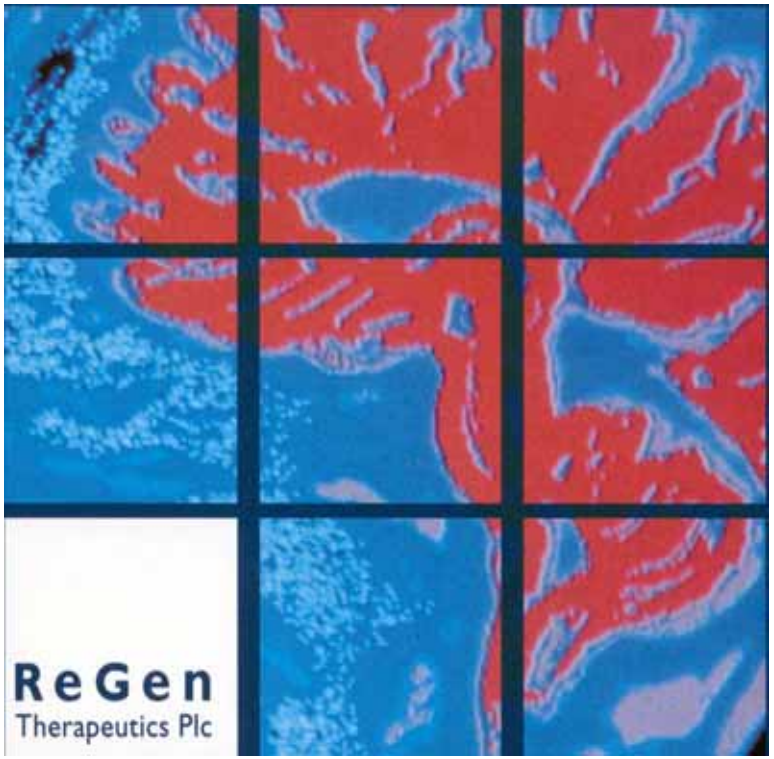


ReGen Therapeutics Plc

Colostrinin™/Strategy update

10th December 2002

Legal Disclaimer

The information contained in this presentation includes forward-looking statements that involve risks and uncertainties. Any statements that are not statements of historical fact (including without limitation statements to the effect that the Company or its management 'believes', 'expects', 'intends', 'anticipates', 'plans' and similar expressions) should be considered forward-looking statements. Important factors that could cause actual results to differ from those indicated by such forward-looking statements include uncertainties relating to the obtaining and amount of future funding, the necessity to conduct further clinical trials and related studies (such as toxicity and bio-equivalence), the ability to develop a scaleable manufacturing process for Colostrinin™ product testing and regulatory approval, efficacy and safety of Colostrinin ™ in the treatment of any disease or condition.

Contents

• Overview/Strategy	– Percy Lomax
• Scientific update	– Dr Marian Kruzel
• Clinical Trials	– Tim Shilton
• Manufacturing	
• Development plan	
• Nutraceuticals	– Martin Small
• Finance	– Norman Lott
• Summary/Q and A	– Percy Lomax

Overview/Strategy

Percy Lomax

Executive Chairman

Key Assumptions in AIM Document - March 2000

- Polish Clinical Trial to show Colostrinin™ clinical effect
- Trial data would secure attractive licensing deal
- Approval faster in Poland
- Further clinical work to be done in Europe

Implications

- Company will generate revenue later than expected
- More external cash needed
- But Biotech fundraising market difficult

Immediate Action

- Reduce costs
- Direct salary costs cut by £300K pa
- Polish office shut
- London office halved in size

Strategic Action

Build on achievements

- Favourable patient data from a number of trial sources
- Scientific data from major University source - UTMB
- Industry contacts built up - pharmaceutical/nutraceutical
- Manufacturing expertise developed

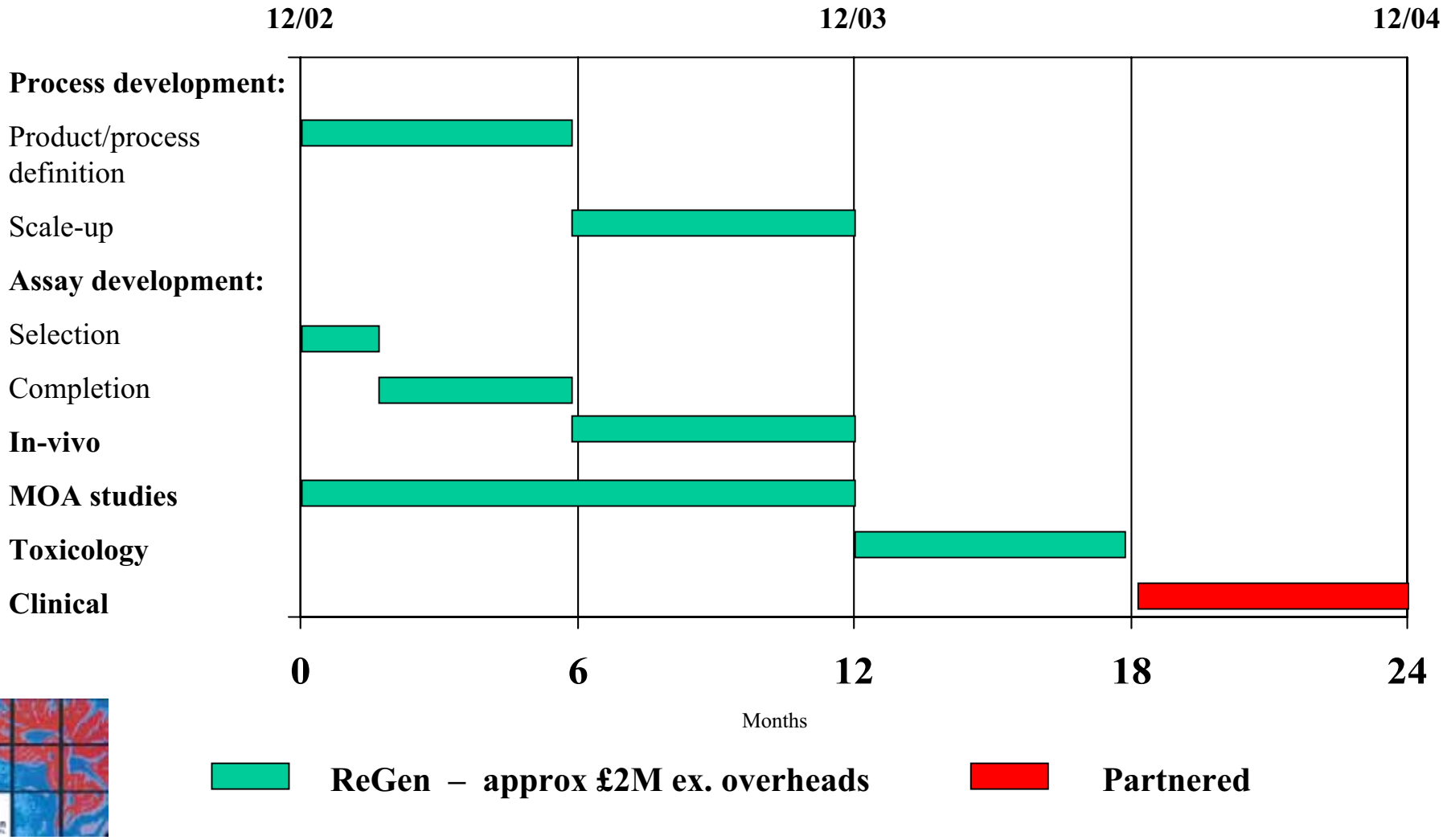
Strategic action

- Individual Executive responsibility for each sector
- Tightly defined sector budgets
- Constant review process

Action

- Develop Colostrinin™ further as a pharmaceutical
- Develop Colostrinin™ further as a nutraceutical
- Continue scientific programme
- Acquire further legs for the business

