

CURRICULUM VITAE

NAME: Klaus Kalthoff

LAST UPDATE: 24 August 2010

CITIZENSHIP: U.S.A.

EDUCATION

<u>Institution</u>	<u>Degree</u>	<u>Year Conferred</u>	<u>Field of Study</u>
Hamburg University, Germany	B.A.*	1964	Philosophy, Education
Freiburg University, Germany	M.S.*	1967	Zool., Physics, Math.
Freiburg University, Germany	Ph.D.*	1971	Zoology
Freiburg University, Germany	Habilitation	1976	Zool., Devel. Biology

* closest U.S. equivalent to German degree

ACADEMIC POSITIONS

Assistant Professor*	Dept. of Zoology	Freiburg Univ.	1971
Associate Professor*	Dept. of Zoology	Freiburg Univ.	1976
Associate Professor	Dept. of Zoology	Univ. of Texas, Austin	1978
Professor	Dept. of Zoology	Univ. of Texas, Austin	1980
Professor	MCDB Section of SBS	Univ. of Texas, Austin	1999

* closest U.S. equivalent to German position

SELECTED PUBLICATIONS

BOOKS

Kalthoff K. (2nd ed. 2001) *Analysis of Biological Development*. Boston: McGraw-Hill, 790 pages

Kalthoff K. (2010) *Human Biology: Evolution, Genetics, Behavior, and Impact on the Environment*. Dubuque, Kendall Hunt, 381 pages

JOURNAL ARTICLES

Kalthoff, K. (1973) Action spectra for UV-induction and photoreversal of a switch in the developmental program of the egg of an insect (*Smittia*). *Photochem. Photobiol.* 18: 355-364.

Kalthoff, K. (1975) Compensation for solar UV damage by solar radiation of longer wavelengths (*Smittia* sp., Chironomidae, Diptera). *Oecologia* 18:101 - 110.

Kandler-Singer, I. and K. Kalthoff (1976) RNase sensitivity of an anterior morphogenetic determinant in an insect egg (*Smittia* sp., Chironomidae, Diptera). *Proc. Nat. Acad. Sci. U.S.A.* 73: 3739-3743.

Rau K.-G. and K. Kalthoff (1980) Complete reversal of antero-posterior polarity in a centrifuged insect embryo. *Nature* 287: 635-637.

Elbetieha, A. and K. Kalthoff (1988) Anterior determinants in embryos of *Chironomus*

samoensis: Characterization by rescue bioassay. *Development* 104: 61-75.

WEB SITES

<http://www.bio.utexas.edu/courses/kalthoff/bio137/>
<http://www.bio.utexas.edu/courses/kalthoff/bio346/>
<http://www.bio.utexas.edu/courses/kalthoff/bio301C/>

The BIO 137 web site is for my seminar course, which is taken by graduating seniors in Human Biology. Students need to write a report on their course work in their chosen area of concentration. The reports form the basis for discussions, during the first one or two class days, on topics including the relevance of certain courses, whether the courses added up to a meaningful package, etc. These discussions provide valuable feedback to me as faculty advisor and to the staff advisors for Human Biology majors. The remaining class days are devoted to a particular topic of current interest, which changes each semester and is presented by an invited speaker on the last class day. In preparation, the students and I discuss a set of related reviews and original research papers, which are chosen by the invited speaker and myself.

The BIO 346 web site is for students in my Human Biology course. This course is on human evolution, genetics and genomics, behavior, and impact on the environment. It is designed as the gateway course for the Biology B.S. degree option called Human Biology. The web site includes a syllabus with links to assigned readings from journal articles. This site also contains a section called "References by Topics", which provides suggested readings for students who take a special interest in a subject.

The BIO 301C web site is for students in my Biology of Being Human course. This course is designed for non-biology majors, covering what I think an educated citizen should know about biology. It emphasizes the same topics (human evolution, genetics, behavior, and impact on the environment) as my BIO 346 course but at a more elementary level. Basic topics, such as Mendelian experiments, are covered before human applications, such as twin studies.

HONORS

Ph.D. "summa cum laude", Freiburg University, 1971

Prize of the Scientific Society of Freiburg, 1975 (A faculty jury awards this prize every 3 years for research work by a junior faculty member.)

