



IBNS News

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AUGUST 2005

MARK B. KRISTAL, EDITOR

PRESIDENT'S MESSAGE - BY BOB ADAMEC

My first letter as President of IBNS is a request for your help in making a significant contribution to the research profile of the IBNS and to further our relationship with our official journals. There are four official journals of the IBNS – *Neuroscience & Biobehavioral Reviews* (NBR), *Physiology & Behavior* (PHB), *Pharmacology Biochemistry and Behavior* (PBB) and *Brain Research Bulletin* (BRB). These journals have an established and growing recognition for the importance of the papers published in them. By publishing your work in these journals, you benefit by associating your work with them. In addition to publishing individual personal papers, a number of IBNS members have contributed special issues to NBR arising from symposia organized for the annual meeting. These have been well received and are therefore good for the journal, good for our contributing members, and, as representative samples of society symposia, very good for the IBNS. I would like to ask that when you organize either a satellite symposium or

a meeting symposium, you consider proposing publication of a special section or issue themed around the papers presented at that symposium, in one of our official journals. The type of symposium will affect which journal is most appropriate, given differences in editorial policy. The following information developed by Dr. Mark Kristal, an IBNS Fellow and Editor of the IBNS Newsletter, and Sara Purdy, Publishing Editor for Behavioral Neuroscience at Elsevier, is designed to give advice and information on how to plan for and develop a special issue.

Best wishes,
Bob Adamec



IBNS members have published a number of high quality and successful special issues in the official journals based on meeting and satellite symposia from the annual IBNS meetings;

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ANIMAL RIGHTS ACTIVISM—A VIEW FROM ENGLAND

How animal rights took on the world.

By Simon Cox and Richard Vadon
BBC Radio 4

The tactics of a small hardcore of animal rights activists have brought them in confrontation with major corporations, scientific establishments and the government.

Some of their strategies have appalled many people, especially those who have been targeted. Whether people support them or not, it cannot be denied that their tactics have had an impact. So what have been the key elements of their approach?

THEY HAVE 'GOT SMART'

The campaign waged against Huntingdon Life Sciences, Europe's largest vivisection laboratory, has shown the increasingly sophisticated tactics of the animal rights movement.

The Stop Huntingdon Animal Cruelty (SHAC) campaign has focused on the suppliers. So far this year 80 companies have severed ties with Huntingdon because of pressure from animal rights campaigners and fear of bad publicity.

Greg Avery of the SHAC campaign has found that

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these include:

Defensive Behavior

Edited by I. S. McGregor, R. Adamec and C. Blanchard
Neuroscience & Biobehavioral Reviews, Vol 28(8), (forthcoming 2005).

Neurobiology of Cognition in Laboratory Animals: Challenges and Opportunities

Edited by M. Sarter and R. Sutherland
Neuroscience & Biobehavioral Reviews, Vol 28(7), 643-784 (2004).

A Tribute to Paul MacLean: The Neurobiological Relevance of Social Behavior

Edited by K.G. Lambert and R.T. Gerlai
Physiology & Behavior, Vol 79(3), 341-547 (August 2003).

The Developmental Role of the Cholinergic Basal Forebrain

Edited by J. Berger-Sweeney, C.F. Hohmann and L. Ricceri
Neuroscience & Biobehavioral Reviews, Vol 27(4), 307-411 (June 2003).

Brain Development, Sex Differences and Stress: Implications for Psychopathology

Edited by G. Laviola and S. L. Andersen
Neuroscience & Biobehavioral Reviews, Vol 27(1-2), 1-188 (Jan - March 2003).

Neurobiology of Defense

Edited by R. Adamec
Neuroscience & Biobehavioral Reviews, Vol 21(6), 729-811 (1997).

If you are planning to organize a symposium for a forthcoming IBNS meeting, you may wish to consider acting as Guest Editor for publication of a selection of papers based on the theme of your symposium, in the form of a special issue or section. Should you wish to publish your papers in one of the official IBNS journals, the journal Editors would be happy to receive a

publication proposal from you for consideration; we would ask though that you follow these guidelines in putting together your proposal.

As Guest Editor you will be responsible for the selection of contents for the issue - there is no predetermined limit on the number or the length of articles contained within an issue; emphasis should instead be on achieving a collection.

Another task of the Guest Editor will be to take care of the strict peer-review process, which is essential to ensure that only high-quality papers are published. Please note that for each special issue final approval of the complete set of papers will be required by the journal Editor before publication in the journal.

