FOR INFORMATION  PUBLIC  OPEN SESSION

TO:            UTSC Campus Council

SPONSOR:      Bernie Kraatz, Vice-Principal, Research
CONTACT INFO: 416-208-4835; vpresearch@utsc.utoronto.ca

PRESENTER:    See Sponsor.
CONTACT INFO: See Sponsor.

DATE:         March 3, 2020 for March 10, 2020

AGENDA ITEM:  8

ITEM IDENTIFICATION:

Annual Report: Office of the Vice-Principal, Research, UTSC

JURISDICTIONAL INFORMATION:

Under section 5.1 of the Council’s Terms of Reference, research planning is within the Council's area of responsibility

GOVERNANCE PATH:

1. UTSC Campus Council [For information] (March 10, 2020)
2. UTSC Academic Affairs Committee [For information] (March 25, 2020)

PREVIOUS ACTION TAKEN:

No previous action has been taken on this item.

HIGHLIGHTS:

The annual report presentation for the Office of the Vice-Principal Research provides an overview of UTSC faculty research outputs, funding and awards for 2018-19. In addition, the presentation highlights the Office’s supports, services and other initiatives for the UTSC community.
In 2018-19, the Office of the Vice-Principal Research supported 266 research faculty at UTSC. Our services include professional grant reviews, funding information sessions, administrative support for grant submissions and a variety of internal funding programs.

We invite you to review the annual report presentation and learn about:

- **22 research stories** featuring UTSC faculty, postdoctoral fellows and students across the departments and disciplines
- UTSC’s newest **Canada Research Chairs**, Professor Hilary Brown (ICHS) and Professor Myrna Simpson (DPES), and other CRC holders from UTSC
- Recipients of prestigious **external research awards and honours**:
  - Royal Society of Canada – Fellow
  - Royal Society of Canada – College of News Scholars, Artists and Scientists
  - CIFAR AI Chairs
- Recipient of **UofT research awards and honours**:
  - Connaught Global Challenge Award
- Recipients of **UTSC research awards and honours**:
  - Principal’s Research Award
  - Research Excellence Faculty Scholar
  - Research Recognition Award
- **Publications** by UTSC research faculty:
  - 625 journal articles
  - 12 Books
  - 54 Book chapters
  - 147 Other publications (reviews, conference papers, editorials, notes, letters, short surveys, exhibitions)
- **Research funding** obtained by our research faculty: over $13M in total for 2018-19
- **Statistics** related to funding sponsors, grant success, commercialization, entrepreneurship and faculty supervision at UTSC
- Recipients of **student awards** and student **outreach activities**
  - UTSC Undergraduate Research Poster Forum
  - UTSC Undergraduate Research Prize
  - UTSC Graduate Student Research Award
  - Let’s Talk Science and Science Rendezvous
- **Research lectures and events**:  
  - Celebration of Research Excellence Lecture Series
  - New Frontiers Seminar Series

**FINANCIAL IMPLICATIONS:**

N/A

**RECOMMENDATION:**

Presented for information.
DOCUMENTATION PROVIDED:

PowerPoint presentation - Research and Innovation at U of T Scarborough
Recent Awards and Honours

Anne-Emanuelle Birn (2018)
Centre for Critical Development Studies
Canadian Women in Global Health Award, Canadian Society for International Health

Barry Freeman (2018)
Arts, Culture and Media
Nathan Cohen Award for Excellence in Critical Writing, Canadian Theatre Critics Association

Gerald Chaim Cupchik (2018)
Psychology
Gustav Theodor Fechner Award, International Association of Empirical Aesthetics

Rudy Boonstra (2018)
Biological Sciences
Lifetime Achievement Award, Canadian Council of University Biology Chairs

Ian Brown (2018)
Biological Sciences
Senior Fellow, Cell Stress Society International

Diana Fu (2019)
Political Science
International Political Sociology Book Award, International Studies Association