DevelopmentTimeline/Costs



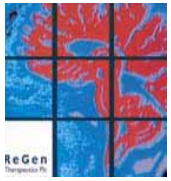
Colostrinin - Scientific update

Dr Marian Kruzel

Senior Scientific Adviser

Alzheimer's Disease

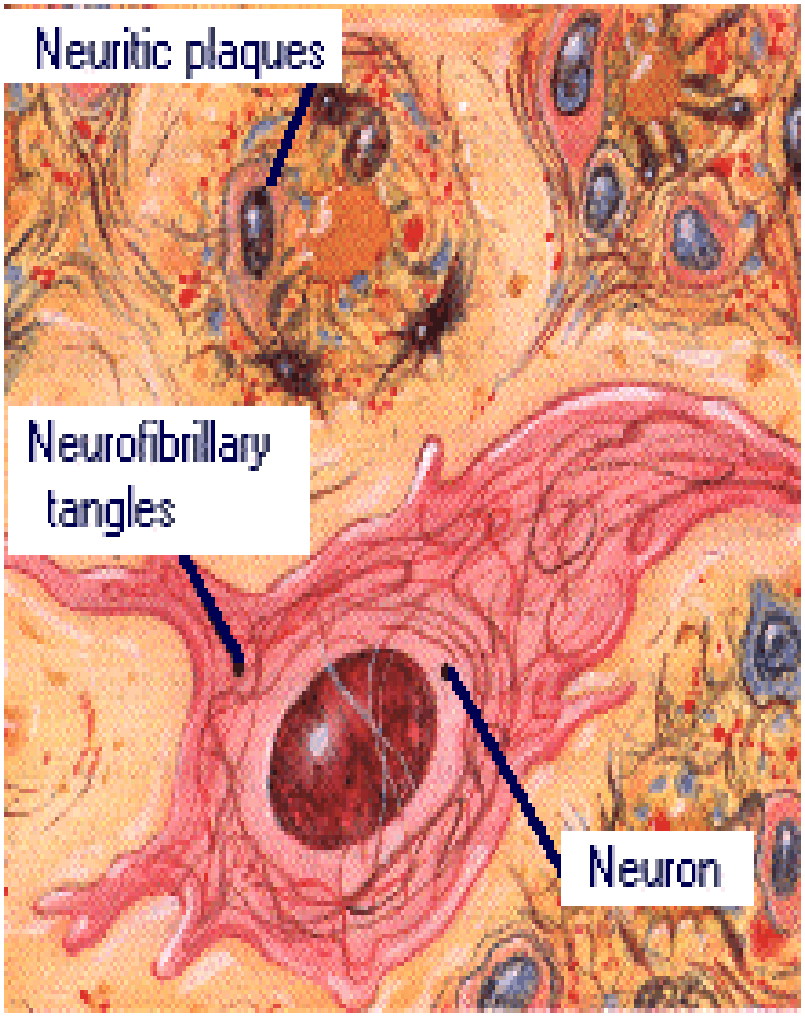
"Alzheimer's Disease is a progressive neurodegenerative disorder that affects an estimated 18 million people in the world "

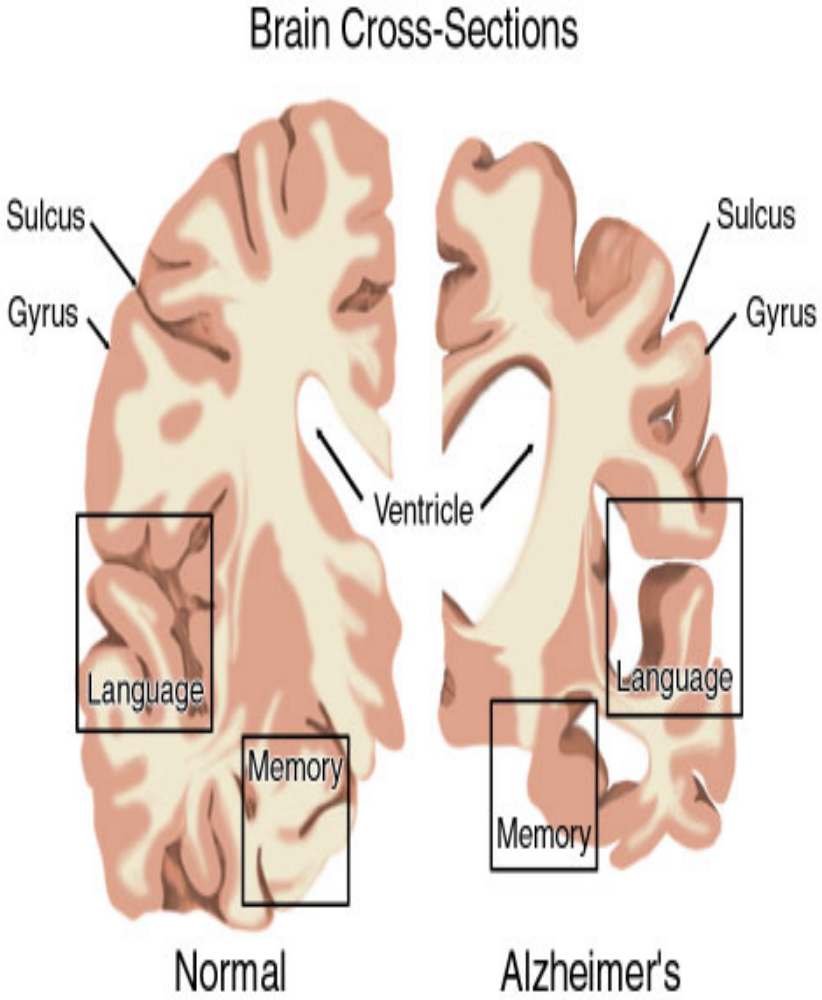


Neuropathology Of Alzheimer's Disease

- Senile Plaques (SPs) - extracellular lesions
- Neurofibrillary Tangles (NFTs) - intraneuronal lesions
- Massive Neuronal Loss (Hippocampus and Neocortex)

