

# **Michael E. Repkin**

| [merbio@aol.com](mailto:merbio@aol.com) | 773.791.1131 |

## **EXPERIENCE**

*President, Founder 2007 - present*

### **Repkin Biosystems, Inc.**

Developed business concept and business plan | designed and produced logo/corporate identity package | designed, produced and maintained repkinbiosystems.com | developed product concepts and prototypes for custom work for clients | identified and created relationships with suppliers and sub-contractors | prepared paperwork for patents | developed human life support technologies including green roof technology, living wall growing systems, composting units and rhizofiltration systems

*Board of Directors President, Founding Member 2004 - present*

### **Urban Habitat Chicago**

Created the framework and direction for an organization devoted to promotion, education and research of sustainable building systems and building material usage within urban areas | designed HR tracking program and training and evaluation program | recruit members for teams | organize events and field operations | engage in public relations work

*Principal, 2001– 2007*

### **Michael Repkin designs**

Ecological design, consultation, building and management of projects involving residential and commercial projects | development of biologically based products in the consumer, government and manufacturing sector | provides a broad range of human life support services and products | developing cost effective methods to implement food production on rooftops in the Chicago area

*Assistant Manager, 2001 - 2004*

### **Kinko's Inc.**

Provided leadership for the successful execution of organization objectives for a \$1.2 million dollar operation | identified and resolved problematic customer relations issues to ensure continuation of customer patronage and positive PR | provided scheduling and training for staff members | prepared daily reports for corporate accounting/cash control/delivery of cash to deposit | performed inventory control including purchase order generation, order placing, receiving, and payment to vendors | managed production flow to ensure on-time delivery of custom orders

*Co - Worker, 1997- 2001*

### **Kinko's Inc.**

Provided customer service for clients with issues pertaining to design and production of documents | assisted clients with digital printing related problems | operated and performed troubleshooting for digital and analog document production machines | oversaw the return of spent cartridges to manufacturers and ensured the proper handling of other recyclable materials to ensure that the organization was achieving environmental goals and conceptual alignment

*Owner, 1996– 2001*

### **MER Biologicals**

Management and design of 40 sites using organic methods to provide clients with native, ornamental, medicinal and culinary plants in urban settings | designed and built a solar greenhouse for a residence that required virtually no maintenance and produced fish and greens | converted turfgrass areas into productive native plant habitats and food production zones | developed methodologies and materials to provide human powered landscape service to reduce hazardous and greenhouse gas | created proposals for multi-year projects with clients to meet stringent budget objectives | provide education and training to clients and sub-contractors on water management and recycling systems

*Project Co-ordinator, 1996 - 2002*

**Bateman Elementary School**

Development, design and implementation of 'Project Green', a program involving 1100 students in recycling, organic gardening, solar energy, human life-support, nutrient recovery and aquaculture | Provided instruction to staff and students and fielded questions from the community and parents | designed and created outdoor planting area to allow all students the opportunity to interact with soil and plants | designed and built integrated aquaculture unit to grow Tilapia and hydroponic houseplants | designed, built and demonstrated solar cooking oven | provided school with vermiculture systems and support | provided materials and support for seedling production of vegetables and native plants

*Medical Laboratory Specialist/Soldier 1988 - 1996*

**Department of Defense, United States Army Medical Corps**

Medical Laboratory Specialist - responsible for accurate chemical, pharmaceutical, hormone and toxin analysis of serum specimens at an 800 bed hospital | Armed Forces DNA Identification Lab (AFDIL) DNA Repository | Armed Forces Institute of Pathology consult lab Histopathology Technician - worked with pathologists to prepare specimens for diagnosis of cancer and other disease processes | Worked in the AFIP microbiology division on independent research related to rapid identification of *Bartonella* species | Barracks Assistant Non Commissioned Officer In Charge - responsible for greater than \$250,000 dollars worth of property, developed work schedules for 28 personnel, performed inspections, and maintained supply and repair orders. | Junior Enlisted Council President - Developed and executed projects to improve community service, social and educational opportunities for 98 personnel assigned to the AFIP

