

# T i m o t h y W e a v e r

## contact

academia: Emergent Digital Practices (EDP), University of Denver, 2121 E. Asbury Ave, Denver, CO 80208-6700

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## educational credentials

1993 M.F.A., Sculpture, University of Colorado at Boulder, Boulder, CO

1978 M.S., Environmental Engineering, School of Civil Engineering, Purdue University, West Lafayette, IN

1976 B.S., Microbiology, Purdue University, West Lafayette, IN

## professional experience

2012-present Associate Professor - Emergent Digital Practices (EDP), University of Denver, Denver, CO

2012-2014 Director - Emergent Digital Practices (EDP), University of Denver, Denver, CO

2009-2012 Associate Professor - Electronic Media Arts Design (eMAD), School of Art and Art History, Digital Media Studies, University of Denver, Denver, CO

2003-2009 Assistant Professor - Electronic Media Arts Design (eMAD), School of Art and Art History, Digital Media Studies, University of Denver, Denver, CO

2007-2009 Graduate Program Director - Digital Media Studies, University of Denver, Denver, CO

1988-present Independent Artist - Boulder/Golden, CO

2000-02 Senior New Media Designer/Senior Project Scientist - the Mediasset Lab | CommercialWare, Denver, CO/Natick, MA

1999-2001 Visiting Faculty - University of Gävle, Creative Media Lab/Creative Programming, Gävle, Sweden

1998-2000 Senior New Media/Web Designer/Developer - Spatial, Inc, Boulder, CO

1997-98 Art Director/Web Designer/Webmaster - eCollege, Denver, CO

1993-95 Environmental Microbiologist – PTI Environmental, Boulder, CO

1990-91, 93, 96 Instructor - Department of Fine Arts, University of Colorado at Boulder, Boulder, CO

1991-92 Research Scholar - Comisión Fulbright, Quito, Ecuador

1989 Staff Artist - Colorado Fine Arts, Denver, CO

1984-88 Senior Research Associate - Synergen, Inc., Boulder, CO

1980-84 Research Microbiologist - Betz Laboratories, Inc., Treviso, PA & The Woodlands, TX

1978-80 Research Scientist - Environmental Engineering, School of Civil Engineering, Purdue University, West Lafayette, IN

solo exhibitions

- 2010 "Hylaea", Penrose Library, University of Denver, Denver, CO  
2009 "Campephilus", College of Santa Fe, MOV-iN Gallery, Santa Fe, NM  
1996 "Familia/cognoscere", National Institutes of Health, Clinical Center Galleries, Bethesda, MD  
1995 "Naciendo en los Bosques/Being Born in the Forest", Museo Municipal de Arte Moderno, Cuenca, Ecuador  
1993 "Diversions of Empire", Edge Gallery, Denver, CO  
1993 "Art in the Time of Cholera", CU Art Galleries, Boulder, CO

solo performances (live cinema)

- 2014 "ArthropodaChordataConiferophyta", Sound Science, Denver Museum of Nature & Science, Denver, CO  
2014 "ArthropodaChordataConiferophyta", Cornish Playhouse, Seattle Center, Seattle, WA  
2013 "ArthropodaChordataConiferophyta", Currents 2013, 4<sup>th</sup> Santa Fe International New Media Festival, Santa Fe, NM  
2013 "ArthropodaChordataConiferophyta", MediaLive 2013, Boulder Museum of Contemporary Art, Boulder, CO  
2012 "Hylaea:Alcidae", Currents 2012, 3<sup>rd</sup> Santa Fe International New Media Festival, Santa Fe, NM  
2011 "Biological Narrative #9: manuMindo", Currents 2011, 2<sup>nd</sup> Santa Fe International New Media Festival, Santa Fe, NM  
2008 "Biological Narrative #7: Danaus" at "Light", 11<sup>th</sup> Subtle Technologies Festival 2008, Innis Town Hall, University of Toronto, Toronto, Ontario, Canada  
2006 "microMacroCosm", Universiteitstheater, Amsterdam, Netherlands (collaboration w/ Trace Reddell)

group exhibitions / collectives

interactive installations

- 2011 "Hylaea | Evolutio", Currents 2011, 2<sup>nd</sup> Santa Fe International New Media Festival, Santa Fe, NM  
2009 "39° 44' 11" N x 104° 59' 21" W", commissioned for *Embrace!* Denver Art Museum, Denver, CO

