5th Annual Conference

SAPA-NE’2002

Drug Discovery and Development in the Post-Genome Era

Co-organizers: MIT CSSA, MIT Talent Forum

June 22 - 23, 2002

Bldg. E51, Wong Auditorium, Sloan Business School,
Massachusetts Institute of Technology

Website: www.sapa-ne.org
Conference Chair:

Shiwen Lin, Ph. D. Infimed Therapeutics, Inc.; SAPA-NE, President-elect;

Conference Co-Chairs:

Erxi Wu, Ph.D. Dana-Farber Cancer Institute;
SAPA-NE, Director of Scientific Symposium
Jun Xian, Ph.D. Genome Therapeutics Corp.;
SAPA-NE, Director of Career Development
Yi Liu, Ph.D. Rhodia ChiRex, Inc.;
SAPA-NE, Secretary General

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MIT CSSA http://web.mit.edu/cssa/
MIT Talent Forum http://www.talenting.com
Greetings from the Conference Chair

On behalf of Sino-American Pharmaceutical Association - New England (SAPA-NE), I would like to welcome you to our 5th annual conference with the theme of "Drug Discovery and Development in the Post Genome Era". Completion of the human genome sequence has provided vast amount of information and new high through-put technologies that would allow us to understand disease processes and discover therapies better and faster. The post genome era is an exciting time to be a life scientist and pharmaceutical professional. In this era, we will be fortunate to witness the human genome map doing for biology what the periodic table did for chemistry.

It is the endeavor in life science, pharmaceuticals and biotechnology brought us together. SAPA is a popular organization of several thousands industry professionals and academic researchers of Chinese heritage in the United States. The local section SAPA-NE (http://www.sapa-ne.org) in the “Genetown” Boston/ Cambridge area, is striving to promote the drug discovery and development profession, facilitate the communication of the latest advancement in biomedical research, and assist in the exploration of new opportunities in the global biotechnology and pharmaceutical industries.

SAPA-NE annual conference has become a tradition and each year attracts renowned executives and professors to showcase their latest technologies, industrial and academic leadership. This year, the conference SAPA-NE’2002 organizing committee has put together an excellent program for you. To share their insight and vision, we have proudly assembled a panel of experts in the field of angiogenesis inhibitors, cancer drug development, high bone mass gene mutation, osteoporosis therapy, drug discovery from natural product, drug discovery from synthetic library, and high through-put early ADME evaluation of drug candidates.

To excel in our profession, SAPA-NE values very much communication. In addition to communicating the latest advancement in science, it is also the organizing committee’s intention to maximize the interaction among participants for networking. The concurrent Exhibit and Career Fair session is aimed at communication and promotion of new technology, high quality products, convenient services, and jobs available in the industry. The Sunday session will provide a forum for human resource specialists in the biotechnology and pharmaceutical industry, career seekers, and professionals looking for growth challenges to explore subjects including interview skills, communication essentials, project management, and leadership styles.

Finally, I would like to thank the organizing committee and all the volunteers whose efforts made this event possible. Special thanks in advance go to the speakers whose pure satisfaction is in science advancement and better health for all the people, and to the lead sponsor Wyeth and other corporate participants for their generous funding and support. With all the contribution and sponsorship, I hope you will find the conference educational and enjoyable.

Have a nice weekend.

Sincerely,

Shiwen Lin, Ph.D.
SAPA-NE’2002 Conference Chair
President-elect, SAPA-NE
5th Annual Conference SAPA-NE’2002

“Drug Discovery and Development in the Post-Genome Era”

June 22 - 23, 2002
Building E51, Wong Auditorium, Sloan Business School,
Massachusetts Institute of Technology

Conference Theme:
Saturday 8:30am – 6:00pm: Gene to Drug, Discovery & Development;
Concurrent Sessions: Technology/Product Exhibition;
Career Fair
Sunday 1:00pm – 5:00pm: How to Find & Grow a Career in the Biotech/Pharmaceutical Industry in US;

Opening Remarks
8:30am – 8:45am SAPA-NE’2002, Dr. Shiwen Lin, Conference Chair, SAPA-NE President-elect; Director of Analytical Development, Infimed Therapeutics, Inc.

