University of Natural Resources
and Life Sciences, Vienna

BOKU GUIDE TO PATENTS

Information for Inventors at the University of Natural Resources and Life Sciences, Vienna

STATEMENT VICE-RECTOR

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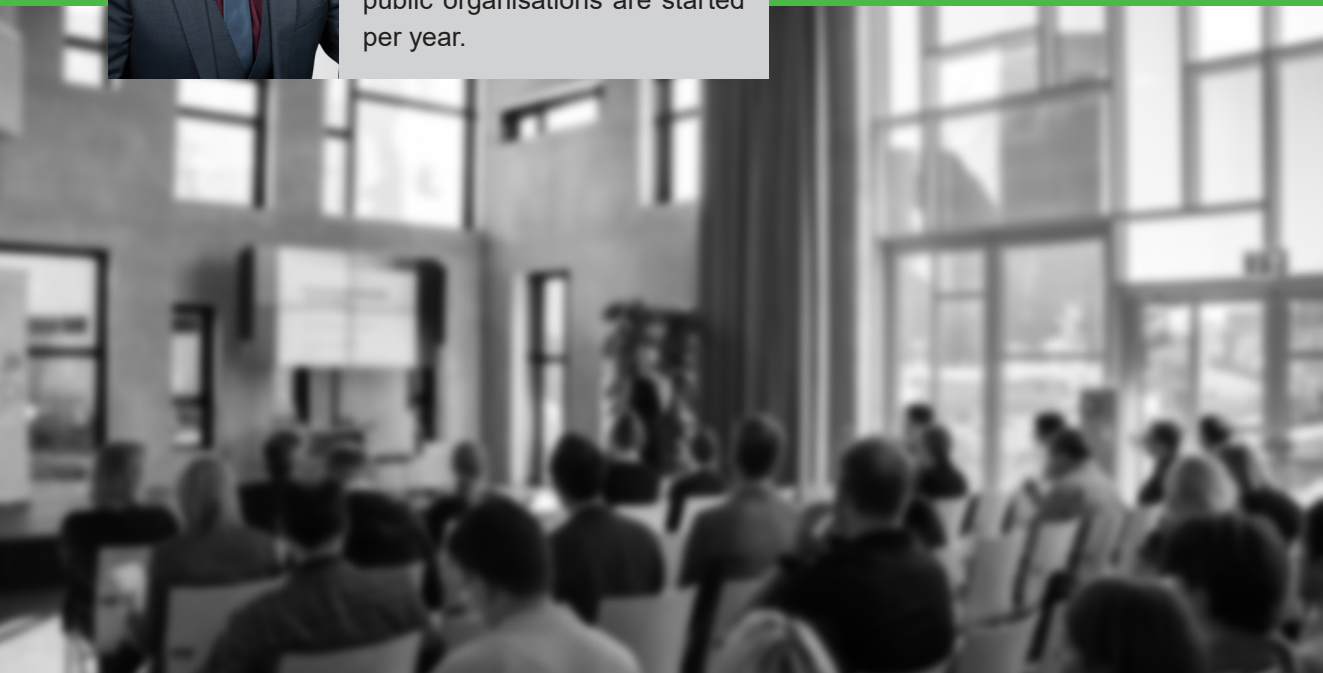
For BOKU the topics invention, IP protection, patent applications etc. always have high priority since ~300 basic and applied research projects in cooperation with hundreds of companies and public organisations are started per year.



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Your Technology Transfer Office (TTO) is ready to provide you with a wealth of information and advice. Contact addresses are available on page 23.

WHAT IS AN INVENTION?

Inventions are new ideas designed to help solve technical problems. They are different from discoveries – such as x-rays or a new animal species – as these can be discovered but not invented.

On the Road to getting a Patent

This brochure compiles valuable information for researchers about the advantages of applying for a patent. The road to successfully acquiring a patent can be compared to a journey into the unknown. This brochure aims at serving as a guidebook to accompany you on this journey.

For you as a researcher, patents can be an excellent way to bring your research into the commercial arena. For legal purposes, patents are also important when it comes to acknowledging an invention's commercial value. Start-up companies are, for example, more likely to be successful with a solid patent portfolio.

