Patents as Data
Aggregators in Personalized Medicine
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Myriad Genetics v. AMP

- Human Gene Patents
  - BRCA1 & BRCA2
  - Nucleotide sequences
  - Genomic (gDNA)
  - Complementary (cDNA)

- Patent Eligibility
  - “Products of nature”
  - Information – sequence
  - Chemical structure
  - Incoherent results
Mayo v. Prometheus

- Process Claims
  - Medical diagnostics
  - Pharmaceutical dosage
  - Myriad process claims

- Laws of Nature
  - Natural correlation
  - Inventive concept
  - “Something more”
  - Not standard hardware
Business Alternatives

- Myriad Patents
  - Expiration
  - Technological shift
  - Changing markets

- Trade Secrecy
  - Testing exclusivity
  - Variations of unknown significance
  - Allele database
  - Comprehensive test
Extending Exclusivity

- Proprietary Database
  - Confidential business information
  - Indefinite exclusivity
  - Independent re-creation
  - Socially valuable

- Myriad Monopoly
  - Sole testing provider
  - Dubious right
  - Beyond patent term
  - Public and private value
Information Disclosure Paradox

- Kenneth Arrow
  - Nature of information
  - Non-rivalrous, non-exclusive
  - Simultaneous benefit
  - Bargaining impasse

- Edmund Kitch
  - Patent publication
  - Strong property rule
  - Breaking impasse
Patent Justifications

- Disclosure Incentive
  - Publication and teaching
  - Incomplete disclosures
  - Next best alternatives
- Innovation Incentive
  - Invention and innovation
  - Costs of innovation
  - Monopoly profits
- Faith-based IP
Prospect Theory

- Edmund Kitch
  - Tragedy of the Commons
  - Comparison to mineral rights
  - Demsetzian property theory
  - Aligning private and public value

- Patent Prospects
  - Avoid rent dissipation
  - Coordinate development
  - Tangible resources
Patent Aggregators

- New Justifications?
  - Ancillary coordination
  - Point of collection
  - Widely dispersed data
  - Transaction barriers
  - Exclusivity

- Social costs
  - Confidential information
  - Extended exclusivity
Alternate Scenarios

- Without Gene Patents
  - No patent focal point
  - Database social loss
  - Alternate exclusivity
  - Government collection

- With Gene Patents
  - Data aggregation
  - Extended monopoly
  - Alternate legal interventions
Legal Interventions

- Antitrust
  - Trade secret monopoly
  - Market substitutes
- Patent Misuse
  - Extended licensing
  - Patent term finality
- Patent Preemption
  - Federal policy
  - Trademark utility
Thank You

Questions Welcome