Office of Grants and Contracts

Technology Transfer Unit (TTU)

TTU functions within the Office of Grants and Contracts (OGC)

Mission of OGC:
OGC promotes, supports and administers sponsored research awards. It provides service and support to AUB administration, faculty, and staff in generating and administering awards in the pursuit of research and scholarly activities; and in protecting and transferring inventions and technologies for the public good.

OGC started in 2001
TTU started in 2008

The mission of TTU is to encourage and assist technology development at AUB and to facilitate the transfer of intellectual property to business and industry. TTU assists in bringing inventions and new technologies to the marketplace so as to create benefits for the University and the community.

TTU Responsibilities
1. Manage invention disclosures;
2. Patentability assessment;
3. Patent filing and protection;
4. Draft and manage licensing agreements;
5. Liaison with local and regional industry for TT;
6. Outreach to industry and regional and international science parks/research institutions/funding agencies etc.;
7. Conduct workshops on TT to AUB community;
8. Liaison with MoE&T for national filings, workshops and capacity building.

TTU Resources
- Annual budget in addition to licensing income (very modest!);
- IP Advisory committee;
- Two staff members, volunteers/student work, legal and business consultants;
- Entrepreneurship Initiative and Darwazah Center for Innovation Management & Entrepreneurship at AUB;
- Local and Regional partnerships;
- Limited (but available) gap/bridge funding;
- Pending hiring of commercialization and marketing experts;
- Pending hiring of two financial officers for OGC and TTU;
- Pending formation of innovation park;
- Pending hiring of commercialization and marketing experts.

Authority and Responsibility of the Committee
- Reviews research contracts with industry and/or private investors that include intellectual property clauses in variance to AUB’s Technology Transfer Policy;
- Reviews all invention disclosures submitted by faculty and/or staff members;
- Makes recommendations concerning the patentability potential of a disclosed invention;
- Makes recommendations on potential licensing of a disclosed invention;
- Makes recommendations on the ownership of a disclosed invention;
- Evaluates the patent application and makes recommendations on its value concerning merit or promotion as part of the faculty evaluation process;
- Reviews requests for waiving provisions of the Technology Transfer Policy.
TT Steps at a Glance

- Process submitted disclosure forms;
- Search patent databases for patentability potential;
- Coordinate patent filing and protection;
- Assist faculty members in transferring technology to industry and others;
- MTA
- Data transfer agreements
- NDA/confidentiality agreements
- Start-Ups/Spin outs

TT Procedures at AUB

Research projects with potential of inventions/discoveries/IP generation are usually identified at the time of the award (or even at proposal level). OGC transmittal form.

Faculty members are encouraged to contact TTU at the early stage of their research activities to be aware of the options that will best leverage the commercial potential of their research. TTU assists faculty members with questions related to funding sources, marketability, commercial partners, patenting and other protection methods, new business start up considerations and university policies and procedures.

Before publicly disclosing any technology or submitting a presentation, lecture, poster, abstract, website description, research proposal, dissertation/masters' thesis, publication, or other public presentation including the invention, faculty members should contact TTU and complete and submit an Invention Disclosure Form.

What to include in an Invention Disclosure:

- Subject-matter and description of the invention.
- Objectives of the invention — its main practical advantages over existing practices or products.
- An indication of any disclosure you have made.
- Your name, address and citizenship.
- Features of the invention that are new and distinguish it from what has come before.
- Lists of relevant patents or technical articles found in any literature search.
- Results of laboratory or commercial tests.
- List of how to obtain satisfactory results throughout the given range of the invention, or are there exceptions.
- All countries in which to file for a patent.
- Names of companies and contacts who might be interested in the invention.

Assessment: this is the period in which the TTU conducts patent searches and determines the invention's commercialization potential; and when the IP advisory committee reviews the invention disclosure.

Each invention disclosure is examined to review the patentability potential of the invention, protectability and marketability of potential products or services, relationship to related intellectual property (its being novel, applicable and non-obvious), amount of time and money required for further development, pre-existing rights associated with the invention, and potential competition from other products/technologies (student volunteers to perform market feasibility).

This assessment may include consideration of whether the intellectual property can be the basis for a new business start-up. The IP Advisory Committee will assess the invention to decide on this matter.

