POLITICS

UK government appoints chief science adviser

A pharmaceuticals boss will help to chart Britain's exit from the European Union.

BY ELIZABETH GIBNEY

Patrick Vallance, currently president of research and development at the pharmaceutical giant GlaxoSmithKline, has been appointed as chief scientific adviser, the UK government announced on 8 November.

Vallance, a clinical pharmacologist and former academic, will replace Mark Walport in April 2018. Walport has left the government to become head of a powerful new funding body called UK Research and Innovation.

As chief scientific adviser, Vallance will advise the prime minister and her cabinet, the government's most senior decision-making body. He will also lead the Government Office for Science, which promotes the use of evidence in policymaking across government.

A major part of his role will be to ensure that high-quality advice is available across government departments as they deal with the legal and regulatory consequences of Britain's decision to leave the European Union, says Graeme Reid, a science-policy researcher at University College London. The United Kingdom needs to manage Brexit's impact on nuclear regulation and Britain's role in fusion research, as well as its effect on environment policy and other science-related issues. "Patrick Vallance's experience in both business and universities will be of huge value," says Reid.

Brexit is likely to boost the day-to-day importance of the chief scientific adviser's role, but Vallance will also have to reinvent other, more informal aspects of the position, says Kieron Flanagan, a science-policy researcher at the Alliance Manchester Business School. The creation of UK Research and Innovation, intended to increase the power of UK research-funding bodies, means Walport will continue to wield great influence over science in government. The chief scientific adviser has traditionally been the voice of science in government, Flanagan says.

The relationship between Vallance and Walport will be an interesting dynamic to watch, says James Wilsdon, a research-policy specialist at the University of Sheffield, UK. He hopes that Vallance will act as a bridge between the science community and policymakers, and be open to a range of people and perspectives. ■

Hurricane Maria, which hit Puerto Rico in mid-September, disrupted water supplies in some areas.

PUBLIC HEALTH

Science scramble after storm

Public-health researchers in Puerto Rico are regrouping to study the aftermath of Hurricane Maria.

BY SARA REARDON

Nightfall sets a hard deadline for a team of public-health researchers in Puerto Rico. Since Hurricane Maria hit on 20 September, leaving large swathes of the island without a reliable power supply, the scientists have rushed home each night to avoid being in the streets after dark. Many of the researchers lack running water, and most have limited telephone access.

Yet the team — co-led by José Cordero of the University of Georgia in Athens — has managed to contact several hundred women to begin assessing whether Hurricane Maria has worsened drinking-water contamination, stress and infectious disease that could harm developing fetuses. This wasn't what the researchers set out to study six years ago, when they started a project to assess the impact of pollution on pre-term births. But Cordero's team is one of several research groups that have scrambled to quantify Hurricane Maria's immediate health impacts, even as team members struggle to meet their own basic needs.

The devastation that Cordero saw on a recent visit to Puerto Rico, his birthplace, shocked him. "I thought I was prepared, but I wasn't," he says.

Even before the hurricane, the island's 18 'Superfund' sites — areas so polluted that the US Environmental Protection Agency deems them hazardous to human health or the environment — posed a potential risk to pregnant women, says Ingrid Padilla, an environmental engineer at the University of Puerto Rico at Mayagüez. Twelve of these sites sit on karst, a type of porous terrain that allows toxic chemicals to flow down from the surface into groundwater.

Padilla's previous research suggests that flooding and other disturbances can quickly bring toxic substances in groundwater back to the surface, and carry them into the water supply. Now, she and her colleagues are collecting hair and blood samples from the research cohort to determine whether pregnant women are being exposed to hazardous chemicals, such as phthalates and chloroform. Since the hurricane hit, the researchers have begun to collect and test groundwater

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