Neuropathology Of Alzheimer's Disease





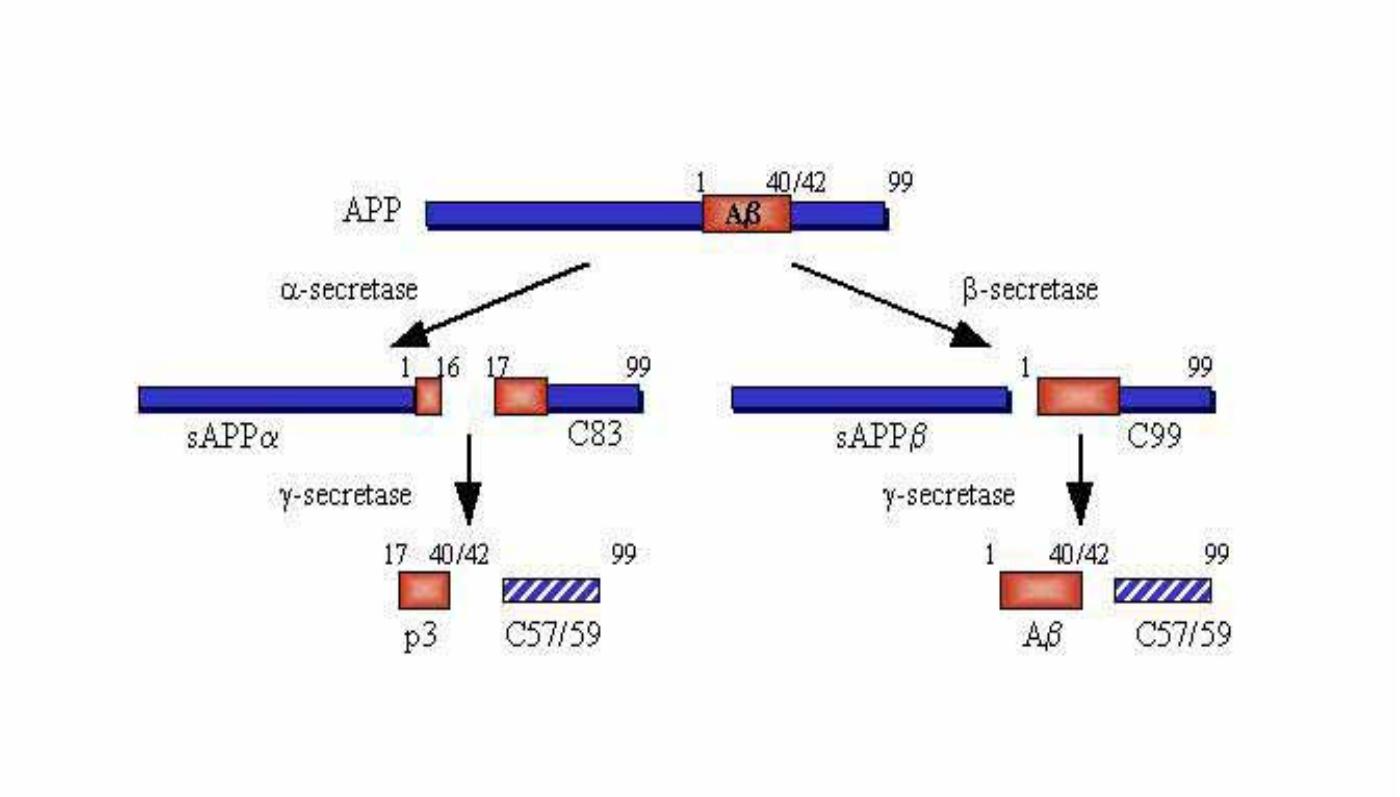
Biochemistry Of Alzheimer's Disease

- Accumulation of extracellular Amyloid-β
- Reduced level of Acetylcholine
- Overproduction of reactive oxygen species (ROS)

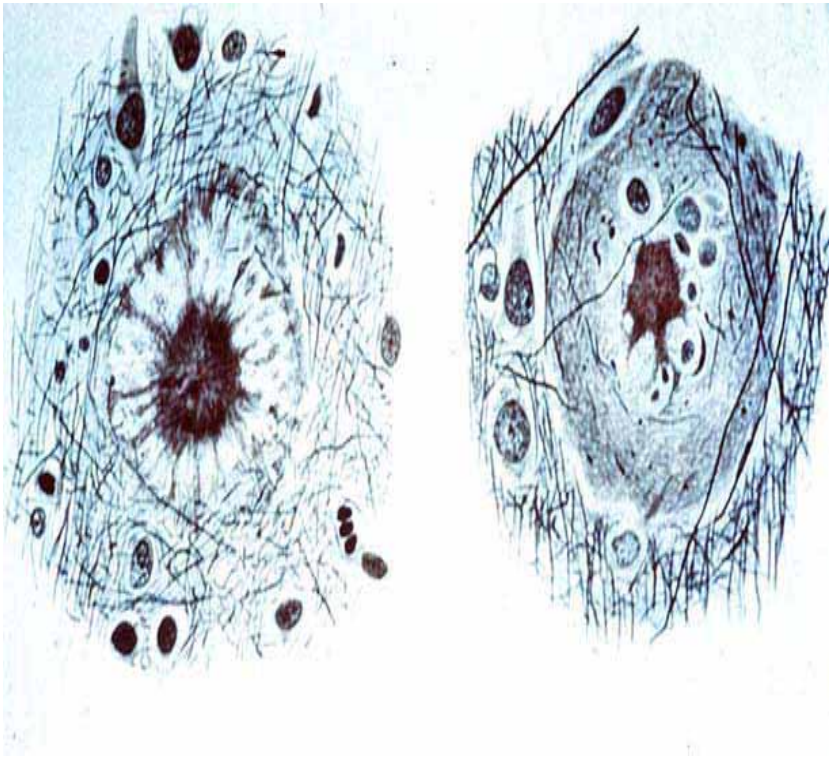
Therapeutic Interventions In Alzheimer's Disease

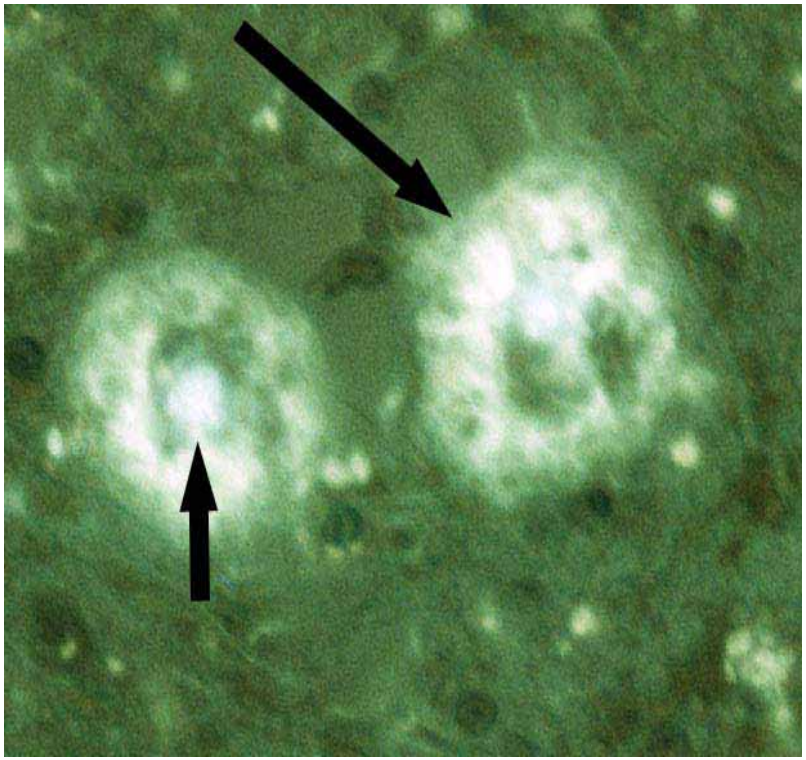
- Anti- β amyloid Experimental Vaccine (clinical trials terminated due to increased mortality)
- Acetylcholinesterase inhibitors (Aricept, Exelon, Galantamine; general limitations)
- Non-Steroidal Anti-Inflammatory Drugs/Anti-ROS (anecdotal)