Saturday June 22, Morning Session:
Hostess: Yajun Xu, Ph.D., Associate Director, Immunopharmacology, Millennium Pharmaceuticals, Inc.; SAPA-NE Executive Committee Member

Keynote Speech
8:45am – 9:45am Dr. Judah Folkman, Professor, Harvard Medical School, Children’s Hospital, “Angiogenesis Inhibitors: A New Class of Drugs”

9:45am – 10:30am Dr. Hans Fliri, Vice President Drug Development, Cetek Corp., “Modern Drug Discovery: A Role for Natural Products?”

10:30am – 11:00am Coffee Break & Exhibition

11:00am – 11:45am Dr. Zhongli Zheng, Vice President Program Management, NeoGenesis Pharmaceuticals, “Genome-scale Drug Discovery Platform”

11:45am – 12:30pm Janice T. Bourque, President & CEO, Massachusetts Biotechnology Council, “An Overview of Biotechnology Industry”

12:30pm – 1:30pm Lunch & Exhibition

1:30pm – 1:45pm SAPA-NE Service Excellence Award & Corporate Sponsor Award
Saturday June 22, Afternoon Session:

Host: Kevin Fang,
Associate Director, Sepracor; SAPA-NE Life-time Member

1:30pm – 2:15pm Dr. George D. Demetri, Director of Center for Sarcoma and Bone Oncology, Dana-Farber Cancer Institute, “Targeting Kit Signal Transduction with Imatinib mesylate as a Novel and Effective Therapy for Gastrointestinal Stromal Tumors (GIST) - A Paradigm for Rational Drug Development”

2:15pm – 3:00pm Dr. Paul Yaworsky, Project Leader, Wyeth Research, “Animal models of the High Bone Mass Mutation in the LRP5”

3:00pm – 3:45pm Dr. Yiping Li, Associate Member of Staff (Associate Professor), The Forsyth Institute; Assistant Professor, Harvard School of Dental Medicine, "Osteoporosis and Bone Biology"

3:45pm – 4:00pm Coffee Break & Exhibition

4:00pm – 4:45pm Dr. Carmen Baldino, Vice President of Chemistry, ArQule Inc., “Primary Screening Libraries for Efficient Drug Discovery”

4:45pm – 5:30pm Dr. Jingtao Wu, Head of Bioanalytical Research, DMPK, Millennium Pharmaceuticals, "Faster and Closer: New Bioanalytical Strategies for ADME Studies"

5:30pm – 9:00pm Dinner & Social

Sunday June 23, Afternoon Session Only:

1:00pm – 1:45pm Elaine Palome, Director of Employment, ArQule Inc., “Career Development Tips”

1:45pm – 2:30pm Katie Murphy, Recruiting Specialist, Aerotek, “Strategies for Interviewing”

2:30pm – 3:00pm Coffee Break

3:00pm – 4:00pm Panel Discussion
Judah Folkman, MD.,
Professor, Harvard Medical School, Surgeon-in-Chief, Children’s Hospital.

1953 B.A. Ohio State University, *cum laude*; 1957 M.D. Harvard Medical School, *magna cum laude*.

Even as a student, Judah co-authored papers describing a new method of hepatectomy for liver cancer and developed the first atrio-ventricular implantable pacemaker for which he received the Boylston Medical Prize, Soma Weiss Award and Borden Undergraduate Award in Medicine.

While serving as a lieutenant in the U.S. Navy from 1960-1962, Dr. Folkman and a colleague at the National Naval Medical Center, Bethesda, MD, first reported the use of silicone rubber implantable polymer for the sustained release of drugs. Their findings become the basis for development of Norplant, the contraceptive used internationally, and initiated the field of controlled release technology. At this time, Dr. Folkman also began growing tumors in isolated perfused organs, which led to the idea that tumors are angiogenesis-dependent.

Dr. Folkman’s discovery of the mechanism of angiogenesis opened a field of investigation that has led to the clinical trials of angiogenesis inhibitors in the U.S. and Europe. Largely because of Dr. Folkman’s research, the possibility of anti-angiogenic therapy is now on a firm scientific foundation, not only in the treatment of cancer, but of many non-neoplastic diseases as well.