When deciding where you would like to publish your issue, please consult these journal homepages for a description of each journal's coverage and editorial policies, as given in its general description, and in the *Guide for Authors*:

- Neuroscience & Biobehavioral Reviews*:
www.elsevier.com/locate/neubiorev
- Physiology & Behavior*:
www.elsevier.com/locate/physbeh
- Pharmacology Biochemistry and Behavior*:
www.elsevier.com/locate/pharmbiochembeh
- Brain Research Bulletin*:
www.elsevier.com/locate/brainresbull

If you would like to submit a proposal for a special issue, please contact Sara Purdy at s.purdy@elsevier.com indicating which of the IBNS journals you would like to publish in; including your proposed table of contents and list of contributors, and a preliminary schedule. On approval of your proposal by the journal Editor, you will be sent comprehensive instructions about the process and the schedule for publication.



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Advice for Graduate Students:

10 SUGGESTIONS FOR A BASIC-RESEARCH CAREER

By Mark B. Kristal, IBNS Fellow

Originally, I titled this piece “The 10 Commandments....” However, that has been done before, and they are not particularly popular.

1. Establish an independent line of research as early in your career as possible. If you can, do so even as a graduate student. Avoid the graduate student’s trap of thinking up experiments in other researchers’ programs that the other researcher has missed. Of course these are useful studies, but do not form the basis of one’s own independent line of research.

2. Be problem-oriented, not technique-oriented. Use a variety of techniques, methods, and orientations -- whichever are necessary to solve the problems at hand. Philip Teitelbaum used to recommend, back in the days of relay racks and electromechanical programming equipment that would take months to assemble for a single experiment, that whenever a study was completed, the equipment for the study should be dismantled, lest the experimenter be seduced into running another study with that equipment just because it was there. It is also painful to hear a major professor introduce one of his or her graduate students as “Jenny Green...she does *c-fos*” or “Tom Smith...he does meta-analysis”. This may interest potential postdoctoral sponsors who are looking to hire new Ph.D.s because of the skills they can bring to the postdoctoral sponsor’s lab, but this puts the new Ph.D. squarely into the role, perhaps forever, of technician rather than scientist. Remember, technology comes and goes, but the underlying questions are the meat of research. It is depressing to go to poster sessions at the big conferences year after year and see the same questions being asked over and over with different, more “cutting edge” techniques, presented by people enamored of the techniques rather than the research problems. If technology is so costly, in terms of equipment, learning time, and other resources,

how does one avoid the trap of becoming technique oriented? The answer: collaborate.

3. Think beyond the next publication, or even the next grant proposal. Take the long view; look at the big picture. In other words, bite off a piece of question that may take a decade, or even a career to answer. There is a major difference between the scientist that wonders how to break the question into appropriate sized grant proposals, and one who wonders how to expand the question into a grant proposal. Furthermore, commit yourself to your question; given the time and energy it takes to answer an appropriate sized research question, pursuing a series of unrelated research questions in parallel rather than in series is often a sign of dilettantism.

4. If you do basic research, keep your eyes open for applications of your findings. On the other hand, if you find yourself doing applied research, keep your eyes on underlying theoretical implications. Often, the distinction between basic and applied research is arbitrary or fluid.

5. When conducting experiments, don’t accept answers or results simply because they are publishable. Keep plugging away at the problem until the answers or results make sense or satisfy you in terms of an overall schema. Most importantly, don’t accept other scientists’ answers; reputation is not a guarantee against being wrong.

6. Expect unexpected results. A great deal of research data is discarded because an experiment “didn’t work”. However, a well designed experiment should provide positive information regardless of how it comes out. Design experiments so that all outcomes yield something; a “no difference” finding is not the same as a “negative results” finding.

7. Don’t expect answers; expect more ques-

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“COLLABORATE”

AN EMERGING FIELD, A NEW GROUP: A MESSAGE TO STUDENTS OF IBNS

Robert T. Gerlai, Chair – IBNS Education and Training Committee

Occasionally, we need to advertise ourselves and make our opinion known to our students. I understood this ever since students of IBNS asked me, as chair of the Education and Training Committee, such questions as: “What do you think the trend is for the next five years?” “Do you think we’ll be able to get a position if we learn this or study that?” “What will be the hottest area of research in the near future?” These were all very good questions, and of course, all of us asked them, or similar ones, before we landed our positions. And perhaps even now, as more seasoned investigators, we are still

asking these questions, worrying about the future of our students. So, here comes a little blurb forecasting where things are going, from my own personal perspective, of course, and advertising the birth of a new group that may be of interest to students of IBNS.

