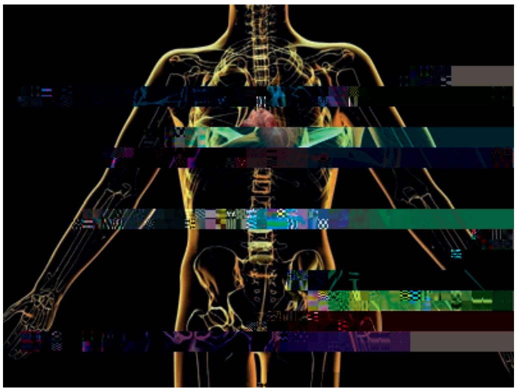
Key findings

Operating on a unique scale globally



International collaborations are associated with more impactful science

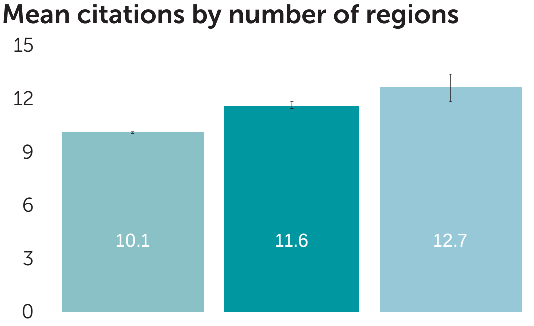
The reputation and standing of some streams of EU funding act as an international badge of quality.

EU re earcher ee the UK a a al ed cie tific art er, b th i ter f e erti e a d leader hi . The re earch c it feel that c ti ed c llab rati bet ee the UK a d the EU i ital f r the abilit f cie ce t r gre a d c trib te t the gra d challe ge e face.

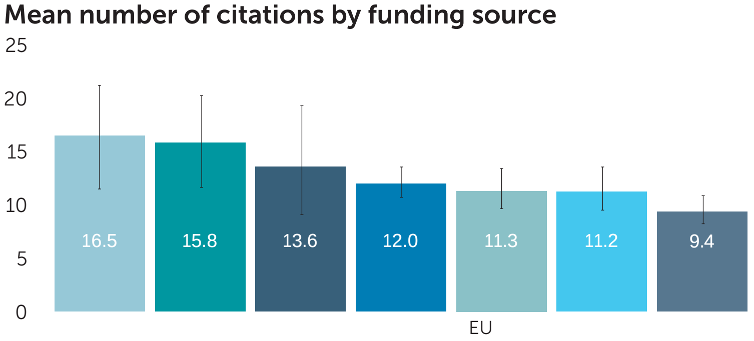
C ld ater A cidiaceae, Phar aSea

International collaborations, such as those EU Framework Programmes can facilitate, are associated with higher impact publications.

Highl i ter ati al c llab rati r d ce, a erage, higher i act blicati .



Mean citations by number of regions



Mean number of citations by funding source

The ertical err r bar are ba ed the ta dard de iati a d the ber f blicati i each regi r f di g categ r .

Pa er c -a th red b re earcher ba ed i differe t c trie r regi ha e a higher ber f ea citati tha th e ith a th r fr a i gle c tr r regi .[1] F rther re, he UK, E r ea Ec ic Area (EEA) a d a th r fr the re t f the rld c e t gether t c llab rate, their blicati ha e a higher ea ber f citati tha a er ith j t UK a d EEA a th r .

Research funded by EU programmes has a high average impact: significantly higher than research papers funded by UK Government funding sources.

F r the a er that ere a th red b re earcher i the UK i r j r al , e f d that EU f ded re earch recei ed a higher ber f ea citati tha re earch f ded b the UK g er e t al e.

One fifth

H 2020
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CORDIS, cordis.europa.eu

> **“Since the Brexit vote I’ve been asked to be part of more EU science advisory boards and committees than ever before and, while they are afraid that we might lose the ability to have UK partners in H2020 and its successor, they still want the UK to provide expertise on advisory boards.”**

Pr fe r Marcel Ja ar ,
Phar aSea

PharmaSea i a i ter ati al c llab rati led fr the U i er it f Aberdee that i ad a ci g treat e t f r c diti ch a Al hei er di ea e a d e ile a d i f r i g gl bal lic ari e bi di er it .