Dr. Folkman holds honorary degrees from 11 universities and is the recipient of numerous national and international awards. He was elected to the National Academy of Sciences, the American Academy of Arts and Sciences, the American Philosophical Society and the Institute of Medicine of the National Academy of Sciences.

In addition to his distinguished accomplishments in research, Dr. Folkman has served as a surgeon and teacher. He began his career as an instructor in surgery for Harvard’s Surgical Service at Boston City Hospital, Boston, was promoted to Professor of Surgery at Harvard Medical School, and became the Julia Dyckman Andrus Professor of Pediatric Surgery in 1968. In 1967, at the age of 34, Dr. Folkman became the youngest chief of surgery at Boston's Children's Hospital, which also made him the youngest professor of surgery at Harvard Medical School. Dr. Folkman also is professor of cell biology at the Harvard Medical School.

“The discovery of angiogenesis inhibitors: A new class of drugs”

Abstract

The process of angiogenesis—the growth of new capillary blood vessels—is now recognized as a powerful control point in cancer. The hypothesis that tumors are angiogenesis-dependent has been confirmed by genetic methods and has stimulated angiogenesis research in many laboratories. As a result, angiogenesis inhibitors have emerged as a new class of drugs. Among the most potent and least toxic of the angiogenesis inhibitors are certain proteins in the body such as endostatin and angiostatin and others. This lecture will focus on how these proteins were discovered.
Hans Fliri, Ph.D.,
Vice President Drug Discovery, Cetek Corporation;

“Modern Drug Discovery: A Role for Natural Products?”

Abstract

Natural products have been a rich source of drugs for pharmaceutical industry. The top 20 drugs had worldwide sales of $52 billion in the year 2000, of which 35% were natural products or natural product derivatives. Despite the historical success, pharmaceutical industry is currently abandoning natural products research. Aspects contributing to this trend will be discussed as well as some new emerging technologies which may induce a reversal of this development.
Zhongli Zheng, Ph.D.,
Vice President of Program Management, Neogenesis Pharmaceuticals, Inc.
BS. In Chemistry, 1978-1982, Shandong University, China; Ph.D. in Organic Chemistry, 1983-1989, Yale University, USA. Dr. Zheng has been working in the drug discovery and development industry for the past 13 years. He has served as Staff Scientist at Cytel Corp., San Diego, Senior Scientist - Drug Design and Evaluation, Section head - Drug Design and Evaluation, Associate Director in Drug Discovery at Biogen, Inc. He is also the co-chairman of SAPA-NE Advisory Committee.

“Genome-scale Drug Discovery Platform”

Abstract

Genomics and proteomics have produced a glut of drug targets for the pharmaceutical and biotech industry. The industry is no longer target-limited as it was the case ever since the start of modern drug discovery after the elucidation of the DNA structure in the 50’s. The new bottleneck in drug discovery has now been shifted to the discovery of quality lead molecules. Most high throughput screening technologies cannot handle the genomic scale lead discovery. Neogenesis’s Alis (Automated ligand identification system) technology is an affinity based and generally applicable lead discovery system that overcame many limitations of the biochemical based HTS platforms. This technology can be scaled easily and economically over a wide diverse range of targets for the identification of quality leads.
Janice Bourque
President and CEO of the Massachusetts Biotechnology Council (MBC);
Ms. Bourque has worked for the MBC organization for the past 11 years. The MBC, established 17 years ago, is a not for profit, private trade organization representing and promoting the benefits of biotechnology. Ms. Bourque is responsible for all activities of the Council, including the continued expansion and development of the MBC as the industry continues to mature in Massachusetts and in the world. The MBC has an annual budget of $3 Million, providing leadership and services to 387 member companies. Ms. Bourque is also the President of the Massachusetts Biotechnology Education Foundation, MassBioEd, which engages in initiatives that focus on science education, workforce training and public awareness.

Ms. Bourque has held several previous senior managerial positions, including CFO of Cambridge Medical Technology Corporation, a senior public accountant for Coopers & Lybrand (Boston) Emerging and Middle Market Group, and as a NASA Space Science project manager for the first satellite payloads to be repaired by the space shuttle missions. Ms. Bourque received her MBA degree in finance and accounting and her BS degree in veterinary medicine from the University of New Hampshire.

