

Patenting... demystified



A guide for academics



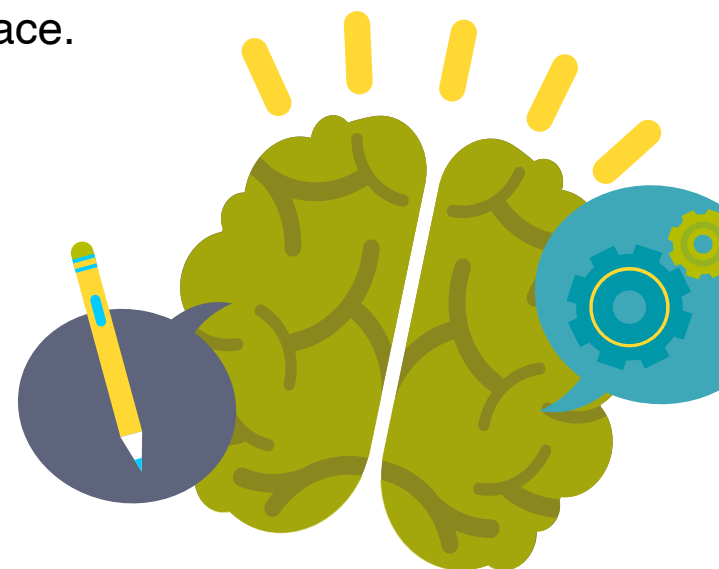
Thinking of patenting your invention?

An individual or team can apply for a patent if they invent, for example, a new device, a new therapeutic agent, a new material, a new diagnostic, or a new process.

In some instances, a new use of an existing compound or apparatus or a new combination of known materials may be patentable if it is advantageous.

Before an application for a patent is made, **the invention must remain a secret**. A public disclosure of the invention will, for the most part, negate the ability to gain patent protection. A disclosure can be in the form of a manuscript, thesis, oral presentation, a poster, social media post or even a discussion without a confidentiality agreement in place.

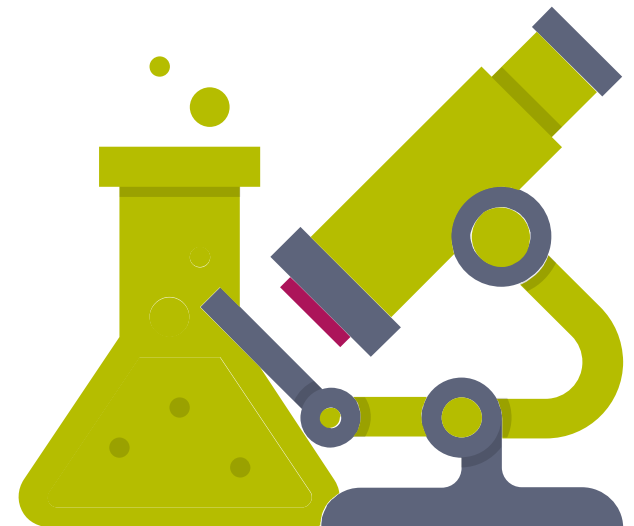
A patent is a form of intellectual property (IP) where a government confers a right for a set period to exclude others from making, using, or selling an invention. The patent duration typically lasts for 20 years.



Reasons to patent

- Increase the translational, societal, and economic impact of your own research.
- As part of the UCL Academic Careers framework, which is set up to support your career development and to recognise your achievements, the filing of patent applications and engaging in translational activities are recognised as indicators of the impact of your research.
- Attract more funding, as funders consider patentable and commercialisable outputs when assessing grant applications¹.
- Attract industrial partners and collaborations to enhance your work. A strong relationship with an industrial partner may enable your work to reach patients or end-users more quickly and at scale.
- To create a spinout company, where IP in the form of patents is essential for providing protection against competitors and becomes a key company asset for future investment.
- UCL has a generous Revenue Sharing Policy, which would benefit you if a patent is licensed to an existing company or to a new spinout company.