video

- 2015 "Hylaea : Melanoplus (pages)", WEALR (World Electro-acoustic Listening Room), 12<sup>th</sup> CSUF New Music Festival, Fullerton, CA  
2015 "Hylaea : Audubon (pages)", Anderson Academic Commons, University of Denver, Denver, CO  
2013 "ArthropodaChordataConiferophyta", Currents 2013, 4<sup>th</sup> Santa Fe International New Media Festival, Santa Fe, NM  
2009 FILE (Festival Internacional de Linguagem Eletrônica) HIPERSÔNICA 2010, SESI Paulista, São Paulo, Brazil  
2008 FILE (Festival Internacional de Linguagem Eletrônica) POA 2008, Santander Cultural, Porto Alegre, Brazil  
2008 ArtTechMedia Cordoba-0.8, International Forum Screen Program: Artificial Life, Cordova, Spain

- 2008 ArtTechMedia 08, Puerto de la Cruz, Tenerife, Canary Islands, Spain
- 2008 FILE (Festival Internacional de Linguagem Eletrônica) RIO 2008, Oi Futuro, Rio de Janeiro, Brazil
- 2007 FILE (Festival Internacional de Linguagem Eletrônica) HIPERSÔNICA 2007, SESI Paulista, São Paulo, Brazil
- 2007 ArtTechMedia 07, 1st Internacional Congress ArtTechMedia, Ministry of Culture, Madrid, Spain
- 2007 "Thinking the Multiple", Liebling Center for Film, Photography, and Video, Hampshire College, Amherst, MA
- 2007 "Beauty and it's Discontents", University of Denver, Myhren Gallery, Denver, CO
- 2006 Korean Experimental Arts Festival 2006, Seoul, Korea
- 2005 New Forms Festival 05 - Ecologies, NFF 05 Cinema, Vancouver, British Columbia, Canada
- 2005 transmediale.05, Haus der Kulturen der Welt, Berlin, Germany
- 2005 SeNEf 2005 - 6<sup>th</sup> Seoul Net Art & Film Festival, Seoul Art Cinema, Ilmin Museum of Art, Seoul, Korea
- 2005 MAF05 - Thailand New Media Arts Festival 2005, Alliance Francais, Bangkok, Thailand
- 2005 "*Personal Ecologies*", Sarai, the New Media Initiative, Centre for the Study of Developing Societies, Delhi, India
- 2004 FILE 2004 (Festival Internacional de Linguagem Eletrônica), SESI Paulista, São Paulo, Brazil
- 2004 3<sup>rd</sup> International Rest Cycling Art Festival, Backfabrik, Berlin, Germany
- 2004 Machinista 2004, International Arts and Technology Festival, Centre for Contemporary Art, Glasgow, Scotland
- 2004 "*In House*", Faculty Triennial, Myhren Gallery, University of Denver, Denver, CO
- sound art
- 2009 Sound + Science Symposium, UCLA/California Nanotechnology Institute, Los Angeles, CA
- 2008 FILE (Festival Internacional de Linguagem Eletrônica) POA 2008, Santander Cultural, Porto Alegre, Brazil
- 2008 FILE (Festival Internacional de Linguagem Eletrônica) RIO 2008, Oi Futuro, Rio de Janeiro, Brazil
- 2007 FILE (Festival Internacional de Linguagem Eletrônica) HIPERSÔNICA 2007, SESI Paulista, São Paulo, Brazil
- 2007 "*Remote Orienteering*", CNTL\_ALT\_DEL 2007-2008, Center for Advanced Music Studies (MIAM), Istanbul, Turkey
- 2007 FILE (Festival Internacional de Linguagem Eletrônica) HIPERSÔNICA RIO 2007, Museu de Arte Moderna, Rio de Janeiro, Brazil
- 2007 ArtTechMedia 07, 1st Internacional Congress ArtTechMedia, Ministry of Culture, Madrid, Spain
- 2006 FILE (Festival Internacional de Linguagem Eletrônica) HIPERSÔNICA 2006, SESI Paulista, São Paulo, Brazil
- net art
- 2003 Arte Digital Rosario, 2003 muestra 01, Santa Fe, Argentina

