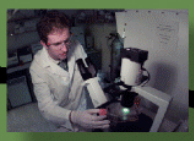
40 Years of Biology at the Lab

1980



1990

FY 80 Funding $14M

1980's
SCE measurements of chromosome damage from environmental exposures (cigarettes, EtBr, etc.)

1982
The mouse is used to model in vivo somatic mutation at the HPRT gene

1982
Added a new wing to building 361

1984
Ethernet installed

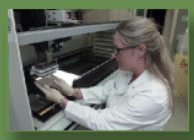
1984
E-mail becomes a reality at BBRP

1984
PhIP isolated from cooked beef, identified and synthesized

1984
Human-Hamster hybrids used to identify correction of repair defects in CHO cells

1984
LLNL uses cross complementation to clone our first DNA repair gene

1985
MoFlo developed



1986 - 1990
Human-hamster system developed for utilizing human sperm chromosomes

1986
Research finds that microwaving meat before frying reduces mutagens

1986
Chromosome painting developed

1986
Human chromosome specific gene libraries

1986-2001
Somatic Biomarker studies of radiation effects in Russians who cleaned up Chernobyl

1986
Wang word processor replaced by Interleaf on Suns

1986
GPA assay for somatic mutations developed

1987
Chromosome 19 studies

1987
The Human Genome Project begins

1987
First ABI sequencer, 24 lanes 14 hour run

1987
GPA mutations detected in Hiroshima bomb survivors

1988
First use of parallel processing at Bio-Med. ten Sun machines harnessed for Human Genome physical map processing

1988
Sequencing of somatic mutations of the human HPRT gene begins to define the mutation spectrum

1988
Biological Accelerator Mass Spectrometry (AMS) starts at the Laboratory

1988
Gene Mapping Project

1992 Biology & Biotechnology Research Program

FY 90 Funding $23M

1990
Program is appointed as a Human Genome Center by the Secretary of Energy

1990
Sperm chromosome studies with DNA probes begin

1991
Institutional Biosafety Committee established

1992
Institute for Genetics and Genomics (IGG) begins to develop new interactions with academic institutions, emphasizing the graduate and postgraduate levels

1992
First semester for Science and Education Research Semester (SERS)

1992
Library outgrows building 361 and moves to trailer 3649

1992
DM gene cloned

1993
Research in DNA repair is extended to include associated protein function & structure and chromatin organization

1994
R&D 100 Award: Chromosome-specific composite DNA probes for the common lab mouse

1994
World Wide Web launched

1994
Center for Health Care Technologies is formed

1994
First CASP Conference

1994
The IMAGE Consortium sends its first arrayed plate of cDNAs to be sequenced

FY 95 Funding $36M

1995
X-Ray Crystallography Facility established

1995
Mapping of Chromosome 19 published

1995
Methods to lower heterocyclic amine formation in foods developed

1992 - Associate Director Anthony Carrano, PhD

1996
BBRP begins resequencing human DNA repair genes

1996
NMR Biomedical Structure Facility established

1996
Protein Structure Prediction Center instituted

1996
Initial funding of DOE Chemical & Biological Non-proliferation Program (CBNP)

1996
Dugway field trials of rapid PCR detection of pathogens

1996
BBRP teams with HR to run HOME campaign

1997
Computational Biology Group created

1997
Sequence homology searching finds a new repair gene, RAD51B

1997
Sperm protamine-DNA complexes form neat structures

1997
Chemotherapy-induced chromosome abnormalities in sperm

1997
JGI established a "virtual" laboratory

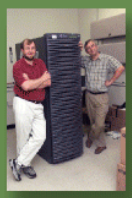
1997
BBRP helps run HOME campaign for second consecutive year

1997
Research finds that marinating chicken before cooking reduces mutagen formation

1998
The three virulence plasmids of Yersinia pestis and the causative agent of bubonic plague are completely sequenced and characterized

1999
Joint Genome Institute, a partnership with LBNL and LANL, formed and entered into production mode

1999 October
CBNP funding more than doubles, from $19 million to $41 million a year



1999
PhIP found to bind to DNA in humans by AMS

1999
Production Genomics Facility in Walnut Creek dedicated by Energy Secretary Bill Richardson