



Supporting **T**alent in **R**esearch@University of Padova (STARS@UNIPD) – Call for proposals 2019

Call Opening: 10 January 2019

Application deadline: 2 April 2019, 1 p.m. (Italian time zone)

PREAMBULE

The University of Padova (Unipd or University), through the programme called “*Talent in Research*”, supports excellent research to be performed on its premises by high-potential researchers.

The programme “*Talent in Research*” is characterized by several initiatives aimed at increasing the participation of young researchers in competitive calls for proposals, as well as attracting researchers from abroad, offering financial support to the most deserving projects, whose research value is acknowledged by internationally renowned experts. The programme includes the following actions:

- “**Talents@Unipd**”, a scouting initiative open to all scientists, with no exclusion of citizenship, who are willing to choose Unipd as their Host Institution in their applications for the European Research Council (ERC) funded researches (<https://www.unipd.it/en/talents-unipd>);
- “**Supporting TALENT in ReSearch@University of Padova - STARS@UNIPD**”, which encourages international, high quality, innovative and ambitious research in Padova and boosts the participation of Unipd in ERC calls, promoting an open and positive attitude towards international funding opportunities for basic research (<https://www.unipd.it/en/stars>).

The STARS@UNIPD – 2019 call for proposals, which is at its second edition, comprises two types of funding supporting individual research projects, proposed by a Principal Investigator (PI) at a “Starting” or “Consolidator” career stage. A third type of funding is specifically addressed to PIs who submitted an ERC application in the 2017 and 2018 calls for proposals, chose the University of Padova as their Host Institution and scored “A” in the second step of the evaluation process; despite being considered eligible for funding, they were not funded due to budget limits.

Candidates who wish to apply to the STARS@UNIPD - 2019 Call for proposals can submit a project in one of the 25 scientific research areas, which Unipd grouped in three Macro-areas corresponding to the three ERC research domains as described in Annex 1.

Moreover, in order to reward excellence and foster a high-level, open, transparent and merit-based competition, as well as promoting the increasingly broad participation of researchers in international competitive calls for proposals, the evaluation process and criteria of the STARS@UNIPD call will be similar to those of the ERC. The application forms themselves, even if slightly simplified, match the templates of the European Research Council.



Art. 1 – DESCRIPTION OF THE PROGRAMME

The **STARS@UNIPD** call for proposals provides funding for two-year research projects, proposed by researchers with excellent scientific qualifications willing to launch or consolidate an independent research activity and a research team at Unipd.

Grants operate on a 'bottom-up' basis, without any predetermined priorities. They are open to PIs of any age and nationality, who wish to pursue research at a Unipd department and who are able to demonstrate the innovative nature, the ambition and the feasibility of the proposed research.

This call for proposals includes the following types of grant:

- **STARS Starting Grants (STARS-StG):** designed to fund excellent PIs who are about to establish their own research team and/or to start their own independent research;
- **STARS Consolidator Grants (STARS-CoG):** designed to fund excellent PIs, who are already conducting research at Unipd and are consolidating their own research team and/or their own independent research;
- **STARS Wild Card Grants (STARS-WiC):** designed to fund PIs who submitted a project to the 2017 and 2018 ERC calls for proposals, indicated Unipd as their Host Institution and obtained a final score of "A", thus qualifying for funding, but were not funded due to budget limits.

Unipd will proportionally fund research projects amongst the Macro-areas and the types of grants, on the basis of the eligible applications and of Wild Card projects submitted.

