



CONCORDANCE v.3 no.4

the newsletter of

Research into the Causes of Schizophrenia and Bipolar Disorder

Western Psychiatric Institute & Clinic - University of Pittsburgh

3811 O'Hara Street # 444 / Pittsburgh PA 15213

Call toll free 1-877-363-5895 On the web: <http://www.pitt.edu/~nimga> FAX (412) 624-0446

The Family Studies of Schizophrenia at the University of Pittsburgh

Dr. Vishwajit Nimgaonkar, Professor of Psychiatry and Human Genetics at the University of Pittsburgh, is inviting volunteers to participate in our research studies of schizophrenia and related illnesses. Funded by the National Institute of Mental Health, the studies extend Dr. Nimgaonkar's efforts to identify the genetic and environmental causes of these severe brain disorders. This multinational research is being conducted in collaboration with researchers at the University of Pennsylvania, the University of Alabama-Birmingham, The Southwest Foundation for Biomedical Research, researchers in New Delhi, India, and scientists in the United Kingdom. These research studies are seeking families with an individual diagnosed with schizophrenia, schizoaffective disorder, or bipolar disorder. Please contact us for more information if you feel your family may be able to help in our research effort.

A Message to our Past Families: How has your contribution helped?

We would like to use this section to address recent questions by our most valuable resource in research, our participants.

"Why hasn't there been a gene discovered for schizophrenia"?

There has been enormous progress in the field of genetics in recent years, and some of these advances have been well publicized in the media. However, progress in psychiatric genetics research has not been as marked, and we certainly wish discoveries were being made more rapidly. One of the main reasons for the pace of psychiatric genetics research is the complexity of the disorders being studied, especially with reference to schizophrenia. As families can attest, schizophrenia is an extraordinarily complex disease that may manifest in many different ways. While illnesses such as Huntington's Disease and Cystic Fibrosis are caused by defects in a single gene, otherwise known as a monogenic disorder, it is believed that schizophrenia is caused by a number of different genetic changes that may have a cumulative effect on the disorder. Thus, the genetic changes that contribute to the development of schizophrenia in one individual may be different than those that lead to the disease in another individual. This is known as heterogeneity and it is a major hurdle in schizophrenia genetics studies. This problem is compounded by the strong environmental influences of many mental illnesses, which again make contributing genetic factors more difficult to isolate. Thus, while there have been a number of findings in the field of schizophrenia genetics, these findings have generally been difficult to replicate in multiple populations.

"Has any progress been made in the field and at the University of Pittsburgh?"

Yes, there have been a number of exciting discoveries recently in laboratories all over the world. Different investigators have reported on possible disease causing genes on several chromosomes, including chromosomes 1, 6, 8, 13, and 22. However, these research studies have been done on different populations throughout the world and many of them must be replicated before they can be considered possible susceptibility genes. One discovery in the field by Dr. Nimgaonkar and colleagues here at the University of Pittsburgh was the report of a gene that may contribute to schizophrenia on chromosome 1. The possible role of this gene in mental illness via altered expression of dopamine levels in the brain has been encouraging and is currently being tested in other populations. As always, we will report these results in this newsletter and scientific articles.

In summary, we realize the lack of definitive results from research into psychiatric genetics and schizophrenia has been very frustrating as our participants and families are eagerly awaiting a breakthrough in the field. However, we would like you to know that progress is being made every day. Further, thanks to your contributions Dr. Nimgaonkar and colleagues here at the University of Pittsburgh remain on the forefront of this research. As stated earlier, the contribution of time and information from our families remains our most valuable resource. As always, we ask that families continue to spread information about our studies to anyone they feel may qualify to participate in our research.

Our African-American study has begun!