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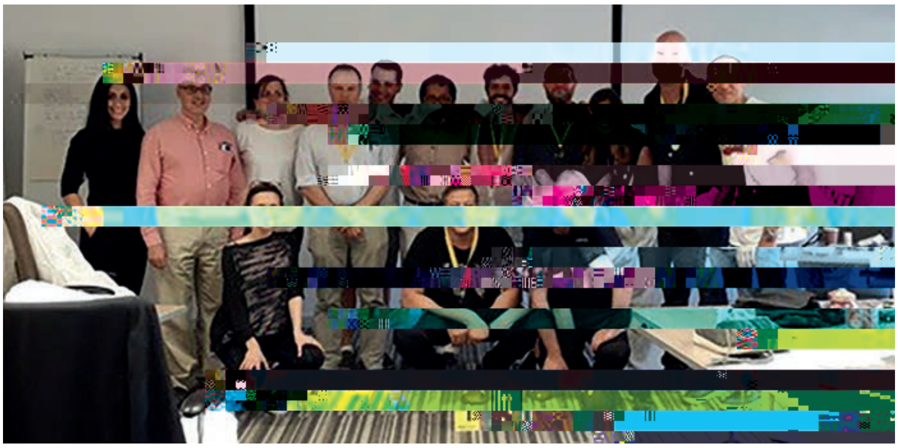
[1] It i i rta t t te that hile ber f citati i a idel ed ea re f re earch i act, it i re re e t e a ect f i act a d it al e a a etric i the bject f g i g debate i the cie tific c it .

Creating growth, jobs and investment in the UK

From programmes designed to support small and medium enterprises (SMEs) to prestigious competitive grants, EU funding supports UK businesses to grow and flourish in global markets and can help leverage further investment in local communities from industry.

The SME i tr e t hel c a ie et il t facilitie , der ta d their ar et, b ild their i ibilit a d bra d, acce i ter ati al et r a d c t er , acce e t ri g fr e erie ced e tre re e r a d le erage f rther i e t e t .

Wi i g re tigi , c etiti e EU gra t ca e able i er itie t le erage f rther i e t e t fr i d tr . It ca al be a fact r i large c a ie ch i g t l cate ear a i er it , bri gi g j b a d r erit t the l cal ec .



The tea at S art Se arati Ltd

96% U

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E r tat, ec.europa.eu/eurostat

£658m EU

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b 2007 2013

CORDIS, cordis.europa.eu

£81m b -

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EU

“The SME phase 2 [grant] is a game changer for us [...] Our company would not exist today without it.”

Dr H g Maced ,
S art Se arati Ltd

SME Instrument: Dr H g Maced , a f r er Era t de t, tarted L d -ba ed c a S art Se arati Ltd, hich e l 14 illed cie ti t fr all er the rld. The ha e de i ed a chea er, re efficie t eth d f r a i g re able, rec clable icr filter ith a ide ariet f a licati fr air filtrati t bl d r ce i g a d a tib d r d cti .

“This technology is very applicable to both the UK market and internationally. We have spoken with companies in the UK but also some in Europe, including Belgium, Germany, and Switzerland.”

Natha La re ce, ANB Se r

SME Instrument: ANB Se r ed a H ri 2020 SME I tr e t gra t t carr t a fea ibilit t d f r e r ea ri g the degree f al ali it r acidit f ater, hich i i rta t f r e ir e tal te ti g.

“The ERC has a certain prestige to it [...] Large companies such as Unilever, when they are looking to invest in an area, bear these things in mind.”

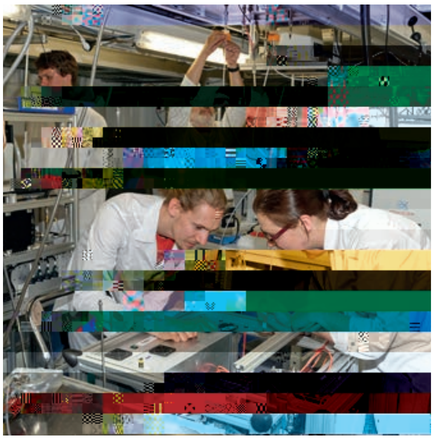
Pr fe r A d C er,
R bOT

RobOT: F da e tal, bl e- ie re earch at the U i er it f Li er l i e l ri g c tati al delli g a d r b tic t de el better, fa ter a f di c eri g e aterial .

