The following Tufts CSDD experts are available to comment or discuss a wide variety of topics relating to drug development.

<table>
<thead>
<tr>
<th>Contact</th>
<th>Expertise</th>
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■ Clinical pharmacology and therapeutics  
■ Ethics |
Since its founding in 1976 as an independent, academic, nonprofit research group, the Tufts Center for the Study of Drug Development at Tufts University has developed strategic information to help drug developers, regulators, and policy makers improve the quality and efficiency of pharmaceutical and biopharmaceutical development, review, and utilization.

Kenneth I Kaitin, PhD, director of Tufts CSDD since 1998, leads a team of 12 research staff and five support staff who:

- Monitor and report on the development, regulation, and utilization of new drugs and biopharmaceuticals.
- Explore the economic, legal, scientific, and public policy issues affecting pharmaceutical and biopharmaceutical innovation worldwide.
- Provide analyses on the development and review of new therapeutic agents.
- Sponsor conferences, roundtables, and public forums that bring together the often diverse perspectives of government, industry, academia, and public health advocates.
- Raise the level of national and international debate on issues related to new drug and biotechnology product development and regulation.

Tufts CSDD Outlook, published each January, showcases the Tufts Center’s view on near-term pharmaceutical and biopharmaceutical development trends. Data contained in Outlook 2013 are based on proprietary research conducted by Tufts CSDD. Analyses are from the ongoing work of Tufts CSDD’s research staff, who confer regularly with a broad range of pharmaceutical and biopharmaceutical industry leaders, as well as with regulators, policy makers, investors, service providers, and others involved in biomedical innovation.

Outlook 2013 constitutes one element in a full range of information and related services focused on the research-based drug and biotechnology industry and other stakeholders in pharmaceutical innovation. Other Tufts CSDD offerings include professional development courses, workshops, and symposia. In addition, the Tufts Center publishes the Tufts CSDD Impact Report, a bi-monthly newsletter providing analysis and insight into critical drug development issues, and the Tufts CSDD R&D Management Report, a quarterly review of strategic issues in pharmaceutical R&D.

Research findings developed by Tufts CSDD are regularly published in peer-reviewed, trade, and business publications, and senior Tufts CSDD staff are quoted frequently in the business, industry, scientific, and general interest press worldwide.

For more information, call 617-636-2170 or click on http://csdd.tufts.edu.
Glossary

**Biopharmaceutical** — Any compound composed of DNA, RNA, or protein. For example: recombinant proteins (rDNA), monoclonal antibodies (mAbs), biologics (biopharmaceuticals extracted from natural sources), and antisense oligonucleotides.

**Biomarker** — Also called biological marker. A substance, measurement, or indicator of a biological state. Biomarkers may exist before clinical symptoms arise.

**Biosimilar** — A follow-on, approved biopharmaceutical that is biologically similar to an existing medicine.

**Clinical trial** — A specific type of clinical study in which a medical intervention is tested against a placebo or an active control in human subjects. Clinical study is a broader term that includes other forms of human participatory research, such as pharmacokinetic, epidemiologic, and behavioral studies.

**Companion diagnostic** — A diagnostic test linked to a therapeutic drug, which serves to stratify populations into responders and non-responders, as well as indicate likelihood of adverse events in particular patients.

**CRO** — Contract research organization. A business entity that manages one or more steps in the drug development process, including conduct of preclinical studies, clinical study design and execution, data management, analysis, medical writing, and regulatory submission.

**Monoclonal antibody (mAb) types** — Murine mAbs are derived from mouse genes; human mAbs are derived from human genes; chimeric and humanized mAbs are each derived from varying amounts of mouse and human genes, with the humanized products containing more human protein sequence than the chimeric versions.

**Personalized medicine** — The tailoring of medical treatment and delivery of health care based on the individual characteristics of each patient – including genetic, molecular, imaging, and other personal determinants.

**Phase I** — Studies typically conducted in healthy volunteers to determine the pharmacokinetic and pharmacologic actions of a drug in humans, the side effects associated with increasing doses, and, in some cases, early evidence of effectiveness.

**Phase II** — Studies designed to obtain data on the effectiveness of a drug for a particular indication or indications in patients with the disease or condition.

**Phase III** — Expanded controlled and uncontrolled trials to gain additional data about effectiveness and safety needed to evaluate the benefits and risks of a drug.