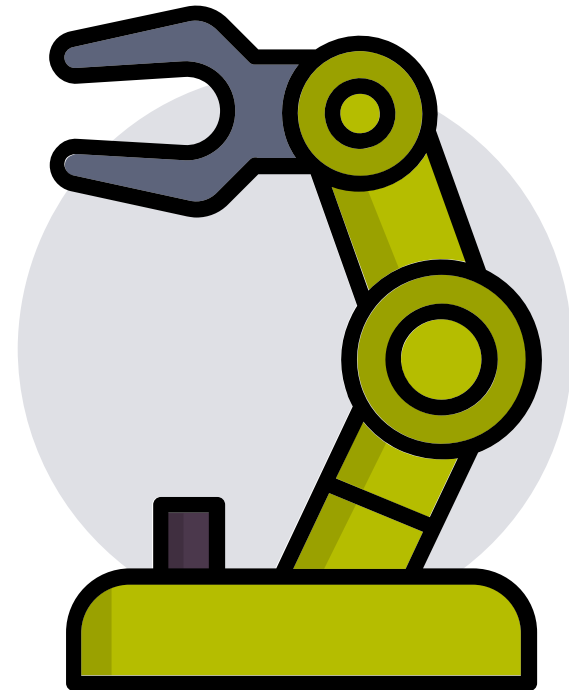
¹*UCLB **will not** support patent filings solely to bolster a grant application or promote the research of an individual/lab. There must be genuine intent to commercialise.*



How involved would you be with the patent process?

The patenting process can take many years to achieve a position of grant (see Typical Patent Timeline, on page 8) and it is important that you remain part of this process in steering the application in the best possible way. This will involve:

- Working with a patent attorney to draft the patent application
- Providing supporting evidence to answer the questions from patent examiners during the patent prosecution process – working alongside your business manager from UCLB
- Signature of documents to enable a patent application to proceed in specific territories at the national phase entry stage (see Typical Patent Timeline, on page 8)



Misconceptions...



A common misconception is that patenting means you cannot disseminate your research findings broadly for the greatest societal impact. This is not the case! You can publish your work after you have filed a patent application (see Typical Patent Timeline). Here are some more misconceptions:

A patent gives you automatic rights of exploitation. This is not true. A patent may give you the right to stop others using the invention as defined in the claims that are granted, but to practice the invention you need to ensure others do not have conflicting rights (**freedom to operate**).

If the scope of your invention overlaps with the invention defined in another granted and active patent, you will require a licence from the other party to use their invention in the exploitation of your own. This does not mean that you will not get a patent for your invention.

For example, *Party A* have patented *vector X*, where *vector X* can carry any therapeutic payload to treat any disease. Your invention makes use of *vector X* but carries a specific therapeutic payload to treat a specific disease. As *Party A* has the ability to prevent people from selling products incorporating *vector X* in certain territories *via* a granted patent, you will need to acquire a licence from *Party A* to sell any product, which makes use of *vector X*.

Crucially, **patenting does not exclude others from performing further academic research on the subject**. The so-called research exemption states that research for strictly academic purposes directed to the patented subject matter is not an act of infringement – the patent laws are there only to prevent others from commercial utilisation.

Criteria...

For an invention to be patentable, it needs to fulfil five essential criteria:

1. The invention must be novel – this means that it has not been described or demonstrated in any way shape or form in the public domain.

This includes journal letters or articles, oral presentations or any information provided through electronic media.

Presentations at internal laboratory meetings are OK, but if there are external collaborators present, it is essential for everyone to commit to a project agreement with a non-disclosure clause, to protect any potential patents.

2. The invention must be inventive, wherein the solution provided is non-obvious to a skilled person in the field. For example, painting a device a different colour is unlikely to be considered inventive, but a formulation of paint that dries faster, or holds its colour better under radiation, might be. However, it is worth noting that the skilled person is a legal construct and what is obvious to an experienced academic would not necessarily be obvious to this fictional skilled person. It is the view of the fictional skilled person which is important to determine inventiveness.



3. **The invention must have an industrial application.** This is interpreted very broadly.

4. The disclosure in a patent must be **sufficient for a skilled person to reproduce** the invention with only routine effort. For example, a drug patent usually needs evidence of effectiveness, as well as instructions for making any novel compounds.