Proteolytic Processing Of APP



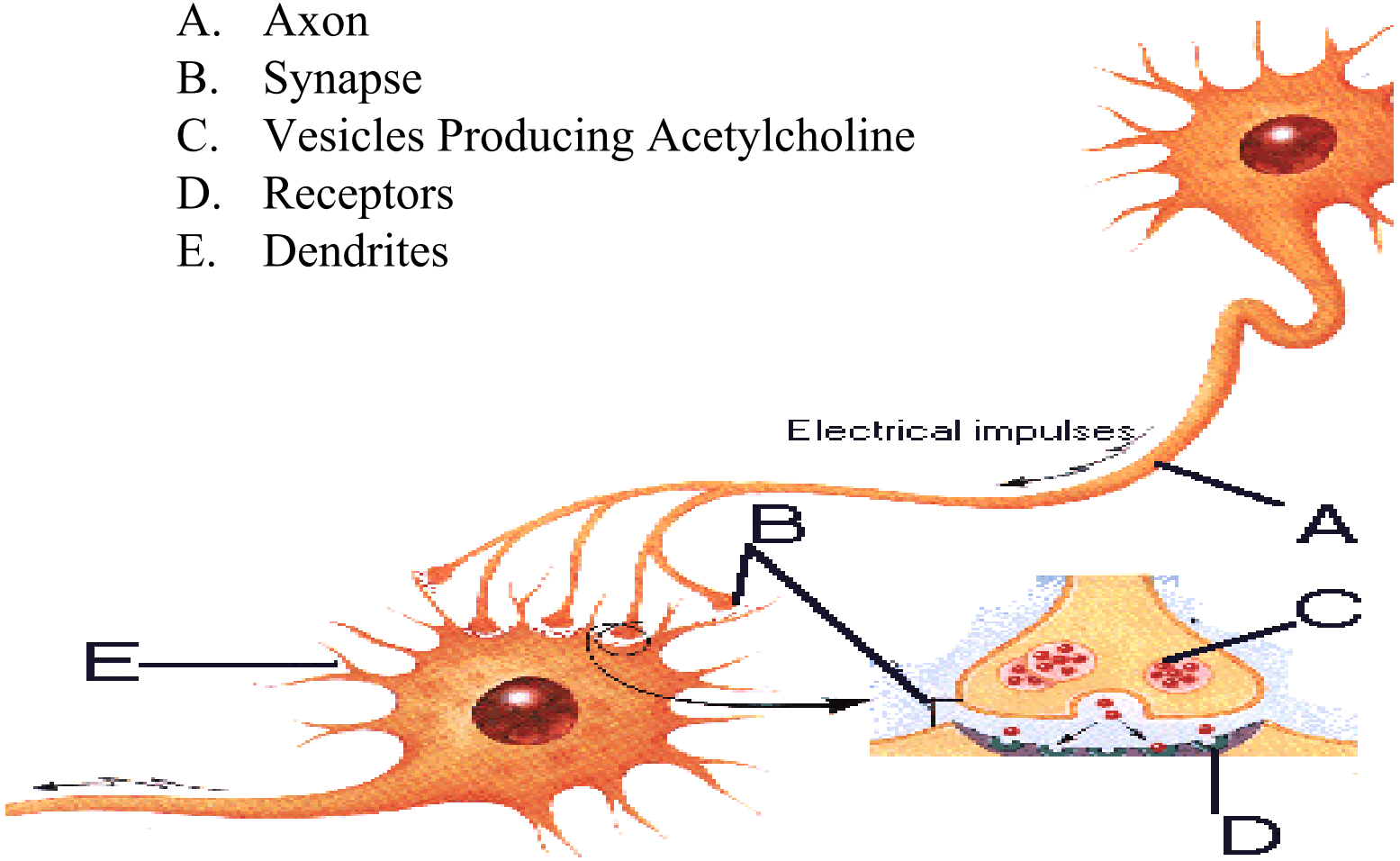
Amyloid Beta Plaques



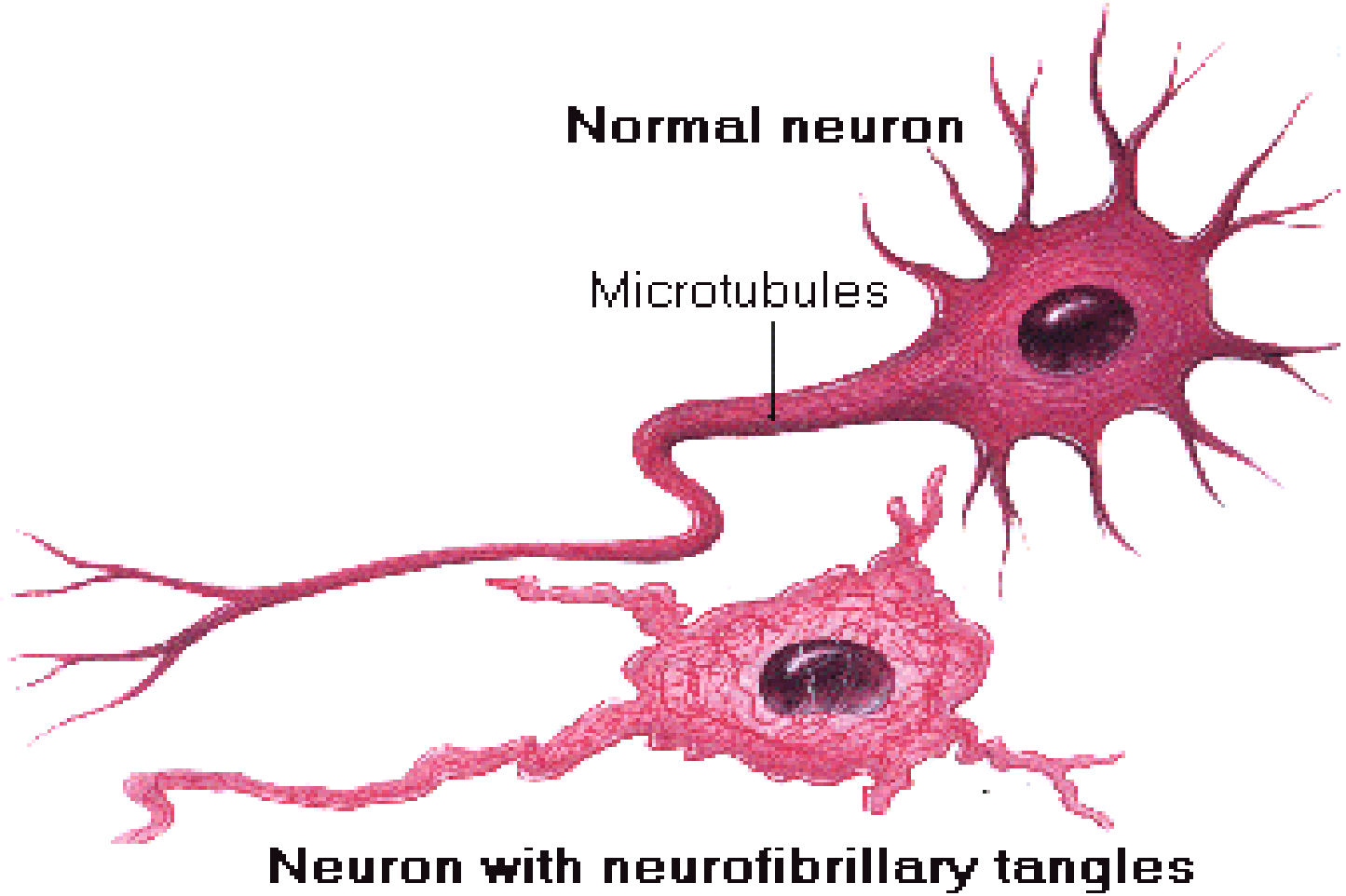


Neuronal Communications

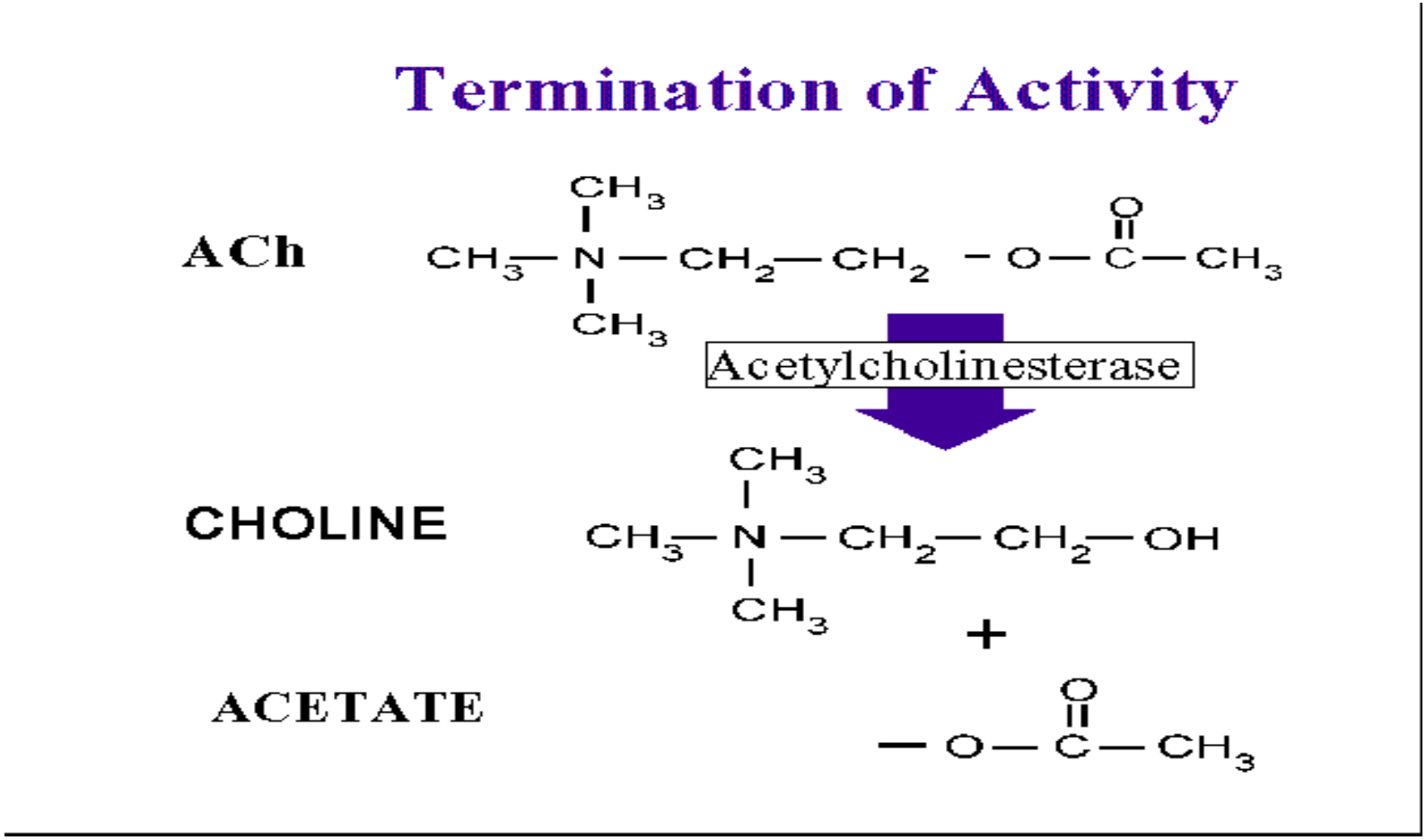
A. Axon
B. Synapse
C. Vesicles Producing Acetylcholine
D. Receptors
E. Dendrites