**Phase IV** — Studies conducted after a drug is approved for marketing to provide expanded safety and efficacy data on the drug when used in the general patient population, and to generate information to improve the prescribing, use, quality, or manufacture of the product.

**Protocol** — A plan detailing the methodology of a clinical study.
A dearth of new drugs in the R&D pipeline—needed to replace the large number of products with expiring patents—is spurring the research-based drug industry to embrace new development paradigms, including the creation of strategic partnerships, often comprised of multiple stakeholders, to collaborate on new product discovery and development. Drug sponsors are partnering with CROs, specialty and technical service providers, patient advocacy groups, venture capital firms, and academic research centers, as well as competitor companies to form novel relationships to share knowledge and expertise, leverage capabilities, and spread development risk.

While disease complexity is a major driver spurring greater collaboration, equally important is the need to more fully identify and address root causes of R&D inefficiency. A recently completed Tufts CSDD study, for example, found that the pharmaceutical industry spends $4 billion to $6 billion each year on procedures, in connection with active Phase II and III trials regulated by the U.S. Food and Drug Administration (FDA), that generate extraneous clinical trial data. In a world shaped by increased patent expirations, diminished cash flow, and fewer promising breakthrough products in company pipelines, the industry recognizes that it cannot afford the cost of generating extraneous data. To their credit, many companies have taken specific steps to reduce the cost of new product development, including improving clinical trial design, making greater use of biomarkers, and increasing the adoption of sophisticated statistical analyses to better understand the data they generate.

The future of bioinnovation remains bright. The emergence of open innovation models, where scientists worldwide openly share knowledge, holds still more promise to transform the nature, pace, and cost of new drug development—to the benefit of patients, as well as to drug sponsors, their development partners, and investors.

CUTTING EXTRANEOUS COSTS WILL REMAIN A TOP PRIORITY FOR DRUG DEVELOPERS

Distribution of Total Direct Study Procedure Costs by Type: 2012

Adopting new R&D strategies alone won’t fill the new product pipeline; the research-based pharmaceutical industry also needs to improve R&D efficiency and performance—from discovery through product launch. New Tufts CSDD research shows that, on average, 18% of a study budget is spent on the direct cost to administer non-core procedures. Eliminating these expenses could save the industry up to $6 billion per year.

Source: Tufts Center for the Study of Drug Development
R&D Trends

Facing rising R&D costs, high attrition rates, and stagnant output, drug companies will seek more integrated partnering agreements with academic centers, CROs, patient groups, and other stakeholders – to boost discovery and speed development of new compounds.

- Pharmaceutical firms will expand their relationships with academic medical centers (AMCs) to foster innovation in discovering and developing treatments for unmet medical needs. Emerging relationships will include competition and collaboration in choosing which projects to support, industry/government pre-competitive research centers, and development and financial risk-sharing models.

- Drug companies will shift more of their focus from licensing-in, or purchasing partially developed new molecules, to discovering and co-developing molecules in collaboration with academia, government, and other organizations.

- Drug developers will seek to reduce study conduct performance risk by utilizing more global investigative sites with fewer subjects per site, but they will need to balance potential gains against a possibly slower pace of clinical trials that will come with engaging less experienced investigators.

- Drug companies will accelerate their move from traditional trial-and-error approaches to exploratory drug development and adopt new R&D paradigms based on biomarkers, modeling and simulation, novel formulation techniques, and adaptive clinical trial designs to help establish more predictable development success based on early stage human testing.

- Fully integrated pharmaceutical networks (FIPNets) will continue to grow and improve drug developers’ access to high-potential compounds, new technologies, and human and financial capital.

NEW PARTNERING MODELS WILL INCREASINGLY SHAPE THE WAY THE DRUG INDUSTRY CONDUCTS R&D

Trends in Industry-Academic Medical Center Partnership Models

With only 30% of compounds in the marketed portfolio of pharma companies generating revenues equal to or greater than the average cost to develop a new drug, drug sponsors are exploring a wide range of development relationships with non-traditional partners. AMCs are particularly attractive, as AMC researchers—more than half of whom already conduct drug and device clinical trials—increasingly act to ensure that the right research is done at the earliest stages to maximize the chances of regulatory success.