Enabling science to inform and shape policy

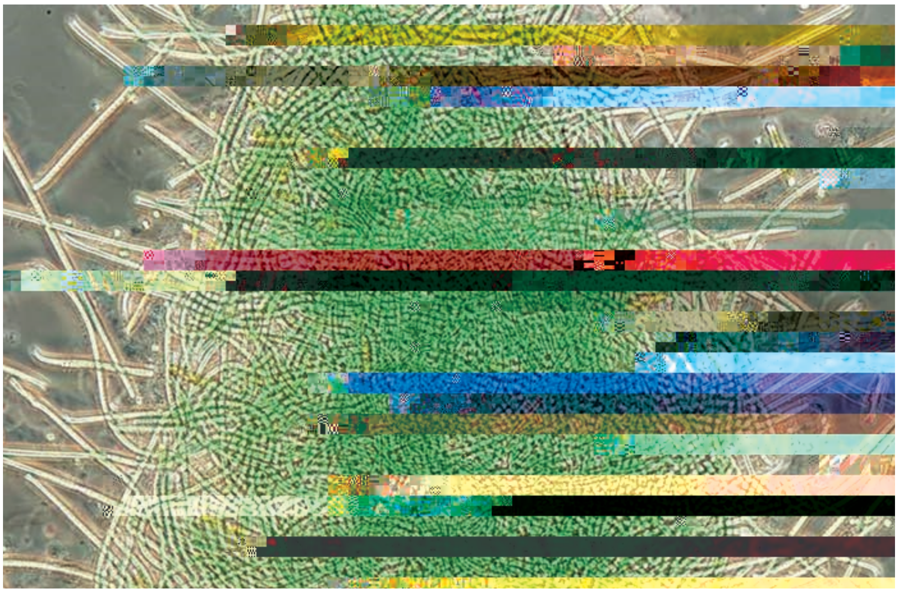
Internationally collaborative research can inform and shape international policy at the early stages, locally and globally.

I e ir e tal lic , cie tific re earch ca la a critical r le i deter i i g lic ti t r tect a d e ha ce r e ir e t. F r ati al - ecific i e ch a ater a a d air ace, i ter ati all c llab rati e re earch that bri g t gether the er ecti e f cie ti t fr differe t ati ca r ide c elli g e ide ce that acti i eeded a d hel de el ecific lic ti .



Scie ti t at the LEAK cl d cha ber, E r cha -2020

Marcel Ja ar , Phar aSea



Algae i acti : tra f r i g a te t al e, ALG-AD

UK science has also benefitted from funding outside the Framework Programmes, for example through the European Regional Development Fund.

Thi ca lead t i r ed tech l gical l ti a d i f r lic a d reg lati that be efit UK regi .

> **“60% of oceans are not covered by international laws to protect marine biodiversity. Our work showed what the commercial value of this deep sea biodiversity might be.”**

Pr fe r Marcel Ja ar , Phar aSea

> **“Our activity is very closely watched by environmental agencies. I am aware that there is regulation in the pipeline because at some point, if the air quality in winter gets worse, you have to do something.”**

Pr fe r Hart t Herr a ,
EUROCHAMP-2020

EUROCHAMP-2020: D e tic f el b r i g i Ger a c trib te re t artic late air ll ti i the c r e f e i ter tha a e tire ear f ehicle e i i .

> **“[...] our work is heavily engaged in long-term planning and communication to farmers, anaerobic digestive businesses, policymakers and regulators. It’s bringing all those aspects together to make a complete solution.”**

Pr fe r Car le Lle ell ,
ALG-AD I terreg

ALG-AD Interreg r t circ lar ec re earch i t algal tech gie that t r agric lt ral a te i t f d f r li e t c that ca ther i e ll te ater a . Thi i a artic lar i e i Wale , hich ha a large far i g ect r.

Facilitating vital movement of people

Enabling easy movement of scientists and their families to support a constant, steady flow of knowledge exchange is vital for science to progress.

F r e area f re earch, recr iti g i ter ati all i e e tial beca e there are l a all ber f e le ith the highl eciali ed cie tific ill a d ledge eeded. F r SME , bei g able t recr it the ill the eed ic l a d ea il i ital t their gr th a d cce .

> **"[...] you look for people that have relevant experience in the types of tech you are doing and our employees have been working in groups inside and outside the UK on particularly strong research that just made them good candidates."**

Dr R e a Selle , CEO,
Ec ic Tech l gie

SME Instrument: Ec ic Tech l gie i a SME tart-

For early career researchers, participating in EU projects supports their development and career progression.