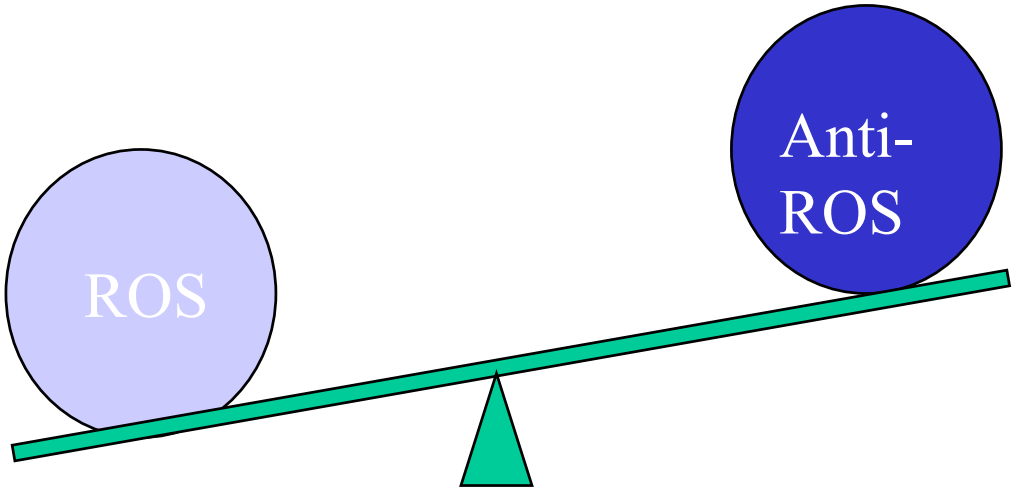
Neuronal Death



Acetylcholinesterase Inhibitor

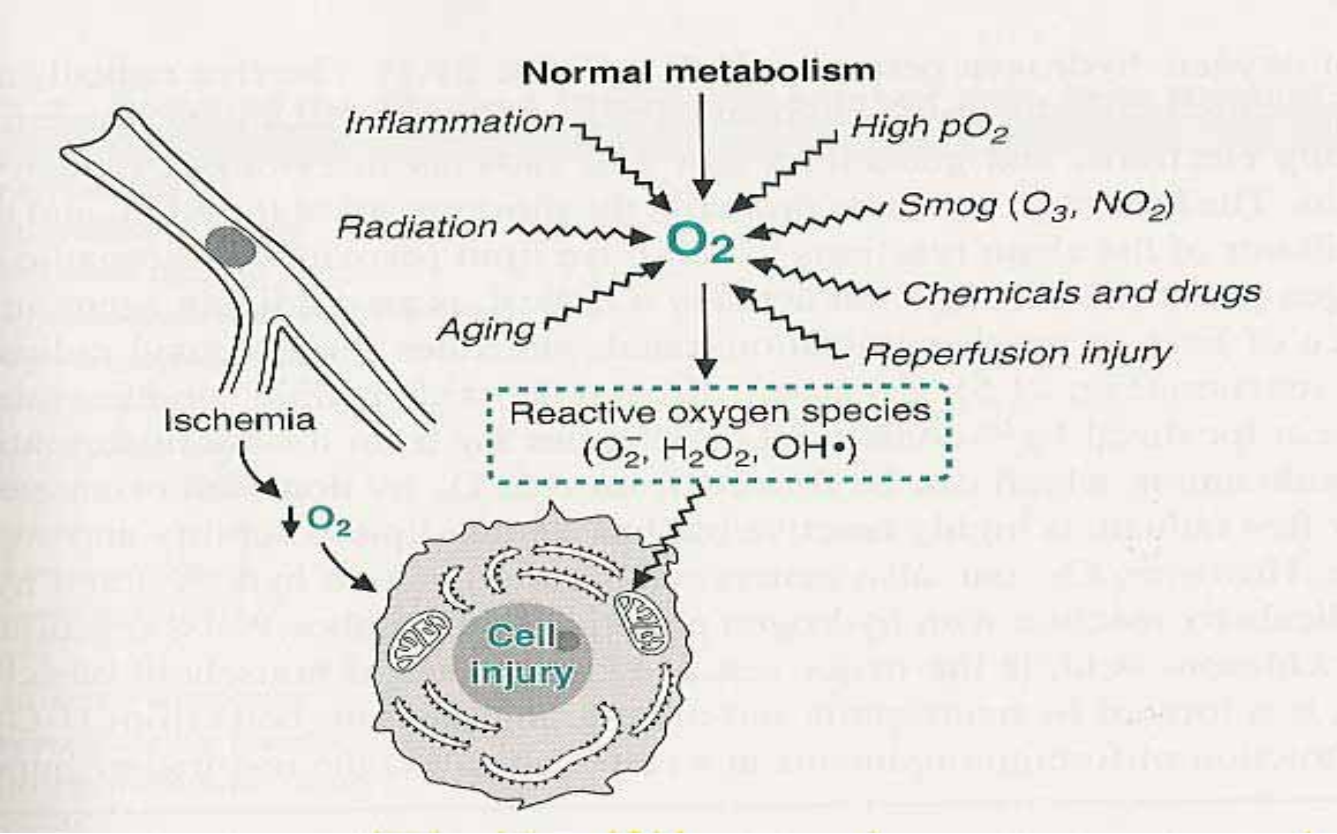


Oxidative Stress



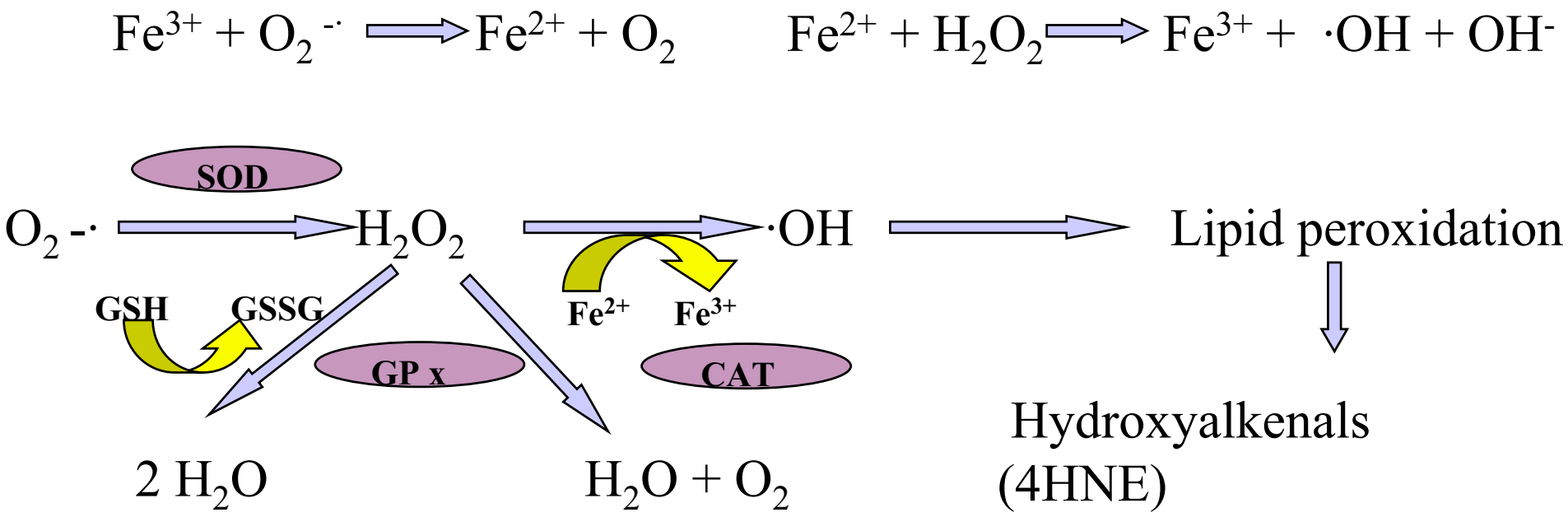
Oxidative Stress is defined as a disturbance in the pro-oxidant to anti-oxidant balance. It describes a state of damage caused by reactive oxygen species (ROS)

Oxygen Metabolism and ROS



Various stimuli can increase the formation of ROS and cell injury

Iron-dependent Oxygen Metabolism



Colostrinin™

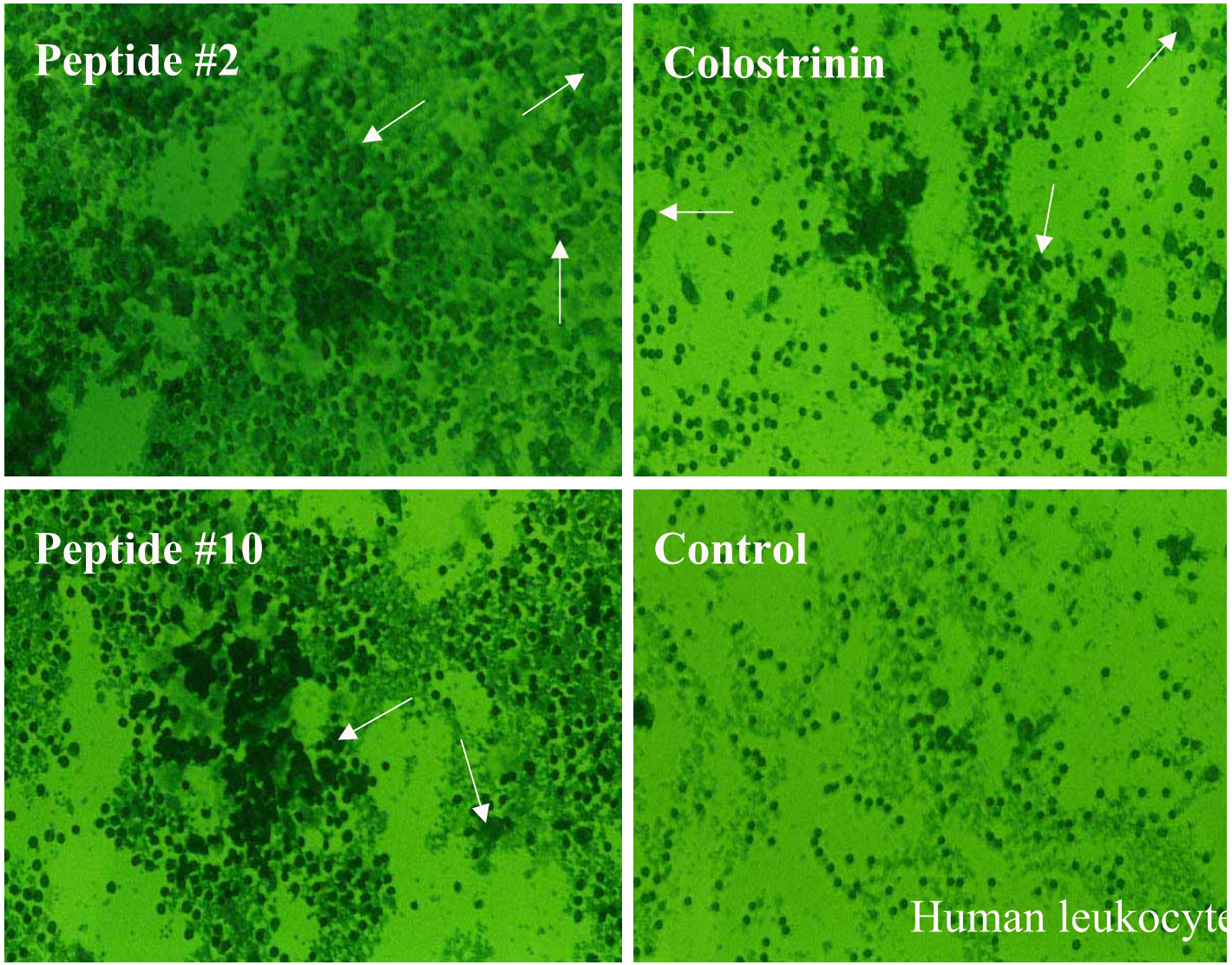
- Colostrinin, also known as proline-rich polypeptide (PRP) has been developed at the Polish Academy of Sciences
- It has been shown to be immunoregulatory in various *in-vitro* and *in-vivo* tests

