# Financial strategy and planning; international trends & best practices

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# Why invest in patents?

- To protect your idea
- To increase the value of your licensing
- For visibility
- For building a portfolio
- For strategic reasons

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# Technology Idea –to- Market

Idea → Proof of Concept → Prototype → Scale-up → Commercial Production → Product In use

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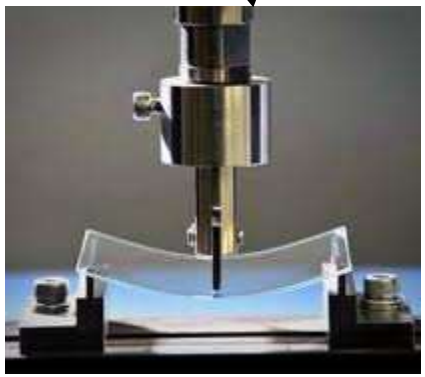

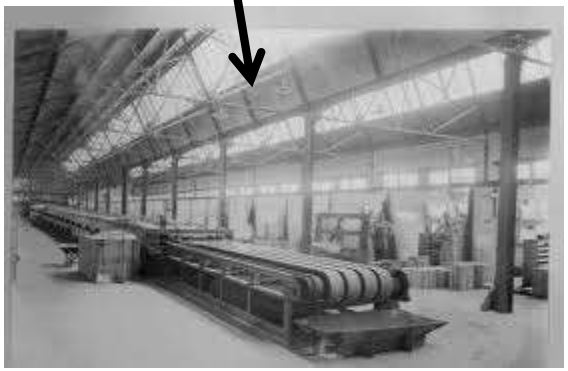

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# Technology Idea –to- Market

Need Partners for this

$$$, Time, People

Idea → Proof of Concept → Prototype → Scale-up → Commercial Production → Product In use

