New lung cancer study suggests more-tailored drug treatment

By Gina Kolata

The first large and comprehensive study of the genetics of a common lung cancer finds that more than half the tumors from that cancer have mutations that might be treated by new drugs that are already approved for other cancers. The study is part of the Cancer Genome Atlas, a large project by the National Institutes of Health to examine genetic abnormalities in cancer. The study of squamous cell lung cancer is the second genetic analysis of a common cancer, coming on the heels of a study of colon cancer. The work became feasible only in the past few years because of enormous advances in DNA sequencing that allow researchers to search all the DNA in a cell instead of looking at 20,000 genes at a time. The result has been a new appreciation of cancer as a genetic disease, defined by DNA alterations that drive a cancer cell's growth, instead of a disease of a particular tissue or organ, like breast or prostate or lung. And, in keeping with the genetic view of cancer, this study of squamous cell lung cancer, no one mutation stood out — different patients had different mutations. As a result, the usual way of testing drugs by giving them to everyone with a particular type of cancer no longer makes sense. So researchers are planning a new type of testing program for squamous cell cancer that will match the major genetic abnormality in each patient with a drug designed to attack it, a harbinger of what many say will be the future of cancer research.

Cancer research, Page 11
Showdown looms over a planned anti-Kremlin march

MOSCOW — Russian Parliament members moved a step closer to stripping an opposition lawmaker of his post Monday, heightening tension before an opposition march planned for this weekend.

The commission on income and property of the Duma, Russia’s lower House of Parliament, found that there were grounds for the expulsion of the lawmaker, Gennady V. Gudkov, a former Soviet intelligence officer who has emerged as one of the few political insiders to persistently and pugnaciously challenge the Kremlin. Gudkov is accused of operating a business while serving in the legislature, which is prohibited by Russian law.

The full Parliament is expected to vote on Gudkov’s fate Friday. The full Parliament is expected to vote on Gudkov’s fate Friday. The full Parliament is expected to vote on Gudkov’s fate Friday. The full Parliament is expected to vote on Gudkov’s fate Friday.

Romney calls Obama’s post-convention gain ‘a sugar high’

President Barack Obama raised more money in August than Mitt Romney did, outpacing him for the first time since the spring and adding to a sense in both parties that Obama is entering the post-convention sprint to Election Day in a slightly stronger position, leaving Romney with less than two months to change that dynamic.

The first post-convention poll by a major news organization, from CNN and ORC International, showed Obama with a slight gain, 52 to 46 percent, over Romney, within the poll’s margin of sampling error.

With some nervousness apparent among Republicans, Romney’s campaign rushed out a memo Monday stating that any post-convention polling lift for Obama was “a sugar high” that would not last the next few weeks, let alone to Election Day.

WEATHER

Autumn-like weather becoming calmer and warmer this week

By Roman Kowch

Still winds and cool temperatures poured into New England this weekend, behind a strong cold front which passed through Saturday evening. Hence a deep trough, located in the mid and upper levels of the atmosphere, has overtaken our recent weather. The trough’s northerly winds, out of Canada, have brought much cooler and drier air.

These winds are occurring ahead of a surface high pressure approaching our region. Once the high pressure arrives by mid-week, winds will diminish; and temperatures will rise. The high pressure should also slow down and broaden, giving tranquil conditions for most of this week and keeping Tropical Storm Leslie out in the Atlantic. Temperatures should rebound into the low 80s°F (26-28°C) by Thursday and Friday.

Extended Forecast

Today: Mostly sunny. High 70°F (21°C). NW wind at 10 mph.

Tonight: Mostly clear. Low 54°F (12°C). W wind at 5-10 mph.


UN warns Syrian rebels over human rights violations

By Kareem Fahim

BEIRUT — The top U.N. human rights official warned opposition fighters in Syria on Monday that they would not be immune from prosecution for atrocities, as videos from the Syrian city of Alepppe appeared to show a mass execution by rebel fighters of bound and blindfolded Syrian government soldiers.

One of the videos, first published Monday on the Brown Moses blog, which curates and analyzes video evidence from Syria, showed at least 20 corpses lying in a crooked row on a bloodstained street curb. The victims were wearing fatigues but no shoes. Several appeared to have been shot in the head.

In that video and another that captured the same scene, different rebel groups appear to take responsibility for the killings. It was impossible to immediately confirm the authenticity of the videos, or to determine exactly when and where they were recorded. If confirmed, the executions were likely to add to growing concerns about the conduct of the militias fighting to topple the Syrian president, Bashar Assad, and particularly their treatment of prisoners.