Genes, Environment, Nervous System and Behaviour, or GENAB, is the name of a new group founded by Drs. Marla Sokolowski and Alison Fleming at the University of Toronto. The name properly reflects the complexity of the field and

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A STUDENT'S VIEW

BY MELANIE PAQUETTE, STUDENT COUNCILOR

I am writing to express my appreciation to all who were involved in making the 2005 annual meeting in Santa Fe, NM a success. I had a really wonderful experience at the meeting, and I strongly encourage graduate and undergraduate students, especially those who are nearing transition points in their careers, to join the society. Membership in a smaller society like IBNS offers many benefits, as I recently discovered.

I am currently a graduate student at Arizona State University in Tempe, AZ, and I will be receiving my Ph.D. in December of 2005. Thus, this meeting came at an opportune time of my career, as I am currently on the market for a post-doctoral fellowship. Not only was I able to present my dissertation research during the poster session, but I was fortunate to be selected for a travel award, which defrayed the full cost of the meeting and gave me the opportunity to deliver a short oral presentation. I made the most of this opportunity by announcing that I am looking for a post doc position, and I was fortunate to be approached during the poster session by several individuals who may have positions available. In addition, the smaller, more intimate atmos-

phere of IBNS made it easy for me to approach many of the eminent behavioral neuroscientists in attendance. I spoke with several about their research ideas and methodologies, as well as post doc opportunities. I received excellent advice about applying for post docs from these scientists, as well as from the panel on "Selecting the right post-doctoral fellowship and getting the first position in academia or industry".

The scientific content of the meeting was not hindered by its smaller size; in fact, the breadth and depth of topics was admirable. I currently work with an animal model of neurotoxin-induced Parkinson's disease, so I was especially excited to learn about other animal models of human disorders, including autism, bipolar disorder, Fragile X, and obsessive-compulsive disorder. I also enjoyed the talks about attention, behavioral neurotoxicity, stress, and the effects of the immune system on depression, all topics that are relevant to my own ongoing research.

Finally, I was pleasantly surprised to be elected as the 2005-2006 student representative to IBNS. I greatly appreciate this opportunity to repay the society

for all the benefits I have received through membership. Specifically, I hope to develop a forum through which students can maximize their experiences in IBNS and shape its future development, as well as share information about funding and job opportunities.

Thanks again to all who were involved in making this such a productive meeting! I urge graduate and undergraduate students involved in behavioral neuroscience research to join IBNS, as membership offers many benefits. I am already looking forward to the next annual meeting in beautiful Whistler, British Columbia from May 23-28, 2006, and I hope to see many of you there!

Melanie A. Paquette

Department of Psychology
Arizona State University



THE 10 SUGGESTIONS (CONT'D. FROM PG. 3)

tions. Daniel Lehrman used to tell us that a good experiment will raise more questions than it answers. Perhaps non-scientists find this aspect of science strangely frustrating. However, the lack of a final solution distinguishes the scientist's quest from that of the engineer.

8. Never stop asking questions. Questions are the stock-in-trade of the scientist. The corollary of this suggestion is "never make assumptions." Of course, assumptions are a necessary part of hypothesis construction, but on an everyday practical level, and in terms of research design, assump-

tions can be disastrous. Many times I've located hiding escaped rats that my students couldn't find because unlike my students, I did not assume that a rat could not "go there" or "do that".

9. Choose a problem that excites you. It should excite you so much that you can't sleep. It should excite you so much that when someone asks you the time, you blurt out your research topic.

10. Strive for elegance in research. The elegance of an experiment is in the quality of the thinking and the cleverness of the approach to answering the research

question, not in the complexity of the design or the sophistication of the methods. Often, the most elegant experiments are simple, low-tech attacks at the heart of the problem. Study classic research in your field and appreciate the logic and thought that went into it. All too often students nowadays ignore older research because it isn't available online, or dismiss it for using old-fashioned techniques. There is much wisdom and cleverness in some of those old papers. Reading them, learning from them, and citing them, is real scholarship.



"NEVER STOP
ASKING
QUESTIONS."

