



# RESEARCH EXCELLENCE

## GOAL 2: BE A WORLD LEADER IN KNOWLEDGE EXCHANGE AND MOBILIZATION

### Objective: Leadership in Knowledge Exchange and Mobilization

**PURPOSE:** UBC strives to support impactful research activity that enhances the engagement of the university locally, regionally, nationally and internationally. Cross-sectoral partnerships, innovation and entrepreneurship opportunities are fostered through the University Industry Liaison Office (UILO), the Entrepreneurship@UBC program, as well as through the Innovation Catalyst and UBC’s new University Innovation Strategy.

	Vancouver & Okanagan		
Metric Summary	2011/12	2012/13	2013/14
External Contracts & Agreements	979	951	1052
Cumulative Spin-Offs	153	158	161
New Intellectual Properties	N/A	249**	280**

### Summary of Items to Create Metrics

#### SECTION 3: New intellectual properties

Total number of new intellectual properties created at UBC

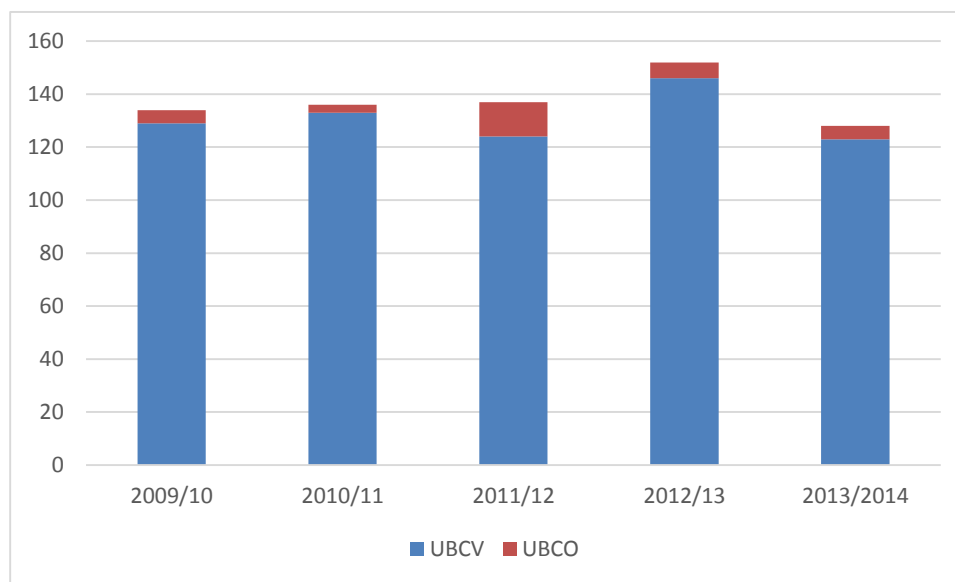
- A) **\*\*Invention Disclosures + Patents (Issued only) + Technologies Mobilized**
- B) **Technology Development Projects**
- C) **Revenues from Technology Licensing**

To measure the total number of new intellectual properties being developed on an annual basis at UBC as a key component of innovation activities. Creation of new intellectual properties is one indicator of the quality and quantity of research activity at UBC. In combination with other metrics in Goal 2, it is possible to determine the degree of knowledge exchange and mobilization occurring at UBC.

- Inventions Disclosures: Count of inventions disclosures submitted (re: UBC Policy 88).
- Technology Development Projects: number of funded research projects associated with UBC invention disclosures and that are being undertaken with a view to creating a commercially viable product or service. Typically funded via UILO Prototype Development program, CIHR PoP Program, NSERC I2I Program, Genome BC’s proof of Concept Fund and Technology Development Initiative. This metric does not include projects partnered with CERCS.
- Licensing Revenue: Royalties; License, Assignment and Option Fees, and; Equities Liquidated and Dividends.
- Technologies Mobilized: includes the number of *different* technologies mobilized through the following mechanisms: Licensed by the UILO to an industry partner (the count is the number of different technologies rather than the number of license agreements); Downloaded or licensed through Flintbox (count of technologies rather than transactions); Accepted through the Intellectual Ventures Canada Solutions Report agreement, and; Mobilized through other channels.