Teaching Excellence Award, College of Natural Sciences, UT Austin, 2000

TEACHING

UNDERGRADUATE COURSES TAUGHT

BIO 301C	Biology of Being Human*
ZOO 314K	Mammalian Anatomy
BIO 137	1-Senior Seminar in Human Biology
BIO 346	Human Biology (formerly ZOO 313/323)
BIO 349	Developmental Biology (formerly ZOO 321)

GRADUATE COURSES TAUGHT

ZOO 382L.4 Developmental Genetics
ZOO 390K.5 Techniques in the Study of Development
ZOO 390K.11 Current Literature in Developmental Biology
ZOO 390K.14 Graduate Survey of Animal Development

GRADUATE STUDENTS SUPERVISED

(UT Austin only, current position in parentheses)

Albrecht von Brunn	M.A., 1983	(lost contact)
Roger Phillips	Ph.D., 1986	(Research Associate, Dept. of Biology, Univ. of Sussex, Brighton)
Ahmed Elbetieha	Ph.D., 1988	(Professor, Dept. of Biology, Jordan Univ. of Sci. & Technol., Irbid)
Michele Dick	M.A., 1992	(lost contact)
Susanne Dyby	Ph.D., 1995	(Research Scientist, USDA, Agric.Res.Service, Gainesville, FL)

POSTDOCTORAL FELLOWS SUPERVISED

(UT Austin only, current position in parantheses)

Herbert Jäckle	1978-1980	(Director, Max Planck-Institute, Göttingen, Germany)
Jean Percy	1983-1984	(Research Scientist, Forest Pest Management Institute, Sault Ste. Marie, Ontario, Canada)
Liu Hai-hu	1986-1987	(Research Scientist, Shanghai Institute of Cell Biology, Academia Sinica)
Akif Uzman	1987-1988	(Associate Professor, Dept. of Biology and Biochemistry, University of Houston)
Michael Rebagliati	1987-1990	(Associate Professor, Department of Anatomy and Cell Biology, College of Medicine, University of Iowa)

SERVICE

ADMINISTRATIVE POSITIONS

Director, Center for Developmental Biology, 1983-1996
Director, NIH Training Grant in Developmental Biology, 1990-1993 (NICHD grant for 8 graduate students and 4 postdoctoral fellows, \$ 1,196,728 for 1990-1995)
Associate Chairman, Department of Zoology, 1997/98
Chairman, Department of Zoology, 1998/99
Chairman, Section of Molecular Cell and Developmental Biology, 1999-2003

SOCIETY FOR DEVELOPMENTAL BIOLOGY

Chairman of Organizing Committee for Sixth Annual Southwestern Developmental Biology Conference, Port Aransas, TX, 25-28 Februar 1988
Member of SDB Education Committee, 1996 to 2002

JOURNALS AND GRANTING AGENCIES

Member of the Editorial Advisory Board of *Development*, formerly *Journal of Embryology and Experimental Morphology*), 1982-1993

Ad hoc reviewer for National Science Foundation and scholarly journals including *Development*, *Developmental Biology*, and *Nature*, 1978 to present

CURRICULUM DEVELOPMENT AND STUDENT ADVISING

Hominin evolution, human genetics and behavior, and the human impact on the environment, have recently seen enormous progress in scholarly research as well as increasing attention from the general public. The Human Genome Project will touch our lives more profoundly than our ability to land on the moon. The study of hominin fossils and human behavioral ecology will provide a useful perspective for seeing ourselves as part of nature. Problems of overpopulation and environmental degradation may become the greatest challenge to our survival with dignity. Since anthropology has been a long-standing hobby of mine – dating back to my undergraduate years, when I used related courses to fulfill degree plan requirements in philosophy and education - I have developed a new undergraduate course entitled “Human Biology” on these subjects. I have taught this course to Biology majors and Plan II students since 1995 under the numbers ZOO 313/323 and BIO 346.

The strong student interest in the topics covered by the Human Biology course led to a new Biology B.S. degree option also called “Human Biology”, which was created as part of a revised Biology undergraduate curriculum at UT Austin in 2000. Students enrolled under UT’s Human Biology plan need to satisfy core course requirements in cell & molecular biology, anatomy, physiology, behavior, and evolution/ecology. In addition, students choose one of currently six possible areas of concentration, ranging from *Cellular, Molecular, and Developmental Biology* to *Problems of Developing Countries*. The idea behind this wide range of choices is to foster student interest in a subject matter instead of leaving them excessively focused on their GPA. The Human Biology degree plan is designed for students planning to enter professional programs in administration, law, or medicine, and for those who are interested in research but have not decided on a specific area yet.

Enrollment in the Human Biology degree plan has grown more than expected, with about 120 students graduating in the 2004/05 academic year. Given the complexity of the degree plan, with currently six areas of concentration to choose from, student advising takes a major effort. As faculty advisor for this plan, I spend about 5-10 hours per week in e-mailing and face-to-face consulting.