Anthony Charles Ruocco (2019)
Psychology
Mid-Career Investigator Award, North American Society for the Study of Personality Disorders

Michael Lambek (2019)
Anthropology
Elliott P. Skinner Book Award, Association for Africanist Anthropology
Royal Society of Canada Fellows

John Friedlander (1988)  
Computer & Mathematical Sciences

Lisa Jeffrey (2007)  
Computer & Mathematical Sciences

John Kennedy (2005)  
Psychology

H. Bernie Kraatz (2019)  
Physical & Environmental Sciences

Michael Lambek (2000)  
Anthropology

Judith Teichman (2014)  
Political Science / Centre for Critical Development Studies

Frank Wania (2017)  
Physical & Environmental Sciences
Members of the College of New Scholars, Artists and Scientists

Katie Larson (2018)
English

Nathalie Rothman (2014)
Historical and Cultural Studies

Medals and Awards

Nick Eyles (2013)
Physical & Environmental Sciences
RSC McNeil Medal

Balint Virag (2014)
Computer & Mathematical Sciences
John L. Synge Award
2019 UTSC Awards

UTSC Principal’s Research Award
Marlene Goldman (2019) English

UTSC Research Excellence Faculty Scholar
Jason Weir (2019) Biological Sciences

UTSC Research Recognition Award
Rutsuko Ito (2019) Psychology
Canada Research Chairs

Daniel Bender
Historical and Cultural Studies

Brian Connelly
Management

Hilary Brown
Interdisciplinary Centre for Health and Society

Cendri Hutcherson
Psychology

Marney Isaac
Physical & Environmental Sciences / Centre for Critical Development Studies

Kagan Kerman
Physical & Environmental Sciences

Michael Lambek
Anthropology

Bianca Schroeder
Computer & Mathematical Sciences

Myrna Simpson
Physical and Environmental Sciences

Bebhinn Treanor
Biological Sciences
Julie Teichroeb/Girish Daswani
Anthropology

Mark Campbell
Arts, Culture and Media

Ken Welch
Biological Sciences

Lisa Jeffrey
Computer and Mathematical Sciences

Judith Teichman/Anne-Emanuelle Birn
Centre for Critical Development Studies

Marlene Goldman/Neal Dolan
English

Rena Helms-Park
Centre for French and Linguistics

Michelle Silver
Interdisciplinary Centre for Health & Society

Russell Kazal/Daniel Bender
Historical and Cultural Studies

John Trougakos
Management

William Seager
Philosophy

Artur Izmaylov
Physical & Environmental Sciences

Lucan Way/Matt Hoffman
Political Science

Andy Lee
Psychology

John Hannigan
Sociology

Sarah Forbes
Library Representative

UNIVERSITY OF TORONTO SCARBOROUGH
1265 Military Trail, Toronto, Ontario M1C 1A4
UTSC Research Funding

**Total Funding**

- **NSERC**
- **SSHRC**
- **CIHR**
- **Institutional Initiatives**
- **Government, Other**
- **Corporate**
- **Not-for-profit**
- **Faculty Count**
- **Award Count**

*Preliminary numbers*

- Data Source: UTBI Research Cube; prorated; total budget allocated by the sponsor during Grant Year April 1 - March 31; last system refresh February 5, 2020
- Affiliated hospitals data are updated with a one year delay
### UTSC Research Funding