Art. 2 – ELIGIBILITY CRITERIA

For each type of grant, PIs of any nationality meeting the following criteria may apply:

- ✓ **STARS-StG:** the PI has been awarded his/her first Doctoral degree within a minimum of 2 and a maximum of 7 years prior to 30 November 2018; eligibility extensions are provided for in the 'Specific Eligibility Criteria' described in Annex 2;
- ✓ **STARS-CoG:** the PI is a tenured professor or researcher at Unipd, or a researcher on a fixed-term contract of type a) or type b) at Unipd, who has been awarded his/her first Doctoral degree within a minimum of 7 and a maximum of 12 years prior to 30 November 2018; eligibility extensions are provided for in the 'Specific Eligibility Criteria' described in Annex 2; researchers who were granted a *Marie Skłodowska Curie Actions – Individual Fellowship* within the 2016 call for proposals, having Unipd as their *Host Institution*, are admitted to this funding scheme;
- ✓ **STARS-WiC:** the PI is a professor/researcher who submitted a proposal in the *Starting* or *Consolidator* or *Advanced* ERC Grant, 2017 and 2018 calls for proposals, indicating Unipd as *Host Institution*, obtained a final mark of "A" but was not funded due to budget limits.

PIs with an ERC grant still active at the deadline of the call, or who will be funded within the date of the



approval of the ranking list, are not eligible to apply.

Art. 3 - PROPOSAL SUBMISSION

3.1 Submission process

Each candidate may submit a single research proposal in one of the 25 research areas within the three Marco-areas corresponding to the three ERC research domains. The following procedure applies:

- ✓ in order to submit the proposals, candidates must exclusively follow the on line procedure available at this link: <https://pica.cineca.it/unipd/>. They must first register on the platform and follow the instructions described in Annex 2;
- ✓ the proposal must be submitted within the opening and closing date of the call. The STARS@UNIPD – 2019 call will open on 10 January 2019 and close on 2 April at 1 p.m. (Italian time zone). Proposals submitted after the deadline will not be considered eligible;
- ✓ the proposal must be written in English;
- ✓ the proposal must be completed in its entirety and must include all the required documents; should any document in the application be written in any other language, an English translation thereof must be included;
- ✓ if the PI does not hold a permanent position at Unipd and his/her proposal is submitted under the STARS-StG or STARS-CoG type, then the application must include a “Letter of commitment” duly signed by the Head of the Department chosen by the candidate as his/her hosting department. Such procedure is detailed in Annex 2;
- ✓ once the filling in of the online proposal is completed, the candidate must sign the application according to the instructions provided on the on line platform (and in Annex 2). A valid ID must be enclosed.

The system performs a general check on the completeness of the required information and reports any errors that have to be corrected before submission. Once the application is signed it can be submitted to Unipd. Only proposals submitted via the on line system will be considered eligible.

3.2 Contents of the proposal

The application package consists of:

- ✓ an administrative form containing the PI personal data and some general information about the research proposal;
- ✓ the research proposal (*Research Proposal*), drawn up according to the forms included in Annex 2 and uploaded in a .pdf format. The Research Proposal comprises the following:
 - **Research Proposal [Part B1]**: extended synopsis; PI’s CV and track record;
 - **Research Proposal [Part B2]**: scientific proposal.

PIs applying for WiC grants should only complete part B2 of the proposal, extrapolating a line of research from their original ERC project, that must be consistent with the duration and budget of the STARS grant.

For all types of grants, the application form includes a table related to the ethical implications ("*Ethical*



Issues Table" described in Annex 2) of the proposed research, which certifies the project compliance to the national, European and international legislation on ethical issues.

The application form, according to the type of grants selected by the candidate, also includes the documents listed below:

- ✓ **STARS-StG e STARS-CoG:** a *Letter of Commitment* must be provided by PIs who do not hold a permanent position at Unipd. The letter has to be duly signed by the Head of the Department that the candidate has chosen for carrying out his/her project. Considering the proposal feasibility, the Head of Department supports the access to the Department structures, tools and useful knowledge that may be necessary for the implementation of the project.
- ✓ **STARS-WiC:** the *Evaluation Summary Report* issued by the ERCEA for the project submitted in the 2017 and 2018 calls for proposals, which obtained an "A" as final score but was not funded.

This call for proposals, its attachments and any document that may be relevant to the submission process are available on the website <https://www.unipd.it/en/stars2019>.