Colostrinin™ and its Peptides

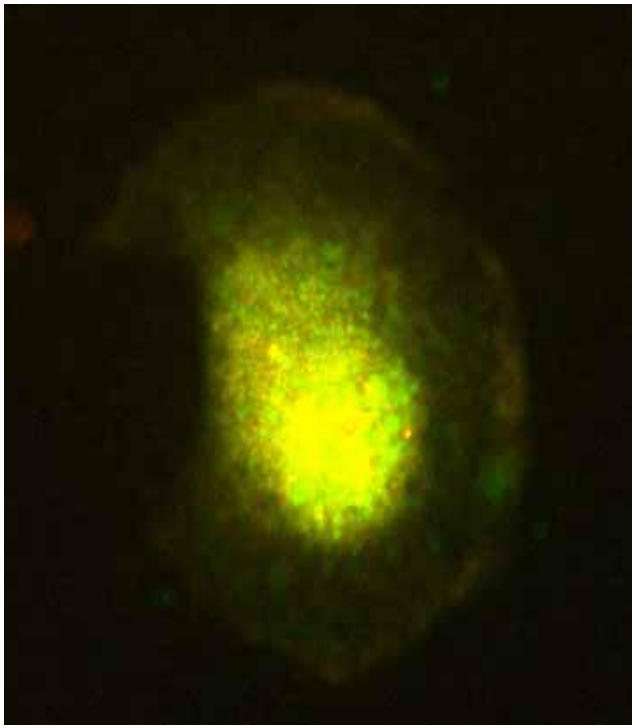
The UTMB Study

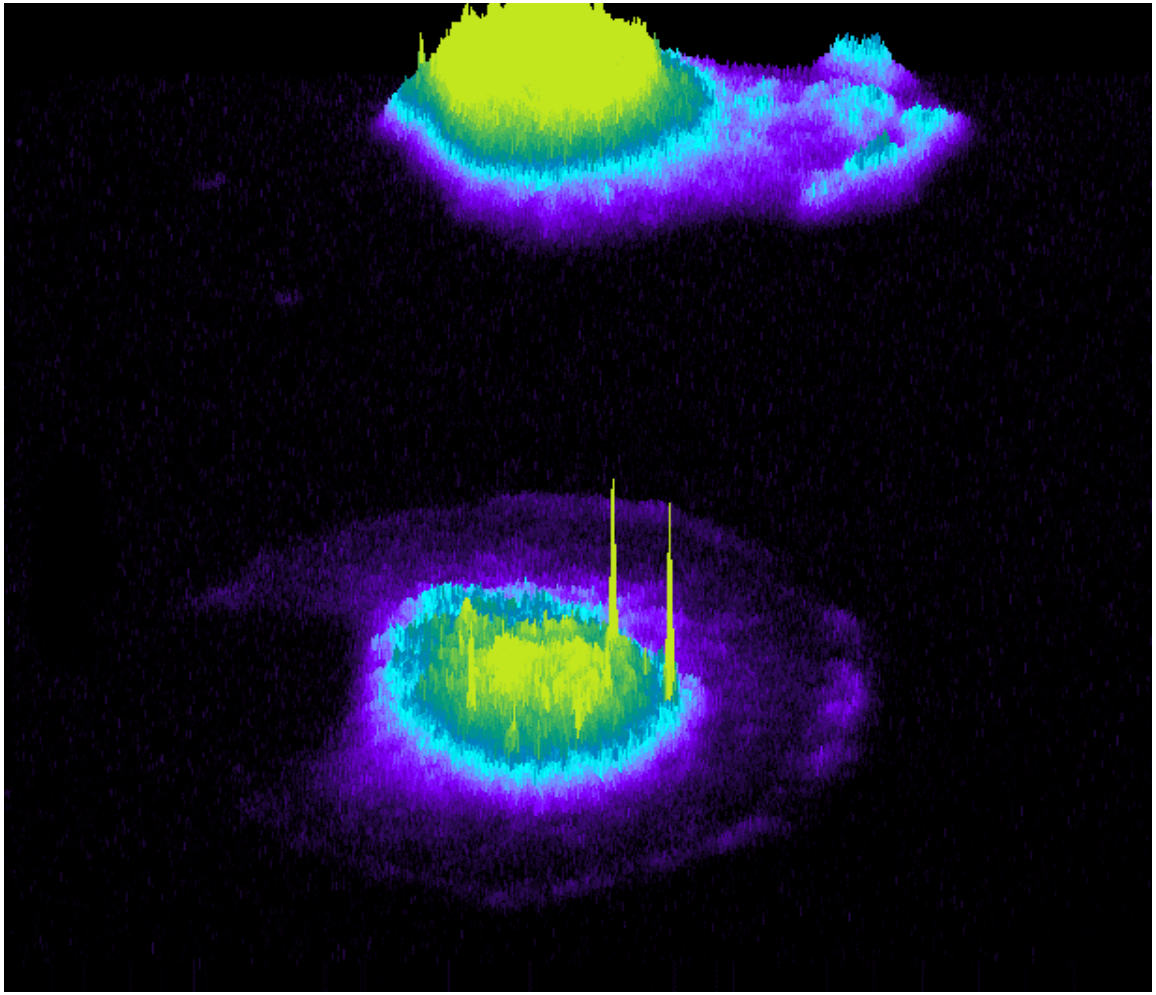
- Anti-oxidant activity
- Proliferative responses/Cytokine induction
- Cell differentiating responses