<table>
<thead>
<tr>
<th></th>
<th>2015-16</th>
<th>2016-17</th>
<th>2017-18</th>
<th>2018-19</th>
<th>2019-20*</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSERC</td>
<td>$3,111,844</td>
<td>$2,836,057</td>
<td>$3,726,473</td>
<td>$3,573,744</td>
<td>$3,788,028</td>
</tr>
<tr>
<td>SSHRC</td>
<td>$974,664</td>
<td>$1,061,959</td>
<td>$1,369,850</td>
<td>$1,596,533</td>
<td>$2,019,808</td>
</tr>
<tr>
<td>CIHR</td>
<td>$715,781</td>
<td>$1,066,502</td>
<td>$765,089</td>
<td>$732,110</td>
<td>$981,801</td>
</tr>
<tr>
<td>TIPS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$125,000</td>
</tr>
<tr>
<td>Tri-Council</td>
<td>$4,802,289</td>
<td>$4,964,518</td>
<td>$5,861,412</td>
<td>$5,902,387</td>
<td>$6,914,637</td>
</tr>
<tr>
<td>CFI</td>
<td>$219,388</td>
<td>$943,711</td>
<td>$637,007</td>
<td>$340,800</td>
<td>$757,888</td>
</tr>
<tr>
<td>CRC</td>
<td>$827,147</td>
<td>$716,667</td>
<td>$1,000,000</td>
<td>$1,000,001</td>
<td>$1,070,000</td>
</tr>
<tr>
<td>OGI</td>
<td>$75,000</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>MRIS</td>
<td>$379,760</td>
<td>$927,133</td>
<td>$378,078</td>
<td>$541,459</td>
<td>$811,742</td>
</tr>
<tr>
<td>Institutional Initiatives</td>
<td>$1,501,295</td>
<td>$2,587,511</td>
<td>$2,015,085</td>
<td>$1,882,260</td>
<td>$2,639,630</td>
</tr>
<tr>
<td>Government, Other</td>
<td>$1,754,205</td>
<td>$2,649,804</td>
<td>$2,680,665</td>
<td>$2,483,695</td>
<td>$1,792,403</td>
</tr>
<tr>
<td>Corporate</td>
<td>$161,834</td>
<td>$194,064</td>
<td>$67,702</td>
<td>$34,817</td>
<td>$297,824</td>
</tr>
<tr>
<td>Not-for-profit</td>
<td>$1,569,840</td>
<td>$1,734,428</td>
<td>$1,708,233</td>
<td>$1,436,563</td>
<td>$2,050,368</td>
</tr>
<tr>
<td>Total Research Funding</td>
<td>$9,789,463</td>
<td>$12,130,325</td>
<td>$12,333,097</td>
<td>$11,739,722</td>
<td>$13,694,862</td>
</tr>
<tr>
<td>Faculty Count</td>
<td>235</td>
<td>241</td>
<td>250</td>
<td>261</td>
<td>266</td>
</tr>
<tr>
<td>Award Count</td>
<td>374</td>
<td>387</td>
<td>387</td>
<td>413</td>
<td>382</td>
</tr>
</tbody>
</table>

*Preliminary numbers

- Data Source: UTBI Research Cube; prorated; total budget allocated by the sponsor during Grant Year April 1 - March 31; last system refresh February 5, 2020
- Affiliated hospitals data are updated with a one year
Research Funding by Department 2019-20*

*Preliminary numbers

- Data Source: UTBI Research Data Cube (last updated February 5, 2020), pro-rated, April 1 – March 31
- Research data is dynamic and changes with each refresh
NSERC Discovery Grant (DG) Competitions

*Preliminary numbers
Data Source: U of T Marketshare Data Mart (Tableau); retrieved February 5, 2020
SSHRC Grant Competitions

SSHRC Insight Grant (IG) Success Rate

SSHRC Insight Grant (IG) Success Rate

Tableau Faculty
- Mississauga
- Scarborough
- U of T
- National

Data Source: U of T Marketshare Data Mart (Tableau); retrieved February 5, 2020
The numbers reported are based on a list compiled from Scopus database and supplemented with select publications. The list is not comprehensive.
In 2019-20*, more than $1.2M has been allotted for faculty, postdocs, students and centres through our internal programs, awards, and sponsorships.