In short: Patents can legally protect your professional knowledge and expertise, helping you to achieve commercial success.

Patents are industrial property rights, like trade marks and designs.

Filing a Patent Application can be the first step toward commercialisation of your know-how. It is a way to put ideas, inventions and technologies into practice and make it accessible to the public, consumers, the market and to specific fields of trade.

Comments from Experienced Inventors

“Successful acquisition of research grants from domestic and international funding agency also require an IP protection strategy. This has to be elaborated in advance. Inventions must be also managed.”

Univ.Prof. Dipl.-Ing. Dr. Alois Jungbauer, Department of Biotechnology, BOKU Vienna

“Scientists sometimes think that patenting their research might hinder the advance of humanity. The opposite is true. Only if intellectual achievements are protected by patents, enterprises will invest into developing such ideas to products and services.”

Assoc. Prof. Dr. Regina Grillari, Department of Biotechnology, BOKU Vienna; Evercyte GmbH

“Modern life science research switches rapidly between fundamental research and potential application. Joining forces with tech transfer and patent experts enables a smooth process to protect IP.”

Univ.Prof. Dr. Diethard Mattanovich Department of Biotechnology, BOKU Vienna; Co-founder of Syconium Lactic Acid GmbH

Inventions at the University

- Inventions created by university employees are referred to as “employee inventions”. This also applies to inventions created outside of office hours as long as the individual is still employed by the university!
- All inventions must be reported to the TTO (the Invention Disclosure Form is available on the TTO website). The university has three months from the date of reporting to claim the invention.
- Similar to private companies, the inventions belong to the university. This certainly does not mean that the inventor will be overlooked. On the contrary, an invention can only become truly successful when the inventor and the university work together.

  For you as an inventor, this means you do not have to pay the patent application fee or the legal fees and you may be entitled to inventor remuneration (UG2002 §106).

Invention Evaluation: Once an invention has been formally reported, the university has three months in which to assess the patentability and market value of the technology and decide whether or not to claim it. The TTO will evaluate the invention, working closely with the inventors. The invention must be kept confidential by the university and by the inventors. If the invention is not claimed by the university within this three month time limit, ownership of the invention reverts to the inventors, who are free to commercialise it as private individuals.

IP Protection: If suitable, the TTO will arrange for Intellectual Property (IP) protection. The term Intellectual Property Rights (IPR) comprises all intellectual creations and absolute rights to intangible goods. This includes industrial property rights (patents, utility models, trademarks, etc.) and copyright.

Software and other IP: The university actively encourages its scientific researchers to consider opportunities to commercialise non-patentable technologies developed at the university. Examples include:

- Biological materials, such as cell lines, animal models, etc.
- Software
- Copyright protected works (handbooks)

Points to consider in the Evaluation

You can facilitate the evaluation process of the TTO by providing

- A patent search (see page 11)
- Answers to the following areas:
  - Applications:
    What can this invention be used for?
    What are the potential areas of application?
    What are the competitive advantages or the potential disadvantages of your invention compared to the available products on the market (e.g. cheaper, easier to scale, etc.)?
  - Market and customers:
    Does the invention meet a customer need?
    What is the benefit for the customer when using the invention?
    What kinds of future trends are important?
    How will the market and customer demand develop?
  - Further steps:
    What are the necessary next steps in bringing the technology to the market?
    What resources are needed for these steps?

PATENTS: ON THE ROAD TO SUCCESS

What is a Patent?

A patent is a set of exclusive rights enabling the patent holder to exclude others from commercial use. In exchange, the invention must be publicly disclosed. For an invention to be patentable, it must be new in the field of technology, it should not be too similar in resemblance to other products, and should be viably commercial. Patents are valid for a maximum of twenty years; patent applications are reviewed separately in each country.

Patent Information and Patent Search Engines

To avoid duplication of research results, it is essential to perform a patent search at the beginning of each research project (in addition to searching scientific literature). This can be done online in publicly available databases free of charge. You can use keywords but also specific patent classifications to enhance the quality of search results. All databases offer information files, tutorials, or even webinars to help you with the search for prior art in patent literature. When you believe that you have invented something, it is also important to search for prior art to determine whether your invention is novel and provides an inventive step.