Commonly used
- Unrestricted grants
- Fee for service

Increasingly popular in the present
- Corporate venture capital funds
- Academic drug discovery centers

Emerging
- Risk sharing
- Competitive grants

Source: Tufts Center for the Study of Drug Development
Regulatory Environment

Regulatory agencies in the U.S. and Europe, responding to growing pressures to approve breakthrough drugs more quickly, will increasingly rely on new analytical and information tools to streamline the approval process.

- The FDA will spend considerable time ironing out the wrinkles relating to implementation of the *FDA Safety and Innovation Act* to allow for mid-course corrections while avoiding late course surprises through greater communication efficiency.

- At the same time, the agency will continue to address the significance of patient-reported outcomes and comparative effectiveness research while struggling to understand and control the impact of social media, a powerful communication tool that affects a variety of FDA-regulated activities—from product promotion to adverse event reporting to patient-organized clinical trials.

- The FDA will continue to seek solutions to the problem of drug shortages, stemming in part from the lack of manufacturers of generic injectables, which has resulted in compounding pharmacies—numbering near zero a decade ago to several thousand currently—becoming essentially an unregulated gray market for drugs in short supply.

- The European Medicines Agency (EMA) will enforce new approaches for the ethical conduct of clinical trials to strengthen transparency, post-market surveillance, staggered approvals, and incorporation of information into the full scientific assessment report required for every medicine granted a central marketing authorization by the European Commission.

USE OF SPECIAL DESIGNATIONS ARE LIKELY TO INCREASE IN THE U.S. AND EUROPE

**FDA Special Designation Trends**

![Bar chart showing the share of total approvals for orphan, fast track, accelerated approval, and any designation for oncology and non-oncology drugs from 2002-2011.](chart)

Regulators in the U.S. and Europe are hoping to increase the use of special designations to spur therapies to treat non-oncology life-threatening and rare diseases, to the level that oncology drugs enjoyed in 2007-11, when these products accounted for about 38% of all orphan approvals in both regions. Expected changes in regulatory policies and programs—and a shift in market value assessment that favors R&D of medicines for special patient populations—may increase the popularity of special designations besides orphan.

*Note: Numbers in each cluster may exceed 100%, as approvals may have more than one designation.*

*Source: Tufts Center for the Study of Drug Development*
The continually and rapidly evolving biotech sector will seek more creative funding strategies from a widening range of partners while working closely with regulators on preclinical programs.

- To cope with rising development costs and regulatory uncertainty, biotechnology companies will seek more varied sources of funding, including from nonprofit organizations, governments, and sales of assets, as well as more creative deals with traditional sources, such as large pharmaceutical firms, venture capital, and angel investors.

- Because biotech products are often developed for novel targets for which surrogate endpoints and target locations are only partially understood, sponsor companies increasingly will need to seek the advice of regulators to address the unique pharmacology and target-specific risks in preclinical development programs.

- The FDA in 2013 will release a draft guidance for a new product designation, termed a breakthrough therapy, and, as required by the FDA Safety and Innovation Act, must respond to requests for this designation and take actions to expedite development and review, a move that will be welcomed by small and mid-sized biotech companies.

- The Patient Protection and Affordable Care Act, which requires the FDA to create an abbreviated approval pathway for biological products that are demonstrated to be “biosimilar” to or “interchangeable” with an FDA-approval biologic, will result in significant growth in the biosimilar market and an increase in demand for lower cost biologics.

**ANTICANCER mAb PRODUCTS WILL CONTINUE TO DOMINATE NEW PRODUCT DEVELOPMENT**

**Pipeline for Monoclonal Antibodies (Mid-2012)**

The mix of indications of mAbs in clinical study is expected to mirror that observed in 2012: of the 359 mAbs in clinical study in mid-2012, 52% focused on anticancer therapies, 26% on immunological treatments, and the remaining 22% on other indications. Although the number of mAbs entering clinical studies annually from the late 1990s through the late 2000s tripled, it has remained relatively flat over the last several years, a trend likely to continue in the near-term.

*Source: Tufts Center for the Study of Drug Development*
Prescription Drug Policy

Prescription drug policy will be shaped by global concerns to a greater degree than ever before, with international coordination growing in relation to the development of personalized medicines as well as drugs for neglected diseases.