In a brutal episode in late July, a group of rebel fighters were seen in a video executing several captives — members of an Alepppe family accused of being enforcers for the government — with a spray of gun-fire. In recent days, other videos have captured summary executions by the rebels.

Speaking in Geneva on Monday, Navi Pillay, the U.N. High Commissioner for Human Rights, warned of atrocities by both the government and its opponents. Both, she said, "deploy snipers that target civilians."

Pillay also said the Syrian government’s attacks on civilians and destruction of homes "may constitute war crimes or crimes against humanity," according to a transcript of Pillay’s remarks on her office’s website. And in a stern warning directed at anti-government forces, Pillay noted the "undeniable climb in human rights violations" attributed to the rebels, including abductions and summary executions.

Spreading Palestinian economic protests focus on leaders

By Isabel Kershner

Hebron, West Bank — A week of Palestinian protests against rising prices and economic hardship erupted Monday into rioting against the Palestinian Authority in this city and others in the West Bank, posing a new challenge to the Western-backed government that has worked to promote stability.

Ager had mostly been directed at Salam Fayyad, the prime minister of the Palestinian Authority, whom an internationally respected economist who has been widely credited abroad with shepherding the authority toward sound fiscal policies and the building of the institutions needed for a future state. But a financial crisis caused in part by a shortfall in funds expected from international donors has forced Fayyad to impose austerity measures. In Hebron, thousands of youths took to the streets Monday, furious that the president of the authority, Mahmoud Abbas, had not fired Fuyyad and instead had expressed support for him over the weekend.

Protestors hurled stones at City Hall and Police Headquarters here and smashed the windows of a municipal fire truck. Toward evening, they faced lines of Palestinian security officers clad in riot gear. The police officers acted with restraint, but when they were pelted with rocks by some of the protesters, they fired tear gas to disperse the crowd.

Stores were closed, and taxi and truck drivers went on strike and blocked roads to protest recent increases in fuel prices. The Palestinian Authority buys its gasoline from Israel, where the price rose sharply this month to more than $2 per liter.

Absence of China’s presumptive new leader Stokes rumor mills

BEIJING — The strange disappearance from public view of China’s presumptive new leader is turning into a saga that has shown the Communist Party’s stability into something of an anachronism.

Over the past week, the new leader, Xi Jinping, has missed at least three scheduled meetings with foreign dignitaries, including U.S. Secretary of State Hillary Rodham Clinton on Wednesday and the prime minister of Denmark on Monday. Speculation that his health, either physical or political, has prevented him from making public appearances is rife on the Chinese Internet, but there has been no official explanation for his absence. He was last seen in public Sept. 1.

Xi’s unexplained absence are especially conspicuous on the eve of what is supposed to be China’s once-in-a-decade transfer of power. It also adds to a litany of woes that have disrupted the Communist Party’s hopes for a seamless political transition.

On Wednesday, after Xi did not meet Clinton and Prime Minister Lee Hsien Loong of Singapore, diplomats said privately that he had a bad back.

On Monday, the situation got odder. Foreign journalists had been invited to a photo opportunity between Xi and Prime Minister Helle Thorning Schmidt of Denmark. On Monday, however, the Foreign Ministry denied that any such meeting had been scheduled, and said other Chinese officials would meet the Danish leader.

“We have told everybody everything,” said a Foreign Ministry spokesman, Hong Lei.


BP to sell some Gulf of Mexico oil fields for about $5.6 billion

LONDON — BP agreed Monday to sell its stake in a group of oil fields in the Gulf of Mexico to Plains Exploration and Production Co. of Houston for about $5.6 billion.

The announcement comes as Robert W. Dudley, chief executive of BP, is raising money to pay for cleanup costs and potential fines resulting from a huge oil spill in the Gulf of Mexico in 2010. BP took charges of $38 billion for the spill and could face substantially higher costs if it is found guilty of gross negligence in causing the disaster, which killed 11 people on the Deepwater Horizon rig and led to extensive cleanup efforts.

Dudley has been refocusing BP on high-risk, high-return frontier exploration and production, including deepwater fields. The company has said it is in talks to sell its 50 percent stake in its Russian affiliate, TNK-BP, which it considers a low-growth property.

The announced deal — of older, smaller assets in the Gulf of Mexi-co — remains true to the effort to sell mature fields. Plains Exploration, a midsize oil company with a market capitalization of about $5.2 billion, has operations in California, the Gulf of Mexico and Texas.