3.3 Budget

The budget of STARS projects includes an amount covering research costs, which depends on the scientific domain of the proposal, and, for *Starting Grants* and *Consolidator Grants*, an amount covering a two-year research grant ("*assegno di ricerca*") which will be awarded to PIs who do not hold a permanent position at Unipd.

Each STARS-StG project may include the cost of a two-year grant ("*assegno di ricerca*") for the PI who does not hold a permanent position at Unipd (up to 80,000 euros) and a maximum funding of 100,000 euros for the Macro-areas LS - Life Sciences and PE - Physical Sciences and Engineering and 60,000 euros for the Macro-area SH - Social Sciences and Humanities, to cover research costs (Table 1).

STARS-StG (amounts are expressed in K€)	Maximum funding covering research costs (amount for two years) Macro-area PE: Physical Sciences and Engineering	Maximum funding covering research costs (amount for two years) Macro-area LS: Life Sciences	Maximum funding covering research costs (amount for two years) Macro-area SH: Social Sciences and Humanities	Maximum funding covering the PI grant (gross amount for two years)
PI holding a permanent position at Unipd	140	140	80	N.A.
PI not holding a permanent position at Unipd	100	100	60	80

Table 1 - STARS-StG eligible costs

In each STARS-CoG project, research can be funded up to 140,000 euros for the Macro-areas LS - Life Sciences and PE - Physical Sciences and Engineering, and up to 80,000 euros for the Macro-area SH - Social Sciences and Humanities (Table 2), for 2 years. The STARS-CoG grantees who do not hold a permanent position at Unipd can also add up to 80,000 euros to their budget, such amount will cover a two-year grant ("*assegno di ricerca*") for themselves.



STARS-CoG (amounts are expressed in K€)	Maximum funding covering research costs (amount for two years) Macro-area PE: Physical Sciences and Engineering	Maximum funding covering research costs (amount for two years) Macro-area LS: Life Sciences	Maximum funding covering research costs (amount for two years) Macro-area SH: Social Sciences and Humanities	Maximum funding for the PI grant (gross amount for two years)
PI holding a permanent position at Unipd	140	140	80	N.A.
PI not holding a permanent position at Unipd	140	140	80	80

Table 2 - STARS-CoG eligible costs

Each STARS-WiC project can be funded up to 140,000 euros for the Macro-areas LS - Life Sciences and PE - Physical Sciences and Engineering and up to 80,000 euros for the Macro-area SH - Social Sciences and Humanities (Table 3) for 2 years.

STARS-WiC (amounts are expressed in K€)	Maximum funding covering research costs (amount for two years) Macro-area PE: Physical Sciences and Engineering	Maximum funding covering research costs (amount for two years) Macro-area LS: Life Sciences	Maximum funding covering research costs (amount for two years) Macro-area SH: Social Sciences and Humanities	Maximum funding for the PI grant
PI holding a permanent position at Unipd	140	140	80	N.A.

Table 3 – STARS-WiC eligible costs

Art. 4 – THE EVALUATION COMMITTEE

An evaluation committee will be set up for the selection of proposals that are eligible for funding.

The Evaluation Committee is composed by a maximum of 25 external experts of recognized international prestige, selected among the panel members of the competitive European projects funded by the *European Research Council* (ERC), who will be assigned to 3 sub-committees matching the three ERC Domains:

- PE: Physical Sciences and Engineering ;
- LS: Life Sciences;
- SH: Social Sciences and Humanities.

The subcommittees will be composed by 10, 9, 6 experts (PE=10, LS=9, SH=6).

Three sub-committee coordinators will be appointed with the task of finding the other members of their own sub-committee, one for each ERC sector different from their own, and coordinating the work of the three sub-committees.

If no projects are submitted within a scientific area, no experts will be appointed in that area.

Sub-committees will employ independent anonymous reviewers who are expert in the scientific areas of the projects admitted to the peer-review process (step 2).

