Her Excellency, Ms I.K. van Engelshoven, Minister of Education, Culture and Science

Dear Ms Van Engelshoven and colleagues,

We are writing to ask you to support the work of young researchers in the Netherlands with a continuity funding package of € 350 million. Young researchers on temporary contracts have been hit particularly hard by the coronavirus crisis. A few anonymised examples from our network illustrate the problems faced by this specific group.

Stefanie researches attention and concentration. In early 2020, she prepared an experiment that was to form the basis for the most important chapter of her doctoral thesis. The tasks that her subjects were to perform had been set and the eye-tracking equipment was ready. Then the Netherlands went into lockdown, the laboratory had to be closed and the test subjects stayed home. At best, Stefanie will be able to carry out her experiments in late 2020, but she has no funding for the extra time she needs to analyse and process her results. Even if she is able to receive her PhD, her thesis will be of significantly poorer quality.

Rachid is a physician-researcher. He is developing a smart algorithm that can recognise heart attacks sooner and more accurately based on large quantities of hospital data. After all regular care was suspended, he was no longer able to collect new patient data. His project came to a standstill, even though he is nearly finished. As a qualified physician, Rachid also volunteered to provide acute care for COVID-19 patients. As a result, he spent weeks working long and irregular hours. Now that regular care is slowly resuming, he could carry on with his project, but the project funding has run out. Rachid is unable to continue developing a smart algorithm, and patients care and society are unable to benefit from it. It is unclear whether and, if so, when he will obtain his PhD.

Lisa is a biologist and was awarded a prestigious Rubicon Grant by the Dutch Research Council (NWO), allowing her to spend two years at the University of California as a postdoctoral researcher. She studies the growth properties of algae for the production of biofuel. The algae have a seasonal growth cycle and develop mainly in March and April. Due to the lockdown, she has been unable to perform any measurements in recent months. Lisa will run out of grant money at the end of 2020 and will have to return to the Netherlands to look for another position. Half of her project will fall through, along with her chance of getting a second postdoc appointment. Lisa's dream of a career in research looks extremely uncertain. These examples are just a few of the many cases that we have heard about and experienced up close in recent months – closed laboratories, abandoned experiments, locked archives, inaccessible data, unreachable test subjects and research objects, unreachable excavations and discontinued fieldwork. They serve to illustrate a serious problem. Without government support, many research projects will produce less useful and less reliable results or simply remain unfinished. That would be a major loss for research in the Netherlands: knowledge would be squandered, potential innovations and applications obstructed, and the careers of young researchers frustrated for many years to come. In short, past investment in research and innovation is in danger of being erased and a generation of young researchers may be lost to science and society.

Like many other sectors, academia has adapted to 'the new normal' in recent months with astonishing resilience, flexibility and creativity. Universities, university medical centres, research institutes, research funding bodies such as NWO and their staff have done everything in their power to alter research plans and make them coronavirusproof, to revise project schedules, to enable the resumption of experiments and data collection at a later stage, and even to set up new research projects at record speed that make a direct contribution to resolving this crisis.

All this has been feasible for academics on permanent appointments, but not for young researchers on temporary contracts, such as PhD candidates and postdocs. They have only a limited period of time – 2 to 5 years – to complete and publish their various subprojects, to apply for positions, and to write proposals for follow-up research. Many of them have been hit hard by the current crisis, as the examples above illustrate.

The sector has already worked hard to cushion the delay: an emergency fund has been created from the wage reserve under the new collective agreement for universities; crowdfunding campaigns have been launched at various universities; and funds have been moved efficiently between budgets and plans. Utrecht University, Maastricht University and the University of Groningen have already announced that they have freed up funding for aid purposes. But the sector's own resources and reserves are not enough to guarantee the continuity of research and innovation. In a recent letter to the House of Representatives, the Education Inspectorate concluded that institutions of higher education do not have more money in reserve than strictly necessary to ensure the continuity of operation under normal circumstances. The crisis is now pushing them to the very limits of their capacity.

The crisis has placed the usefulness and importance of research beyond dispute. **That is why we urge you to commit to a continuity funding package in support of the upand-coming generation of researchers.** This support would make it possible to **extend appointments as needed to a maximum of, for example, six months. According to internal calculations by the Association of Universities in the Netherlands (VSNU), the Netherlands Federation of University Medical Centres** (NFU), the Dutch Research Council (NWO) and the Royal Netherlands Academy of Arts and Sciences (KNAW), the amount required is € 350 million. Only with this support will the latest generation of researchers be able to bring their innovative ideas and projects to a successful conclusion and will we avoid wasting previous talent and money. Several neighbouring countries, among them Germany, Sweden, Switzerland and the United Kingdom, have preceded us in this regard. There, young researchers can apply to have their appointments extended for several months.

Outstanding young researchers such as Stefanie, Rachid and Lisa may well be the experts that we will need to advise politicians and the public about the next health, climate, safety, food or geopolitical crisis. Let's make sure that they can continue to pursue their careers in research.

Yours sincerely,

Lucille Mattijssen, MSc, on behalf of the PhD Network Netherlands (PNN) Dr Christina Helbig, on behalf of PostdocNL Prof. Jeroen de Ridder, on behalf of The Young Academy The local Dutch young Academies of the Netherlands:

Amsterdam Young Academy Eindhoven Young Academy of Engineering Maastricht Young Academy Tilburg Young Academy Utrecht Young Academy Wageningen Young Academy Young Academy Groningen Young Academy Leiden Young Academy of the University of Twente Young Erasmus Academy

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Their Excellencies,

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