We recently began our newest study investigating inheritance of schizophrenia and related illnesses in African American families. This study seeks to identify genes that play a role in the inheritance of schizophrenia. This research is significant because it extends our studies to a minority population, African Americans. To date, the great majority of our participants have been European Americans. This new study will help to ensure that the results we obtain will be relevant to different racial and ethnic groups. We are seeking African American families with at least one individual diagnosed with schizophrenia or schizoaffective disorder as well as their family members. Subjects will be asked to undergo the same procedures as our other studies and all subjects will be reimbursed \$100 for participation. **PLEASE CONTACT US FOR MORE INFORMATION IF YOUR FAMILY WOULD LIKE TO HELP!!!**

Join the growing number of families who have helped worldwide!

	Type of Family			TOTAL
	2+ Affected Siblings	1 Affected Person & 2 Parents	1 Affected Person & 1 Parent	
Schizophrenia—USA	74	153	207	434
Schizophrenia—India	94	300	39	433
Bipolar Disorder—USA	8	58	74	140
TOTAL	176	511	320	1007

As the above table shows, our combined research staff in the United States and New Delhi, India, has completed work with a total of **1007** families who have generously volunteered their time to promote our understanding of schizophrenia & bipolar disorder. Worldwide, schizophrenia and bipolar disorder each affect an average of 1% of the population of any given country or culture. Appropriately, the effort to defeat these illnesses has become international in scope. **If you can count yourself among the families who have volunteered, we cannot thank you enough!** To provide even greater power to our laboratory work, we are striving to include several hundred more families into our study. We are always happy to hear from new families interested in participating. If you would like to participate, or learn more about our study, please call us toll free at **1 - 877 - 363 - 5895**.

Our Research Staff Continues to Expand!

To meet the growing needs of our expanding research studies, we have hired a number of new staff members to bring unique expertise to our research and fulfill the needs of such a large project. They include:

Michael Talkowski, *Recruitment Coordinator, Pittsburgh*

Travis Logue, *Laboratory Technician, Pittsburgh*

Fran Lokar, *Recruiter, Pittsburgh*

Todd Schoeni, *Interviewer, Pittsburgh*

Frank Fleischer, *Recruiter, Ohio*

Kay Borneman, *Recruiter, Southwestern Ohio and surrounding areas.*

Angela Russo, *Interviewer, Pittsburgh*

Rose Jarosz, *Project Coordinator for Bipolar Disorder, Pittsburgh*

Muhdulika Dayal, *Data Manager, Pittsburgh*

Monisha Tarneja, *Project Coordinator for Indo-US Psychiatric Genetics, Pittsburgh*

A summary of our recent lab work and other studies

By Vishwajit L. Nimgaonkar, MD, PhD

Work in Pittsburgh: We are continuing exciting work to find genes which may contribute to the causation of schizophrenia. Dr Mansour Hader is investigating the possible role of genes regulating circadian function in the causation of bipolar disorder. Dr Jung Jin Kim is investigating the role of genes located on chromosome 6 in the causation of schizophrenia. Finally, Dr K V Chowdari, our Laboratory Director, is working with colleagues in the Department of Neuroscience to examine variations in certain brain expressed genes. These genes were identified earlier by our colleagues (Drs D Lewis, K Mirnics, P Levitt) as being of potential importance from their studies involving post-mortem brain. In other words, our colleagues found that the levels of proteins that were encoded by these genes were different among brains of patients compared with unaffected individuals. We have recently received funds to investigate the possible role of dopamine related genes in the causation of schizophrenia, using comprehensive analyses.

Work in India: We have recently received funds from the National Institute of Mental Health to continue our research in India for five more years. A separate five-year grant from the Fogarty International Center, a branch of the National Institute of Health, will enable us to train psychiatrists and ethicists from India. Thus, we hope to establish a tradition of psychiatric genetic research in India.

CONTACT US !

Toll free: **1-877-363-5895** (Schizophrenia) / **1-800-994-8182** (Bipolar Disorder).

www.pitt.edu/~nimga/ (schizophrenia) / **www.wpic.pitt.edu/research/neurogen/** (bipolar disorder)

Contact Dr. Nimgaonkar directly at (412) 624-0823 or email nimga+@pitt.edu

NOTE: If you no longer want to receive this newsletter, please leave us a message at 1-877-363-5895 with your name and request to be removed from the mailing list.