These are the most important sources of patent information with free online access…

- Espacenet: https://worldwide.espacenet.com
- Google Patents: https://patents.google.com/
- Depatisnet: https://depatisnet.dpma.de
- United States Patent and Trademark Office: https://www.uspto.gov/

Criteria for patentability:

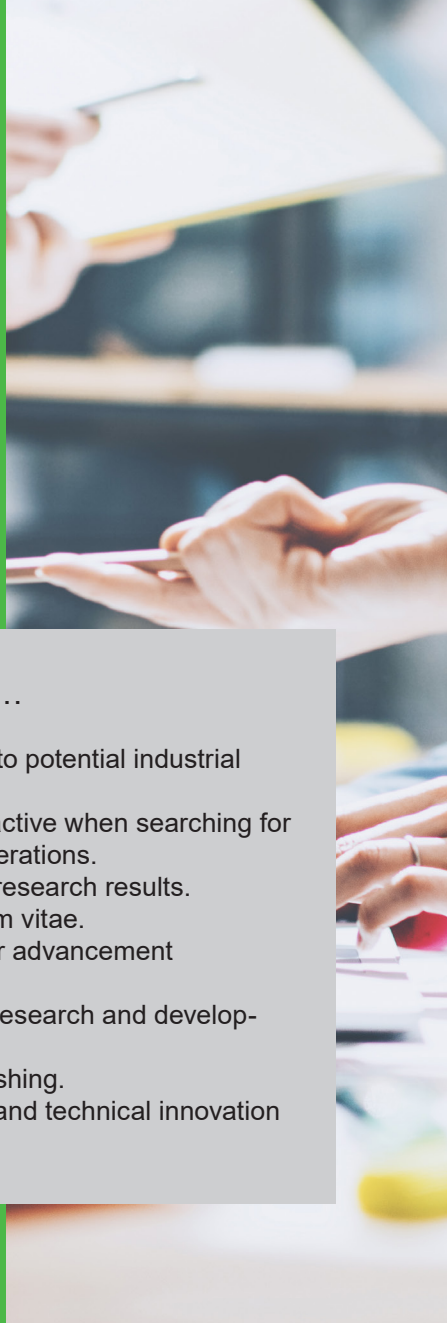
- Commercially applicable
- Novel
- Contains an inventive step
- Technical

PLEASE NOTE!
Any kind of publication about the invention - even if communicated orally by the inventor - could be detrimental to the novelty aspect. If the invention is patentable, any information about it must not be published or otherwise disclosed beforehand.

Advantages of Getting a Patent?

Patents benefit both the inventor and technological progress!

Inventor Remuneration: When the university successfully licenses or sells a particular patentable/patented invention, it distributes some of the net income generated to the inventors as inventor remuneration. Ask your university TTO for more information.



Patent applications…

- are of great interest to potential industrial partners.
- make you more attractive when searching for joint research co-operations.
- help to protect your research results.
- boost your curriculum vitae.
- open doors to career advancement opportunities.
- demonstrate active research and development efforts.
- do not exclude publishing.
- contribute scientific and technical innovation to society.

Patent Application Checklist

The following could be detrimental to the novelty of your invention and could prevent the grant of a patent:

- Past publications in a scientific journal
- Conference presentations
- Public presentations with no confidentiality agreement (such as a classroom lecture)
- A featured story on radio or television
- Online publication
- Former patent applications, even if they have not yet been published

In particular, bear in mind that:

- Master's theses or doctoral dissertations can be detrimental to the novelty factor if the author has not prohibited access to the paper and its contents.
- Publications can be submitted but will negatively affect the novelty factor as soon as the content is published. You should therefore exercise caution with regards to submitting applications and publications. Ask yourself: Do I want people to know about my findings?

Not detrimental to novelty:

- Communication, providing a non-disclosure agreement (NDA) has been signed
- Expert review provided by the Patent Office about the most recent technological developments
- Consultation with the university TTO

Your Roadmap to Patent Applications

Month 0

Priority year*

Month 12

Invention Notification

By law, all employee inventions must be officially reported to the university. The university has a three month period from the date of reporting to decide if it wants to claim the invention or not.