*Laboratory Assistant 1989-1990*

**Northeastern Illinois University Biology Department**

Prepared reagents, solutions and materials for classrooms and research studies | prepared, sterilized and dispensed culture media for bacterial and mycological studies: used automated equipment - Agarmatic with multi carousel plate filling apparatus | maintained bacteriological and mycological stock cultures and performed routine purity checks to ensure culture performance and correct identification

*Laboratory Assistant 1984 -1988*

**Von Steuben Metropolitan Science Center Biology Department**

prepared reagents and any necessary materials for classroom studies | inventoried and maintained lab equipment and supplies | maintained various live plant and animal specimens

*Principal Researcher 1983 - 1989*

**Repkin Labs**

Designed, built and maintained a microbiology laboratory focusing on gram-negative bacilli identification | Prepared and tested culture media for sterility/performance | Designed, constructed and managed an area that met P2 containment requirements (biosafety level 2) for study of antibiotic resistant strains of *Aeromonas hydrophila*

*Partner 1981 - 1982*

**R+H Aquatics**

collected and cultivated freshwater aquatic plants, fish and invertebrates for sale to the aquarium industry developed and sold frozen food preparations for aquatic animals

## **EDUCATION, INSTITUTIONAL**

B.A. Environmental Studies with a Minor in Art: Northeastern Illinois University, Chicago, IL - 145+ credit hours

Strategic Financial Operations Course, Kinko's, Chicago, IL, 2001

Branch Office Certification Program, Kinko's, Chicago, IL 1997

Histopathology Technician: Armed Forces Institute of Pathology, Washington, D.C., 1994

Air Assault School, U.S. Army, Ft. Belvoir, VA, 1994

Integrated Aquaculture Systems Course: Ecologic Woods Hole Oceanographic institute, Woods Hole, Mass., 1990

Medical Laboratory Specialist: Health Science Academy, Ft. Sam Houston, TX, 1989

U.S. Army Initial Entry Training: Ft. Bliss, TX, 1989

High School Diploma: Von Steuben Metro Science Center, 1988

Advanced Microscopy: McCrone Institute, State Microscopical Society of Illinois, Chicago, IL, 1984

Basic Microscopy: McCrone Institute, State Microscopical Society of Illinois, Chicago, IL, 1984

Field Elementary School, Options for Knowledge Environmental Program, 1984

Introduction to Limnology, John G. Shedd Aquarium, Chicago, IL, 1982

Decatur Classical Elementary School, 1982

## **WORKSHOPS & LECTURES - LEADING**

17 October 2007, Urban Habitat Chicago 2007 lecture series, *Gold, Not Garbage: Biological Nutrient Recovery Systems to Create Perpetual Soil Fertility for an Abundant Future*, Chicago Public Library, Budlong Woods Branch, Chicago, Illinois

26 September 2007, Urban Habitat Chicago 2007 lecture series, *Growing Plants on Rooftops in Chicago: Creating Opportunities for Human Health, Economic Growth and National Security*, Chicago Public Library, Budlong Woods Branch, Chicago, Illinois

25 August 2007, Urban Wildlife Coalition, *Urban Wildlife and Human Habitat*, Chicago Public Library, Edgebrook Branch, Chicago, Illinois

14 November 2006, Urban Habitat Chicago, *Urban Habitat Chicago: Our Recent History of Creating Change Opportunities in Chicago*, Columbia College Product Design and Interior Architecture Departments, Chicago, Illinois

15 August 2006, Urban Habitat Chicago 2006 lecture series, *Deconstruction: Learning by Doing - The Kikuchi House*, Chicago Center for Green Technology, Chicago, Illinois