—Stanley Reed, The New York Times
Debunking the middle class

By Keith Yost

Game theory suggests that in the final sum of things, democratic politics is mostly about tweaking the median voter, i.e. the individual or demographic whose inclusion will bring your coalition to 51 percent of the vote. Thus it comes as no surprise that in America, where the median voter is a middle-class voter, election-year rhetoric tends to focus on fetishizing those of moderate income.

2012 is no exception. If you watched the Democratic National Convention last Thursday, you probably heard Joe Biden utter these lines: “Barack and I are about growing this economy. So I’m about investing in the middle class...”

It’s the cult of the middle class that doesn’t just count Democrats as members. I’m sure in the weeks to come, Mitt Romney and Paul Ryan will wax rhapsodically about whatever semi-professionals and middle managers they claim familial relations with, as much as Biden deployed stories of his used-car salesman father to heap more worship on Middle America. But Biden’s convention appearance added a new and dangerous element to the middle-class mythology that deserves a thorough and immediate debunking.

Specifically, Biden put forward a two-part theory—first, that giving more money to the middle class has been the best way to increase consumption, and second, that increasing consumption was the key to growing an economy. The first part of Biden’s claim is false as a matter of record. The U.S. Panel Study of Income Dynamics shows that it is the poor, not the middle class, who save the least and consume the greatest fraction of their income. If raising consumptions is the goal of economic policy, which it most certainly is in Keynesian terms, then focusing on the rich is a far more effective strategy. And looking at the data, it isn’t even the case that targeting economic stimulus toward the middle class would perform much better than spreading it across America. In other words, the points made by Paul Krugman, “There’s no obvious reason why consumer demand can’t be sustained by the spending of the upper class— $200 dinners and luxury hotel stays contribute just as much as fast food dinners and Motel 6s do.”

The second part of Biden’s claim con- trasts a short-term Keynesian approach to increasing consumption in a recession to combat the paradox of thrift, for a long-term Keynesian approach to increasing economic growth, the rate at which we convert our income to consumption, is below the golden rule rate. And so, while Keynesian stimulus can help increase consumption in a recession to break the paradox of thrift, for a long-term Keynesian approach the rate at which we convert our income to consumption is below the golden rule rate.

The general interpretation of Biden is that he meant his comments only as a matter of short-term policy, a way to recover from shortfalls in aggregate demand and no more. But a more realistic reading is that he believes a permanent policy of taxing the rich is a great way to invest in the middle class, a method for increasing economic growth, which would be much more likely to increase consumption and save less as a fraction of its total income. Nothing could be further from the truth.

The simple way to think of this is in any given year, society has a limited pool of resources available to it. These resources include everything from physical and human capital (factories, equipment, education), to natural resources (iron ore, oil, natural gas), to the hours of work we labour and face with this scarcity, society is forced to choose how much of this resource to put toward the production of consumer goods, and how much we will be put toward the production of capital goods. The middle class is not the only one to be affected by this choice. So does the rate at which we convert our income into consumption increase in a recession to combat the paradox of thrift, for a long-term Keynesian approach the rate at which we convert our income to consumption is below the golden rule rate.

There’s no reason the United States can’t increase permanent growth and be universally recognized that our savings rate is below the golden rule rate. And so, while in the short run we may suffer from a paradox of thri- st of short-term policy, a way to recover from shortfalls in aggregate demand and no more. But a more realistic reading is that he believes a permanent policy of taxing the rich is a great way to invest in the middle class, a method for increasing economic growth, which would be much more likely to increase consumption and save less as a fraction of its total income. Nothing could be further from the truth.

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**DAD-ROLLING: A BEST PRACTICES GUIDE**

**STEP 1: RECOGNIZE AN OPPORTUNITY**
Daddy: What's this funny thing at the back of your mouth?

**STEP 2: START WITH WHATEVER UNIQUE BIT OF KNOWLEDGE YOU HAVE**
That's called a "Vulva."

**STEP 3: MAKE UP SOME CONSEQUENCES, NO MATTER HOW TERRIBLE OR UNLIKELY**
Daddy: Biting my tongue is a good idea. It's a 'lurkula' if it's anillus, or a 'thunderwaffle'. Depending on whether you're in the lucro or not.

**STEP 4: PRODUCE COUNTEREVIDENCE AS NEEDED**
Daddy: Don't bite my tongue, buddy! I think I'm an odd species. I asked about my tongue, and you're like:

**STEP 5: SKIRT THE ISSUES OR MAKE EVERYTHING CLEARER**
Daddy: That's right. My four small fingers, my two ears, my one nose, my five toes. It's all litus, or a "thunderwaffle". Depending on whether you're in the lucro or not.