The Evaluation Committee, chaired by three sub-committee coordinators acting as Presidents, will collaborate with a Unipd commission (STARS@Unipd Internal Commission) composed by the Vice Rector



for Research (Coordinator), the Research and Business Relations Area Manager (ARRI), the Head of the International Research Office and the Head of the Research and Quality Office of the University of Padova.

The STARS@Unipd Internal Commission will screen projects for eligibility and support the Evaluation Committee in the preliminary phase, confirming whether financial, human and instrumental resources declared for the projects are actually available. The STARS@Unipd Internal Commission will be in charge of all communication activities taking place among the Evaluation Committee, the Departments and the Unipd bodies involved in the programme.

Art. 5 – SELECTION PROCESS

The selection process includes an eligibility check of all applications, that is followed by two different evaluation steps for the STARS-StG and STARS-CoG grants and by a single step for the STARS-WiC grants. The selection process will be carried out according to the following indicative timetable:

Opening of the call for proposal	10 January 2019
Deadline for proposals submission	2 April 2019 hrs 1 p.m.
Eligibility check	30 April 2019
Pre-selection (Step 1)	30 June 2019
Evaluation of proposals (Step 2)	30 September 2019
Interview	October 2019
Evaluation results	15 November 2019
Approval of the ranking list of projects selected for funding	30 November 2019
Projects starting date	1 January 2020
Latest deadline for the signature of STG or COG research grant contract (“assegno di ricerca”)	31 March 2020

5.1 – Eligibility check

After the call deadline, all proposals will be checked to ensure they meet the eligibility requirements in accordance with Art. 2.

Eligibility is checked on the basis of the information the PI provided in the administrative form and the correctness and completeness of the documents enclosed in the application.

The results of the eligibility check will be published on the following website: <https://www.unipd.it/en/stars2019>. PIs excluded from the selection process due to the lack of one or more individual requirements for participation will be informed by an e-mail. Such e-mail will also describe the procedure for a possible redress.

Upon receipt of the notification of ineligibility the candidate has 5 working days to report any mistakes in the eligibility check carried out by Unipd and the redress will be evaluated by the STARS@Unipd Internal Commission. After the above mentioned time lapse, the disqualification becomes definitive.

The University reserves the right to disqualify proposals at any time if one or more requirements for participation are missing.



5.2 – Evaluation criteria of StG and CoG proposals

Scientific excellence will be the sole criterion of evaluation (Annex 2). Each proposal will be evaluated, at every step of the selection process, on the following two principles:

- the ground-breaking nature, ambition, and feasibility of the project;
- the PI's scientific skill, creativity, and commitment.

A PI of a STARS-StG project must already have demonstrated the potential to conduct independent research and evidence of scientific maturity. For example, a StG PI must have published at least one important publication as main author or without his/her Doctoral supervisor. The PI should also be able to demonstrate a promising track record of early achievements which are in line with his/her field of studies and career stage. S(he) should highlight:

- the most important publications (as main author) in international peer-reviewed scientific journals or in leading journals in his/her research field;
- the participation in national or international conferences, granted patents, awards, prizes and other qualifications that may be useful for the selection process.

A PI of a STARS-CoG project must have already demonstrated research independence and evidence of scientific maturity. For example, a CoG PI must have published several important publications as main author or showing his/her fundamental scientific contribution. The PI should also be able to demonstrate a consolidated track record of achievements which are appropriate to his/her field of studies and career stage.

S(he) should highlight:

- the most important publications (as main author) in major international peer-reviewed scientific journals or in leading journals in his/her research field;
- the participation in established national or international conferences, granted patents, awards, prizes and other qualifications that may be useful for the selection process.

5.3 – Pre-selection (Step 1)

At step 1, only part B1 of the STARS-StG and STARS-CoG proposals will be assessed.

Each proposal will be reviewed by the member of the Macro-area sub-committee who is expert in the scientific area indicated in the administrative form.