26 April 2006, Urban Habitat Chicago 2006 lecture series, *2175 House: Redesigning Human Habitation in Chicago*, Chicago Public Library, Lincoln Park Branch, Chicago, Illinois

08 March 2006, Urban Habitat Chicago 2006 lecture series, *Disseminated Biofiltration for Mitigation of Anthropogenic Contaminants*, Chicago Public Library, Budlong Woods Branch, Chicago, Illinois

May 2005, Urban Habitat Chicago, Lawndale Site, Chicago, Illinois— Adobe brick production workshop with hands - on production

17 May 2002, Illinois State University—Presented a two-hour lecture/workshop in Ecological Design for students, teachers and parents at the Illinois state competition of Illinois Future Problem Solvers

January—June 1997—Bateman Elementary School, Chicago, Illinois— Taught teachers and staff sustainable gardening practices from seedling production to harvest on a monthly basis

Summer 1989—Northeastern Illinois University Introduction to bacteriology for eighth graders as a part of a summer biology program

## **MEDIA APPEARANCES**

07 February 2006, NEIU Independent, Article Describing an Urban Habitat Chicago (UHC) Dinner Experience

19 January 2006, Chicago Sun-Times, Featured Article Describing Food Production on Green Roofs at True Nature Foods in Chicago

13 July 2006, NBC 5 Chicago, Morning News, Television Interview Concerning Food Production on Green Roofs at True Nature Foods in Chicago with Dick Johnson, aired 24 July 2006

18 July 2006, WTTW 11 Chicago, Chicago Tonight, Television Interview Concerning Food Production on Green Roofs at True Nature Foods in Chicago with Christian Farr, aired 26 July 2006

2006, Inhabitat.com, Article concerning green roofs in Chicago with link and photo of True Nature Green Roof project site, photo by Michael Repkin designs

30 November 2006, Time Out Chicago, Featured article with True Nature Green Roof

April 2007, Open Architecture Network Featured Project, collaboration of Michael Repkin Designs and Echo Studio

09 August, 2007, Interview with CLTV's Tim McGill concerning the Urban Heat Island and How to Mitigate for the Effect, aired 25 August 2007

29 August 2007, Discovery Channel Invention Nation Show Interview and Demonstration of Green Roof Construction and Inoculation, aired December 2007 , Peacepoint Entertainment Productions

13 September 2007, Farmer's Almanac Television, Interview with Paul Leone discussing the state of Green Roofs in Chicago and The True Nature Rooftop Victory Garden, to air Spring, 2008

02 February 2008, Live From the Heartland Radio Show, Interview with Michael James Discussing Deconstruction, Green Roofs and the History of Urban Habitat Chicago

## **EXHIBITIONS**

08 November 2007 , Featured in Peace Museum Exhibit "An Oasis of Imagination", at Harold Washington Library, Chicago, Illinois

March - April 2007, Columbia College DIY Culture, Urban Habitat Chicago Seedball Exhibit, Biological Consultant, Chicago, Illinois

19 April 2007, Northeastern Illinois University, Urban Habitat Chicago Exhibit, Earth Day Fair, Chicago, Illinois

21 April 2007, Northside Preparatory High School, Urban Habitat Chicago Exhibit, CASE Green Scene, Chicago, Illinois

01 June 2007 - 20 October 2007, Edgewater Green Market, Discussion and Demonstration of Rooftop Food Production

## **COMMUNITY INVOLVEMENT**

17 October 2007, Visit and Lecture to Students at Gray Elementary School, Chicago, Illinois

28 April 2007, Bateman Elementary School, Painting Day with Home Depot, Chicago, Illinois

12 April 2007, Visit and Lecture to Students at Andrew Carnegie School, Chicago, Illinois

24 March 2007, Bloomingdale Trail Visioning Session and Design Charette, Visual Representation, Chicago, Illinois

30 January 2007, Area 2 Science Fair Judge, Walt Disney Magnet School, Chicago Public Schools, Chicago, Illinois

03 January 2007, Design Consulting and Evaluation, Little Village Environmental Justice Organization (LVEJO), Chicago, Illinois

1997 - 2000, Chicago Public Schools, Student Science Fair Judge, Chicago, Illinois

1996, C&O Canal Clean-Up Day, U.S. National Park Service, Washington, D.C.