CLN-Induced Proliferation

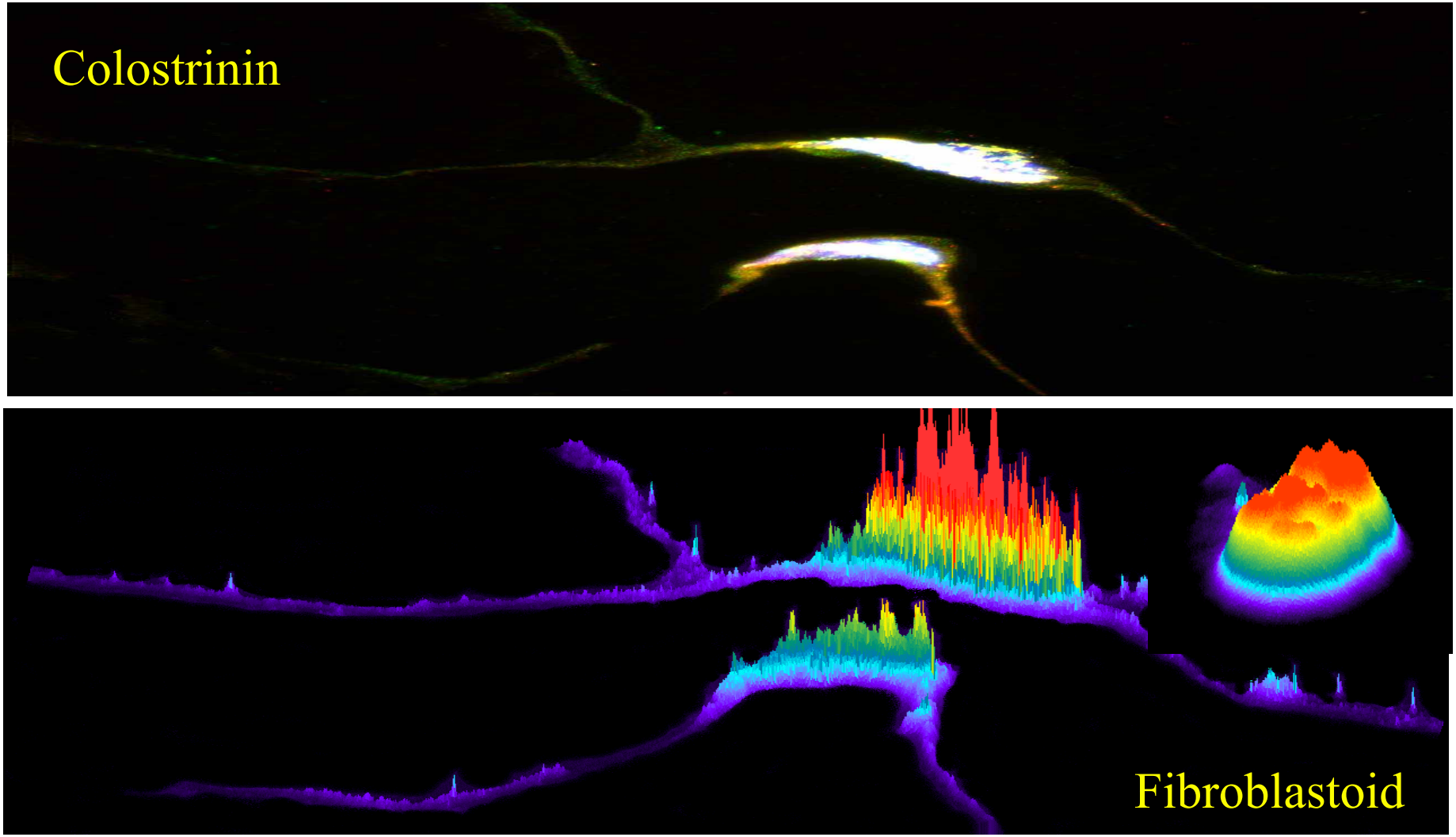


Morphology of the PC12 Cells

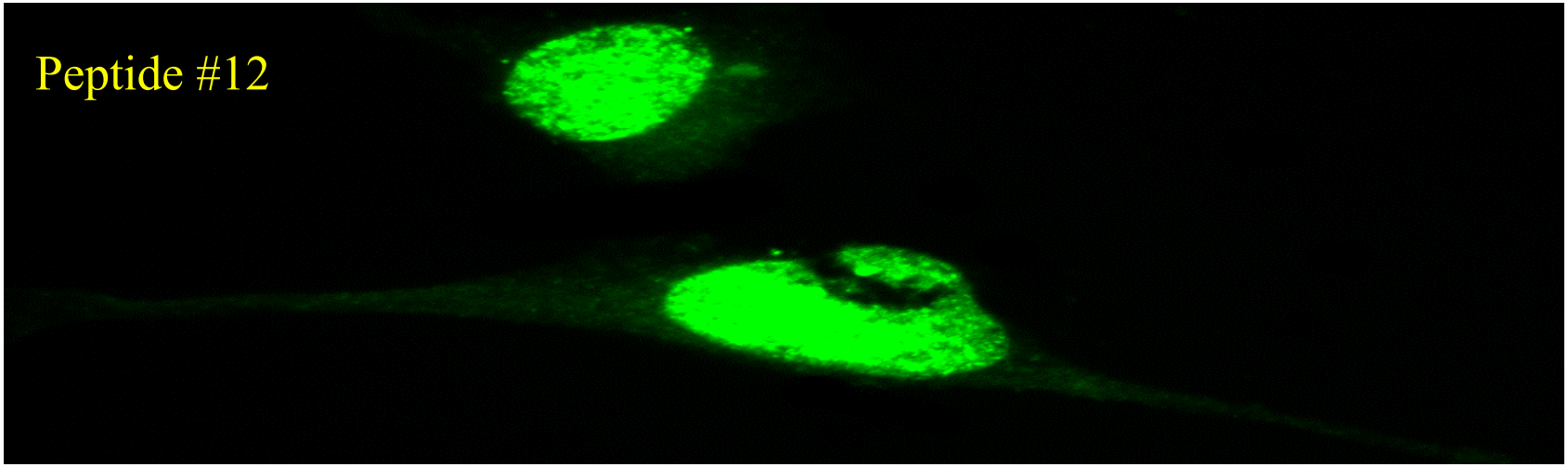