At the end of step 1, every sub-committee will rank the proposals in their Macro-area on the basis of the scores given by the experts.

At the end of step 1, candidates will be informed that their proposal:

- A. is of excellent quality and passes to the following step of the evaluation;
- B. is not of sufficient quality to pass to the following step of the evaluation.

The number of proposals passing to step 2 will approximately double the number of fundable projects.



WiC proposals will be assessed by the expert of the Macro-area sub-committee in charge of the scientific area indicated in the administrative form of the proposal. Only Part B2 - Research proposal has to be submitted and will be evaluated.

The Evaluation Committee will express an evaluation comment on the WiC projects and propose the allocation of funds to the ones that are considered worth supporting.

Results will be published on the following website: <https://www.unipd.it/en/stars2019>.

5.4 – Evaluation of proposals (Step 2)

Proposals for STARS-StG and STARS-CoG grants that are admitted to Step 2 will be assessed in full (parts B1 and B2) by the sub-committee of the Macro-area in charge of the scientific area indicated in the administrative form. The sub-committees will make use of 3 reviewers' evaluations: two evaluations are provided by external experts and one is provided by the sub-committee member.

PIs of STARS-StG and STARS-CoG proposals will be invited to an interview of approximately 30 minutes with the relevant Macro-area sub-committee. The interview consists of a brief presentation of the research project and a question and answer session related to the project and its budget.

Candidates will be notified of the date/time of the interview by e-mail (at the address indicated in the application form) with a notice of approximately 3-4 weeks. The interviews will be held in English, via Skype or in person at Unipd. No reimbursement will be provided for the participation to the interview. In compliance with Annex 2, absence or unavailability to attend the interview shall be deemed as a withdrawal from the selection process and will result in the exclusion of the proposal from funding.

Each Macro-area sub-committee will use the information gathered from the reviewers' evaluations and the interviews to jointly draw the final ranking for StG and CoG proposals. The sub-committees will propose the budget allocation for proposals deemed fundable.

Art. 6 – APPOINTMENT OF THE EVALUTATION COMMISSION AND APPROVAL OF THE RANKING LIST

The Evaluation Committee referred to in Art. 4 is appointed through a Unipd Rector's decree and is in charge of formulating the list of proposals selected for funding, which will be submitted to the University Board of Directors for its final approval.

Art. 7 – ALLOCATION OF FUNDING

Unipd will award a B-type Research grant contract (i.e. *“assegno di ricerca di tipo B”*, pursuant to Art. 3, paragraph 2, clause b) of the current University Regulations for research grants at Unipd) to those PIs of STARS-StG and STARS-CoG projects who included the cost of their own contract in the proposal. The contract will be drawn for the amount specified in the proposal budget after deduction of any contributions required by law.

The Department hosting the research shall agree with the PI the contract's starting date, under penalty of forfeiture. Such date shall not be later than 31 March 2020: any exceptional extension may be granted by the STARS@Unipd Internal Commission in agreement with the Head of the hosting Department, following



a justified request by the PI.

Should the agreement not be entered into by this date, the grantee shall forfeit the right to the research grant. An extension to the agreed date may be allowed in exceptional cases, for example if a project requires an ethics review, in case of prolonged visa procedures, or justified and documented personal problems.

The signing of the contract shall not imply a subordinate employment relationship or ensure any rights to access permanent Unipd staff positions.

Unipd will make the projects funding available to hosting Departments.

- ✓ For STARS-StG and STARS-CoG grants: when the PI does not hold a permanent position at Unipd, the project shall start on the date specified in the research contract and last two years (extensions are admitted). If the PI's employment relationship with Unipd changes during the project, the project shall continue but the residual amount related to the cost of the PI will be recovered by Unipd;
- ✓ For STARS-CoG grants (when the PI holds a permanent position at Unipd) and for STARS-WiC grants: funding will be made available to the PI's hosting Department for two years (no extensions are admitted).