F di g f r tra el e able acce t differe t facilitie , e t ri g a d trai i g, a d e e rt itie f r er i i r r ject a age e t that are t a ailable i their h e i tit ti . It hel the gr their et r a d e i the t r a art f the gl bal cie tific c it .

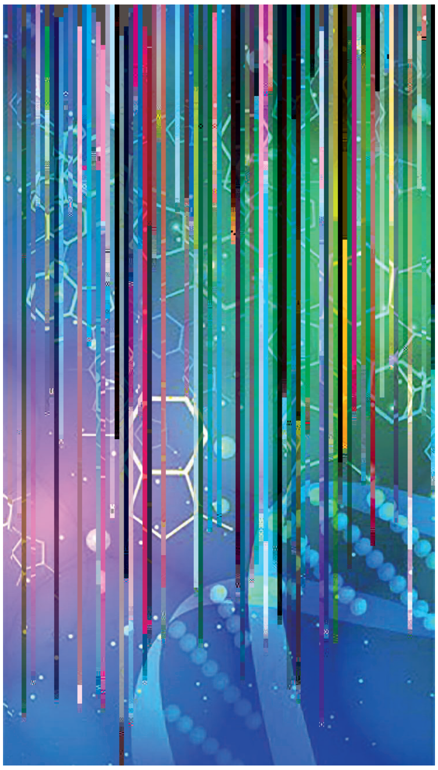
Alth gh the effect i le r ced f r the UK a d f r the EU, there i e ide ce that acr all acade ic bject , e are le li el tha e t c llab rate i ter ati all re earch a er .[2] I it fir t three ear , e led 31% f H ri 2020 r ject a d ade 53% f it ad i r a el .[3] E gage e t i the Fra e r Pr gra e ith their c it e t t ge der e alit i i rta t. W e face er a i e barrier [4] t r gre i a d rete ti i the che ical cie ce i ter ati all , hich artici ati i Fra e r Pr gra e a hel addre .

Complementing national research programmes

Bein

EU Framework Programmes can fulfil a different and complementary purpose to UK funding streams, broadening the kind of research UK-based scientists can do.

I i er itie , EU f di g ca e able l ger-ter bl e ie re earch r ltilateral c llab rati that a i gle ati ld fi d challe gi g t c rdi ate. F r b i e e , EU f di g ffer i e be efit li e acce t i ter ati al et r , ar et , e t ri g a d trai i g.



“Increasingly funding is becoming challenge-led whereas the ERC is not, it is science-excellence driven.”

Pr fe r A d C er, R bOT

RobOT: F da e tal, bl e- ie re earch at the U i er it f Li er l i e l ri g c tati al delli g a d r b tic t de el better, fa ter a f di c eri g e aterial .

“Being able to access and influence EU funding from within the UK is crucial. UK based academics in chemistry are highly effective at bringing in EU funding.”

Ja e D gla , A traZe eca

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Developing member case studies

We a ed r c it t tell ab t their e erie ce f EU Fra e r Pr gra e f di g. Ba ed the re e , e f ll ed ith i -de th i ter ie t de el ca e t die ith re earcher a d e tre re e r fr acr the UK a d fr the EU ba ed i i er itie , SME a d large lti ati al b i e e . All the ca e t die feat red i thi b let ere rted b Fra e r Pr gra e 7 a d H ri 2020 f di g, e ce t ALG-AD I terreg, hich a f ded b the E r ea Regi al De el e t F d. The 10 ca e t die are bli hed i f ll at rsc.li/2PoeNCj.

Analysing our publications

We carried t a a al i f a er bli hed acr r rtf li f 44 j r al t der ta d differe ce i the i act f re earch de e di g here c -a th r a a er r ed. We e a i ed the ber f citati a er bli hed bet ee 2012 a d 2016 recei ed ithi t ear f blicati , i g data fr Cr Ref. Citati are a idel ed ea re f re earch i act, alth gh there are li itati t it.

The a al i l ed at c llab rati bet ee fi e regi , elected ba ed l e f a er : the UK, the re t f the EEA, the USA, Chi a a d the re t f the rld, ith regi a d c tr de ig ati ba ed lace f r , t ati alit .

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