## ZonMw programma second wave corona, gehonoreerde voorstellen juli 2020

Projectvoorstellen met een andere partij als hoofdaanvrager en het Clb als partner:

| # | Indiener   | Onderwerp   | Abstract/korte beschrijving  | Partners   | Partners  |
|---|--|---|--|--|---|
|   | (centrum + naam)   |   |  | binnen RIVM  | buiten RIVM   |
| 1 | Dr. (10)(2e)<br>(10)(2e)<br>pediatrician,<br>Dr. (10)(2e)<br>(10)(2e) Internist-<br>infectious diseases<br>Spaarne Gasthuis<br>Prof (10)(2e)<br>WKZ/UMCUtrecht | SARSLIVA: utility of saliva<br>in diagnosis, detecting co-<br>infections, and evaluating<br>household transmission in<br>COVID-19 | Saliva is an obvious source for SARS-CoV-2 detection.<br>The virus's ability to infect and actively reproduce in<br>the upper respiratory tract was shown last month by<br>Wendtner et al, who reported on experiments that<br>virus from the throats of nine people with COVID-19<br>could be cultured, showing that the virus is actively<br>reproducing and infectious there. Saliva gland ducts<br>also express the ACE2 receptor for the virus in rhesus<br>macaques. High viral loads were already present in the<br>saliva of COVID-19 patients at the onset of disease,<br>which could account for the fast-spreading nature of<br>this epidemic. Also, SARS-CoV-2 infection appears to<br>shed viral particles from the throat into saliva even<br>before symptoms start. Pre-symptomatic transmission<br>was estimated to contribute to up to 60% of COVID-19<br>cases in China. Saliva may therefore be the obvious<br>tool to detect a-symptomatic and pre-symptomatic<br>individuals before actual symptoms present. When<br>saliva proves to detect low viral loads, COVID-19<br>patients, who may remain symptomatic for weeks to<br>months, can be followed to see whether they still<br>spread the virus. To validate saliva for these purposes,<br>we propose a study where we 1. Follow confirmed<br>COVID-19 patients with home self -sampling of saliva | RIVM:<br>-The viral diagnostic unit<br>Dr (10)(2e) ) (10)(2e) , Dr<br>(10)(2e) ,<br>(10)(2e)<br>- Dr (10)(2e) ,<br>(10)(2e)<br>- Dr (10)(2e) :<br>(10)(2e) | UMCU &RIVM:<br>Molecular<br>diagnostics<br>(bacterial); dr<br>(10)(2e)<br>(10)(2e)<br>,<br>collaborating<br>with RIVM. Long<br>standing<br>experience with<br>saliva as<br>specimen for<br>tracing bacterial<br>infections.<br>UMCU WKZ &<br>RIVM: Prof dr<br>(10)(2e)<br>pediatrician, and<br>currently also<br>(10)(2e)<br>experienced in<br>large scale trials<br>on respiratory<br>infections and |

|   |  | for 4-6 weeks and at least two weeks after symptoms<br>have stopped. 2. Follow household members for 4-6<br>weeks to detect potentially pre-symptomatic and a-<br>symptomatic SARS-CoV-2 infected individuals. 3.<br>Follow emerging IgA and IgG anti-SARS-COV-2<br>antibodies in saliva over time 4. Detect other<br>respiratory viruses present in relation to symptoms of<br>infection. The study is a close collaboration between<br>the Spaarne hospital, Streeklaboratorium Haarlem,<br>and the RIVM where viral diagnostics will be<br>performed and mucosal SARS-CoV-2 antibody<br>emergence.<br>If we can use saliva for early detection, and at low viral<br>loads in the course of infection, containment of viral<br>spread is made easier and allows for improved policies<br>in this pandemic. | microbiome<br>studies.<br>Streeklab<br>Haarlem: Dr. 10/20<br>(10)(20)<br>microbiologist<br>(10)(20)<br>(10)(20)<br>Spaarne<br>Gasthuis: Dr.<br>(10)(20)<br>Internist-<br>infectious<br>diseases and Dr.<br>(10)(20)<br>(10)(20) |
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