

Inside:

- Retreat Program
- Pictures from the Retreat

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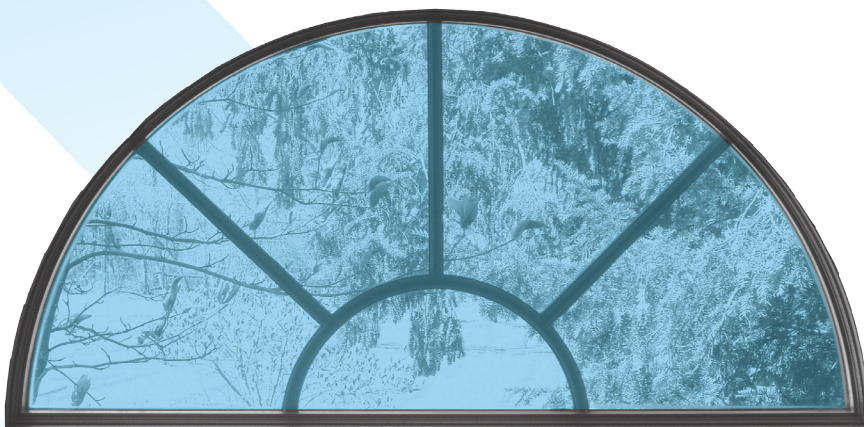
Sharing the Sunshine

The Third Annual Medical Biotechnology Center Retreat participants were greeted with a beautiful spring morning as they arrived at the Antrim Inn in Taneytown, Maryland. The handsome inn, located northwest of Baltimore, is a delightful mixture of old and new buildings with extensive gardens and well known for its sumptuous fare. The continental breakfast certainly reinforced that perception.

With the outside so inviting, it was somewhat difficult to come in and settle down, but the muffins, pastries, fruit and coffee helped. Once the meeting started, the research drew everyone’s attention and it was clear from the questions that the focus was now on the science. After a short welcome by MBC Director W. Jonathan Lederer, Dr. Shengyun Fang opened up the meeting discussing his research into protein cycling signaling pathways. He was followed by newly-minted Ph.D., Dr. John Weaver, who talked about his thesis work on nitric oxide, a simple molecule with complex functions. The next faculty member to speak was Abdul Ruknudin, an affiliate faculty member from UMB, who studies calcium signaling in heart. The last speaker of the first section was MBC’s first guest speaker, Dr. Wuyuan Lu from the Institute of Human Virology. This is the first year that the retreat has included guest speakers who are affiliated with MBC’s sister centers. Dr. Lu gave an entertaining look at the rewards of interdisciplinary research.

A brief break for more fruit and pastries was the only delay in the morning presentations. The second session started with

Continued Page 2



A flower filled view from an oriel window in the main meeting room.

From the initial welcome, through a quick lunch break game of croquet and throughout all the presentations, the Retreat demonstrated the benefits of coming together as colleagues and friends.



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Time	Presenter
8:30-8:50	
8:50-9:00	
9:00-9:20	Shengyun Fan
9:20-9:40	John Weaver
9:40-10:00	Abdul Ruknu
10:00-10:30	Wuyuan Lu,
10:30-11:00	
11:00-11:20	Paul Wellin
11:20-11:40	Kadir Aslan
11:40-12:00	Hali Hartman
12:00-12:30	William Bentley
12:30-1:50	
1:50-2:10	Bruce Vogelstein
2:10-2:30	Valeriy Lukyanov
2:30-2:50	Joe Kao
2:50-3:20	James Du, C
3:10-3:40	
3:40-4:00	Les Baillie
4:00-4:20	Olga Bocharov
4:20-4:40	Mervyn Mont

Wuyuan Lu, IHV

Dr. Lu's major scientific expertise and achievements lie in using both genetic and protein engineering approaches to study the molecular basis of protein receptors. He is currently focused on applying the tools of molecular biology to tackle significant biomedical and infectious diseases.

The retreat schedule this year, shown on the right, was for some of the newer members of the MBC community.

affiliate faculty member Dr. Paul Wellin presented on the correct location within a cell for biosensing and what has been happening with ion channels. The last speaker was the speaker on the pathways in living cells to enhance protein function.

Lunch was served in an adjacent room. There was a croquet court before the afternoon session. There was sport, but there was not enough time to play.

The afternoon session started with a presentation on calcium signaling talk presented by Dr. V.