- **Cancer drugs** – More and speedier approvals are expected in the U.S., but, taking a cue from Europe, more payer scrutiny is likely as some newly approved cancer drugs offer relatively marginal benefits in terms of survival and quality of life.

- **Biosimilars** – In the U.S., biosimilar approvals are on the horizon, as well as a definitive regulatory pathway, following the lead of the European Medicines Agency.

- **Personalized medicine** – Expect to see more approvals of co-developed companion diagnostics and therapeutics, and, correspondingly, greater numbers of collaborations between diagnostics and therapeutics manufacturers as they seek to establish footholds in what is projected to be a high-growth, multi-billion dollar market.

- **Neglected diseases** – Drug development will progress at a steady rate, while in developing nations barriers to patient access to newly approved products will likely remain.

### PROGRESS ON NEW DRUGS FOR NEGLECTED DISEASES CONTINUES AT A SLOW PACE

**Global Approvals for Neglected Diseases: 2009-2012**

<table>
<thead>
<tr>
<th>Disease Category</th>
<th>Number of Products</th>
<th>Disease Category</th>
<th>Number of Products</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV/AIDS</td>
<td>23</td>
<td>Trachoma</td>
<td>0</td>
</tr>
<tr>
<td>Malaria</td>
<td>8</td>
<td>Rheumatic fever</td>
<td>0</td>
</tr>
<tr>
<td>Tuberculosis</td>
<td>0</td>
<td>Typhoid and paratyphoid fever</td>
<td>1</td>
</tr>
<tr>
<td>Dengue</td>
<td>0</td>
<td>Kinetoplastids</td>
<td>1</td>
</tr>
<tr>
<td>Helminth</td>
<td>0</td>
<td>Diarrheal diseases</td>
<td>2</td>
</tr>
<tr>
<td>Leprosy</td>
<td>0</td>
<td>S. pneumoniae</td>
<td>2</td>
</tr>
</tbody>
</table>

Only about 33% of the 40 new drugs that won approval in 2009-12 were placed on the World Health Organization (WHO) Model List of Essential Medicines, which describes them as affordable drugs that satisfy the health care needs of the majority of the population, available in adequate amounts and dosage forms. Emerging countries, many of which are shaping formulary policies, in part, to battle a range of chronic diseases, will be looking to the WHO to hasten the pace of new additions to the essential medicines list.

Source: Tufts Center for the Study of Drug Development
Greater integration and risk sharing with contract service providers, combined with new approaches to optimizing protocol designs and simplifying global clinical trial activity, are key strategies drug developers will use to drive efficiency, lower cost, and improve performance.

- Sponsor companies, in their efforts to drive efficiency improvements, will adopt new approaches and embrace technology solutions to assess and implement more feasible protocol designs and clinical trial execution.

- The transfer of operating and resource risk to contract preferred providers will drive more rapid adoption of new technology solutions and practices by leading CROs looking to protect their profitability, while delivering higher levels of speed, efficiency, and reliability.

- In an effort to simplify clinical trial operating complexity, sponsors and CROs will scale back the number of investigative sites they operate and the number of countries where they locate their trials.

- The large minority disparities that exist among patients and principal investigators participating in industry-funded clinical research will receive renewed attention from sponsors, CROs, and regulatory agencies as population demographics shift and more targeted, stratified medicines and diagnostics enter clinical testing.

- The global investigative site landscape is ripe for consolidation, as sites reluctantly invest in infrastructure despite a global economic recovery, while sponsors and CROs vie to establish preferred relationships with larger, more established, and experienced study conduct providers.

**STREAMLINING AND SIMPLIFYING PROTOCOL DESIGN HOLDS PROMISE FOR IMPROVING EFFICIENCY**

*Proportion and Direct Cost of Protocol Procedures by Endpoint Type*

A 2012 Tufts CSDD study found that one out of every five clinical trial procedures collects extraneous data and costs sponsors, on average, $1.1 million in direct administration fees per study. Strategies to streamline and simplify protocol design will yield substantial improvements in study performance and efficiency while offering cost savings – an unusual win-win combination.