The contribution covering research costs will cover costs for additional staff, equipment, travels, consumables, publications and other costs necessary for the implementation of the project. Expenses that occur outside the period of the contract are not eligible.

During the carrying out of the project, modifications to the approved budget must be authorized by the STARS@Unipd Internal Commission.

Art. 8 DUTIES OF PIs OF FUNDED PROJECTS

PIs are duty bound to carry out the activities envisaged in the research project they submitted and for which they have been funded.

At the end of the first year and within 30 days from the end of the project, the PI must submit a scientific report (*Intermediate* and *Final*, respectively) describing the implementation of the project, the results obtained, any changes compared to the original proposal.

The scientific report, together with the approval of the Board of the hosting Department, must be sent to Unipd, which will, in turn, send it to the STARS@Unipd Internal Commission.

The results of the research must be published according to the "Open Access Regulation for the scientific production of the University of Padova" and, also for the purpose of ex post verification, in publications resulting from research funded under this call, PIs should quote (in order of priority) the STARS@UNIPD programme, the acronym and the title of the project.

During the project implementation, the PI undertakes to submit a ERC-StG or ERC-CoG or ERC-Adv project proposal indicating Unipd as his/her Host Institution.



Art. 9 – ETHICAL PRINCIPLES

All the proposed research and innovation activities shall comply with ethical principles and relevant national, EU and international legislation, including the Charter of Fundamental Rights of the European Union and the European Convention on Human Rights and its Supplementary Protocols. Particular attention shall be paid to the principle of proportionality, the right to privacy, the right to the protection of personal data, the right to the physical and mental integrity of a person, the right to non-discrimination and the need to ensure high levels of human health protection. Research and innovation activities proposed under these projects shall have an exclusive focus on civil applications.

Art. 10 – FINAL PROVISIONS

For anything not specified in this call for proposals, please see Law no. 240/2010 and the University of Padova current Regulations for research grants and subsequent amendments and integrations, and other current regulations.

The University reserves the right to verify a candidate's self-certifications and statutory declarations (provided in accordance with the Italian Presidential Decree DPR 445/2000) at any stage of the procedure. If the aforementioned statements are found to be false, the declarer shall forfeit any benefits that s(he) may have gained from the false statements, without prejudice to any sanctions envisaged by the Italian criminal code or by special laws governed by Art. 76 of Italian Presidential Decree DPR no. 445/2000.

Personal data provided by candidates shall be processed according to the EU Regulation no. 679 dated 27.04.2016 (*General Data Protection Regulation - GDPR*).

The candidates' personal data will be electronically processed only for the purposes of the present call for proposals and the possible establishment of their employment contract.

The provision and collection of personal data is mandatory for the participation in the selection procedure and, in case of sensitive data, it is carried out according to Law 68/1999 and Law 104/1992.

The complete documentation informing on the personal data processing is available at the following link: <http://www.unipd.it/en/privacy>.

The person in charge of this procedure is Mr. Andrea Berti, Manager of the Research and Business Relations Area (ARRI) of the University of Padova.

The call for proposals is jointly managed by the Research and Quality Office and the International Research Office of the University of Padova:

- for questions or information about the proposal submission, please refer to the Research and Quality Office: stars.grants@unipd.it;
- for questions or information about the evaluation procedure, please refer to the International Research Office: talent.stars@unipd.it.

All relevant documents for this call for proposals are available at the following link: <https://www.unipd.it/en/stars2019>.



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The English version of this call for proposals has the sole purpose of enabling applicants to understand the content thereof; only the Italian version of the call is legally binding.