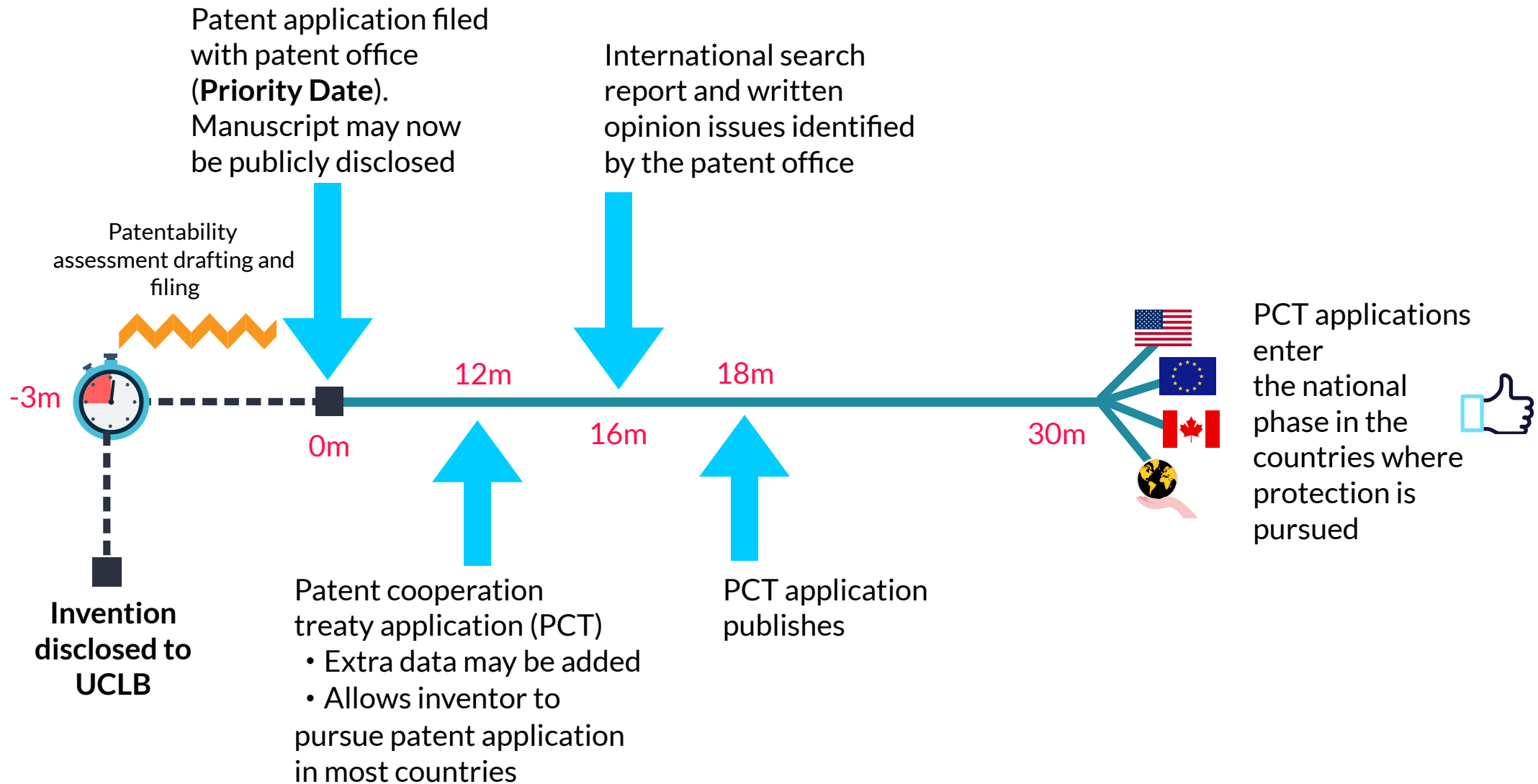
5. **It must not fall into an excluded category.** For example, mathematical methods, computer programmes,² artistic creations, medical treatments and diagnostic methods performed on a person or animal, and biological processes to produce plants or animals.

If the invention does not fulfil all of these criteria, there are other forms of intellectual property rights (IPR) that may be relevant to protect your creative output. These include trademarks (e.g. a logo), design rights (features that appeal to and are judged by eye), copyright (e.g. software), database rights and confidential information (often referred to as “know-how”).

²However, a process comprising a series of steps to solve a technical problem in a novel and non-obvious manner, may be worthy of patent protection, even if the process is carried out using software. For such technical processes, the actual software code is automatically protected by copyright but the functionality of the code, i.e., what the code does when run on a computer, is the decisive element that can be protected by a patent.