<table>
<thead>
<tr>
<th>Procedures Supporting Primary and Key Secondary Endpoints</th>
<th>Procedures Supporting Regulatory Compliance</th>
<th>Standard Procedures</th>
<th>Procedures Supporting Supplementary, Tertiary, and Exploratory Endpoints</th>
</tr>
</thead>
<tbody>
<tr>
<td>$2.9 million*</td>
<td>$1.3 million*</td>
<td>$0.8 million*</td>
<td>$1.1 million*</td>
</tr>
</tbody>
</table>

*Direct cost to administer procedures per study

Source: Tufts Center for the Study of Drug Development
Selected CSDD Publications

Listed below are selected articles published in 2012 by Tufts CSDD research staff.

**R&D Trends**


**Biotechnology Sector Trends**

**Prescription Drug Policy**


**R&D Management and Operations**


**Regulatory Environment**

AGENDA 2013
Tufts CSDD Research Projects Due for Completion

TUFTS CSDD MULTI-COMPANY PROJECT SERIES
- Comparing fully-loaded direct costs of outsourcing versus in-house staffing
- Measuring the adoption and use of electronic health records in clinical trials
- Assessing outsourcing strategies and operations
- Evaluating the cost of regulatory harmonization
- Benchmarking the cost of comparator drugs and co-therapies
- Assessing site satisfaction with the clinical supplies process
- Evaluating best practices in improving minority patient participation

REGULATION AND GLOBAL INNOVATION TRENDS
- Measuring the cost of drug development: Tufts CSDD’s newest estimate
- Determining clinical success and phase transition rates for central nervous system drugs
- Assessing reasons why investigational drugs fail
- Examining the company and product landscape for medical countermeasures
- Identifying and validating predictors of new molecular entity success
- Surveying orphan product sponsors’ development plans for companion diagnostics

R&D PERFORMANCE AND MANAGEMENT
- Analyzing the prevalence of drug-diagnostic co-development in the late-stage personalized medicine pipeline
- Assessing the magnitude and cost of collecting unused protocol data
- Quantifying the impact of adaptive clinical trial designs

BIOTECHNOLOGY SECTOR TRENDS
- Assessing the landscape for biopharmaceutical products and sponsors
- Evaluating biosimilar diffusion barriers in the U.S. market

PHARMACEUTICAL POLICY AND MARKET TRENDS
- Evaluating pharmaceutical industry donation programs targeting neglected diseases
- Measuring progress in neglected disease drug development and patient access
- Examining the Priority Review Voucher Program for pediatric cancers
- Assessing the alignment of state and federal regulations on essential drug benefits
- Evaluating the causes and impact of drug shortages
- Analyzing the market for prescription to over-the-counter switches in the U.S. and E.U.
February 4-8, 2013  
**Boston**  
**40th Annual Postgraduate Course in Clinical Pharmacology, Drug Development, and Regulation**  
Now in its 40th year, the Tufts CSDD Postgraduate Course provides advanced instruction in clinical pharmacology, drug development, clinical trial strategies, biopharmaceutical development, drug safety, and the regulatory process. The 2013 course features lectures, breakout groups, and an interactive panel discussion. Over five days, expert faculty will examine clinical trial ethics, outcomes research, epidemiology, and information technology in clinical development. The program includes an interactive, mock presentation to regulators, providing participants with a unique opportunity to identify and analyze the impacts of drug design protocols on the regulatory process.

February 21, 2013  
**Boston**  
**Tufts CSDD Executive Forum Roundtable: Managing Protocol Design to Improve Clinical Study Efficiency**  
This program brings together R&D leaders from industry, academia, and contract research organizations to discuss strategic R&D issues and new approaches that will guide the research-based industry to future success.  
*More on Inside Back Cover.*

May 16, 2013  
**Boston**  
**Tufts CSDD Executive Forum Roundtable: Partnerships, Alliances, Consortia, and Other Risk-Sharing Collaborations**  
*See Inside Back Cover.*

July 9-10, 2013  
**Boston**  
**Leadership for Drug Development Teams: Improving Cross-Functional R&D Performance**  
Designed in collaboration with industry R&D leaders, the curriculum is based on challenges experienced by hundreds of development teams, program managers, and functional directors. Two-thirds of the course is devoted to hands-on casework, with the rest focused on interactive discussion with faculty. Attendance is limited to 35.