Ms. Bourque is a Board of Director of the Cambridge Chamber of Commerce. She also is a Massachusetts Ambassador and Advisory Board Member; Chair of The Council of State Biomedical Associations; Member of the Women's Forum; and an Honorary Board Member of Innovation Odyssey, a new tour of the Boston History Collaborative. Ms. Bourque was recently named a Mass High Tech All Star and is a recipient of the Boy Scouts of America’s Good Scout Award.

As a Newton resident, Ms. Bourque is a Board of Director of the Auburndale Cooperative Bank, serves as Co-President of the Newton Highlands Neighborhood Area Council and serves on the Newton Biosafety Committee. She is an active member of St. Bernard’s Parish.

“An Over View of Biotechnology Industry”
He was trained in the laboratory of James D. Griffin, M.D. at Dana-Farber Cancer Institute, where he studied the dysregulation of cytokine genes in tumor cells of mesenchymal origin as well as the molecular mechanisms of gene regulation of hematopoietic cytokines. He subsequently developed translational clinical trials studying the ability of hematopoietic cytokines to support chemotherapy administration. Dr. Demetri’s research and clinical interests have focused on targeted therapeutic strategies for the management of solid tumors, with a particular emphasis in sarcomas. Most recently, Dr. Demetri’s team has developed and tested the hypothesis that the selective tyrosine kinase inhibitor Imatinib mesylate (formerly known as STI571, now labelled as Gleevec) would be effective as a targeted antineoplastic therapy for Gastrointestinal Stromal Tumors (GISTs) which exhibit dysregulated signaling through the product of the c-kit proto-oncogene. Dr. Demetri is currently the Principal Investigator of the NCI-sponsored North American Intergroup study using Imatinib as therapy for patients with metastatic or unresectable GIST.

“Targeting Kit Signal Transduction with Imatinib mesylate as a Novel and Effective Therapy for Gastrointestinal Stromal Tumors (GIST) - A Paradigm for Rational Drug Development”

Abstract

Oncogenic tyrosine kinases have long been associated with the etiology of certain sarcomas in animals, and the development of imatinib as a targeted therapy for a form of human sarcoma represents how this scientific knowledge came to be translated into clinical therapeutic research. From the pioneering work of Hirota, we know that gastrointestinal stromal tumor (GIST) is a form of sarcoma which expresses the KIT receptor tyrosine kinase, the product of the c-kit proto-oncogene. KIT is the receptor for the cytokine known as Stem Cell Factor (SCF), and normally KIT kinase activity is turned “on” only if SCF is bound to the receptor. However, GIST cells exhibit gain-of-function mutations in the c-kit gene that lead to the constitutively “on” signaling from KIT1,2. The link between the constitutively phosphorylated (i.e. activated) status of the KIT kinase was hypothesized to be an early event crucial to the pathogenesis of the disease.2 This hypothesis soon became testable. Drs. Brian Druker and Michael Heinrich at the Oregon Health Sciences University, in collaboration with colleagues at Novartis Pharmaceutical research laboratories, identified a 2-phenylaminopyrimidine derivative which could selectively inhibit KIT tyrosine kinase activity in hematopoietic cells as well as being an inhibitor of the oncogenic BCR-ABL and native ABL kinases.3 This small molecule was referred to as “signal transduction inhibitor-571” (STI-571, now known by the generic name of Imatinib mesylate, or by the commercial names Gleevec in the USA and Glivec in the rest of the world). Key preclinical studies were then performed at Harvard Medical School, using a human GIST cell line developed by Dr. Jonathan Fletcher at the Dana-Farber Cancer Institute, which demonstrated that exposure of GIST cells to Imatinib would rapidly inhibit the uncontrolled activity of KIT.4 This inhibition of KIT phosphorylation by Imatinib resulted in significant decreases in cellular proliferation and the induction of programmed cell death (apoptosis) in the cultured GIST cells. The hypothesis that the uncontrolled kinase activity of KIT was central to the pathogenesis of human GIST became testable with the availability of Imatinib for clinical trials. Imatinib by 1999 had been shown by Dr. Druker to be a novel agent which was remarkably safe and effective in the treatment of chronic myelogenous leukemia. There was compelling scientific rationale to move forward with clinical testing of Imatinib as an anticancer therapy for GIST, as this was a disease for which prior systemic therapies were wholly inactive. The response rates to conventional chemotherapy for GIST have been reported in the range of 0% to 5% at best. 5 Additionally, for patients with metastatic or unresectable disease, GIST represents an incurable malignancy, with an estimated progression-free survival measurable usually in weeks, and overall survival rates of less than two years. With this background of unmet medical need and rational scientific targeting, we were able to treat the first GIST patient with Imatinib in collaboration with colleagues in Helsinki, Finland. In this single patient proof-of-concept study, a rapid, dramatic, and sustained clinical and radiographic response to Imatinib was noted in a patient with far-advanced, bulky, chemotherapy-resistant GIST.6 This benefit has now been maintained for more than 25 months with continued daily dosing of imatinib. The patient has
enjoyed an exceptionally good quality of life during this time, as well. Serial biopsies revealed a myxoid degeneration of the GIST tumor, while PET scanning identified significant decrease in tumor-associated metabolic activity. The excitement of this proof-of-concept has been followed by an international drug development effort of unprecedented speed to prove the value of Imatinib and signal transduction inhibition in the management of patients with unresectable GIST. Thousands of patients have now been treated on clinical trials of Imatinib in GIST, and the available data have confirmed the benefits of therapy with Imatinib. More than half of the GIST patients have achieved objective responses, and the majority of these responses are highly durable. These data have led to the February 2002 approval by the U.S. Food and Drug Administration of imatinib for the treatment of metastatic GIST. Additionally, under the auspices of support from the U.S. National Cancer Institute, newer clinical research initiatives have begun to test whether earlier application of Imatinib in GIST patients might further improve clinical outcomes and survival. Over time, acquired resistance to this single agent therapy has evolved in approximately 20% of patients, and the research efforts of a coordinated team are focused on the evaluation of the molecular mechanisms of resistance. The systematic investigation of resistance will provide novel insights into the mechanisms of tyrosine kinase-mediated oncogenesis and alternative signaling pathways in cells selected by tyrosine kinase inhibition.

