

Jeff Wolf: Congress and the administration: Seniors and certain minority groups need a 'super-vaccine'

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While I applaud the Administration and Congress for investing billions of dollars to develop a vaccine to defeat COVID-19, Congress and the Administration must keep in mind that special efforts need to be undertaken to develop vaccines to address the most vulnerable among us: seniors and those who are also immune-compromised, particularly minority populations. These individuals need a “super-vaccine”.

Older people tend to have weaker immune systems, leading to higher COVID-19 mortality rates. Compounding the problem, those in retirement communities and nursing homes often reside in close proximity, driving up infection rates.

Minority communities, particularly African Americans and Native Americans, are disproportionately dying from COVID-19, largely because of they often suffer from conditions that weaken the immune system: diabetes, hypertension, and obesity.

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The overwhelming number of vaccines under current development - and getting the lion's share of the federal funding - will be effective in protecting the vast majority of individuals from COVID-19, but most will generate solely a humoral antibody response. That approach may work fine for young and otherwise healthy patients

with strong immune systems, but it will do little to address the needs of those who are dying in large numbers from COVID-19 – the elderly and those within minority populations.

The critical difference is that older patients and those who are immune-compromised tend to lack a robust T-cell response, which Heat Biologics believes is important in preventing the disease. With the typical flu, seniors are often prescribed a double-dose of vaccine to compensate for their inability to mount an effective adaptive response. This approach, however, may not be optimal in vaccinating against COVID-19. New data suggests that a combination of T-cell and antibody responses against COVID-19 may provide the best protection for seniors and others.

While Congress and the Administration weighs a new funding package to respond to COVID-19, they should keep in mind the special needs of America's seniors and those within immune-compromised communities, and focus on a "super-vaccine" that will ramp-up T-cell protection for our most vulnerable citizens. The elderly and those living in communities suffering most greatly from this pandemic need to know they do not need to settle for a one-size fits all solution. Options are available and should be demanded.

-Wolf is a serial biotech entrepreneur and the CEO of Heat Biologics. He is currently teaming up with Waisman BioManufacturing, part of the University of Wisconsin in Madison, to manufacture a COVID-19 vaccine.