

The Vancouver Biotechnology Cluster

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A collaborative effort

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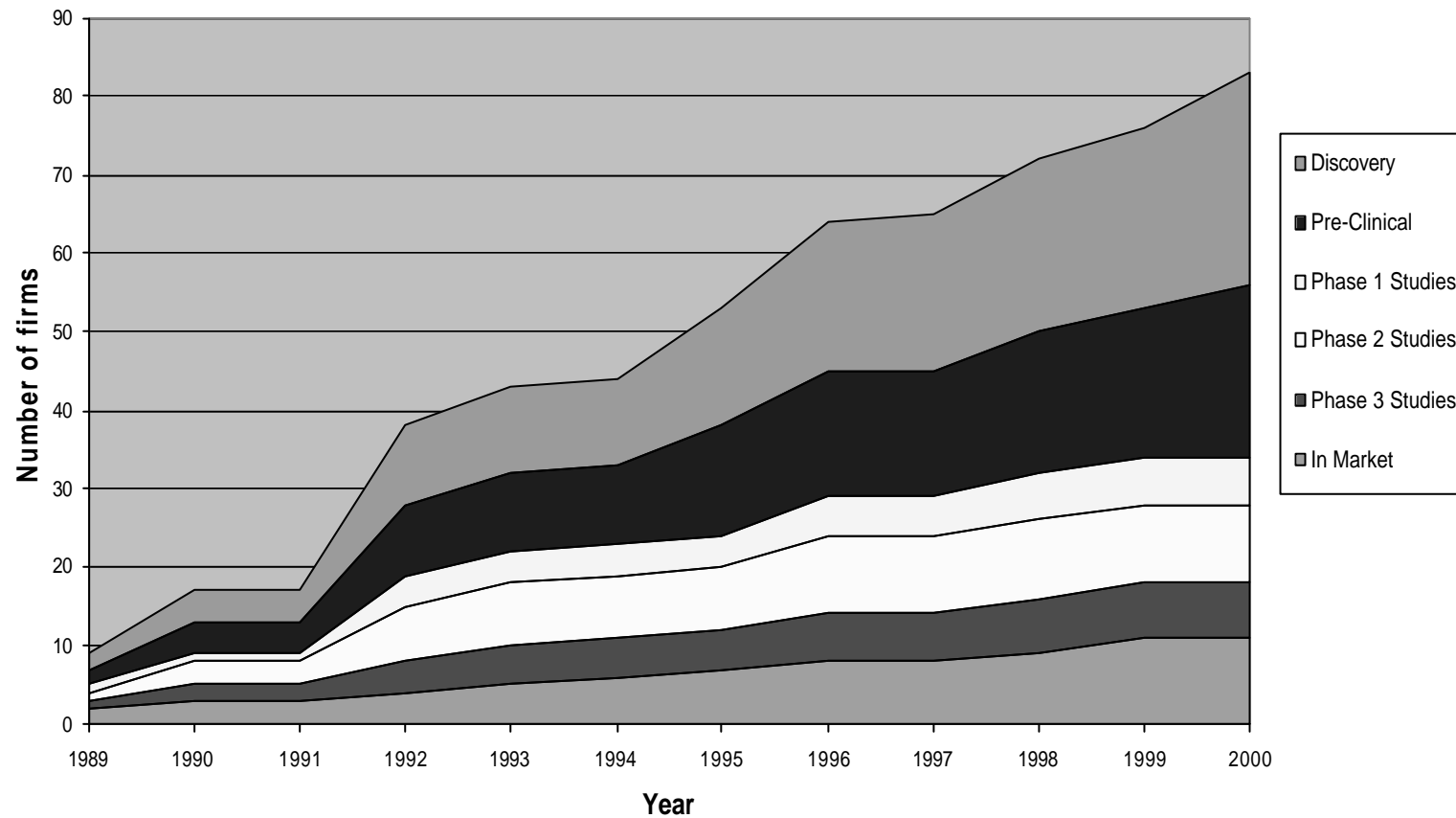
Biotech Cluster Study Information