Retreat Schedule

	Title
Arrival/Continental Breakfast	
W. Jonathan Lederer, Director - Welcome	
ang	Can VCP function without its partners in ERAD
er	A comparative study of neuronal and inducible nitric oxide synthases generation of nitric oxide, superoxide, and hydrogen peroxide
adin	The pacemaking in heart - Role of Ca^{2+}
IHV	Self-defense - a survival skill required of a chemist at IHV
Break (30 min)	
ng	Membrane trafficking of potassium channels
n	Metal-enhanced fluorescence: An emerging tool in nano-biotechnology
ann	Sodium Channels
y, CBR	Rewiring Cell Circuitry for Enhanced Performance
Lunch (80 min)	
el	Assembly of flexible glue (or sticky grease?) molecules in man, mice and worms.
enko	Novel approaches for studying Ca^{2+} cycling in cardiac myocytes
	Using light as a tool in biology
OMB	Zebrafish as a model for studying muscle and bone development
Break (30 min)	
e	Oral anthrax vaccines
ova	One protein - many folds
eiro	Role of ubiquitin in Huntington's disease

Invited Speakers

	<p><i>William Bentley, CBR</i></p> <p>Dr. Bentley's research focuses on heterologous protein expression and cellular stress responses in insect cell and baculovirus systems. The practical side to his efforts are in metabolic engineering, bioreactor optimization and biodegradation.</p>	<p><i>James Du, COMB</i></p> <p>Dr. Du is "Dr. Zebrafish" to his many collaborators. He uses this model system to study cellular and molecular mechanisms that control the differentiation of muscle cells during embryogenesis. Transgenic zebrafish, like their mammalian counterparts, is an extremely useful technology to study fish growth and development.</p>
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above, was somewhat different than previous years; three speakers were invited from the MBC's sister centers. This proved to be a very popular change. Community, it was their first introduction to another center, other than the Institute of Human Virology, which shares the same building as the MBC.

ng from the Department of Physiology, UMB. He discussed his work on potassium channels and how they are directed Dr. Kadir Aslan, from MBC's Institute of Fluorescence, brought the audience up-to-date on the fast growing area of ing on the second floor of the MBC. Channels were again a topic with Hali Hartmann discussing her work on sodium second guest lecturer, Dr. William Bentley from the Center for Biosystems Research. He spoke on modifying metabolic duction of specific products—really engineering living bioreactors. room and there was a little time to go out and enjoy the sunshine and the unusual opportunity to play croquet on a real sessions started. It was interesting to see how some of the foreign-born members of MBC took to this strictly summer to get a full game in.

h MBC Assistant Professor Bruce Vogel who studies how cells literally stick together. He was followed by another cal- aleriy Lukyanenko. Calcium signaling is one of the major foci of MBC's Institute of Molecular Cardiology, of which Dr.

Continued Page 4



Conversations flourished during lunch which included a salad of assorted field greens in a crisp flour tortilla with blackened tomato vinaigrette, crumbled boursin cheese and ripe olives, one of three entrees (layered chicken napoleon with eggplant, squash, black bean sauce and coriander



crème fraiche, grilled salmon with wasabi aioli and toasted orzo or bourbon and molasses-marinated New York strip steak with sweet potato puree and pecan butter) and apple tulips with caramel sauce and raspberry coulis for dessert.

Lukyanenko is a member. Dr. Joe Kao, who spoke about his work on light triggered probes, was the last member of MBC to talk before our final guest speaker, Dr. James Du from the Center of Marine Biotechnology. Dr. Du has been a collaborator of several MBC faculty members because of his expertise in using transgenic zebrafish as a model system.

Just in case anyone was still hungry, there was a break for cookies and other goodies before the last session, which started with Dr. Les Baillie, the head of the Biodefense Initiative at MBC. His long term research goal is the development of an oral, single dose vaccine for anthrax. He was followed by Dr. Olga Bocharova, a relatively new member of Dr. Ilia Baskakov's laboratory, who discussed the laboratory's work on prion proteins. The day finished with Mervyn Monteiro extending his work on ubiquilin from Alzheimer's to Huntington's disease, a very exciting development.

The meeting was held in one of the newer buildings on the site, which is quite spacious but lacked strong AV capabilities. As the participation in this retreat has grown, it was necessary to find larger accommodations this year, as the Donaldson-Brown Center which hosted the last two retreats can only handle a maximum of 60 people. There were 70 participants this year, including Dr. Claude Nash, Vice President for Research and Development; Dr. Marian Jackson, Associate Vice President for Academic Affairs; Dean Drake, Associate Vice President for Research and Development; Dr. Richard Gilpin, UMBI Compliance Coordinator, and Alicia Moran, Communications Specialist, from UMBI Central. They find this an excellent way to get an overview of MBC research capabilities.