**Browse Online and Submit Online
to the IBNS Official Journals**



- **Physiology & Behavior** – recent special issues include *Male Sexual Function* (Nov 2004)
- **Pharmacology Biochemistry and Behavior** – recent special issues include *Sex and Drugs* (July 2004)
- **Neuroscience and Biobehavioral Reviews** – Special issue topics include *Individual Differences in Behaviour and Physiology: Causes and Consequences* (Feb 2005)
- **Brain Research Bulletin**

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ANIMAL RIGHTS ACTIVISM IN ENGLAND (CONT'D. FROM PG. 1)

many of the biggest companies can be persuaded very quickly and not because they care about animals.

"Businessmen don't care about ethics; all they care about is profit. They don't make ethical decisions; they make financial ones. So we turn it into a financial decision - we will hit you where it hurts and that's hitting you in the pocket." **THEY HAVE BECOME RELENTLESS**

The key lesson that the animal rights movement has learnt is being relent-

less. Campaigners used to focus on a variety of local targets across Britain. But starting with the Consort kennels campaign, the movement has concentrated its fire on one national target.

Campaigner Greg Avery was involved with the Consort campaign and says: "We grabbed hold of those kennels and didn't let go. You don't pick a company unless you can close it down because otherwise you just make those companies stronger. So when they are chosen - they are

finished."

THEY BELIEVE INTIMIDATION WORKS

For all of the sophistication of the movement they are well aware that if arguments and legal pressure fail there is always illegal intimidation. The Shac campaign says it is against all such tactics but some nasty things have happened to companies it has named and shamed on its website.

For instance, on 10 September 2004 fake bombs were planted un-

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GENAB AT TORONTO (CONT'D. FROM PG. 3)

some may need to keep in mind when studying the biology of behaviour. Faculty of GENAB spans several departments in three campuses of the University and some of its teaching hospitals with the plurality of members from the biology and psychology departments of the Mississauga Campus. Several members also participate in the new behaviour genetics undergraduate curriculum, and numerous graduate level possibilities also exist for the students of this field. The relevance for IBNS members is that GENAB provides an example and a potential opportunity for budding scientists and those who would like to start budding soon, to enter this exciting field of science. But, for more seasoned fellows, it may also be notable because it may signal a trend: Behavioural neuroscience is enjoying a renaissance and with the infusion of ever more powerful molecular techniques, computer software and hardware applications, etc., the genetic aspects of behavioural neuroscience are becoming an integral part of our every day science life. This is also demonstrated by the fact that the upcoming IBNS

meeting in beautiful British Columbia, Canada, is coordinated with, and will be held back-to-back with a meeting of IBANGS, the International Behavioral and Neural Genetics Society.

Students often ask whether the study of genetics is hard? There is always resistance and fear of another discipline, but really, genetics is not different from other sciences. It is just another, but quite powerful, way with which the experimenter can perturb his/her study organism and observe how it responds. And indeed this is one of the common threads that ties members of GENAB together. For example, Joel Levine (U of T, Mississauga, Biology) studies the genetic basis of social behaviour of *Drosophila* and how behaviour among flies may be synchronized using circadian clocks. Ultimately, he will understand the interplay between gene expression, neural circuits, and individual behaviour and group dynamics, no small feat. I (U of T, Mississauga, Psychology) also study social behaviour but chose zebra fish as a study species. This fish exhibits very strong schooling (social cohesion) and I hope

to understand the mechanisms of the phenomenon using a forward genetic approach: I generate random mutations, identify abnormally behaving mutants and then clone the genes responsible with a provocative long term goal of understanding the biology of autism spectrum disorders. Perhaps closer to our own species are the studies done by Gary Kraemer (U of T, Mississauga, Psychology) who works on the development of brain mechanisms that are used to mediate social behaviour in the rat, and how their development and organization is dependent upon the social environment and experience. Ultimately, he is interested in how social experience might affect gene expression and regulate the neural organization of some brain mechanisms. Ashley Monks (U of T, Mississauga, Psychology) also uses rodents and a complex array of multidisciplinary approaches. He studies the biological mechanisms that determine male- and female-typical neural development and adult function. Employing molecular genetic, endo-

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“...neuro-behavioral genetics is the future.”

ANIMAL RIGHTS ACTIVISM IN ENGLAND (CONT'D FROM PG. 5)

der the cars of two directors of Northgate, a supplier to Huntingdon. Later that day, Northgate announced that it had terminated its business relationship with Huntingdon Life Sciences.

Companies connected to Huntingdon have this month alone been the subject of attacks, including damage to cars, homes being daubed with paint, and windows being smashed. One family which breeds animals for research has suffered a consistent campaign of harassment.