---

**Fun Fun Fun**

**PILED HIGHER AND DEEPER**

by Jorge Cham

---

**SUMMER: WHEN DOES IT END?**

- Summer break ends?
- First "brick" weather day?
- Summer classes end?
- Fall farm begins?
- Leslies on the ground?

---

**Dinosaur Comics**

by Ryan North

**Did you know that human babies don't even come out with teeth?**

**It's totally true! They're like - all gums!**

"But then how do they catch their prey?" you ask? Easy: they don't!

They don't?

Wrong! INSTEAD, they feed off of the juices they suck out of their mother's chest!

...Mammals, man.

**"Mammals". Dude, are you being mammal's racist?**

No! I love mammals! I just think they're UNUSUAL, and weirdly big into mammaries. They're so big into mams that they put it right in their name!

Well, we're "dinosaurs".

Exactly! TERRIBLE (in the powerful sense) LIZARDS. We don't define ourselves by our BOOBS.

LATER:

Also our skeletons look way more badass, not trying to start a fight here just stating facts
The next day: ‘What? Six bank robberies!? But I just vandalized the library!’ ‘Nice try. They saw your plate with all the 1’s and I’s. ’ ‘That’s impossible! I’ve been with my car the whole ti-- ... wait. Ok, wow, that was clever of her. ’

Instructions: Fill in the grid so that each column, row, and 3 by 3 grid contains exactly one of each of the digits 1 through 9.

Sudoku I

ACROSS
1 Rhyming tequila brand
9 Palette user of old
15 Tick, for example
16 Was lost in thought
17 Crash
18 Part of the border between the two Congos
19 Broad band of a sort
20 Make easier to drive
22 It makes it harder to drive
23 Cup of Champagne
25 Sphere of responsibility
27 Screen villain in a Nehru jacket
28 Bulge in a trunk
31 Sound around the ears, perhaps
33 Orchestration abbreviation
34 Wait
37 Lab fixture
38 Eschews

DOWN
1 Vespucci contemporary
2 Vespucci landfall of 1499
3 Grounds
4 National Fire Prevention Mo.
5 Audible mask
6 Queenly in-law of William of Orange
7 Reveal one’s guiltiness
8 Joe DiMaggio mentor
9 Aaron Spelling alma mater
10 Fathers of cygnets
11 Name on the cover of My Life as an Explorer
12 Opposite of “persona”
13 Take it easy
14 Group paid to strike?
15 Tick, for example
16 Was lost in thought
17 Crash
18 Part of the border between the two Congos
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1999
10

4 5 6 7 8 9

2 3 4 5 6 7

7 8 9 1 2 3

9 1 2 3 4 5

Techdoku I

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1999
10

4 5 6 7 8 9

2 3 4 5 6 7

7 8 9 1 2 3

9 1 2 3 4 5

Instructions: Fill in the grid so that each column and row contains exactly one of each of the numbers 1–6. Follow the mathematical operations for each box.

12x
2 6
20x

6 5 4

Sudoku I

Solution, page 15

Techdoku I

Solution, page 15

Saturday Stumper

Solution, page 12

by Lars G. Doubleday

ACROSS
1 Rhyming tequila brand
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1999
10

4 5 6 7 8 9

2 3 4 5 6 7

7 8 9 1 2 3

9 1 2 3 4 5

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12x
2 6
20x

6 5 4

Solution, page 15

Solution, page 12

by Lars G. Doubleday
Sudoku II
Solution, page 9

Instructions: Fill in the grid so that each column, row, and 3 by 3 grid contains exactly one of each of the digits 1 through 9.

Technodoku II
Solution, page 9

Instructions: Fill in the grid so that each column and row contains exactly one of each of the numbers 1–6. Follow the mathematical operations for each box.

Totally Random!
By Elise Stave

Beaver Tails by Ranbel Sun

Ahm taking Five One One One. What about you?

You know, "Principles of Chemical Science"

Three zero ninety-one looks cool too.

What gibberish are you spewing?

Oh, so Five Eleven One...

MIT, DO YOU SPEAK IT?

12:23 AM IS TIME FOR...
THE ALL NIGHTERS

Hi, I’m ALLVARA and I’m FRED D’AMICO.

NORMALLY WE’D STOP TO CHAT...
BUT WE’RE A LITTLE OCCUPIED WITH ONE OF OUR LATE NIGHT PROJECTS.

BOOM!

MIT MEDICAL IS CLOSED OVERNIGHT. CALL THE 24-HOUR HELPLINE AT 617-253-4481

YIKES! MIT MEDICAL CLOSES AT 11PM!!
GOOD THING I CAN CALL THE 24-HOUR HELPLINE AT 617-253-4481!!

