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## **Rapid Deployment Vaccine Collaborative (RaDVaC) Receives \$2.5M from Balvi Philanthropic Fund to Improve Global Vaccine Access**

*The Balvi grant will enable continued development, testing, and continuous updates and improvements of open-source vaccine designs and production methods, including “vaccine factory in a tube” technology. Funds will also support build-out of a decentralized scientific network for open sharing of production methods and technologies, as well as clinical trial and immunology data.*

The Rapid Deployment Vaccine Collaborative (RaDVaC) is pleased to announce a \$2.5M grant from Balvi, the philanthropic organization established by Ethereum co-founder Vitalik Buterin, which funds high-risk, high-reward projects to improve global pandemic preparedness and response capabilities.

The SARS-CoV-2 pandemic continues to reveal very serious, ongoing deficiencies in global pandemic readiness and public health responses. Once lifesaving vaccines were deployed, they showed very high levels of effectiveness. However, despite having been designed and produced in the earliest days of the pandemic, due to complex, slow, and inefficient regulatory burdens, they remained inaccessible for nearly a year in high-income countries, and for far longer in low- and middle-income countries. In response to this urgent humanitarian need caused by the vaccine access gap, RaDVaC developed and published free and open-source vaccine recipes and protocols, and offered scientific support to individuals and groups worldwide producing and testing the vaccines.

Since early 2020, RaDVaC has been creating technically accessible open-source vaccine designs and development tools, and constantly refining them in light of ongoing research. RaDVaC will use funds from Balvi to expand these activities and to create distributable vaccine resources, including “vaccine factory in a tube” technology.

RaDVaC and Balvi share a commitment to bridging and shortening the vaccine access gap, and in establishing both the citizen-science right to vaccine creation, and vaccine access as a public good. More broadly, both organizations share the goal of fostering decentralized, open-source research and knowledge dissemination.

With this grant, RaDVaC will be able to expand its efforts to enhance global pandemic preparedness on a number of fronts:

### **Vaccine platform research**

- Improve vaccine designs beyond current commercial offerings, emphasizing the following currently underrepresented but important features:

- Broad-spectrum
- Mucosal immune response to provide protection against infection
- Durability
- Self-administration
- RNA vaccine prototyping: messenger RNA (mRNA) and self-amplifying RNA (saRNA)
- Prototyping and optimization of nanoparticle delivery vehicles for vaccines and other therapeutics
- R&D of “vaccine factory in a tube” technology: ideally, a “just add water” vaccine production platform
- Increase vaccine production simplicity and independence

### **Preclinical studies**

- Assess safety of new formulations
- Measure and model immune responses and efficacies

### **Innovative human challenge trials**

- Design novel, safe, cost-effective clinical trials
- Establish the groundwork for a safe, efficient human challenge trial of a broad-spectrum coronavirus vaccine, with efficacy against future pathogenic coronaviruses

### **Global community of open research**

- Maintain and grow a global community in mutual support of designing, developing, testing, funding, and deploying accessible vaccines and vaccine-development technologies
- Create tools for data sharing and analysis
- Provide grant support to scientists developing key “vaccine factory in a tube” technologies

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**About RaDVaC:** RaDVaC is a group of citizen scientists motivated to action by the suffering caused by the SARS-CoV-2 pandemic, and concerned about future pandemics. RaDVaC participants have a range of backgrounds and professions, but many are trained scientists, physicians and engineers. RaDVaC is a 501(c)(3) non-profit organization. RaDVaC has shared all vaccine designs under open licenses (CC BY 4.0 and OCL-P v1.1), and is a partner of the Open COVID Pledge. Though commercial SARS-CoV-2 vaccines are widely available, they target archaic variants and are increasingly ineffective against emerging variants; in contrast, RaDVaC’s IP-free designs remain highly relevant due to low cost, ease of production and administration, transportability, rapid iterability, and broad accessibility. For more information, find us online at <https://radvac.org/>

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