In summary, the inhibition of abnormal KIT signaling by Imatinib represents an effective targeted therapy of GIST, a solid tumor for which no prior systemic therapy has offered benefit. Imatinib, a rationally developed therapy that targets the underlying molecular pathogenesis of this malignancy, is an important new paradigm for the treatment of cancer. Although activation of KIT does not appear to be a common mutational pathway in cancer, extensive research efforts are currently underway to identify whether KIT might be a rational target in any other human malignancies. The evaluation of resistance to Imatinib will also provide a novel tool by which to study signal transduction pathways in human cancer. The systems used to develop Imatinib and study the biology of KIT should be useful by extrapolation to other new target pathways and molecules relevant to cancer.
Osteoporosis is a common condition characterized by reduced bone density and increased fracture risk affecting more than 10 million Americans. Genetic factors have been shown to play an important role in the pathogenesis of osteoporosis. Recently, a group at Creighton University identified a kindred with unusually high bone mineral density (BMD). The bone mass phenotype is inherited in an autosomal dominant fashion and the pedigree was large enough to enable a positional cloning approach to identify the mutant gene. A substitution (G171V) in the low-density lipoprotein receptor related protein 5 (LRP5) was shown to result in the high bone mass (HBM) trait. To validate and investigate the G171V mutation as being the cause of the HBM phenotype, we created transgenic mice expressing the human LRP5 G171V mutation in bone. Immunohistochemistry of calvaria and long bone revealed strong transgene expression in the pre-osteoblasts and osteoblastic cells lining the periosteum as well as osteocytes present in mineralized bone. Measurement of volumetric BMD (vBMD) by pQCT analysis showed significant increases in both total femoral vBMD (30-55%) and trabecular vBMD (103-250%) of the distal femoral metaphysis in male and female transgenics at 5, 9, 17 and 26 weeks of age over their non-transgenic littermates. Diaphyseal cortical vBMD proximal to the metaphysis was slightly but not significantly increased (2-8%), whereas cortical thickness at the mid-diaphysis increased by 21-42% due to an increase in periosteal circumference (7-17%). High resolution microCT analysis of the distal femora of the transgenics revealed an increase (125-232%) in trabecular bone volume fraction due to both increased (41-53%) trabecular number and increased (43-46%) trabecular thickness resulting in greater (121-344%) connectivity density. There were no differences in osteoclast number at 17 weeks of age (controls: 21.41 ± 1.65 /mm² vs. transgenics: 20.66 ± 1.07 /mm²). Fluorescent micrographs of calcein labeled bone revealed a 33% increase in actively mineralizing bone surface in the transgenic animals and an 11% increase in mineral apposition rate. Supporting this observation there was enhanced alkaline phosphatase staining in osteoblasts and a significant reduction in the number of TUNEL positive osteoblasts and osteocytes. Taken together these results indicate that the increased BMD in the transgenics is due to increased osteoblast number and activity, which could in part be due to their increased functional lifespan. Importantly, increased bone density in the transgenics was associated with significant increases in vertebral compressive and femoral bending strength. The similarity of the bone density and architectural changes in the transgenic mice, together with the increased strength of the bone, suggest that the skeletal effects of LRP5 (G171V) transgene expression in the mouse closely mimic the human HBM phenotype. In conclusion, we have progressed from a single genetic polymorphism to an interesting target for novel osteoporosis therapies.
Abstract