HELLO! MIT MEDICAL! WE’RE OUT SOME HERBAL SUPPORT.
Registration

For previous applicants: **September 10, 12pm**

For ALL APPLICANTS: **September 12, 10am**

Steps to register:
1. Go to IsraelwithIsraelis.com
2. Create a login and fill in your personal information
3. Select Shorashim as your trip provider
   and MIT/Boston Campus as your trip.

Info Session
September 9, 6:00pm
W11 (Small Dining Room)

Questions?
Email Shoshana at Birthright@mit.edu
Reif’s first months
as MIT’s president

Getting to know MIT community
and making plans for the future

Reif, from Page 1

think about designing an envi-
ronment around the “university of the future.” Such a committee
would have more students than
faculty because, according to Reif, “[faculty] only know how we’re
teaching ... [you] know what you
want to see.”

Reif said that some metrics of success in improving MIT’s resi-
dential education could include whether people want to employ
the students and whether stu-
dents make a difference by creat-
ing entrepreneurial enterprises, and so forth. “To me, that is what mat-
ters,” said Reif. “And I just want to
do that by using [MIT] technol-
y and recreating or reinventing
what we do on campus.”

1 EdX is ‘moving quite
good,” said Reif, hinting
that many more schools may join
EdX in the future.

Reif also considers impact
an important measure, “Are the
things we do changing the world?
Making it a better place?”

EdX

One of the ventures that arose
from Reif’s interest in residential education while he was provost
was edX, which Reif had a hand
in creating. What began as MITx
has, in the last six months, grown
to contain classes from Harvard and the University of California,
Berkeley. EdX is “moving quite
good,” said Reif, hinting that many
more schools may join edX in the future, though developments
have been going “as fast as [they]
can,” and “the platform that we
developed is the one with the
highest quality.”

“After we announced this ... almost every institution you could
think of contacted us to jump on
that bandwagon,” said Reif, add-
ing that the goal for edX is for
every institution to “bring some-
thing new to the table for the
whole world to benefit.”

“We need to think about, and I mean collectively, not just me,
... how do we use that tool.”
said Reif, referring to how edX
might be used at MIT and other
universities. Reif added that how
MIT uses edX as a science and
technology school may be differ-
ent than how other schools may
use it, and “that requires a high
degree of thinking.”

RLAD implementation

On June 2, a leaked letter from
Chancellor Eric Grimson PhD ‘80
to the housemasters outlined the administration’s plan to place
Residential Life Area Directors
(RLADs) in nine undergraduate
dorms. What followed was a nega-
tive response from many students
over the facts that no students
beyond a small committee under
Grimson were consulted in the
process. Additionally, it was an-
nounced after students had gone
home for the summer and at a point where the plan could not be
changed to a substantial degree.

These events occurred before
Reif officially became president, and he said that he does not know
the details or specifics of that pro-
cess. However, Reif emphasized that it is very important to him
that before decisions are made, those potentially affected are
consulted.

“At the end of the day, some-
bodies have to make a decision, but it is
has to happen after consultation,
not behind closed doors and not informing [those affected],” said Reif.
“That is the mental model I would like to proceed [with].”

MITIMCo

Faculty have recently raised
corns over the development of
MIT-owned land in Cambridge.
The MIT Investment Management
Company (MITIMCo) has pro-
posed plans to allocate a signifi-
cant portion of MIT’s real estate
to commercial development in long-
term leases. This would sharply
constrain “future development of
educational, housing, recreation, and academic research,” accord-
ing to the May/June 2012 Faculty
Newsletter. The faculty, according
to the newsletter, feel that MITIM-
Co’s plans would lead to “serious
and irreversible damage to MIT’s
future educational and research
missions.”

“I think it is valid for people
to be concerned about that,” said
Reif, adding that the newly-
formed faculty task force on the
issue should return with feedback
from Provost Chris A. Kaiser PhD ’80 toward the end of September,
and Kaiser will then make rec-
ommendations to Reif. He added that MITIMCo’s plans have been
carried out in “complete consen-
sus with the administration,” and
agreed that the faculty task force
would be the beginning of faculty
input into future plans.

Student interaction

One other topic that Reif fo-
cused on during his acceptance
speech was student interaction.
Reif stated that he has plans, but
hopes that students will give him
feedback and ideas for what they
want him to do. One of the main
plans is having presidential office
hours for the entire MIT commu-
nity, which will be announced
“relatively soon.” Reif also intends
on being out and about MIT by
eating at dining halls on occa-
sion, going to music and sporting
events, walking around campus, and
taking morning and after-
noon breaks to get coffee and “see
familiar faces and bump into [stu-
dents].” The Presidential Transi-
 tion Advisory Committee is still
gathering feedback for Reif from
students and the MIT community.
“I really do want the MIT stu-
dents to know that really actively
care for them and the rest of the
community,” said Reif.

