

Intellectual Property at SickKids

Industry Partnerships & Commercialization (IP&C) supports staff in translating SickKids innovations into real-world impact. IP&C connects inventors with resources and expertise, manages intellectual property, and executes commercialization strategies.

What is Intellectual Property?

Intellectual property (IP) refers to knowledge, expressions, creations, and other assets stemming from human intellect that are legally protected from unauthorized use by others. These protections help attract the investment needed to develop new technologies and products by ensuring those who invest resources can benefit from their efforts.

Inventorship vs. Ownership

SickKids owns all IP created using institutional resources, as per the [SickKids Intellectual Property Policy](#). Staff are required to disclose any SickKids IP to IP&C through the [Inventor Portal](#).

While ownership resides with SickKids, inventorship is based on an individual's participation in the invention's conception. Identifying inventors is essential for assigning IP rights, ensuring fair recognition, and meeting legal requirements.



Inventors/Creators

Individuals who meaningfully contribute to the conception of an invention, forming a clear, specific, and original idea of how it works. Goes beyond general input and requires creative, intellectual contribution.



Contributors

Individuals who support the work through technical tasks, experiments, or suggestions but do not take part in conception. Their contributions are valuable but do not meet inventorship criteria.

When SickKids IP is commercialized, any net revenue is shared equally between the institution and the named inventors.

While sharing knowledge within SickKids is encouraged, caution is required when communicating outside the institution. Disclosing sensitive details in publications, presentations, posters, or discussions can jeopardize IP protection. Contact IP&C early for guidance on external communications.

Note: The University of Toronto is considered an external entity.

Intellectual Property Protections

Utility Patent

Grants exclusive rights to inventors for novel, non-obvious, and useful inventions.

20-year protection

Design Patent

Protects design aesthetics (shape, configuration, or composition of color) of products.

15-year protection

Copyright

Protects authored works, such as literature, photography, music, and art.

Lifetime + 70-year protection

Trademark

Protects symbols, names, logos, and slogans used to identify brands, products, and services.

10-year protection

Examples of Intellectual Property

Research Works: New, inventive, and original creations in both intellectual and tangible forms.

Institutional Works: Tangible materials and work products created as part of your job duties.

Education

Apps, teaching platforms, disease simulators, books, educational content and curricula

Research Tools

Engineered cell lines, assays, questionnaires, screening platforms, animal models

Medical Devices

Biosensors, health monitors, implants, surgical tools, clinical instruments

Diagnostics

Screening platforms, in-vitro tests, imaging equipment, diagnostic procedures

Therapeutics

Drugs, vaccines, treatment regimens, surgical procedures, biologicals

Work Products

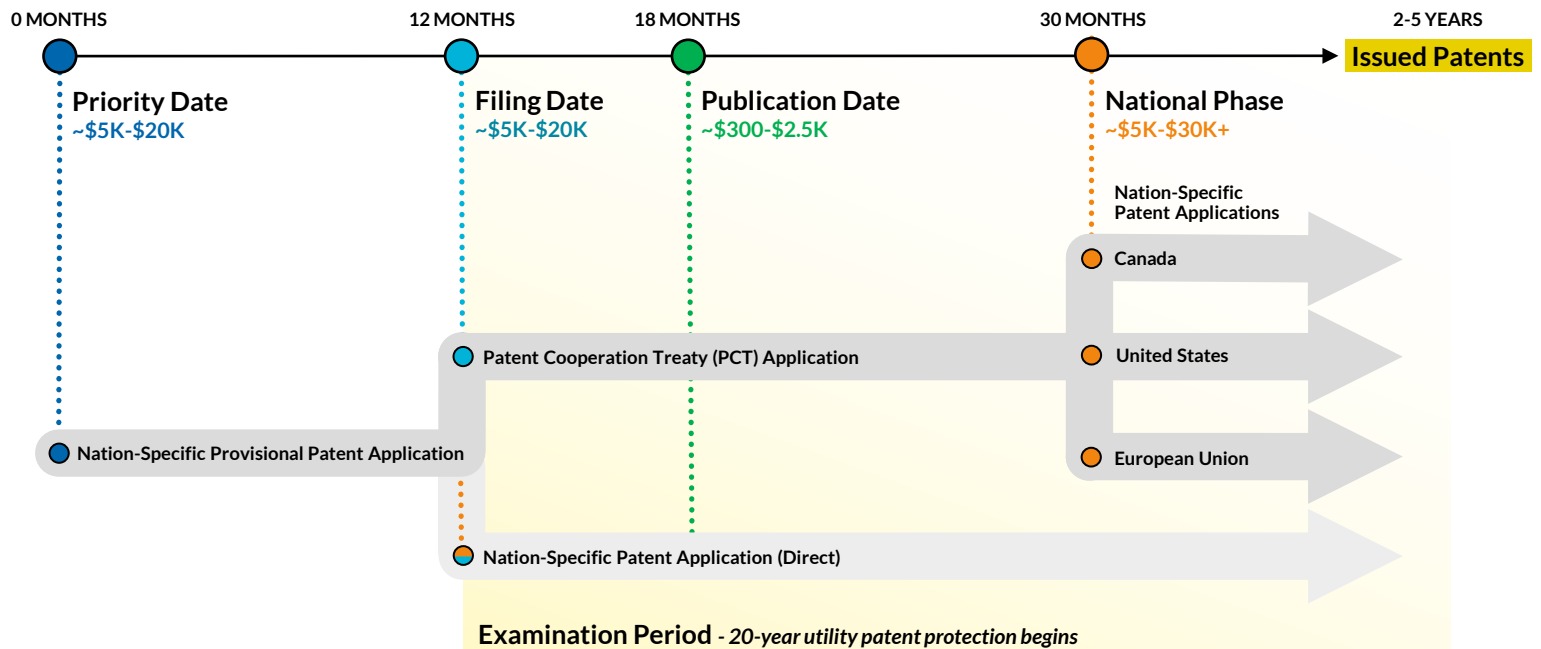
Clinical data, biobanks, images, reports, methods, operating procedures