Bone formation and bone resorption are physiologically controlled by the activities of osteoblasts and osteoclasts. Imbalances in these activities can arise from a variety of hormonal or inflammatory perturbations, resulting in skeletal abnormalities characterized by decreased bone mass, as in osteoporosis, or increased bone mass, in osteopetrosis. Increased osteoclast activity is seen in many osteopenic disorders, including postmenopausal osteoporosis, Paget’s disease, bone metastases, periodontitis, and rheumatoid arthritis. We are also studying molecular mechanisms that control bone formation and bone resorption. Results of our work will aid in developing therapeutic interventions in diseases involving bone disorders.

Molecular Basis of Bone Formation

We are investigating genes that control the differentiation of mesenchymal stem cells to osteoblasts. Using the bone-specific osteocalcin gene as a model, we have studied the control of osteoblast differentiation by cytokines and transcription factors. Using subtractive differential screening, we recently identified several novel genes that are specifically expressed in osteoblasts. We are characterizing the functions of these genes in bone formation using gene knockout and transgenic mouse approaches. Overexpression of OBTF2 (one of cloned osteoblast genes) in mice dramatically enhances bone density. In contrast, mice that lack the gene result in osteoporosis.

Mechanisms of Bone Resorption

We cloned and characterized the genes encoding OC116KDa and cathepsin K, through differential screening of a human osteoclastoma cDNA library. Using a gene knockout approach, we have studied in vivo functions of these two genes. We demonstrated that OC116KDa is an osteoclast-specific subunit of a proton pump, while cathepsin K is a key osteoclast-specific cysteine protease involved in degradation of bone matrix proteins. Recent reports indicate that mutations of OC116KDa and cathepsin K are responsible for some forms of osteopetrosis in humans. This knowledge will be relevant to the control of osteoporosis, arthritis, periodontal and other metabolic bone diseases.
Carmen M. Baldino, Ph.D.,
Vice President of Chemistry at ArQule Inc.
In this role, he is responsible for library chemistry optimization and the production of screening libraries that support ArQule’s efforts in strategic alliances and drug discovery. Dr. Baldino joined ArQule in 1995 as staff investigator. In 1997, he was promoted to Director of Screening Libraries where he was responsible for the design and development of ArQule’s Mapping Array. In 1998, Dr. Baldino was promoted to Senior Director of Combinatorial Operations and Process Chemistry, a role that included the design, development and production of ArQule’s high throughput automated chemistry capabilities.

Dr. Baldino received his Ph. D. in synthetic and bioorganic chemistry with Professor Dale L. Boger at Purdue University. His main area of research was the total synthesis of medicinally relevant natural products. He also worked with Professor Boger as a research associate at the Scripps Research Institute before joining Professor Harry H. Wasserman at Yale University as a postdoctoral fellow. His research with Professor Wasserman focused on the utility of tricarbonyl chemistry in the total synthesis of natural products. Dr. Baldino received a B.S. in Chemistry from Southern Connecticut State University and is a member of American Chemical Society.