Patent Search Procedure

- Preliminary search of existing patents by comparing the invention to others and weighing similarities and differences.
- Search are performed to determine uniqueness, identify potential additional features for the product, identify additional potential uses for a product, or to identify potential solutions for a design.
- Patent Search Databases:
  - U.S. Patent & Trademark Office;
  - European patents by country, EP, Japanese, and World Patents;
  - IPO (World Intellectual Property Organization);
  - Knowledge Express.
- Searching the Marketplace: In coordination with the faculty member, TTU comes up with a list of potential interested companies in the invention.
**Protection.** Patent protection, begins with the filing of a patent application in the Ministry of Economy and Trade of Lebanon, and when appropriate, with foreign patent offices. Faculty members are required to respond to TTU and outside patent counsel requests to complete the patent application. Faculty members are also requested to keep TTU informed of upcoming publications or interactions with companies related to the invention.

**Marketing.** In cooperation and coordination with the faculty member and the Center for Entrepreneurship at OSB, TTU identifies candidate companies that have the expertise, resources, and business networks to bring the technology to market. This may involve partnering with an existing company or forming a start-up. The active involvement of faculty member is essential and necessary to effectively market the technology and shorten the process.

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**Preparing a patent application**

A patent application consists of an abstract, a specification and often drawings.

- The abstract is a brief summary of the contents of the specification. The specification comprises:
  - A clear and complete description of the invention and its usefulness;
  - Claims which define the boundaries of patent protection.
- The specification must be so clear and complete that it will enable anyone with average skill in the technology to make or use the invention.
- Information specified as protected by claims cannot be used freely (copied, manufactured or sold) by others until the patent expires. Information not protected by claims can be used immediately by anyone.
- The challenge is to draft the claims so that the invention is defined broadly enough to provide maximum protection against potential infringers, while at the same time being sufficiently specific to identify the invention and distinguish it from all prior inventions.

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**Filed Patents to date**

<table>
<thead>
<tr>
<th>Title of Patent Application</th>
<th>Faculty</th>
<th>Publication Date</th>
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<tbody>
<tr>
<td>Imidazo[1,2-a]quinoxalines et derives pour le traitement des cancers</td>
<td>Medicine</td>
<td>October 3, 2008</td>
</tr>
<tr>
<td>Methods and Compositions for Treating Disorders caused by a Deficiency in a Gene Product of a CLN Gene</td>
<td>Medicine</td>
<td>June 17, 2010</td>
</tr>
<tr>
<td>Apparatus for Measuring Depth of a Hydrophobic Liquid on the Surface of Water and Method for Same</td>
<td>Engineering and Architecture</td>
<td>March 10, 2011</td>
</tr>
</tbody>
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**Status of IP at AUB**

- Total Number of Invention Disclosures: 18
- Total Number of preliminary searches with pre-disclosures: 8
- Inventions currently being filed for patenting: 2
- Total number of active licensing agreements: 1
- Licensing agreements being negotiated: 5

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**Fields of Study**

| Agriculture | Natural insect pest control  
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<td></td>
<td>Natural treatment for diabetes and obesity</td>
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| Engineering & comp sciences | Telephone applications  
|                            | Desalination  
|                            | Remote sensing (oil spill, fires)  
|                            | Robotics  
|                            | Microprocessors |
| Medicine | Pathway for neurodegenerative disease (licensing in negotiation with a US-based drug company)  
|          | Cancer treatment |
Ownership of Inventions

In general, all inventions made or conceived on AUB campus using AUB resources are owned by AUB. Ownership of inventions (if unresolved) shall be determined by the provost and the director of the Office of Grants and Contracts in consultation with the IP advisory committee, and their decision shall be final.

The Technology Transfer Unit, and in consultation with the provost and the Advisory Committee shall determine that such discovery or invention be either:

1. Owned by AUB;
2. Assigned outright to the discoverer or inventor;
3. Transferred to one or more patent management organizations with which the University has contracted for commercial development or marketed by the Technology Transfer Unit;
4. Forwarded to the outside sponsor if such action is required under the terms of a sponsored project agreement or by law.

Royalties Distribution

The University will first deduct 15% from any creation exploitation to cover administrative fees and any direct expenses that have been incurred, such as patent filing fees.

Remaining funds are distributed equally between inventors, inventors’ department (up to 20% of operating budget), and university.