1995- 1996, Auto Free D.C. Member and Activist, Critical Mass Participant for Rock Creek Park Rides

1995 - 1996, Organized Food and Clothing Drives for Armed Forces Institute of Pathology to Support Local Shelters, Washington, D.C.

1995 - 1996, Met Net Volunteer Cook and Information Table Attendant, Washington, D.C.

## **GRANTS**

City of Chicago 2007, Department of Environment, Green Rooftops for Chicago, Rooftop Food Production and Stormwater Utilization in Lawndale Neighborhood, PHA3600DB60623, Chicago, Illinois

City of Chicago 2006, Department of Environment, Green Rooftops for Chicago, Rooftop Victory Garden, True Nature Foods, Chicago, Illinois

Oppenheimer Foundation 2002- funding for instructing students on various solar projects

Oppenheimer Foundation 2000- funding to support Mars Millennium Project - student display at Adler Planetarium, Chicago

Student Science Fair 1983-1987-funding for microbiological research

Banker's Trust Company 1985-funding for microbiological research

## **DESIGN and PRODUCT RESEARCH & DEVELOPMENT**

### **2008**

Residential Landscape Design Proposal, SR1347SL60015, Deerfield, Illinois, 2008

### **2007**

Residential Landscape Design Proposal, and Build SR0033FA60172, Roselle, Illinois, 2007

Residential Landscape Design Proposal, EF4815WB60641, Chicago, Illinois, 2007

Church Landscape Design Proposal, DB2732WS60625, Chicago, Illinois, 2007

Vertical Growing System Design and Build Prototype, Repkin Biosystems, Chicago, Illinois, 2007

Grow Bag System Design and Build, Demonstration for Urban Habitat Chicago, Chicago, Illinois, 2007

Residential Landscape Design Proposal, and Build CC6739SC60637, Chicago, Illinois, 2007

New Method for Infusing Multi-Species Ceramobiotic Spheres with Seeds and Nutrients, Chicago, Illinois, 2007

Soil-Based Above Grade Vegetable Production in Urban Area, GV2607WH60659, Chicago, Illinois, 2007

Residential Landscape Design Proposal, and Build DA6116NM60645, Chicago, Illinois, 2007

### **2006**

Residential Landscape Design Proposal, EK1104RR66035, Highland Park, Illinois, 2006

Rainwater Infiltration Area Design and Build, CRL5624NC60659, Chicago, Illinois, 2006

Design Concept Proposal for Vegetated Air Biofiltration Units for O'hare International Airport, Chicago, Illinois, 2006

Rooftop Vegetable Production Project Design to provide residents with food and purified rainwater for laundry use. Site:PHA3600DB60623, collaboration with Echo Studio and UHC, 2006

Rooftop Vegetable Production Project Build and Implementation for a Chicago Natural Foods Market, collaboration with Echo Studio and UHC, 2006

### **2005**

Residential Landscape Design/Build, PL7528NK60076, Skokie, Illinois, 2005

Residential Green Roof Design, collaboration with Echo Studio, CVL WN60660, 2005

Rooftop Vegetable Production Design for a Chicago Natural Foods Market, collaboration with Echo Studio, 2005

Energy Use Analysis and Design for Retail Space, 2005

Utilization of Post-Consumer Glass as an Aggregate Substitute in Concrete, 2005

Design for a Neighborhood Park/Plant Production Area in Chicago, Illinois, 2005

Proposal for Used Building Materials Recovery and Restoration Retail Facility (ReStore) for Habitat for Humanity, Windy City Affiliate, Chicago, Illinois, 2004 - 2005