*Preliminary numbers as of February 25, 2020
Faculty Internal Funding Programs
2019-20*

- Research Impact Fund: $3,000
- Research Grant Enhancement Fund: $7,600
- Working Groups: $6,000
- International Research Collaboration Fund: $15,000
- Research Conferences, Symposia & Workshops: $20,278
- Institutional Matching Fund: $75,000
- Research Competitiveness Fund: $87,712
- Tri-Agency Bridge Funding: $187,500

*Preliminary numbers as of February 25, 2020
The internal funding programs supported UTSC faculty across all disciplines.

*Preliminary numbers as of February 25, 2020*
OVPR Strategy

- Encourage participation in funding opportunities
- Help with writing winning proposals
- Support and cultivate partnerships
- Support institutional initiatives

Grant writing and editing support
Grant workshops for faculty
Research Officers and Financial Specialists
OVPR Strategy

- Faculty training and research proposal development services and support
- Seed funding to enhance, stimulate and promote faculty research
- Recognition and promotion of faculty research excellence
- Support student research and innovation activities (The Hub and the Bridge)
UTSC Clusters of Scholarly Prominence Program (CSPP)

• Following extensive conversations with faculty, the Research Advisory Board and the Chairs and Directors group, the UTSC CSPP was developed.

• Purpose: to provide UTSC faculty with a mechanism to help pursue the creation of self-sustaining, interdisciplinary, inter-departmental, collaborative clusters of scholarship in areas of established and emerging research strength at UTSC.

• Value: $100,000-$200,000 per year for three years/can apply for an additional two years of funding.

• Inaugural Competition Deadlines:
  o NOI: May 4, 2020
  o Full Application: June 15, 2020
**OVPR Grant Support**

- In the past year (May 1, 2019 to February 14, 2020)
  - Administrative oversight of \(~120\) external grant applications
    Review for compliance with UT protocols for indirect costs if applicable
  - MRA approval process support
  - Enhanced processing of \(~40\) applications
    - Proposal development and editing support
    - Review and feedback on narrative sections of proposal and/or budget review and feedback
<table>
<thead>
<tr>
<th>Topic</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSERC Discovery Grant Information Session: Preparing an NOI</td>
<td>June 11, 2019</td>
</tr>
<tr>
<td>NSERC Discovery Grant and Research Tools &amp; Instruments Grant Panel</td>
<td>June 12, 2019</td>
</tr>
<tr>
<td>Discussion</td>
<td></td>
</tr>
<tr>
<td>SSHRC Insight Grants Information Session</td>
<td>June 17, 2019</td>
</tr>
<tr>
<td>NSERC Alliance Grant Program Information Session: Live Stream</td>
<td>June 26, 2019</td>
</tr>
<tr>
<td>New Frontiers in Research Fund - Exploration Stream: Webinar</td>
<td>July 17, 2019</td>
</tr>
<tr>
<td>Information Session</td>
<td></td>
</tr>
<tr>
<td>New Faculty Orientation</td>
<td></td>
</tr>
<tr>
<td>• Building Research Excellence: Research funding opportunities, grant</td>
<td></td>
</tr>
<tr>
<td>support &amp; communications</td>
<td></td>
</tr>
<tr>
<td>• Building your Research Profile: Research Award Nominations and</td>
<td></td>
</tr>
<tr>
<td>Communicating Impact</td>
<td></td>
</tr>
<tr>
<td></td>
<td>August 7-9, 2019</td>
</tr>
<tr>
<td>Topic</td>
<td>Date</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>------------------</td>
</tr>
<tr>
<td>NSERC Discovery Grant Panel Session: Preparing an Application</td>
<td>September 9, 2019</td>
</tr>
<tr>
<td>NSERC Discovery Grant and Research Tools &amp; Instruments Grant Panel</td>
<td>September 9, 2019</td>
</tr>
<tr>
<td>Discussion</td>
<td></td>
</tr>
<tr>
<td>SSHRC Insight Grants Panel Session</td>
<td>September 11, 2019</td>
</tr>
<tr>
<td>MRA/MROL Information Session/Workshop</td>
<td>September 11, 2019</td>
</tr>
<tr>
<td>SSHRC Insight Development Grant Panel Session</td>
<td>January 13, 2020</td>
</tr>
<tr>
<td>Presentations at 8 Departmental Meetings</td>
<td>September 2019 – February 2020</td>
</tr>
</tbody>
</table>
Marlene Goldman, *English*
Principal’s Research Award 2019