Typical Patent Timeline



Patentability and commercial potential assessment

When considering whether your research is patentable or has a commercially valuable application,

Please do:

- Contact UCLB at the earliest opportunity and at least three months prior to disclosure of your research results *via* publication, conference, etc, as this will provide sufficient time to assess the patentability of the invention, draft a high-quality patent application with our patent attorneys and carry out due diligence checks

Please do not:

- Disclose your ideas, results or data in the public domain before the patent application is filed. This will destroy the novelty of the invention and therefore its patentability
- Leave it to the last minute to talk to UCLB (e.g with only weeks until publication)
- Wait for the invention to be fully formed before contacting UCLB. Our business managers can help you to identify key data to support a patent application and help you to secure translational funding to generate such data if it falls outside of the scope of your current grant funding

IP ownership

As with any employment, an employer owns IP generated by its employees and this is the default position taken at UCL. For university staff, UCLB commercialises patentable and non-patentable IP for UCL.

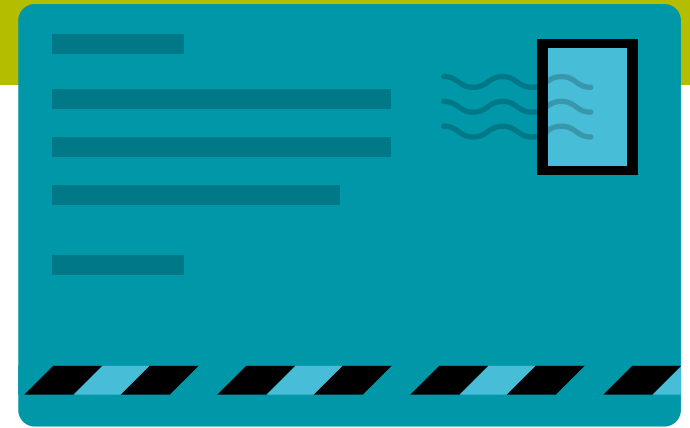
As such, UCL has an IP Policy that defines this and the support provided to secure IP.

If you are a student, you are included in UCL's IP Policy. UCL students (as a general principle) own the intellectual property that they generate, however there are some important exceptions to this principle.

Students should examine UCL's IP Policy to determine whether such an exception may affect them. Please be aware that UCL cannot advise individual students on how to handle their IP as this could result in a conflict of interest for the university.



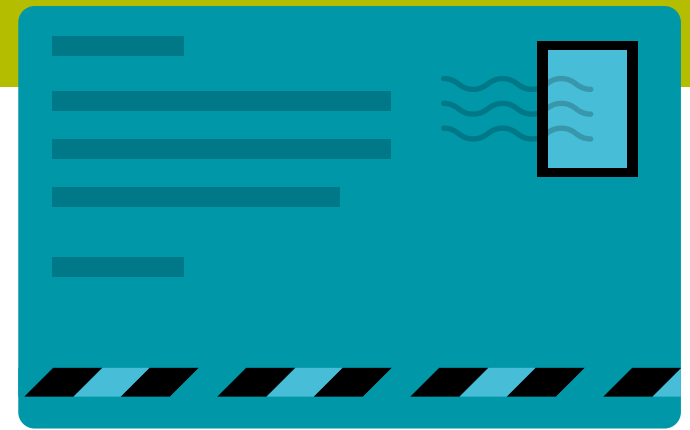
Patent filing process at UCL



We take new technologies and discoveries from the early stage through to market.

The procedure is easy:

- Contact your department business manager
- Your business manager will ask you to complete a confidential Invention Disclosure Form (IDF) - the IDF captures the essence of the technology and asks for the details of the inventors, funding sources, and your visions around the commercial applications of the research
- The ability to patent the invention, the strategic position of the patent filing, and the commercial potential of the invention will be assessed by the UCLB team
- Feedback will be provided to you on the outcome of this process



- If we believe there is a commercially viable application of the research, we will work with our trusted patent attorneys in collaboration with you to file a patent application; IP protection is at no cost to you as UCLB will pay for the patenting process
- If your invention does not currently meet the patentability criteria, where possible we will provide guidance around how you might improve the patentability position of your invention
- Once the patent application is filed, you may publish (where applicable)³

³*In rare occasions, the patent strategy can require delaying publication a little longer, please liaise closely with your business manager.*



Contact a [UCLB business manager](#) now to discuss your invention