- This is a work in progress (25 interviews)
- Geographically limited to Lower Mainland
- Basic information obtained from National Research Council (NRC) and BC Biotech Association
- Cluster statistics: 40 privately owned firms, 10 venture capitalists, 9 government organization, 2 non-profit organizations, 3 research institutes
- 32 private firms belong to the pharmaceutical cluster and 8 to the medical device cluster as defined by ISRN standards

Biotech Cluster Vibe in Vancouver

- Type I regionally embedded and anchored cluster
- Smaller than Montreal/Toronto clusters but more bioscience “stars” (Queenton and Niosi)
- Role of location/life style clearly a factor
- Young and small firms; inspiration - Quadra Logic Technology (QLT) created in 1981 - largest privately owned biotech firm in Vancouver - 400 employees
- Over half of private BC biotech firms were spun off from UBC; only three were spun out from SFU

Growth of the Vancouver Biotech cluster



Barriers to Innovation

- Difficulty finding and retaining qualified employees
- Competition with US and Eastern Canada due to economic disadvantages associated with Vancouver
- *“Need some kind of incentive to attract employees, something we can work with other than scenery - like tax free stock options...”*
- *“No incentive to finance biotech in Canada”*
- *“Best thing government could do is leave us alone”. “ Let us do business without interfering”*

Barriers to Innovation (cont.)

- Lack of industrial experience in Vancouver due to relative youth of biotech cluster
- Prowling head hunters: those employed by biotech firms in Vancouver are often asked several times a week if they are looking for a job
- *“Lack of experienced management, upper level”*
- Lack of tax credits for upper level management to attract them to work here

Sources of Innovation

- Progression of trained PhD students from UBC labs contributes to talent in BC. *“it’s a trickle down effect better than in ’92”*
- Close proximity of firms to university (labs) : *“opportunities from UBC, SFU and UVIC where tech comes from university and genome centers.”*
- BC Biotech Association provides networking opportunities for members in Biotech Industry
 - 80% of those interviewed mentioned the importance of the BC Biotech Association

Sources of Innovation (cont.)

- Existence of venture capitalists
 - *“There are lots of VC in BC but not enough science”*
 - *“The mining industry in Vancouver when the VSE existed is similar to the biotech cluster in Vancouver. High risk with unpredictable outcomes so Vancouver is used to this dynamic of investing. There are a lot of angel investors because of this dynamic”*

Points of Interest

- Geographic limitations: Is Victoria part of Vancouver's biotechnology cluster?
 - virtual vs. physical
- Role of difference in SFU and UBC IP policies
- Sudden drop in UBC spin offs since 1999

"There are a lot of genetic disease spin offs that are making good money but there isn't enough science coming out of UBC so there is currently a slow decline of spin off companies."

Necessary vs. Sufficient Cluster Conditions

- What are the necessary and sufficient conditions that support the formation of a biotech cluster in Canada? Are these region specific?
- Necessary (common features): university, labs, government agencies, private firms, human capital (?)
- Sufficient (conditions for continued existence): at least one private firm with a global reach (Porter), manufacturing resources, active/interventionist public sector (?)
- Potential test – Catastrophic loss of a node/actor - can a cluster survive without certain nodes?

A methodological test

- The Womens Advisory Group on Innovation Studies (WAGIS) was set up with Status of Women Canada funding to test innovation survey instruments for gender bias
- Results of focus group testing carried out at CPROST by Nicola Crowden under the direction of Catherine Murray in Vancouver in summer 2002 showed the ISRN interview guide does not have an inherent gender bias
- The focus groups did point out the position of the respondent in an enterprise is important in order to qualify responses

Outcome of the testing

- The WAGIS findings suggest there are several analytical problems in Oslo-based innovation studies, and that these could have gender bias implications:
 - Definition of, and underreporting of, services and process innovations
 - Definition of, and specification of the respondent(s) position in the firm
 - A pro-innovation bias that tends to assume all innovation is radical
- The CPROST ISRN interview data base now records gender of respondent