“Primary Screening Libraries for Efficient Drug Discovery”

Abstract

One component of the industrial effort to improve the productivity of the drug discovery process is the generation of higher quality hits from primary screening libraries. Although there have been many advancements in the technologies for designing the “right” compounds, the bottlenecks remains in rapidly developing the necessary chemical process. ArQule’s approach to address this bottleneck has been concentrated in the following two areas.

- Expansion in the number and diversity of automated chemical transformations
- Advancement in the technology for the LC purification of libraries.

This strategy, which provides a unique platform not only for the generation of screening libraries but also efficient hit follow-up and SAR expansion, will be described.
Jing-Tao Wu received his Ph.D. in Analytical Chemistry (Mass Spectrometry) from The University of Michigan. He then joined the Drug Metabolism and Pharmacokinetics (DMPK) Department of DuPont Pharmaceuticals Company, which later became part of Bristol-Myers Squibb Company. He recently joined Millennium Pharmaceuticals as the Head of Bioanalytical Research of DMPK. Jing-Tao’s research interests include high-throughput bioanalytical mass spectrometry, small volume sampling and analyses for microdialysis and intracellular measurements and large-number multiple component assays for cassette dosing. He has authored and co-authored over 20 publications in peer reviewed journals in these areas in the past five years.

“Faster and Closer: New Bioanalytical Strategies for ADME Studies”

Abstract

In an accelerated drug discovery environment, an ever increasing number of compounds are put into early ADME (Absorption, Distribution, Metabolism, and Elimination) screenings in the lead optimization stage. This poses a challenge on the bioanalytical function in terms of the capacity to meet the throughput requirement. Also, in order to project human dose and to select the compounds with the best success rate for clinical trials, information on the pharmacokinetics at the site of action is often highly desirable. This kind of studies often poses another challenge on the bioanalytical function in terms of the capability to look closer into the site of action.

This presentation will highlight some of the new bioanalytical strategies developed to enhance the bioanalytical capacity and capability to meet these growing needs. The strategies that will be discussed include multiple-component assays for cassette dosing, on-line sample preparation, parallel analysis, high-speed separation, automation, microdialysis, and intracellular measurement.
SAPA-NE 2002 Outstanding Contribution Awards

Dr. Yi Liu, Secretary General, SAPA-NE
Accomplishments: Yi became a SAPA member as soon as he learned the organization and quickly contributed his energy to SAPA as a coordinator in his company. This year, as Secretary General, Yi took the initiative in formalizing efficient executive meeting agenda/documentation program. In March, he successfully chaired Business Development Seminar, a SAPA-NE legendary seminar series. Dr. Liu also took on multiple responsibilities in organizing SAPA-NE Annual Conference as a co-chair, fund-raising and public relation, etc. Among many other contributions, Dr. Liu is also a member of SAPA-NE Information Technology Task Group and responsible for maintaining SAPA-NE homepage.

Dr. Erxi Wu, Director of Scientific Symposia, SAPA-NE
Accomplishments: Erxi is a long time SAPA member and has been actively participated all SAPA-NE events since the establishment of SAPA-NE. Last year, Erxi contributed a great deal to help organize SAPA-NE 4th Annual Conference. This year, as Director of Scientific Symposia, Dr Wu successfully organized and chaired the Scientific Symposium in December, 2001 and SAPA-NE special seminar in June, 2002. As a conference co-chair, Dr. Wu devoted relentless effort and lots of personal time to the preparation of 2002 SAPA-NE Annual Conference, and is a key contributor in several aspects of the conference.

Dr. Wenge Wang, Director of News Report, SAPA-NE
Accomplishments: Wenge is a long time SAPA member and became SAPA-NE executive committee member since 1999. As Director of News Report, Dr. Wang involved in several tasks, such as writing news report for SAPA-NE events, organizing material for SAPA news letter, contacting with major media news papers. Dr. Wang also actively helping out in other areas, such as registration, chaired and co-organized SAPA-NE Chinese New Year Parties, buying gifts/prizes for parties or outings and being accounting assistant for SAPA-NE treasure. Dr. Wang was the co-chair of this year's Business Development Seminar.

SAPA-NE Special Contribution Awards

Dr. Tao Peng and Dr. Xiaoping Yang
Dr. Peng and Dr. Yang both work at Whitehead Institute, MIT. They love SAPA as an organization and value SAPA-NE activities. They helped SAPA-NE in activity preparations in a special way they can and participated SAPA-NE events. We treasure their contributions. Without their vital contributions, SAPA-NE wouldn't reach what we achieved today.