A presidential focus

President before Reif, Susan. J.
Hockfield focused heavily on put-
ing MIT’s weight behind develop-
ments in biotechnology and ad-
vanced manufacturing during her
term. This focus influenced MIT’s
research focus and relations with
those industries.

When asked about what might be his focus in the future, Reif said,
“MIT has an amazing potential, and I would even say an obliga-
tion to attack the world’s greatest
challenges. We have the some of
the smartest students and faculty,
and we should work together to
do research into those challenges.”

Reif has some ideas for those
challenges, but would like the
students and faculty to identify
specific topics that he can then
support. He cited some important
challenges as health, bistech, en-
ergy, poverty, and food technol-
ogy, among others, but said that
“MIT should pick a few of those —
ot one, not two, but a few, and
work on them.”
East Campus Courtyard, September 14th, 7:30PM-Midnight
Cash bar provided by the Muddy Charles, 21+ with ID only.

Tobacco
Nemes - Paranoid Social Club - Rolltreppe
Lung cancer treatment study: Existing drugs could treat squamous cell lung cancer

Cancer research, from Page 1

Squamous cell lung cancer, second in frequency only to adenocarcinoma of the lung, kills about 50,000 people each year. That is more than are killed by breast cancer, colon cancer or prostate cancer. While as many as 30 percent of adenocarcinoma patients never smoked, only 20 percent of squamous cell cancer patients are non-smokers.

Adenocarcinoma of the lung also can be easier to treat than squamous cell cancer. About 30 percent of adenocarcinoma patients have mutations in their cancers that can be targeted by new drugs. Those drugs do not work in squamous cell cancers, whose mutations are different.

The new study compared tumor cells from 178 squamous cell lung cancer patients to the patients’ normal healthy cells. More than 60 percent of the tumors had alterations in genes used to make protein and lipid kinases, enzymes that are particularly vulnerable to the new crop of cancer drugs and for which many drugs are already available or are being tested in other cancers.

Kinases, explained Dr. Roy S. Herbst of Yale Cancer Center, who was not an author of the new study, function like on-off switches for cell growth. When they are mutated, the cells die.

Then come drug tests in patients. But if only a small percentage of patients have each of the mutations, that poses a problem. Ordinarily a few medical centers would enroll patients with a particular type of cancer, like squamous cell. But if, instead, squamous cell patients are subdivided according to their particular gene mutations, there would be too few for a drug test within a single institution or even several.

The plan is to cast a wider net. So the challenge is to put the findings to clinical use.

Now the challenge is to put the findings to clinical use. First, researchers have to establish that the mutations in question actually are essential to the tumors’ growth, said Dr. Bruce Evan John- son, a lung cancer researcher at Dana-Farber and an author of the new paper. There are several steps: show that the mutated gene is added to normal cells that turn into cancerous cells, show that if the mutated gene is added to mice that develop squamous cell lung cancers, and show that if the gene is turned off in cells grown in a laboratory, with a drug, for example, that the cells die.

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We invite all Juniors and Seniors to attend:

**Fall Presentation**
Date: Tuesday, September 11th
Time: 8:00 p.m.
Place: Stata Center, Building 32, Room 155

**MIT Career Fair**
Date: Friday, September 21st
Time: 11:00 a.m. – 5:00 p.m.
Place: Johnson Athletics Center (W 34)

We remind you that the resume submission deadline is **September 30th**. First round interviews will be held at career services on **October 10th**.

*Applicants must apply via [www.joinbain.com](http://www.joinbain.com) AND Career Development Center. Please include a cover letter, resume and unofficial transcript.
Hockfield at HKS
To spend one year as visiting prof

Although Hockfield will not teach any classes, Harvard stu-
dents will be able to interact with her through Belfer Center and
HKS events and other activities, according to Ellwood.

"Following 14 years in aca-
demic leadership, the Kennedy
School and the Belfer Center
provide an ideal environment
for reflection, study and conver-
sation. I’m delighted to join this
remarkable community," said
Hockfield in a statement.

Although the visiting profes-
sor appointment is only for one
year, Allison wrote, "If she want-
ed to stay longer at Belfer, we
would love to have her."

"I have long admired Susan
Hockfield’s passion and dedi-
cation as a research scientist,
university leader, and national
policy advocate," wrote Ell-
wood. "Hers is a track record of
remarkable distinction, and we
are thrilled to welcome Presi-
dent Hockfield to the Kennedy
School."