Initial Application

If the university decides to back the invention and file a patent application, it will take care of drafting the patent specifications and filing the initial application. The date of filing this first application is called the priority date.

Patent Applications in other Countries

Within a twelve-month period from the initial filing (= priority year*):

- EP – European Patent: Patent applications within Europe
- PCT – Patent Cooperation Treaty: International patent application**
- Additional individual countries

*A patent application with the same priority date can be filed in other countries within the twelve-month period.
**PCT: The choice of this patent application secures the right to select the countries in which the patent protection is sought up to 30 months after filing the first application.

Our Tip: We recommend filing the patent application in countries where there is a market or a suitable production location. Start thinking about these things as early as possible!

Month 18

Month 30

Publication

After 18 months, the Patent Office will publish the patent application and (if available) a report on patentability.

Start of nationalisation phase.

Examination

The Patent Office will review patentability and may require further information.

Patent Granted

The patent term is twenty years, starting from the date the application was filed.

Patent Not Granted

FAQs

Can I submit my paper for publication right after handing in the invention disclosure form?

No, only after the patent application has been filed.

When am I allowed to publish a paper about the invention?

After the university grants approval.

As the inventor, do I have to pay for the patent?

No, as long as the university has claimed ownership.

Do I still have to notify the university about my invention even if I do not wish to apply for a patent?

Yes.

When does patent protection come in to effect?

If a patent is granted, patent protection is retroactive, becoming effective starting on the date of patent application.

Who owns the invention?

The university, providing the university claims the invention within three months.

Do I still have to inform the university about my invention even if the rights have already been given to, say, a company?

Yes. The university will still need to claim the rights to the invention to then pass them on to the collaborating company.

OPPORTUNITIES AFTER FILING

Your patent journey will consist of several opportunities to get the most out of your invention. Finding a successful option depends on what you want to do as well as the circumstances.

Which Route to Success best suits your Journey?

There are different routes to commercialising an invention. Depending on the technological area, the characteristics of the invention and the interests and personality of the inventor/s, some routes are more advisable than others. Your TTO will give you guidance.

License:

The patent is made available to one or more companies for a fee.

+ Lower financial risk
− Little control, lower profit

Starting your own Spin-off Company:

Start a company based on the patent.

+ Potentially large profits
− High degree of risk

Sale:

The patent is sold to a company and the ownership is transferred for a fee.

+ Quick profit, minimal effort
− Small return, no additional application opportunities

Cooperation Projects:

A patent supports a cooperation effort together with a company.

+ Higher chance to acquire additional external funding and better market access
− Risk of selling below value or becoming dependent on the collaboration company

Do you have an Entrepreneurial Personality?

Consider where you most likely see yourself and the invention in the future.

1

Do I want to spend time commercialising my invention?

2

Do I want to bear the financial risk and burden?

3

Do I want to continue actively developing the invention?

4

Are there potential company partners interested in the invention?

If you answered ‘yes’ to questions 1-3, then you should consider starting a business!

If you answered questions 3 and 4 with ‘yes’ then you should consider discussing with your TTO if a joint project combined with a license or an option agreement might be suitable.
If you only answered question 4 with a ‘yes’, then licensing or selling the patent could be promising options!

Not sure? Your TTO is happy to meet with you to answer all of your questions.

Routes

1. Licenses

Most commonly, the university makes technologies available to companies by licensing its intellectual property. The company receives the right to use the technology in return for approriate remuneration.

2. Sales

In other cases, the university transfers the ownership of its intellectual property at current market prices to companies.

3. Working with Companies: Cooperation Projects

Cooperation projects with one or more companies might be an interesting option for exploiting your research results and gaining access to their expertise. Before starting negotiations with a company, please contact the Research Support, Innovation & Technology Transfer Office as soon as possible! For the desired outcome, be well prepared (know your costs, project plan and potential project outcome i.e. impact). Our team will help you with budget calculations and contracts relating to industry projects as well as intellectual property, including:

Confidentiality Agreements: Revealing confidential information to third parties such as other research institutions or companies can jeopardise later patent filings. The best protection is to set up a short written agreement between the parties, called CDA (Confidential Disclosure Agreement) or NDA (Non-disclosure Agreement) beforehand.