Patenting Process

Obtaining a patent is a multi-year process that requires significant expertise, coordination, and funding. IP&C supports inventors at every stage, helping to determine the most effective IP protection strategy and guiding them through the developmental, legal, and administrative steps necessary to secure issued patents.

Intellectual property laws vary by country; international treaties and agreements help streamline the process for securing protection in multiple jurisdictions. The Patent Cooperation Treaty (PCT) allows inventors to file a single application that can later be converted into national applications in member countries. At SickKids, filing through the PCT is the preferred strategy for protecting inventions internationally, although direct national filings may be pursued in specific circumstances.



	PCT Process	Nation-Specific Process	Inventor Responsibilities
Priority Date ~\$5K-\$20K	File a Nation-Specific Provisional Patent Application to any PCT member country: preliminary filing that locks in PCT Application Filing Date, does not count as public disclosure	File a Nation-Specific Provisional Patent Application to country of choice: preliminary filing that locks in Nation-Specific Patent Application Filing Date, does not count as public disclosure	Innovation Pathway Stages 2-4 - Articulate need, advantages, ongoing activity in the field - Assist with applications - Maintain confidentiality - Research and development to strengthen patent claims
Filing Date ~\$5K-\$20K	File a single PCT Application 12 months after Priority Date	File a Nation-Specific Patent Application to country of choice 12 months after Priority Date	
Publication Date ~\$300-\$2.5K	International Search Report published, details prior art and patentability published 6 months after Filing Date	Details of Nation-Specific Patent Application to country of choice published 6 months after Filing Date	Innovation Pathway Stages 3-6 - Continue developmental progress - Prepare funding applications, solicit investors and partnerships - Complete office actions as needed - IP maintenance
National Phase ~\$5K-\$30K+	Adapt PCT Application into Nation-Specific Patent Applications for PCT member countries to fulfill individual jurisdictional requirements	Initiated at Filing Date	



Intellectual Property Case Study

KidVitals™ – Smart Paediatric Monitoring & Seizure Intervention System

Background

Children with epilepsy and seizure-prone conditions often require continuous monitoring and rapid access to rescue medication. A multidisciplinary team at SickKids, in partnership with the University of Toronto and industry collaborators, developed KidVitals™: a wearable system that pairs real-time physiologic monitoring with predictive seizure analytics and an on-body drug injection device. With a novel anti-seizure compound discovered at SickKids at its core, the KidVitals system aims to transform seizure management by enabling earlier detection, faster intervention, and safer care at home.

Product Description



1. Drug & Delivery System

- Novel, fast-acting anti-seizure compound discovered at SickKids
- Adhesive, wearable on-body injector for rapid delivery
- TechCo's injector and sensor hardware for precise dosing
- PharmaMaterials' patented excipient for stability and drug delivery

2. Wearable Monitoring & Predictive Analytics

- Continuous EEG and vital signs monitoring
- Algorithms for early seizure detection and predictive alerts
- Custom SickKids/U of T code with select open-source components
- KidVitals mobile app for real-time alerts, dosing approval, and trend visualization

Team Composition

- **Dr. Amelia Collins – Principal Investigator, SickKids**
Conceived the clinical concept and led discovery of the novel anti-seizure compound.
- **Dr. Benjamin Li – Co-Investigator, UofT**
Led seizure-detection algorithm development using a mix of custom and open-source code.
- **Dr. Carlos Rivera – Research Fellow, SickKids**
Led data analysis, predictive modeling, and algorithm refinement.
- **Dana Patel – Graduate Student, SickKids + UofT**
Conducted preclinical testing of the compound; designed the KidVitals app user interface; developed the product brand name and logo.
- **Evan Moore – Undergraduate Student, SickKids + UofT**
Assisted with preclinical compound testing and experimental setup.

Industry Collaborators

TechCo Inc.

Provided hardware prototyping and contributed injector and sensor technologies.

PharmaMaterials Ltd.

Provided the patented excipient (drug vehicle) used to deliver the novel compound.





Intellectual Property Case Study

KidVitals™ – Smart Paediatric Monitoring & Seizure Intervention System

Questions

1. Who owns the product?

2. Which of the product components could be patented by SickKids?



Intellectual Property Case Study

KidVitals™ – Smart Paediatric Monitoring & Seizure Intervention System

Questions

3. Which aspects are protected by copyright for SickKids?

4. What actions should be taken to verify whether the KidVitals name and logo are available for use as the product's brand?

