

Press release

**Data published in *npj Vaccines* show Mymetics' malaria CyRPA virosome vaccine elicits protective antibodies against *Plasmodium falciparum* parasites in preclinical *in vitro* and *in vivo* models**

- **Malaria PfCyRPA virosome vaccine inhibited parasite growth by 80% and 77% in a preclinical *in vitro* and *in vivo* study, respectively.**

**Epalinges, Switzerland, 3 February 2020** – Mymetics Corporation (OTCQB: MYMX), a pioneer in the research and development of virosome based vaccines and immunotherapies against human life disabling and infectious diseases, announced today that results from a study at the Swiss Tropical and Public Health Institute (Swiss TPH) were published on January 31, 2020 in the Nature Partner Journal (*npj*) Vaccines.

The publication with title “Vaccination with virosomally formulated recombinant CyRPA elicits protective antibodies against *Plasmodium falciparum* parasites in preclinical *in vitro* and *in vivo* models” shows that Mymetics' virosome based vaccine elicited in mice and rabbits high titers of PfCyRPA-specific antibodies that bound to the blood-stage parasites. At a concentration of 10 mg/mL, purified total serum IgG from immunized rabbits inhibited parasite growth *in vitro* by about 80%. Furthermore, in a *Plasmodium falciparum* (Pf) infection mouse model, passive transfer of 10 mg of purified total IgG from PfCyRPA vaccinated rabbits reduced the *in vivo* parasite load by 77%.

The study shows that Mymetics influenza virosomes represent a suitable antigen delivery system for the induction of protective antibodies against the recombinant PfCyRPA, designating it as a highly suitable component for inclusion into a multivalent and multi-stage virosomal malaria vaccine.

The *Plasmodium falciparum* (Pf) cysteine-rich protective antigen (PfCyRPA) has emerged as a promising blood-stage candidate antigen for inclusion into a broadly cross-reactive malaria vaccine. This highly conserved protein among various geographical strains plays a key role in the red blood cell invasion process by *P. falciparum* merozoites and antibodies against PfCyRPA can efficiently prevent the entry of the malaria parasites into red blood cells. The aim of the present study was to develop a human-compatible formulation of the PfCyRPA vaccine candidate and confirming its activity in preclinical studies. Recombinant PfCyRPA expressed in HEK 293 cells was chemically coupled to phosphoethanolamine and then incorporated into the membrane of unadjuvanted influenza virosomes approved as antigen delivery system for humans.

Work at Swiss TPH has been co-funded by the Commission for Technology and Innovation, (grant 17635.1 PFLS-LS) and by Fondation Botnar (grant 6349). Mymetics SA produced and provided the virosome formulations for the studies.

Mymetics is continuing to collaborate with the Swiss TPH and other not-for-profit and academic institutions to advance a multi-stage malaria virosomal based vaccine on PfCyRPA and other malaria stage candidate antigens.

*npj* Vaccines is an online only journal. The online version of the article can be considered definitive. The DOI for this paper will be 10.1038/s41541-020-0158-9 and is available to view online or at <https://www.nature.com/articles/s41541-020-0158-9>.



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### **About Mymetics**

Mymetics Corporation (OTCQB: MYMX) is a Swiss based biotechnology company, with a research lab in the Netherlands, focused on the development of next-generation preventative vaccines for infectious and life disabling diseases. It currently has several vaccines in its pipeline: HIV-1/AIDS, malaria, intra-nasal Influenza and Chikungunya in addition to several ongoing collaborative projects in the field of allergy and oncology Immunotherapy.

Mymetics' core technology and expertise are in the use of virosomes, lipid-based carriers containing functional fusion viral proteins and natural membrane proteins, in combination with rationally designed antigen and adjuvants. For further information, please visit [www.mymetics.com](http://www.mymetics.com).

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### **Forward looking statements**

The Private Securities Litigation Reform Act of 1995 provides a "safe harbor" for forward-looking statements, which are identified by the words "believe," "expect," "anticipate," "intend," "plan" and similar expressions. The statements contained herein which are not based on historical facts are forward-looking statements that involve known and unknown risks and uncertainties that could significantly affect our actual results, performance or achievements in the future and, accordingly, such actual results, performance or achievements may materially differ from those expressed or implied in any forward-looking statements made by or on our behalf. These risks and uncertainties include, but are not limited to, risks associated with our ability to successfully develop and protect our intellectual property, our ability to raise additional capital to fund future operations and compliance with applicable laws and changes in such laws and the administration of such laws. See Mymetics' most recent Form 10-K for a discussion of such risks, uncertainties and other factors. Readers are cautioned not to place undue reliance on these forward- looking statements which speak only as of the date the statements were made.