Hockfield will not
Teach any classes.

Hockfield derives her relevant
experience from advocating us-
ing research universities to pro-
mote innovation and economic
growth during her presidency
at MIT. In September 2006, MIT
launched its Energy Initiative
(=MITIE) to improve energy sys-
tems to meet future needs. In
June 2011, Hockfield was asked
by President Barack Obama to
co-chair the Advanced Manu-
facturing Partnership’s steering
committee.

ights can have greater impact on
policy," wrote the Belfer Center’s
director, Graham Allison, in an
e-mail to The Tech. "That is a cen-
tral question for the Center for
Science and International Af-
fairs, so we look forward to col-
laboration with her and others."

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Teach any classes.

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committee.
GET ART! STUDENT LOAN ART PROGRAM EXHIBITION & LOTTERY » ON VIEW THROUGH SEPT. 16

GRADUATE STUDENT RECEPTION » Wed., Sept. 12, 5–7PM LIVE MUSIC, FOOD, AND BEVERAGES

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import new_skills
def learn MarketableJobSkills():
    return linux, OSX, javascript, applescript, perl, python

if you.interest == True:
    print "E-mail join@tech.mit.edu"

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Baltimore and Pittsburgh will lead the AFC North as Schaub and the Texans take the South

Tuesday, September 11, 2012

The Tech

By Austin Osborne

AFC East

1. New England Patriots (14-2)
2. Buffalo Bills (9-7)
3. New York Jets (8-7)
4. Miami Dolphins (2-14)

As long as Tom Brady and Bill Belichick, are around, the Patriots will be one of the most dominant teams in the NFL. They’ve upgraded their receiving corps with the acquisition of Brandon Lloyd and will be one of the biggest teams in the NFL. They’ve upgraded their receiving corps with the acquisition of Brandon Lloyd and will be one of the best teams in the NFL. They’ve upgraded their receiving corps with the acquisition of Brandon Lloyd and will be one of the best teams in the NFL.

The AFC North always seems to be coming down to Baltimore and Pitts-

burgh. Baltimore has been known for the past decade for their suffi-
coting defense, with the main fig-

urehead being middle linebacker (LB), Ray Lewis. Lewis is entering his 15th season, but even at 37, he doesn’t appear to be slowing down. The loss of Terrell Suggs will defi-
nitely impact the Ravens’ going for-
ward, but not enough to stop them from fighting it out for the division crown. Joe Flacco has now proven that he can win in the playoffs, and the Ravens have one of the best runningbacks (RB) in the league, Ray Rice.

No team can compete at a high level with the level of distraction and disorder the Jets have in their locker room.

The Steelers always seem to be involved come January. Like the Ravens, they also pride themselves on strong defense and power run-

ning. QB Ben Roethlisberger will be aiming to make up for his un-

favorable performance in the 2012 playoff game against an inferior Denver Broncos team. With much of the team returning this season, the Steelers will need to search for their seventh Super Bowl victory.

Cincinnati was one of the sur-

prises last season, led by rookies Andy Dalton and A.J. Green. With a foot-

less full training camp canceled due to the lockout), they should both see massive improve-

ments on their already impressive rookie season. It will remain to be seen whether or not their de-

fense will be able to keep up the brusling style of the Ravens and Steelers, but they should be able to help force the ball carriers to make their second con-
ssecutive playoff appearance.

There isn’t much to look forward to in Cleveland this season. The only real bright spots on the team are offensive linemen Joe Thomas, cornerback CB Joe Haden, and new rookie RB Trent Richardson. Other than Thomas, however, the Browns don’t have much of an of-

densive line to speak of, and they also have no QB to force defenses to respect the pass. This may mean that Richardson is in for a rough rookie season. Especially in this division, which is considered by many to be the best in football, Cleveland has no chance to com-

pete this year.

AFC West

1. Oakland Raiders (10-6)
2. Denver Broncos (9-7)
3. San Diego Chargers (6-10)
4. Kansas City Chiefs (2-14)

Last season, Oakland made a huge splash by trading many of their draft picks for former Cleveland quarterback Carson Palmer. Palmer was fairly effec-
tive for the Raiders, even with his 16 interceptions in 10 games, and he brings some statability to a posi-
tion that has largely been filled by the likes of JaMarcus Russell, Jason Campbell, and Bruce Gradkowski. They also have a promising young secondary to go along with him who should be able to loaf less in the passing game for Palmer by forcing the defense to respect the run. In this incredibly weak division, the Raiders may have just enough to sneak into the playoffs and make a run.