- 2003 IMMA Net.Art Open, Irish Museum of Modern Art, Dublin, Ireland  
2003 Third Place Gallery, Stockholm, Sweden  
2001 FILE 2001 (Festival Internacional de Linguagem Eletrônica)  
Museu da Imagem e do Som, São Paulo, & Curitiba, Paraná,  
Brazil  
2001 Boston Cyberarts Festival, Liteshow, MIT- List Visual Arts Center,  
Cambridge, MA  
2001 European Media Art Festival 2001, Kunsthalle Dominikanerkirche,  
Osnabrück, Germany  
2001 Rhizome Artbase, international new media arts archive  
2001 SIGGRAPH '99 Art Gallery: technOasis, US Tour:, Ewing, NJ  
2000 d>art 00, webprogram, City Exhibition Space, Sydney, Australia  
2000 Darklight Digital Film and New Media Festival, Straylight, Dublin,  
Ireland  
2000 The 7th New York Digital Salon (NYDS-7) - European Tour:  
Circulo de Bellas Artes, Madrid, Spain, Palacio de Santa Cruz,  
Universidad de Valladolid, Valladolid, Spain  
2000 "Electronic Easel", CU Art Galleries, Boulder, CO  
1999 SIGGRAPH '99 Art Gallery: technOasis, LA, CA & US Tour: Santa  
Monica College of Art Gallery, LA, CA, Sausalito Art Festival,  
Sausalito, CA, Mississippi State University, Dept. of Art, Miss.  
State, MS  
1999 The 7th New York Digital Salon (NYDS-7), School for Visual Arts,  
NYC, NY

printmaking

- 2012 "*Projecto! WR?*", Zipper Galeria, São Paulo, Brazil  
2009 "*Mother, Whaea, Madre, Mere...*", Access Gallery, Denver, CO

sculpture

- 1997 "*Man of the Forest: Human Interactions with Endangered Species*", (collaboration with the International Orangutan Foundation), Aalta Gallery, Denver, CO, Norlin Library, University of Colorado, Boulder, CO  
1997 "*1997 Colorado Council on the Arts Artist Fellowship Awards Outreach Tour*", Cherry Creek Arts, Festival, Denver, CO, Colorado State Fine Arts Pavilion, Pueblo, CO, Grand Junction Center for the Arts, Grand Junction, CO  
1996 "*Recent Work and Collaborations*", IDA Gallery, Centre for the Fine Arts, York University, Toronto, Ontario, Canada  
1996 "*Beyond Fear: Reflections on Water and Health Projects in the Ixil Triangle*", (with The Aesthetic Recovery Project), Emmanuel Gallery, Denver, CO  
1996 "*Families <<>> Communities*", Southern Ute Cultural Center Museum, San Ignacio, CO, Norlin Library, University of Colorado at Boulder  
1995 "*Obras de la Coleccion Permanente*", Museo Municipal de Arte Moderno, Cuenca, Ecuador  
1994 "*Birdmania*", Laumeier Sculpture Park, St. Louis, MO  
1994 "*Erasures and Exclusions*", Pirate; A Contemporary Art Oasis, Denver, CO

- 1994 *"Pirate Invitational"*, Pirate; A Contemporary Art Oasis, Denver, CO
- 1993 *"15 Years of Art in Public Places"*, Boulder Museum of Contemporary Art, Boulder, CO
- 1991 *"Claremont Exchange Show"*, Claremont Graduate School, Claremont, CA (invitational)
- 1991 *"Connelly, Hubeggar, Uhlman, Villareal, & Weaver"*, Emmanuel Gallery, Denver, CO
- 1991 *"People Transforming Places Transforming People"*, UMC Fine Art Gallery, Boulder, CO
- 1991 *"The No Show"*, Boulder Artists' Gallery, Boulder, CO
- 1990 *"Colorado Sculpture"*, Bass Performing Arts Center, University of Texas at Austin, Austin, TX (invitational)
- 1990 *"Alternative Arts Alliance Show"*, The Ice House, Denver, CO
- 1990 *"Art for Refugees"*, Rocky Mountain Peace Center, Boulder, CO
- 1990 *"Outsider Show"*, Pirate; A Contemporary Art Oasis, Denver, CO
- 1989 *"Social Commentary"*, CORE New Art Space, Denver, CO
- 1989 *"Outsider Show"*, Pirate; A Contemporary Art Oasis, Denver, CO
- 1989 *"Show 2"*, UMC Fine Art Gallery, Boulder, CO
- 1988 *"Sculpture in the Park"*, Boulder Arts Center, Boulder, CO