Material Transfer Agreement: If you are planning to send or receive materials from other laboratories, research centres or companies, the rights and duties of the parties have to be formalised with a Material Transfer Agreement (MTA).

4. Creating a New Business

An invention alone does not make for a successful company!

Aside from the technology, think about the following:
Which problem do I want to solve and what solutions are already out there?
What kind of product / service am I going to develop/make available?
Who would pay for my products or services and how can I reach out to these customers?
What would the ideal team look like and what is my role in the company?
What would the best business location be?
What are the projected selling trends in the near future?
Where is my market, where can I manufacture products, where do I need legal protection?
How much would the product cost?
Who are my competitors and what are their strong points and weaknesses?
How much time does it take to make the product/service and what kinds of resources are required?
How can I raise the required capital?

Institutions providing help to entrepreneurs:

INiTS, the university business incubator offers organisational, infrastructural and financial support to people from universities who want to start a business:
http://www.inits.at/

ACCENT, is the incubator of Lower Austria and therefore the first contact for the economic implementation of innovative ideas.
http://www.accent.at/

ECN – Entrepreneurship Center Network is the platform and first contact point at Viennese universities to get in touch with the start-up ecosystem.
ecn.ac.at

Austria Wirtschaftsservice
www.aws.at

FFG - The Austrian Research Promotion Agency (FFG) is the national funding agency for industrial research and development in Austria.
www.ffg.at

The TTO will be happy to establish contact with any of these supporting agencies for you.

Contact

Knowledge and Technology Transfer
We offer expertise in the field of invention disclosure, licensing & patents, spin-offs and entrepreneurship. We help scientists in the commercialisation of innovative ideas.
tto@boku.ac.at

TTO Team
https://www.boku.ac.at/fos/technologietransfer

Ready?

- ✓ Contact your university TTO.
- ✓ Provide them with any relevant information and contracts that you are aware of.
- ✓ Prepare any questions you might have for the initial meeting and think about your expectations regarding your technology.

University of Natural Resources and Life Sciences, Vienna

supported by:

Federal Ministry Education, Science and Research

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Imprint

Editor: BOKU - University of Natural Resources and Life Sciences, Vienna; Gregor-Mendel-Strasse 33, 1180 Vienna. Printed in December 2018. | **Responsible for the content:** This brochure was produced in cooperation with the WTZ Ost partner universities. The text of this brochure is based on the publication “A patent’s road to success” by the Johannes Kepler University Linz / WTZ West and was edited and reprinted with the permission of the Johannes Kepler University Linz (original text by: Birgit Wimmer-Wurm, Theresia Hackl, Anna Theresa Steiner, FORMDENKER, Juliane Göbl). We do not assume any responsibility or liability for the accuracy, content, completeness and reliability of information provided. Copying or reproducing any material in this brochure (even certain sections) or processing and copying material to distribute the information electronically in any form requires written permission from the editor. Information for the brochure has been carefully compiled but errors and inaccuracies can occur. | **Editorial lead:** Lisa Grabner, Inmaculada Sanchez Romero, Tom Withnell and Tobias Reckling (University of Vienna). | **Editorial support:** Karin Hofmann, Tanja Sovic (Technische Universität Wien), Michael Hoschitz, Helga Kroschewski, Andrea Kolbus (Medical University of Vienna), Bernhard Koch, Verena Hönninger (University of Natural Resources and Life Sciences, Vienna) and Christine Ruckenbauer (University of Veterinary Medicine, Vienna). | **Photos:** Rauf Aliyev/shutterstock.com (p.1), University of Natural Resources and Life Sciences, Vienna (p.2), Benjamin Furtlehner (p.2), Archiviz/shutterstock.com (p.4), Tonhom1009/shutterstock.com (p.6), University of Natural Resources and Life Sciences, Vienna (p.7), Evercyte GmbH (p.7), University of Natural Resources and Life Sciences, Vienna (p.7), Ilya Bolotov/shutterstock.com, SFIO CRACHO/shutterstock.com (p.12), watchara/shutterstock.com (p.18) | **Print:** Resch Druck | **Design and copywriting:** Alexander Kurzwernhart and Andreas Kurz