Denver has been a media circus for the past 12 months. First, it was Tim Tebow’s magical run to lead the Broncos to their first playoff win since 2006. Then, in the offseason, news broke that Denver had signed Peyton Manning after coming off several major surgeries. This is an incredibly risky move, but it may just pay off. Denver’s success last season was due in large part to their stifling defense and clutch kicking. In the end, this move may not be the end of Tim Tebow (even though he was re-

ceiving the majority of the credit for the wins). If Manning can provide even half of the production that he did in Indianapolis, the Broncos could be a very formidable team this season. However, if Manning’s neck isn’t completely healed or affects his throwing mo-
tion, then the entire season could come down to Baltimore and Pitts-

burgh will lead the AFC North as Schaub and the Texans take the South

Tuesday, September 11, 2012

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AFC East

1. New England Patriots (14-2)
2. Buffalo Bills (9-7)
3. New York Jets (8-7)
4. Miami Dolphins (2-14)

As long as Tom Brady and Bill Belichick, are around, the Patriots will be one of the most dominant teams in the NFL. They’ve upgraded their receiving corps with the acquisition of Brandon Lloyd and Donna Jo, and Schaub has the abil-

ity to pick apart secondaries at a moment’s notice. The Titans have decided to trade the 83rd overall pick to the Cleveland Browns for QB Jake Locker, who was very impres-
sive coming out of the pocket going undefeated and having a passer rating near 100. They hope to get more production from the backup QB Chris Johnson this season as well.

Miami Dolphins (2-14)

The Dolphins have more problems than their quarterback, Matt Tebow. No team can compete at a high level with the level of distraction and disorder the Jets have in their locker room.

The Steelers always seem to be involved come January. Like the Ravens, they also pride themselves on strong defense and power run-

ning. QB Ben Roethlisberger will be aiming to make up for his aw-

Some of the biggest problems that the Dolphins will have this season will be any different. They seem to be favored every year, but they never seem to be able to compete at a high level. This is moot, however, as the Dolphins may have just enough to sneak into the playoffs and make a run.

Jacksonville simply lacks the talent to compete. Outside of Mau-

iek Ivory and the quarterback, they do not have any offensive wrap-

ers (WR) in the league in Andre

Jackson, San Diego will probably be another middle-of-the-
pack team.

Kansas City City (KC) is another team with plenty of talent to suc-

ceed, but they never seem to be able to compete at a high level. In the end, KC just has too many holes, including questionable QB play, to compete this year.

AFC South

1. Indianapolis Colts (9-7)
2. Tennessee Titans (6-10)
3. Jacksonville Jaguars (2-14)

The Houston Texans are my per-

sonal pick to win the AFC in the Super Bowl this season. If QB Matt Schaub hadn’t gotten injured at the end of last year, this Texans team would have been poised to make a deep run in the playoffs. They have very few weaknesses at any position on defense, LB Brian Cushing and Milt Harison will hurt this com-

fers pass rush. Defensive end J. W. D. Davis has a knack for getting the left by Williams, but he should be up to the challenge. They have one of the

most athletically gifted wide receiv-

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pack team.
Women’s tennis wins first game

MIT crushes Assumption, 9-0

By Phil Hess

daper staff

It was a fine start to the 2012 season for the No. 30 MIT women’s tennis team as the Engineers downed Assumption College, 9-0. Junior Lauren C. Quisenberry and freshman Victoria Tam got things started for MIT with an 8-0 win at No. 1 doubles. After the win at No. 1 doubles, the duo of Michelle M. Dutt ’15 and Sunnie E. Lampl ’16 scored an 8-0 win in their match at No. 3 to give the Engineers a 2-0 advantage. Junior Julia C. Hsu ’14 and senior Candace Wu ’13 completed the doubles sweep with an 8-2 win at No. 2.

Quisenberry continued to cruise in singles play, taking the easy 6-0, 6-0 win in the No. 1 singles match. Vynnie J. Kong ’15 clinched the team win for MIT at No. 2 with a 6-0, 6-1 win. MIT went on to take the remaining singles matches in straight sets as well, with Wu winning 6-0, 6-1 at No. 3 and Tam taking a 6-2, 6-1 win at No. 4. Dutt and Hsu completed the sweep for the Engineers, with Dutt coming out on top by a 6-4, 6-2 score at No. 5 and Hsu gaining the 6-3, 6-1 decision at No. 6.

MIT will open the New England Women’s and Men’s Athletic Conference play at Springfield College on September 15th, its next match.

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(1 of 3)

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NSA is coming to MIT
Friday, September 21