**RESEARCH EXCELLENCE - A) # Invention disclosures**

	Okanagan			Vancouver			UBC		
	11/12	12/13	13/14	11/12	12/13	13/14	11/12	12/13	13/14
Invention disclosures	13	6	5	111	146	123	124	152	128



**Benchmark:** Benchmarking against North American universities can be done through statistics provided by the Association of University Technology Managers (AUTM). AUTM has published data up to fiscal year 2011/12 and made available some preliminary 2012/13 data. UBC performance vs. the rest of the Canadian G5 universities is provided below:

	2011/2012		2012/2013	
	#	Rank vs. G5	#	Rank vs. G5
UBC	124	3	152	2
Univ. of Toronto	158	1	166	1
Univ. of Alberta	133	2	103	4
Univ. de Montreal	104	4	121	3
McGill	81	5	95	5

**Description:** Subject to the terms of a sponsored research agreement, inventions made at UBC initially belong to the individuals who create them. Under the terms of UBC Policy 88, if the inventors desire or are required by the terms of their research agreement to commercialize the invention, ownership are transferred to UBC. At this point inventors are required to complete an Invention Disclosure and Assignment Form available from the UILO to begin the technology transfer process. This is the count of these submissions.

**Person with lead responsibility for this metric:** Helen Burt, Associate Vice-President Research, VPRI

**Data collection will be from:** Brett Sharp, Director of Operations, UILO

**Date:** Collected for each fiscal year April 1-March 31. These numbers are normally available in April each year.

**Explanation of Results**

In 2012/13 128 new invention disclosures were received by the UILO. Invention disclosures are made when researchers wish to commercialize discoveries arising from research conducted using UBC facilities or developed using University-administered funds.

## RESEARCH EXCELLENCE - A) Patents Filed, and Issued

	Okanagan			Vancouver			UBC		
	11/12	12/13	13/14	11/12	12/13	13/14	11/12	12/13	13/14
Patents Filed	2	8	3	164	237	211	166	245	214
Patents Issued	0	0	0	50	70	98	50	70	98

**Benchmark:** Benchmarking against North American universities can be done through statistics provided by the Association of University Technology Managers (AUTM). AUTM has published data up to fiscal year 2011/12 and made available some preliminary 2012/13 data. UBC performance vs. the rest of the Canadian G5 universities is provided below:

### Patents Filed

	2011/2012		2012/2013	
	#	Rank vs. G5	#	Rank vs. G5
UBC	92	1	133	1
Univ. of Toronto	63	4	66	5
Univ. of Alberta	86	2	74	3
Univ. de Montreal	74	3	69	4
McGill	54	5	99	2

Note: discrepancy between benchmark data and the data reported above is due to the fact that AUTM constrains reporting to exclude provisional patent applications and certain follow-on applications such as continuations, divisionals, and continuations-in-part.

### US Patents Issued

	2011/2012		2012/2013	
	#	Rank vs. G5	#	Rank vs. G5
UBC	13	3	14	T3
Univ. of Toronto	22	1	13	5
Univ. of Alberta	7	5	20	2
Univ. de Montreal	19	2	14	T3
McGill	10	4	22	1

### Description

Number of patents filed and issued based on research developed at UBC and our Affiliated Hospitals.

**Person with lead responsibility for this metric:** Helen Burt, Associate Vice-President Research, VPRI

**Data collection will be from:** Brett Sharp, Director of Operations, UILO

**Date:** Collected for each fiscal year April 1-March 31. These numbers are normally available in April each year.

## RESEARCH EXCELLENCE - A) # Technologies mobilized

	Okanagan			Vancouver			UBC		
	11/12	12/13	13/14	11/12	12/13	13/14	11/12	12/13	13/14
#Technologies Mobilized	0	0	0	51	76	54	51	76	54