September 12, 2013  
**Boston**  
**Tufts CSDD Executive Forum Roundtable: Outsourcing to Maximize Operating Efficiency**  
*See Inside Back Cover.*

November 7, 2013  
**Boston**  
**Tufts CSDD Executive Forum Roundtable: Enhancing Product Value through Comparator and Co-Therapy Clinical Trials**  
*See Inside Back Cover.*

Looking ahead  
February 2014  
**Boston**  
**Postgraduate Course in Clinical Pharmacology, Drug Development, and Regulation**  
*See description above.*

*For more information about these programs, call the Tufts Center for the Study of Drug Development at 617-636-2170, email us at csdd@tufts.edu, or visit http://csdd.tufts.edu and click on the “Courses” section.*
The drug development landscape is rapidly changing. Stay on top of the trends with

Tufts CSDD Impact Reports

A bi-monthly, authoritative analysis of critical drug development issues, highlighting current research of the Tufts Center for the Study of Drug Development.

The Tufts CSDD Impact Report has become must reading for professionals worldwide looking to understand the current state of drug development and regulation. Presented in a concise, easy-to-read format, each issue delivers original research, analysis, and insight on a host of mission-critical topics relating to the nature and pace of drug development and regulation.

It’s why readers, year after year, describe Tufts CSDD Impact Reports as “thoughtful and timely,” “excellent,” and “a real asset.”

2013 EDITORIAL CALENDAR:
- January/February — A Review of Patient Recruitment and Retention Practice Benchmarks
- March/April — The Global Investigative Site Landscape and Site Performance Metrics
- May/June — Oncology Product Success Rates
- July/August — Measuring Progress in Neglected Diseases Drug Development
- September/October — Why Investigative Drugs Fail: The Causes for High Attrition Rates
- November/December — Assessing Regulatory Mechanisms for Speeding Access to Breakthrough Drugs

To preview Tufts CSDD Impact Reports, visit http://csdd.tufts.edu/reports for a complimentary PDF download.

To subscribe, visit http://csdd.tufts.edu/reports to order online.

Tufts CSDD corporate subscriptions are available at volume discounts. Contact Jonathan Hsieh at 617-636-0840 or email Jonathan.Hsieh@tufts.edu for details.
An ongoing program of highly interactive, one-day roundtable discussions for R&D leaders, hosted by the Tufts Center for the Study of Drug Development.

FEBRUARY 21, 2013 MANAGING PROTOCOL DESIGN TO IMPROVE CLINICAL STUDY EFFICIENCY
Protocol design strategies, such as decreasing the prevalence of unused protocol data, reducing protocol complexity, and limiting the number of protocol amendments, can decrease costs and streamline timelines. This roundtable will open with a presentation of recent Tufts CSDD findings on the incidence and cost of protocol amendments and unused protocol data, and will follow with a discussion on specific strategies to reduce protocol complexity and improve clinical study performance and lower cost.

MAY 16, 2013 PARTNERSHIPS, ALLIANCES, CONSORTIA, AND OTHER RISK-SHARING COLLABORATIONS
Throughout the pharmaceutical industry, companies are entering into innovative risk-sharing collaborations and creating integrated networks to improve product development and share risk. This roundtable will review alliance and network relationship management strategies that enhance partnership value and increase return on investment.

SEPTEMBER 12, 2013 OUTSOURCING TO MAXIMIZE OPERATING EFFICIENCY
Successful biopharmaceutical outsourcing strategies have been linked to decreased pipeline risk and increased cost savings. This roundtable will open with a presentation of Tufts CSDD findings on current outsourcing trends and their impact on operating performance and the results of a recent study comparing internal and outsourced resource costs. Companies with innovative outsourcing models then will share strategies that have boosted productivity, lowered cost and delivered higher levels of operating efficiency.

NOVEMBER 7, 2013 ENHANCING PRODUCT VALUE THROUGH COMPARATOR AND CO-THERAPY CLINICAL TRIALS
Regulatory bodies increasingly are asking sponsors to conduct comparator studies to assess safety and effectiveness of new drugs relative to marketed therapies. Many cost and regulatory challenges remain, however, with respect to comparator trial design and co-therapy sourcing. Tufts CSDD will kick-off this roundtable with a discussion on trends in comparator drug and co-therapy operating practices and costs. Companies will then discuss solutions to more effectively manage trials involving comparator and co-therapies.

Roundtables are held 10 a.m. – 4 p.m. at the Tufts Center for the Study of Drug Development in Boston.

For more information, call Robert Chung at 617-636-2187, or email robert.chung@tufts.edu.