Typically most technologies at R&D labs are at this stage

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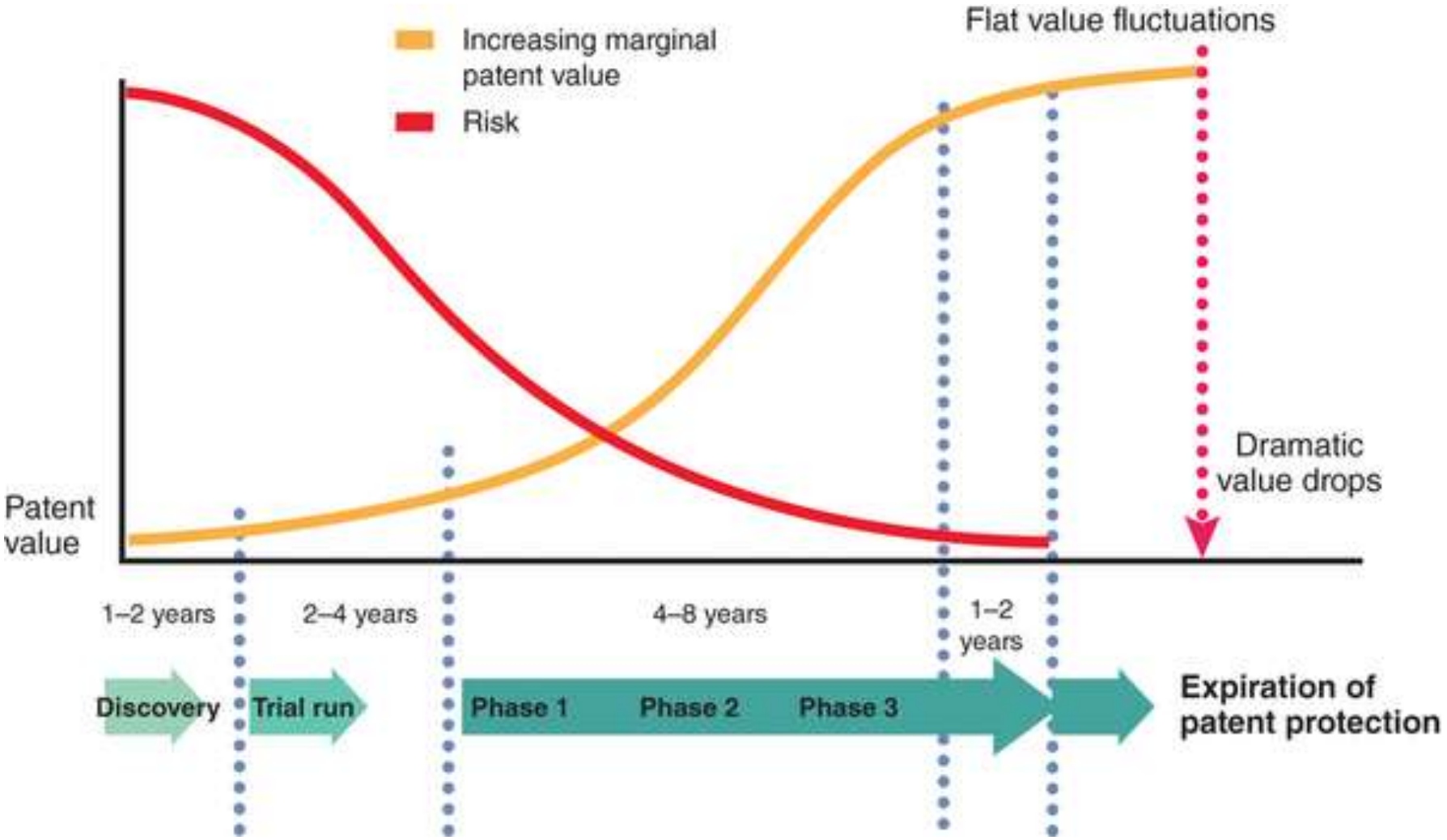
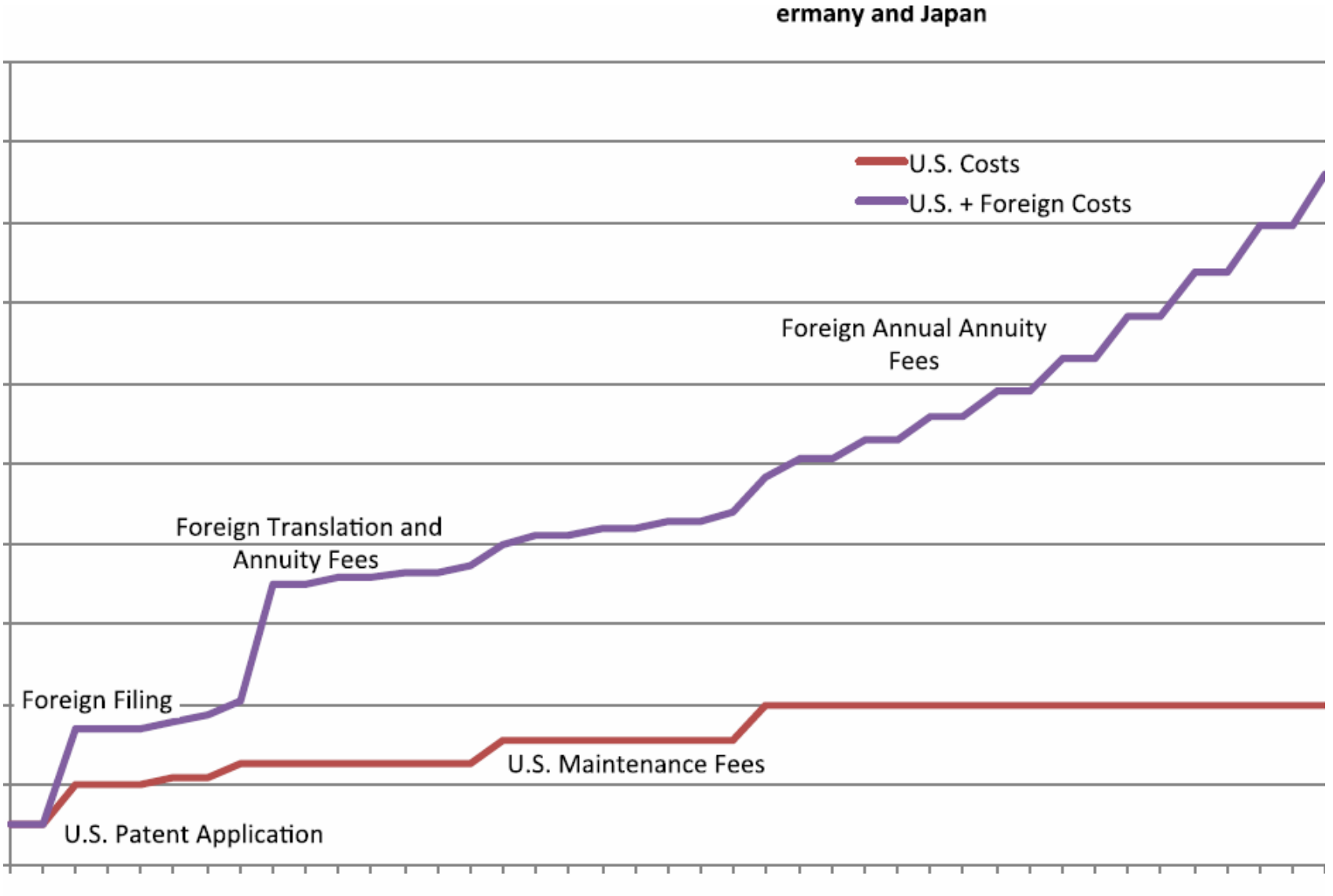
# Life cycle of pharma patent value