#### visiting artist lectures / residencies

- 2014 Espacio Fundación Telefónica, Lima, Peru
- 2014 DXArts, University of Washington, Seattle, WA
- 2014 iET+I, Cornish College of the Arts, Seattle, WA
- 2014 Denver Museum of Nature & Science, Denver, CO
- 2011 Santa Fe Institute, Santa Fe, NM
- 2011 Arts & Ecology, University of New Mexico, Albuquerque, NM
- 2011 iARTA, University of North Texas, Denton, TX
- 2009 College of Santa Fe, Moving Image Arts, Santa Fe, NM
- 2009, 10, 13, 14 University of Pittsburgh, Honors College, Spring Creek Preserve, Rock River, WY
- 2008 University of Colorado at Boulder, Department of Art & Art History, Boulder, CO
- 2006 Universidad San Francisco de Quito, Colegio de Comunicación y Artes Contemporáneas, Quito/Cumbaya, Ecuador
- 2005 University of Pittsburgh, Studio Arts Department, Pittsburgh, PA
- 1999, 2000 HiG/University of Gävle, Creative Media Lab/Creative Programming, Gävle, Sweden
- 1999 KTH/Swedish Royal Institute of Technology, Center for User-Oriented Interface Design, Stockholm, Sweden
- 1997 Institute of American Indian Arts, Santa Fe, NM
- 1995 Universidad Central del Ecuador, Facultad de Artes, Quito, Ecuador
- 1992, 95 Universidad de Cuenca, Escuela de Arte Visual, Cuenca, Ecuador
- 1992, 95 Fundación Cultural Paul Rivet, Cuenca, Ecuador
- 1995 University of Colorado at Denver/Metropolitan State College, Department of Fine Arts, Denver, CO,
- 1995, 98, 2000 University of Colorado at Boulder, Department of Fine Arts, Boulder, CO

1990 University of Texas at Austin, Department of Fine Arts, Austin, TX,

conference lectures/presentations

- 2014 *"Hylaea, el bioculturalismo y la recodificación de la memoria ecológica"/"Hylaea, bioculturalism and the recoding of ecological memory"*, cultural program of the United Nations COP20, Conference on Climate Change, Espacio Fundación Telefónica, Lima, Peru
- 2014 *"Cambiando mediante el arte/Change through the arts"*, International Seminar on Art, Technology and Environment. panel, cultural program of the United Nations COP20, Conference on Climate Change, Espacio Fundación Telefónica, Lima, Peru
- 2012 *"From Life to Afterlife Cinema"*, Machine Wilderness, 18th International Symposium on Electronic Art (ISEA) 2012, Albuquerque, NM
- 2011 *"The Works of Steina and Woody Vasulka & the Emergent Platforms of Alchemedia, Biomedica and Pharmakomedia"*, Panel Chair, 25<sup>th</sup> Conference of the Society for Literature, Science and the Arts, Kitchener, Ontario, Canada
- 2009 *"Tools for Life Cinema"*, FILE Symposium 2009 (Festival Internacional de Linguagem Eletrônica), SESI Paulista, São Paulo, Brazil
- 2008 *"Biological Narrative #7: Danaus"*, 11<sup>th</sup> Subtle Technologies 2008, Symposium, University of Toronto, Toronto, Ontario, Canada
- 2008 *"High Resolution Digital Imaging of Six Extinct (or Possibly Extinct) North American Bird Specimens"*, Wattis Foundation Internship Program for Zoology, Research Symposium, Denver Museum of Nature & Science, Denver, CO
- 2008 *"Re-wiring the Biological Narrative: Telematic to Biophilia Connections"*, Figurations of Knowledge, 5<sup>th</sup> Biannual European Conference of the Society for Literature, Science and the Arts, Center for Literary and Cultural Research, Berlin, Germany
- 2006 *"Authoring the Biological Narrative" & "Artists' Presentation: microMacroCosm"*, Close Encounters: 4<sup>th</sup> European Biannual Conference of the Society for Literature, Science and the Arts (European SLSA), University of Amsterdam, Amsterdam, Netherlands
- 2005 *"Authoring the Biological Narrative"*, New Forms Festival 05 – Ecologies, NFF 05 Conference: "Eco Systems: Negotiating Natural, Cultural and Technological Systems in Post-traditional Ecology", Museum of Anthropology, University of British Columbia, Vancouver, B.C., Canada
- 2005 *"The Virtual City"*, Panel Chair, 6<sup>th</sup> ELL Colloquium, University of Denver, Denver, CO
- 2004 *"Biological Narrative 1 thru 5"*, FILE Symposium 2004 (Festival Internacional de Linguagem Eletrônica), SESI Paulista, São Paulo, Brazil
- 2003 *"Spawning the Biological Narrative"*, Rethinking Space + Time Across Science, Literature and the Arts, 17<sup>th</sup> Conference of the Society for Literature and Science (SLS), Austin, TX

publications

- 2011 *"Biomimetics: Emulation and Propagation in Post-traditional Ecologies"*, chapter contribution to "Second Nature: Origin and Originality in Art, Science and New Media", Rolf Hughes & Jenny Sunden, Editors, Axl Books, Stockholm, Sweden.

