epidemics (first of all pandemics) and to select its optimal combination.**

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