Source: *Nature Biotechnology*, **29**, 781, (2011)

# Patent Costs – Rough Trends




Source: Discussion Item on University Technology Licensing Program tabled by the Office of the President, University of California, to the Committee on Finance, 2012 (http://www.universityofcalifornia.edu/regents/regmeet/jan12/f9.pdf)

# Example – MIT Technology Licensing Office Statistics

| **MIT-TLO Statistics for Fiscal Year 2012** | |
|---|---|
| Total Number of Invention Disclosures | 694 |
| Number of U.S. Patents Filed | 305 |
| Number of U.S. Patents Issued | 199 |
| Number of Licenses Granted | 81 |
| Number of Options Granted | 26 |
| Number of Companies Started | 16 |
| | |
| Cash Income | $147.5 M |
| Royalties | $ 54.09 M |
| Patent Reimbursement | $10.43 M |
| Equity Cash-In | $ 2.75 M |
| Expenditure on Patents | $16.5 M |

Source: http://web.mit.edu/tlo/www/about/office_statistics.html

# How do the US Universities perform?

| Year | Invention Disclosures | Licenses | Options | License Income: Gross Received (in $, millions) | Patent Appl: Newly Filed | Start-ups: Initiated | Res Exp (Total) ($, million) | Res Exp ($, million) spent for each disclosure | License income as a % of Res Exp | Res Exp spent for creating one startup ($, million) |
|---|---|---|---|---|---|---|---|---|---|---|
| 2009 | 20,184 | 4,347 | 951 | 2,313 | 11,961 | 593 | 53,560 | 2.7 | 4.3% | 90 |
| 2008 | 20,020 | 4,125 | 986 | 3,437 | 12,153 | 595 | 51,205 | 2.6 | 6.7% | 86 |
| 2007 | 19,740 | 4,323 | 751 | 2,703 | 11,749 | 551 | 48,603 | 2.5 | 5.6% | 88 |
| 2006 | 18,792 | 4,176 | 748 | 2,163 | 11,583 | 551 | 45,062 | 2.4 | 4.8% | 82 |
| 2005 | 17,315 | 4,140 | 749 | 2,128 | 10,236 | 450 | 42,052 | 2.4 | 5.1% | 93 |
| 2004 | 16,817 | | | 1,472 | 10,486 | 458 | 40,983 | 2.4 | 3.6% | 89 |
| 2003 | 15,463 | | | 1,418 | 7,899 | 373 | 38,381 | 2.5 | 3.7% | 103 |
| 2002 | 14,358 | | | 1,304 | 7,316 | 401 | 34,859 | 2.4 | 3.7% | 87 |
| 2001 | 12,612 | | | 1,112 | 6,367 | 426 | 29,838 | 2.4 | 3.7% | 70 |
| 2000 | 11,933 | | | 1,275 | 6,049 | 386 | 27,750 | 2.3 | 4.6% | 72 |
| **Total** | **167,234** | **21,111** | **4,185** | **19,325** | **95,799** | **4,784** | **412,294** | **2.5** | **4.7%** | **86** |

Source: Data was obtained from AUTM Licensing STATT (a licensing database run by the Association of University Technology Managers)

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# The top licensing earners – how they skew the picture

| | Research Expenditure ($, million) | Invention Disclosures | Startups Initiated | License Income ($, millions) | Research Exp for each disclosure ($, million) | License income as a % of Res Exp | Res Exp for creating a startup ($, million) |
|---|---|---|---|---|---|---|---|
| Average per year of the **top 6%** universities | 7,054 (17%) | 3,023 (18%) | 81 (17%) | 1,164 (60%) | 2.3 | 16.5 % | 87 |
| Average per year of the **bottom 94%** universities | 34,175 (83%) | 13,700 (82%) | 397 (83%) | 769 (40%) | 2.5 | 2.2% | 86 |
| Average per year of all universities | 41,229 (100%) | 16,723 (100%) | 478 (100%) | 1,933 (100%) | 2.5 | 4.7% | 86 |