SAPA-NE 2002 Corporate Excellence Award

Wyeth Research (former Genetics Institute)
Lead Sponsor of the SAPA-NE 5th Annual Conference.

Wyeth

The Corporate Excellence Award is presented to Wyeth Research for its deep commitment to the world pharmaceutical and healthcare industry, for its vision to lead the way to a healthier world, and for its shared values and strong support to community. For the past three years, Wyeth Research has been supporting SAPA-NE activities both financially and through its employees. Wyeth Research executives, scientists and attorneys have addressed several SAPA-NE symposia and conferences. This year, Wyeth Research is the lead corporate sponsor. All of these actions demonstrate the company’s leadership, quality, integrity, respect for people, and spirit of collaboration. In summary, Wyeth Research’s support to SAPA-NE is an excellent example of its contribution to our community and society.
SAPA-NE Historical Activities (1999-2002)

08/07/1999  SAPA 7th Annual Conference, Rutgers University, NJ
08/28/1999  SAPA-NE 1st Election Party, Whitehead Institute, MIT
09/10/1999  SAPA-NE EC Meeting, Sichun Garden
09/26/1999  Celebration of 50th Anniversary of China, Boston City Hall
10/02/1999  SAPA-NE 1st Coordinator Outing, Blue Hill Reservation
11/06/1999  SAPA-NE Biopharmaceutical Forum, Whitehead Institute, MIT
11/06/1999  SAPA-NE EC Meeting, Whitehead Institute, MIT
11/14/1999  Community service: Passport Renewal, King School, Cambridge, MA
12/17/1999  SAPA-NE EC Meeting, Yangtze River Restaurant
01/22/2000  SAPA-NE 2nd Celebration of Chinese New Year, Whitehead Institute, MIT
02/13/2000  Meeting with William Au (Guangzhou International Bioisland), Royal East
02/27/2000  SAPA-NE EC Meeting, Whitehead Institute, MIT
03/11/2000  SAPA-NE 2nd Business Development Symposium, Whitehead Institute, MIT
04/11/2000  Host Dalian Delegation, Biogen
05/06/2000  SAPA-NE EC Meeting, Yangtze River Restaurant
05/11/2000  International Biotechnology Conference, Beijing
06/24/2000  SAPA-NE 3rd Annual Conference, Whitehead Institute, MIT
08/05/2000  SAPA 8th Annual Conference, Rutgers University
09/15/2000  SAPA NE Election/Member Reunion Party, Whitehead Institute, MIT
09/22/2000  SAPA-NE EC meeting, MIT
10/14/2000  SAPA-NE 2nd Coordinator Outing, Blue Hill Reservation, Boston
11/03/2000  SAPA-NE EC meeting, YumYum Restaurant
11/11/2000  SAPA-NE Career Workshop, Whitehead Institute, MIT
01/28/2001  SAPA-NE 3rd Celebration of Chinese New Year, Whitehead Institute, MIT
02/24/2001  SAPA-NE EC meeting, International Buffet
03/17/2001  Royal Dynasty Restaurant SAPA-NE EC meeting
03/24/2001  SAPA-NE Intellectual Property Symposium, Whitehead Institute, MIT
10/05/2001  SAPA-NE EC meeting, MIT
10/26/2001  SAPA-NE EC meeting, MIT
Rhodia ChiRex, a corporate sponsor of SAPA-NE

Rhodia ChiRex is a leading company in the field of pharmaceutical active ingredient outsourcing, offering a combination of proprietary chiral and non-chiral process chemistry technologies, contract process research, development services, and commercial-scale contract manufacturing.

The mission:

to commercialize new drugs

The method:

to our chemistry services

To be first in the race for new pharmaceutical products, chart the fastest course by using our chemistry services. Working with novel process technologies, our chemistry team will boost your productivity and shorten your timelines. From left off in discovery to light-speed commercial manufacture, Rhodia ChiRex can help you create the newest star in the pharmaceutical galaxy.

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617-628-5246 U.S.
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http://www.rhodiachirex.com
Corporate Sponsors & Product Show Participants 2000-2002:

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