Padova, 9 January 2019

Annexes:

1. Macro-areas and ERC scientific domains;
2. Guide for Applicants and application template.



Attachment 1: Macroareas and ERC scientific domains

Macroarea PE: Physical Sciences and Engineering	Macroarea LS: Life Sciences	Macroarea SH: Social Sciences and Humanities
<p>PE1 Mathematics: All areas of mathematics, pure and applied, plus mathematical foundations of computer science, mathematical physics and statistics</p> <p>PE2 Fundamental Constituents of Matter: Particle, nuclear, plasma, atomic, molecular, gas, and optical physics</p> <p>PE3 Condensed Matter Physics: Structure, electronic properties, fluids, nanosciences, biophysics</p> <p>PE4 Physical and Analytical Chemical Sciences: Analytical chemistry, chemical theory, physical chemistry/chemical physics</p> <p>PE5 Synthetic Chemistry and Materials: Materials synthesis, structure-properties relations, functional and advanced materials, molecular architecture, organic chemistry</p> <p>PE6 Computer Science and Informatics: Informatics and information systems, computer science, scientific computing, intelligent systems</p> <p>PE7 Systems and Communication Engineering: Electrical, electronic, communication, optical and systems engineering</p> <p>PE8 Products and Processes Engineering: Product design, process design and control, construction methods, civil engineering, energy processes, material engineering</p> <p>PE9 Universe Sciences: Astro-physics/chemistry/biology; solar system; stellar, galactic and</p>	<p>LS1 Molecular and Structural Biology and Biochemistry: Molecular synthesis, modification and interaction, biochemistry, biophysics, structural biology, metabolism, signal transduction</p> <p>LS2 Genetics, Genomics, Bioinformatics and Systems Biology: Molecular and population genetics, genomics, transcriptomics, proteomics, metabolomics, bioinformatics, computational biology, biostatistics, biological modelling and simulation, systems biology, genetic epidemiology</p> <p>LS3 Cellular and Developmental Biology: Cell biology, cell physiology, signal transduction, organogenesis, developmental genetics, pattern formation in plants and animals, stem cell biology</p> <p>LS4 Physiology, Pathophysiology and Endocrinology: Organ physiology, pathophysiology, endocrinology, metabolism, ageing, tumorigenesis, cardiovascular disease, metabolic syndrome</p> <p>LS5 Neurosciences and Neural Disorders: Neurobiology, neuroanatomy, neurophysiology, neurochemistry, neuropharmacology, neuroimaging, systems neuroscience, neurological and psychiatric disorders</p> <p>LS6 Immunity and Infection: The immune system and related disorders, infectious agents and diseases, prevention and treatment of infection</p> <p>LS7 Diagnostics, Therapies, Applied</p>	<p>SH1 Individuals, Markets and Organisations: Economics, finance and management</p> <p>SH2 Institutions, Values, Environment and Space: Political science, law, sustainability science, geography, regional studies and planning</p> <p>SH3 The Social World, Diversity, Population: Sociology, social psychology, demography, education, communication</p> <p>SH4 The Human Mind and Its Complexity: Cognitive science, psychology, linguistics, philosophy of mind</p> <p>SH5 Cultures and Cultural Production: Literature, philology, cultural studies, anthropology, study of the arts, philosophy</p> <p>SH6 The Study of the Human Past: Archaeology and history</p>



<p>extragalactic astronomy, planetary systems, cosmology, space science, instrumentation</p> <p>PE10 Earth System Science: Physical geography, geology, geophysics, atmospheric sciences, oceanography, climatology, cryology, ecology, global environmental change, biogeochemical cycles, natural resources management</p>	<p>Medical Technology and Public Health: Aetiology, diagnosis and treatment of disease, public health, epidemiology, pharmacology, clinical medicine, regenerative medicine, medical ethics</p> <p>LS8 Evolutionary, Population and Environmental Biology: Evolution, ecology, animal behaviour, population biology, biodiversity, biogeography, marine biology, microbial ecology</p> <p>LS9 Applied Life Sciences and Non-Medical Biotechnology: Applied plant and animal sciences; food sciences; forestry; industrial, environmental and non-medical biotechnologies, nanobiotechnology, bioengineering; synthetic and chemical biology; biomimetics; bioremediation</p>	
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