Source: Data was obtained from AUTM Licensing STATT (a licensing database run by the Association of University Technology Managers)

# Licensing Income to MIT (from Momenta)

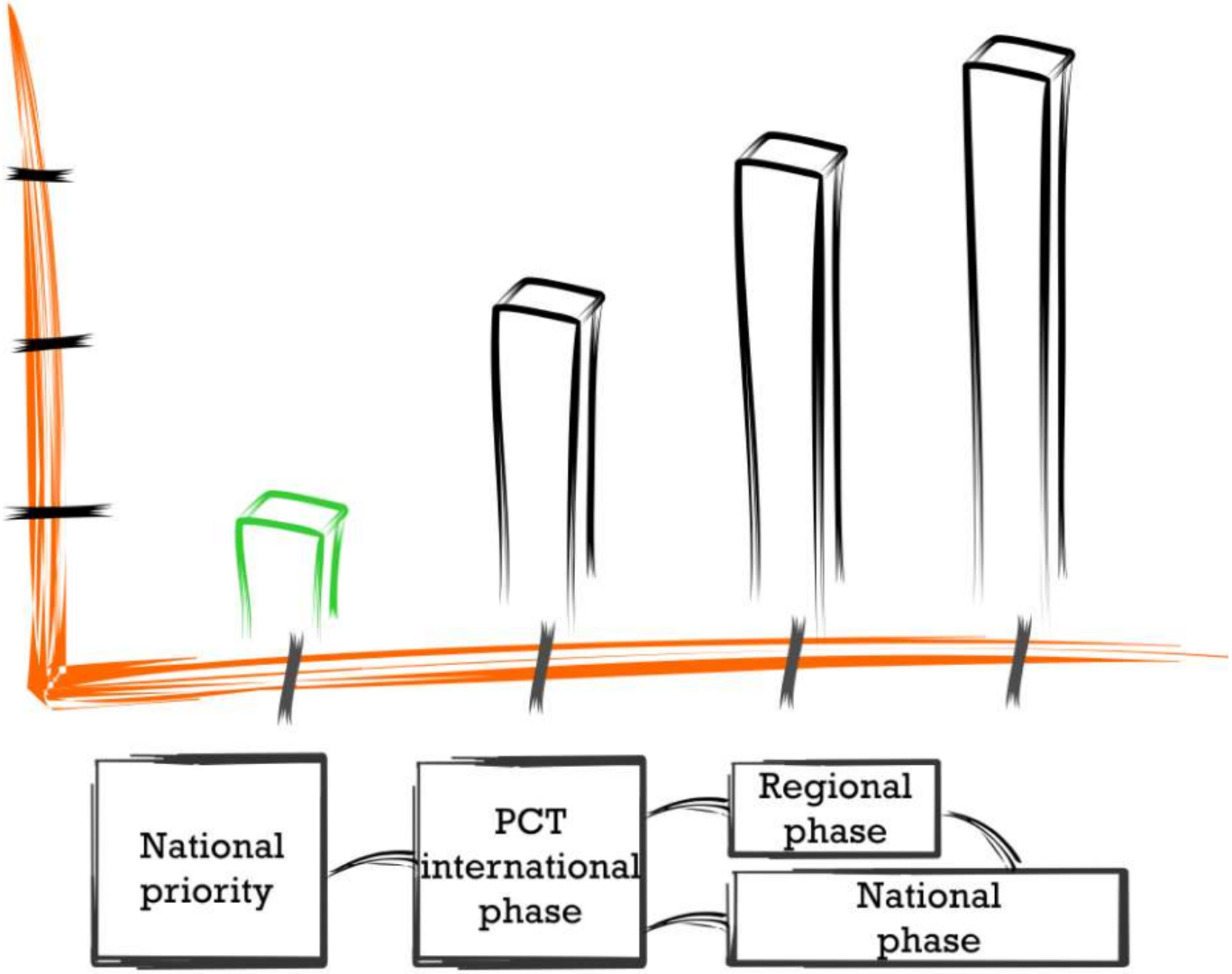
| | 2013 | 2012 | 2011 |
|---|---|---|---|
| License maintenance fees | $ 82 | $ 183 | $ 158 |
| Royalties | 252 | 1,013 | 6,563 |
| Total | $334 | $1,196 | $6,721 |

(in thousands)

- 290,000 equity shares
- License maintenance fees
- Royalties
- Market Cap (Feb 26 2015): $ 716 million

Source: Momenta Pharmaceuticals Annual Report 2013

# Deferring Costs




Source: http://patentcost.co.uk/

# Contacts

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