## **2004**

Development of Alternative Structural Support Materials Utilizing Native Illinois Plants in The Chicago Metropolitan Area, 2004

Erosion Control and Food Production Consultation, Design and Build at a Residence in Oakland, California, 2004

Urban Food Production and Rainwater Harvesting Consultation for People's Grocery, Oakland, California 2004

Environmental Education and Food Production Design for Elm Place Middle School, Highland Park, Illinois, 2004

Biostabilization of Sand Roads in Sears, Michigan, 2004

## **2000 - 2003**

Rainwater Collection and Purification in the Chicago Metropolitan Area, 2003

Oyster Mushroom Production from Commercial and Residential Waste Sources, 2002

Residential Organic Food Production in Lima, Peru, 2001

Solar Oven Cooking Systems for Peru and United States of America, 2001

Biogenic Hydrogen Production from Short - Rotation Tree Crops in Urban Areas, 2000

Graywater Recycling Using Biological Filtration for Dish washing, 2000

## **<2000**

Automated Organic Hydroponic Food Production Systems for Urbanized Areas, 1999 - 2001

PULP –Pasteurized Urban Leaf Product, Developed with A.Turner 1999

NASA AO 99-HEDS-01 “Suitability of Martian Soil for Utilization in Biogenic Oxygen Production by Plant and Microbial Communities”, 1999

Organic Hydroponic Systems for Urbanized Areas, 1997 - 1999

Water Resource Analysis for Forest Park, Illinois, 1998

The Future of Food and Future Food Sources, 1998

Design/build Water Recycling Demonstration Unit for Elementary School, 1998

Master Plan Concept Report for Rockford and Outlying Cities: A Redevelopment Strategy, 1998

Design, Building and Operation of a Residential Passive Solar Greenhouse in Chicago for the Integrated Cultivation of Tilapia and Hydroponic Vegetables, 1998 - 1999

Development of Non-Petroleum Intensive Organic Residential Landscaping Service, 1994 - 2000

Water Reclamation and Reuse, 1996 - Present

Soil Enhancement and Substitution 1996 - Present

### **<1995**

Mass Production of *Bartonella* Species for Cellular Fatty Acid Analysis and Antigen Production, 1995 - 1996

Minimized Energy Input for Conservation of Cooking Fuel, TaCOS System Development, 1993

Soil-less Growth Systems for Indoor Food Production 1991-1996

Utilization of *Enterobacter aerogenes* in Heavy Metal Recovery 1987-1991 for patent development

Use of Algal and Bacterial Biomass for Soil Enhancement 1987 - 1989

Integrated *Tilapia*, Earthworm , Rabbit and Vegetable Production in Minimal Urban Space 1987-1991

Hydroponic Cultivation of *Raphanus sativus* in a Household for Consumption, 1988

Breeding of *Tilapia mariae* in Recovered Urban Household Water, 1987 - 1988

Anaerobic Stabilization of Decomposed Fish Fecal Solids for Application in Engineered Soils, 1987

### **<1985**

Seroconversion of mice using oral killed cell preparations of *Aeromonas hydrophila* 1985-1987

Native American Architecture Technology Adapted to Self-sufficient Housing Systems, 1984

Design, Construction and Performance Testing of Advanced Pressurized Portable Particle Restrictive Environment (AP3RE), 1984

Methods of Creating Potable Water With Minimal Inputs for Wilderness Survival Situations, 1983

Antibiotic Sensitivity of *Aeromonas hydrophila* 1983-1988

Rapid Identification of Gram - Negative Aerobes 1983- 1986

Treatment Comparison of *Aeromonas hydrophila* Infected *Bufo americanus*, 1983

Breeding, Raising and Sale of *Betta splendens*, 1983

Photosynthesis Driven Water Purification in Freshwater Aquaria, 1982

Development of Frozen Food for Aquarium Use, 1982