**Benchmark:** Benchmarking of licensed invention disclosures (note that this is only a portion of what UBC is reporting on above) against North American universities can be done through statistics provided by the Association of University Technology Managers (AUTM) who has published data in this regard up to fiscal year 2012/13. UBC performance vs. the rest of the Canadian G5 universities is provided below:

	2010/2011		2011/2012	
	#	Rank vs. G5	#	Rank vs. G5
UBC	31	4	35	1
Univ. of Toronto	34	T2	24	3
Univ. of Alberta	28	5	11	5
Univ. de Montreal	34	T2	25	2
McGill	44	1	12	4

### Description

This number includes the number of *different* technologies mobilized in 2013/14 through the following mechanisms:

- Licensed by the UILO to an industry partner (the count is the number of different technologies rather than the number of license agreements) (27)
- Downloaded or licensed through Flintbox (count of technologies rather than transactions) (15)
- Accepted through the Intellectual Ventures Canada Solutions Report agreement (2)
- Mobilized through other channels (0)

**Person with lead responsibility for this metric:** Helen Burt, Associate VP Research, VPRI

**Data collection will be from:** Brett Sharp, Director of Operations, UILO

**Date:** Collected for each fiscal year April 1-March 31. These numbers are normally available in April each year.

### Explanation of Results

Fifty four different UBC technologies were mobilized in 2013/14 through licensing agreements, downloads and orders via technology portals and through submission to Intellectual Ventures as a Solutions Report under the Intellectual Ventures Canada partnership with UBC.

## RESEARCH EXCELLENCE - B) # Technology development projects

	Okanagan			Vancouver			UBC		
	11/12	12/13	13/14	11/12	12/13	13/14	11/12	12/13	13/14
#Technology development projects	0			24	25	25	24	25	25

**Benchmark:** A general comparator benchmark for other institutions is not available. However, statistics for CIHR PoP and NSERC I2I projects are available from the CIHR and NSERC respectively. UBC's comparison with the G5 universities is below. As can be seen from the data in the tables below, UBC has been the most successful institution in the country with respect to obtaining Proof of Principle funding and performs well in obtaining Idea to Innovation Funding.

	FY 2001-2013 (all time)		FY2013	
	# (\$value)	Rank vs. G5	# (\$value)	Rank vs. G5
CIHR POP				
UBC	\$9.1M	1	\$1.08M	1
Univ. of Toronto	\$3.4M	3	\$0.16M	T3
Univ. of Alberta	\$2.2M	4	\$0.16M	T3
Univ. de Montreal	\$0.6M	5	\$0.16M	T3
McGill	\$6.5M	2	\$0.77M	2

	FY 2005-2013 (all time)		FY2012 (most recent data)	
	# (\$value)	Rank vs. G5	# (\$value)	Rank vs. G5
NSERC I2I				
UBC	\$4.1M	3	\$0.63M	1
Univ. of Toronto	\$6.0M	1	\$0.50M	3
Univ. of Alberta	\$1.0M	5	\$0.13M	5
Univ. de Montreal	\$1.4M	4	\$0.22M	4
McGill	\$4.6M	2	\$0.61M	2

### Description

This metric describes funded research projects that are associated with UBC invention disclosures and that are being undertaken with a view to creating a commercially viable product or service. Typically these projects are funded by the UILO's internal Prototype Development program, the CIHR Proof of Principle (PoP) program, the NSERC I2I Program, and Genome BC's Proof of Concept Fund and Technology Development Initiative. This metric does not include projects partnered with CECRs such as the Centre for Drug Research and Development unless external CIHR PoP funds have been obtained; partnerships with CECRs are captured in another metric.

