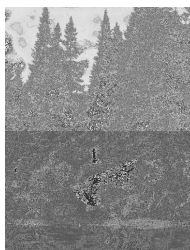


Boreal Bioprospecting Initiative:

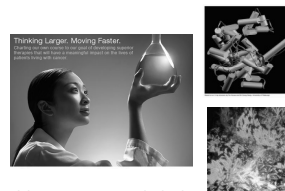
Extracting economic benefits
from Northern Ontario's unique
natural resources

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NOSM - East



•Bioprospecting is the search for novel natural compounds, proteins, or organisms with medicinal or commercial value

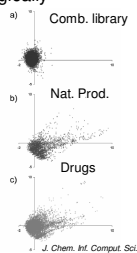
•The identification of natural compounds is a rapidly expanding field for large pharmaceutical companies looking to replenish their *pipeline* with new lead compounds



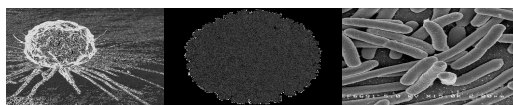
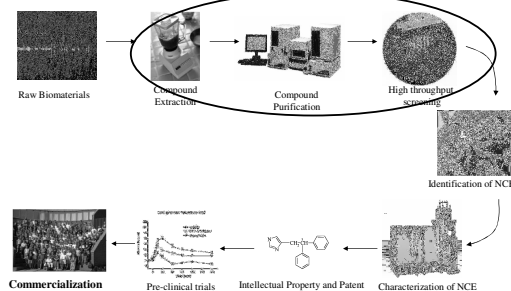
•Although several geographies are currently being bioprospected (e.g. Pacific rainforest, Amazon rainforest, and Ocean floors), there is currently little bioprospecting in Northern Ontario.

Why look at natural products?

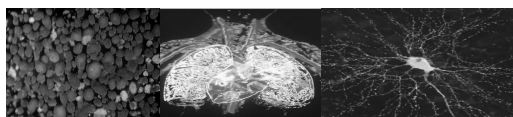
- Natural products have coevolved with various protein targets making them more physiologically relevant than random *de novo* synthesized libraries
- In 2003, 8 of the 10 small molecules approved by the FDA were inspired by natural products
- 61% of all 877 small molecule new chemical entities approved by the FDA from 1982-2002 can be traced back to a given natural product



Bioprospecting: The Big Picture

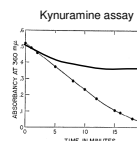


Bioprospecting for what?



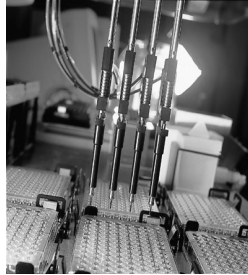
BBI Pilot Study – Searching for neuroprotectants in naturally derived extracts

- 1) Develop a preliminary bioassay: Screening against target (eg. MAO)
-assay should be inexpensive and fast
- 2) Screen a library of extracts/compounds and identify 'hits'
- 3) Proceed to further downstream testing and characterization (eg. Cellular models, structural elucidation, mechanism)



Future Directions

- Expand bioassays
- Derive chemical/extract library from various biomaterials
- Engage community based stakeholders and partners
- Develop partnerships with academic and industrial laboratories
- Establish an *IP* portfolio with potential for commercialization



Thank You