exhibition reviews, interviews & catalogues

- 2013 Currents 2013, Santa Fe International New Media Festival, Santa Fe, NM
- 2013 "Sounds from Silence", Pasatiempo, 6/15/13, Santa Fe, NM
- 2012 Currents 2012, Santa Fe International New Media Festival, Santa Fe, NM
- 2011 Currents 2011, Santa Fe International New Media Festival, Santa Fe, NM
- 2009 Chanzit, Gwen, 2009, *"Timothy Weaver +eMAD"*, Embrace! Volume 1, Christoph Heinrich, Denver Art Museum, Denver, Colorado, pp. 132-137.
- Chanzit, Gwen, 2009, *"Timothy Weaver +eMAD, Revisiting 39° 44' 11" N x 104° 59' 21" W"*, Embrace! Volume 2, Heinrich, Christoph and Jeff Wells, Denver Art Museum, Denver, Colorado, pp. 134-151.
- 2009 FILE 2009 (Festival Internacional de Linguagem Eletrônica), exhibition catalogue, SESI Paulista, São Paulo, Brazil
- 2008 Subtle Technologies 08 - *"Light"*, 11th Festival of Art and Science, exhibition, symposium, screening, performance catalogue, Subtle Technologies Festival, Toronto, Ontario, Canada
- 2008 FILE (Festival Internacional de Linguagem Eletrônica) POA 2008, HIPERSÔNICA, exhibition catalogue, Porto Alegre, Brazil
- 2008 FILE (Festival Internacional de Linguagem Eletrônica) RIO 2008, HIPERSÔNICA, exhibition catalogue, Rio de Janeiro, Brazil
- 2007 CNTL\_ALT\_DEL 2007-2008, compilation CD, *"Opsin"*, Center for Advanced Music Studies (MIAM), Istanbul, Turkey
- 2007 FILE 2007 (Festival Internacional de Linguagem Eletrônica), HIPERSÔNICA, exhibition catalogue, SESI Paulista, São Paulo, Brazil
- 2007 ArtTechMedia07, exhibition catalogue, 1<sup>st</sup> International ArtTechMedia Congress, Ministry of Culture, Madrid, Spain
- 2006 FILE 2006 (Festival Internacional de Linguagem Eletrônica), HIPERSÔNICA, exhibition catalogue, SESI Paulista, São Paulo, Brazil
- 2005 *"BASICS"*, exhibition catalogue, transmediale.05, Haus der Kulturen der Welt, Berlin, Germany
- 2004 FILE 2004 (Festival Internacional de Linguagem Eletrônica), exhibition catalogue, SESI Paulista, São Paulo, Brazil
- 2004 *"In House"*, exhibition catalogue, Faculty Triennial, Myhren Gallery, University of Denver, Denver, CO
- 2002 Internet Art & Digital Culture, published by Festival Internacional de Linguagem Eletrônica (FILE), Museu da Imagem e do Som, São Paulo, Brazil