**Person with lead responsibility for this metric:** Helen Burt, Associate VP Research, VPRI

**Data collection will be from:** Brett Sharp, Director of Operations, UILO

**Date:** Collected for each fiscal year April 1-March 31. These numbers are normally available in April.

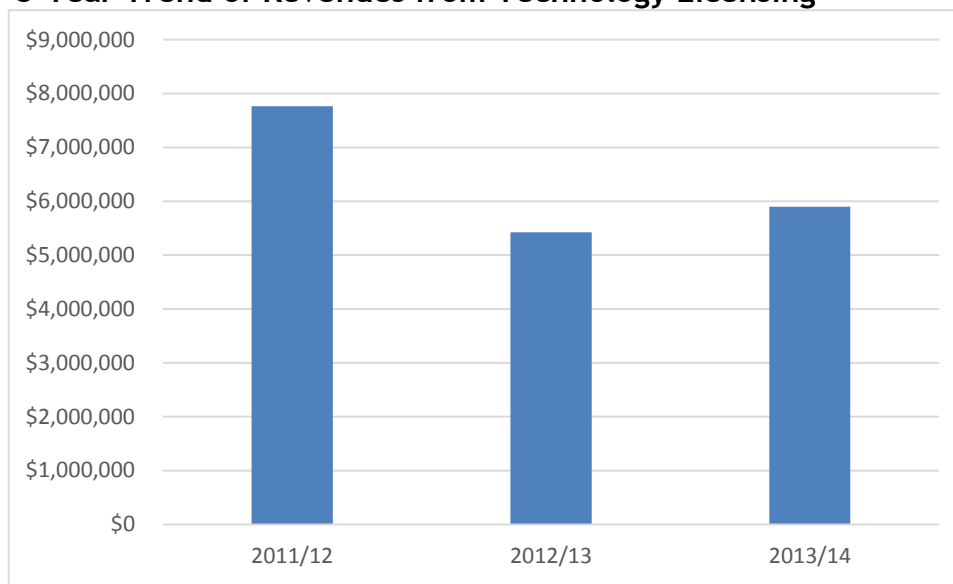
### Explanation of Results

UBC researchers have been very successful at attracting external funding to support technology development projects. For example, since the inception of the PoP program UBC has secured nearly 16% of all CIHR Proof of Principle funding. These funding sources are supplemented by the UILO's internal Prototype Development Fund. Approximately 15 projects are funded by these programs each year. In FY 2014 the launch of Genome BC's Proof of Concept Fund and Technology Development Initiative lead to the funding of an additional 12 technology development projects.

## RESEARCH EXCELLENCE - C) Revenues from technology licensing

	UBC - Okanagan			UBC - Vancouver			UBC - V + O		
	11/12	12/13	13/14	11/12	12/13	13/14	11/12	12/13	13/14
Revenues from technology licensing (UILO licensing)	0	0	0	\$7,764,938	\$5,424,365	\$5,897,225	\$7,764,938	\$5,424,365	\$5,897,225

### 3-Year Trend of Revenues from Technology Licensing



**Benchmark:** Benchmarking against North American universities can be done through statistics provided by the Association of University Technology Managers (AUTM). AUTM has published data up to fiscal year 2011/12 and made available some preliminary 2012/13 data. UBC performance vs. the rest of the Canadian G5 universities is provided below:

	2011/2012		2012/2013	
	\$value	Rank vs. G5	\$value	Rank vs. G5
UBC	\$7,764,938*	1	\$5,352,982	1
Univ. of Toronto	\$6,101,560	2	\$3,001,100	3
Univ. of Alberta	\$909,230	4	\$831,958	5
Univ. de Montreal	\$5,185,184	3	\$3,970,701	2
McGill	\$885,811	5	\$891,794	4

\*These numbers are slightly different from the ones displayed in the top table. This is because AUTM first collects the numbers reported from UBC, converts them into US dollars to standardize the measurement for North America, then converts back to Canadian dollars for generating the Canadian report. These numbers are likely to be affected by the fluctuating exchange rate being used in each calculation.

#### Description

Licensing revenue includes: Royalties; License, Assignment & Option Fees, and; Equities Liquidated & Dividends

**Person with lead responsibility for this metric:** Helen Burt, Associate VP Research, VPRI

**Data collection will be from:** Brett Sharp, Director of Operations, UILO

**Date:** Collected for each fiscal year April 1-March 31. Data normally available in June.

**Explanation of Results:** In 2013/14 UBC technologies generated almost \$5.9M in licensing revenue.