Cendri Hutcherson, *Psychology*
Canada Research Chair in Decision Neuroscience

Bebhinn Treanor, *Biological Sciences*
Canada Research Chair in Spatially-Resolved Biochemistry

Jason Weir, *Biological Sciences*
Research Excellence Faculty Scholar 2019

Rutsuko Ito, *Psychology*
Research Recognition Award 2019

Daniel Bender, *Historical & Cultural Studies and Culinaria Research Centre*
Canada Research Chair in Cultural History and Analysis

Julie McCarthy, *Management*
Research Excellence Faculty Scholar 2018
Student Research Awards 2018-19

U OF T SCARBOROUGH UNDERGRADUATE RESEARCH POSTER FORUM
(Co-sponsored by the Library and the Office of the Vice-Principal Research)

1ST PLACE
NAZIA MOHSIN
Psychology
Centre for French and Linguistics
Phonetic Symbolism in Urdu

2ND PLACE
SHENHAB ZAIG
Psychology
Mechanisms of opioid-induced respiratory depression and analgesia in zebrafish

3RD PLACE
DILAKSHAN SRIKANTHAN
Psychology
Elucidating the Efficacy of Intrathecal Delivery of CAR-T immunotherapy in preclinical models of Medulloblastoma

U OF T SCARBOROUGH UNDERGRADUATE RESEARCH PRIZE 2018-19
(Co-sponsored by the Library and the Office of the Vice-Principal Research)

PRAVEEN JAYARAJAN
Biological Sciences

JUDY PERPOSE
Arts, Culture and Media

GRADUATE STUDENT RESEARCH AWARD 2018-19

TAHIRA GULAMANI
Psychology, Masters level

JOÃO PEDRO FONTENELLE DE ARAÚJO FREIRE DA SILVA
Physical & Environmental Sciences, Doctoral Level
Science Rendezvous at the Toronto Zoo

Attendance
~5,800

Number of Event Volunteers
75

Volunteer Hours Spent Planning
1,400

Social Media Reach
21,000+ impressions
The Hub – Since 2015

- 148 startups formed (265 students / founders)
- Majority from Computer Science
- 33% incorporated
- Combined value at graduation of $1.6 million
- Combined valuation today of top 5 companies over $30 million

**HUB companies by industry**

<table>
<thead>
<tr>
<th>Industry</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apps/Software</td>
<td>52%</td>
</tr>
<tr>
<td>E-Commerce</td>
<td>13%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>12%</td>
</tr>
<tr>
<td>Health</td>
<td>6%</td>
</tr>
<tr>
<td>Arts</td>
<td>6%</td>
</tr>
</tbody>
</table>
Accelerate
• 18 students forming 5 startups
• One-on-one coaching, advising

Incubate
• 66 students forming 46 startups
• Workshops, group sessions

Engage
• 800 students
• Bothing, presentations, lectures and events

The process followed by The Hub is to create a funnel, engaging students primarily via presentations and boothing. A pool of 200 highly motivated students is identified. There is a conversion rate of 30% that draws them into The Hub, where they focus on building their prototype of their idea, attending workshops and group advising sessions. Roughly 25% go on to accelerate their company, which is the point where revenues kick in, and there is advising and one on one coaching.
Women Entrepreneurs
• 6 of this year’s 8 winning teams included women founders

Inclusivity
• The Hub is broadly inclusive by gender, cultural diversity, and discipline focus

This year’s star entrepreneur
• Lynne Corvaglia

Lynne – a student from IDS, currently on placement in Costa Rica – has created a social enterprise to recycle 64 tons of leather from Southwest Airlines. She pitched her idea at the Startup Intake, and won first place.