SHAC has denied any involvement in these incidents and while these tactics are widely condemned, they nevertheless are successful in persuading companies to accede to the campaigners' demands.

The Home Office has funded a National Extremism Tactical Co-ordination Unit within the Association of Chief Police Officers, which aims to share information across the country about the best ways of tackling illegal activities.

New laws to stop extremists pro-

testing outside people's houses are also planned.

THEY HAVE 'GONE GLOBAL'

The British animal rights movement is the largest and the strongest in the world. Activists across the globe now look to the UK to learn how to campaign more effectively.

Patti Strand of the American Lobby group the National Animal Alliance believes the British have a lot to answer for.

"We view the United Kingdom as

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ANIMAL RIGHTS ACTIVISM IN ENGLAND (CONT'D. FROM PG. 6)

the Afghanistan for the growth of animal rights extremism throughout the world. The animal rights movement that we are dealing with in the United States is a direct import from the United Kingdom."

THEY HAVE PLANNED FOR THE FUTURE

Such is the confidence of the animal rights movement that they are already thinking about the future. Greg Avery of SHAC has new targets in his sights.

"When Huntingdon closes we won't just go on to another company. We will go on to a whole area of animal abuse. And look to knock out big chunks - puppy farming, factory farming, circuses and zoos.

All these could be finished. We're becoming bigger, even more intelligent and even more determined not just to take companies down but to finish whole areas of animal abuse."

Revered thinkers within the movement like Ronnie Lee, founder of the Animal Liberation Front, want to go much further than closing down zoos and circuses.

"To create a world that is fair to the other creatures on it we have to have some policy of reducing the human population so that would mean we would have to breed less."

How much less? Lee says a reduction in the British population from the current level of 60 million to just 6 million would be better for the animals. Lee is serious enough

about reducing the population to have had a vasectomy.

His views aren't ones you'll hear at the stalls campaigning against animal cruelty all over Britain but what's clear is that animal rights activists won't be content with shutting down fur farms or animal testing labs.

Buoyed by their success they want nothing less than to change the world.

Story from BBC NEWS:
news.bbc.co.uk/go/pr/fr/-/2/hi/uk_news/magazine/4020235.stm

Published: 2004/11/18 11:14:23 GMT

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"We have to have some policy of reducing the human population so that would mean we would have to breed less."

Ronnie Lee
Animal Liberation Front

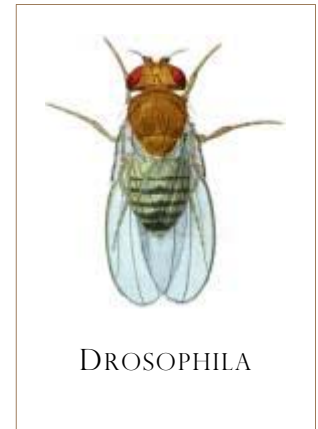
GENAB AT TORONTO (CONT'D. FROM PG. 7)

crine and anatomical methods, he studies the cellular and molecular mechanisms whereby androgens contribute to sexual behaviour and neuromuscular function in rats and mice. Just as sexy is the focus of Bryan Stewart (U of T, Mississauga, Biology) who works at the level of synapses. He investigates the molecular mechanisms of the development and functioning of neural synapses in *Drosophila* and how such mechanisms relate to particular brain disorders in humans. Particularly interesting are his studies on the N-ethylmaleimide sensitive factor (NSF) which has been implicated in seizure and schizophrenia. *Drosophila* is the focus of Marla

Sokolowski too, who has become well known for her work on the evolution and genetics of foraging in the fruit fly larva and adult. Her group is currently applying their expertise in food related behaviours in the fruit fly to the development of a simple model system for the identification of candidate genes relevant to obesity in humans. Her research is also characterized by state-of-the-art genetic, genomic, molecular and neurobiological applications. And without trying to be exhaustive, the last on this list of interesting examples is the research of Alison Fleming (U of T, Mississauga, Psychology), which focuses on the developmental biology and

psychology of maternal reproductive, social, and affective behaviours in rats, -and the list goes on.

Clearly, the range of topics is large, the possibilities are enormous, and neurobehavioural genetics is the future. Biased opinion, of course, but a little enthusiasm never hurts. So, IBNS students, if you are interested in genetic applications in behavioural neuroscience, or would like to learn more about the exciting developments in this field, keep your eyes open for groups like GENAB, and network and locate Universities that serve as a hub for such studies.



DROSOPHILA



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