- 2001 Rhizome Artbase, new media art archive, www.rhizome.org, 02/01
- 1999 "7th Annual New York Digital Salon", Leonardo, the Journal of the International Society for the Arts, Sciences and Technology, MIT Press, Vol.32, No. 5
- 1999 "SIGGRAPH '99 Electronic Art and Animation Catalog", 26th International Conference on Computer Graphics and Interactive Techniques, LA, CA
- 1999 "School of Visual Arts Hosts Seventh New York Digital Salon", SVA News, 10/99
- 1999 "ArtsWire Web Reports, Open Home: Timothy Weaver", ArtsWire Current, April 20, 1999, Volume#8 No. #16, Judy Malloy, Editor
- 1996 "Families <>Communities", exhibition catalog, CU Art Galleries, Boulder, CO
- 1996 "The Aesthetic Recovery Project", radio interview, June 4, 1996, Corriente!, KGNU, Boulder, CO
- 1996 "Emerging from the Darkness", exhibition review, July, 1996, In the Now, Denver, CO
- 1996 "Guatemalan Art Exhibit Strives to Bring Community Together", exhibition review, Volume XXII, Issue #23, June 5, 1996, La Voz Hispana de Colorado, Denver, CO
- 1996 "Guatemalan Art Exhibit Strives to Unite Community", exhibition review, Hispania News, June 6, 1996, Denver, CO
- 1995 "Naciendo en los Bosques", television feature/interview, June 14, 1995, La Television, TeleAmazonas, Quito, Ecuador
- 1995 "Una Instalación Contra la Amnesia", exhibition review, May 31, 1995, Hoy (newspaper), Quito, Ecuador
- 1995 "Artista-científico Norteamericano Inaugura Muestra Escultórica", exhibition review, May 15, 1995, Meridiano (newspaper), Guayaquil, Ecuador
- 1995 "Naciendo en los Bosques", television feature/interview, May 31, 1995, Las Noticias, TeleRamas, Cuenca, Ecuador
- 1995 "Naciendo en los Bosques", radio interview, May 31, 1995, Enfoque en la Cultura, Cuenca, Ecuador
- 1995 "Tim Weaver Expone en el Museo de Arte Moderno", exhibition review, May 31, 1995, El Mercurio (newspaper), Cuenca, Ecuador

#### honors and awards

##### creative (individual)

- 1997 Individual Artist Fellowship, Mixed Media, Colorado Council on the Arts
- 1991-92 Fulbright Research Scholar, Sculpture, Ecuador
- 1991 Teaching Excellence Award, University of Colorado at Boulder
- 1978 Magoon Award for Outstanding Teaching, Purdue University

##### technical (group)

- 2000 IEEE Computer Society, Top 10 Software
- 1999 CADence Magazine, Best New Technology
- 1999-2000 Silver Product of the Year, NASA TechBriefs

#### research grants

- 2008, 09, 10, 11 Wattis Foundation Internship for Zoology, Denver Museum of Nature and Science



2004-15	Creative Arts Materials Fund, University of Denver
2004, 05, 06, 07, 08, 09, 10	Internationalization Small Grants Program, University of Denver
2005, 06, 07, 08, 11, 13, 14	Rosenberry Fund Award, University of Denver
2006, 09, 12	Professional Research Opportunities for Faculty Fund, University of Denver
2005	Faculty Research Fund, University of Denver
1993-94	International Project Grant, Neodata Endowment for the Arts and Humanities
1991-92	Fulbright Research Scholar, Sculpture, Ecuador

## collections

### institutional

Fundación Cultural Paul Rivet, Cuenca, Ecuador  
Museo Municipal de Arte Moderno, Cuenca Ecuador  
Richard F. Brush Art Gallery, St. Lawrence University, Canton, NY  
Special Collections, Christchurch, New Zealand  
University of California - Davis, Davis, CA  
University of Colorado, Special Collections, Boulder, CO  
University of Denver, AHSS Dean's Office, Denver, CO  
University of Wales, School of Art, Aberystwyth, United Kingdom

### private

Michelle Assaf, Denver, CO  
Miles & Jennifer Burnsed, Charlottesville, VA  
Gwen Chanzit, Denver, CO  
Jill Desmond, Denver, CO  
Jennifer Dunn, Santa Fe, NM  
Douglas Graniero & Jennifer Ryan, Boulder, CO  
Emily Griffith, Houston, TX  
Aubrey Francois, Portland, OR  
Kimberly Free, Wilmington, NC  
Christoph Heinrich, Denver, CO  
Delanie Jenkins & Andersen English, Pittsburgh, PA  
Alexandra Kennedy Troya, Cuenca, Ecuador  
Kara Kudzma, Denver, CO  
Jaime Landivar, Cuenca, Ecuador  
Tina Lovelace & Jeff Sporkin, Denver, CO  
Angela McCormick & Jim McCutcheon, Boulder CO  
E.J. Meade, Boulder, CO  
James & Janice Redenbarger, San Ra, CA  
Carlos Runcie Tanaka, Lima, Peru  
Bruce Wyman, Portland, OR  
Melanie Yazzie, Erie, CO

## patents

Weaver, T.W., P.L. Friend, and W.K. Whitekettle, 1988, Biochemical conversion processes, United States Patent #4,732,680, March 22, 1988  
Weaver, T.W., P.L. Friend, and W.K. Whitekettle, 1986, Biochemical conversion processes, European Patent #86303