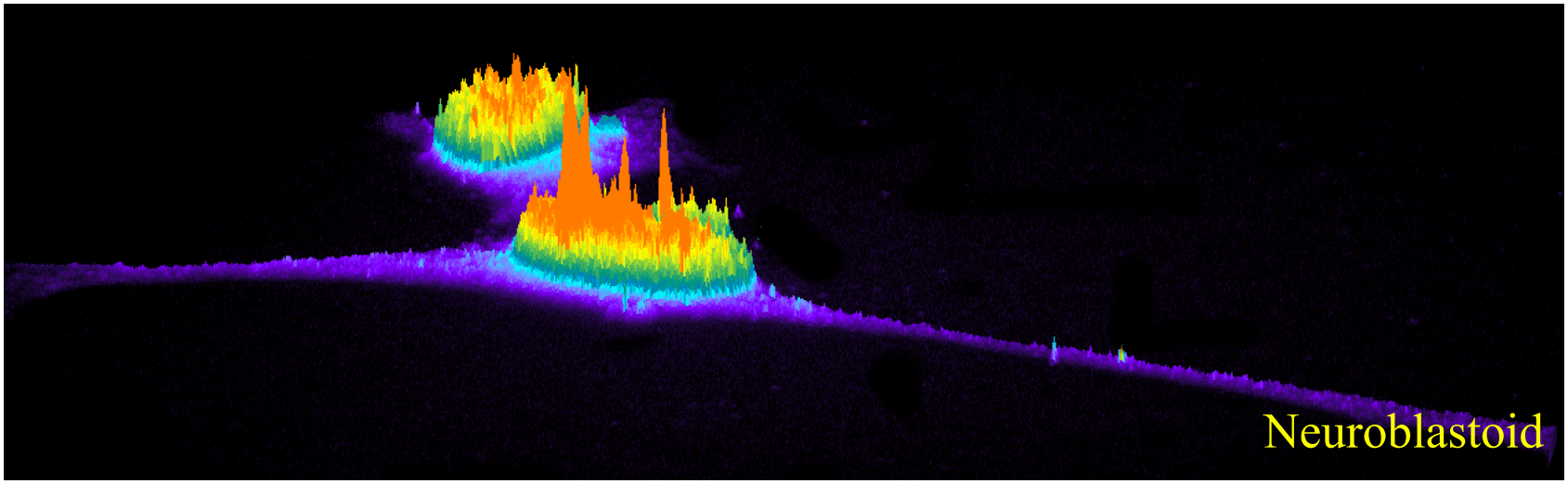


CLN-Induced Morphological Changes

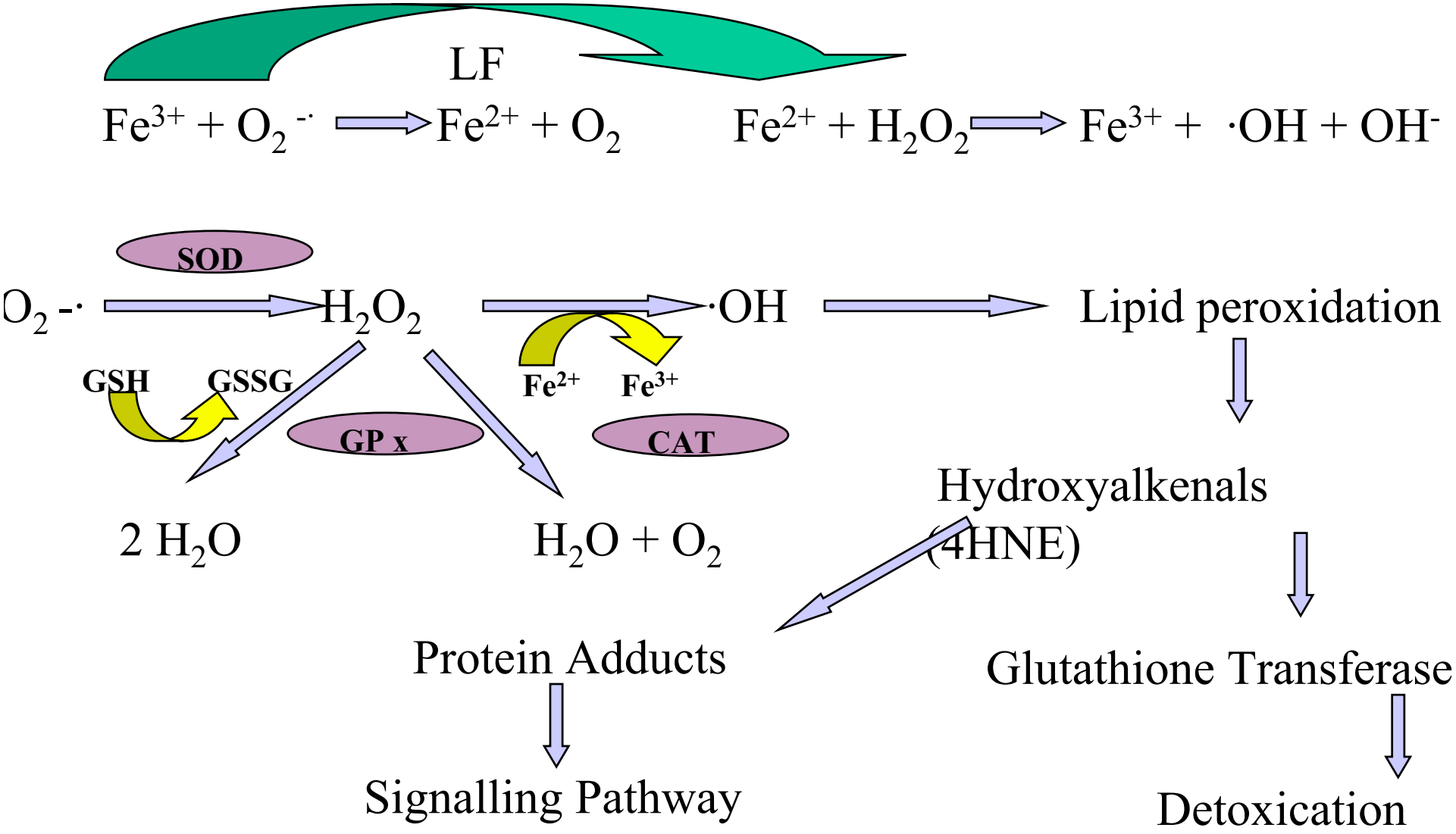


CLN-Induced Morphological Changes





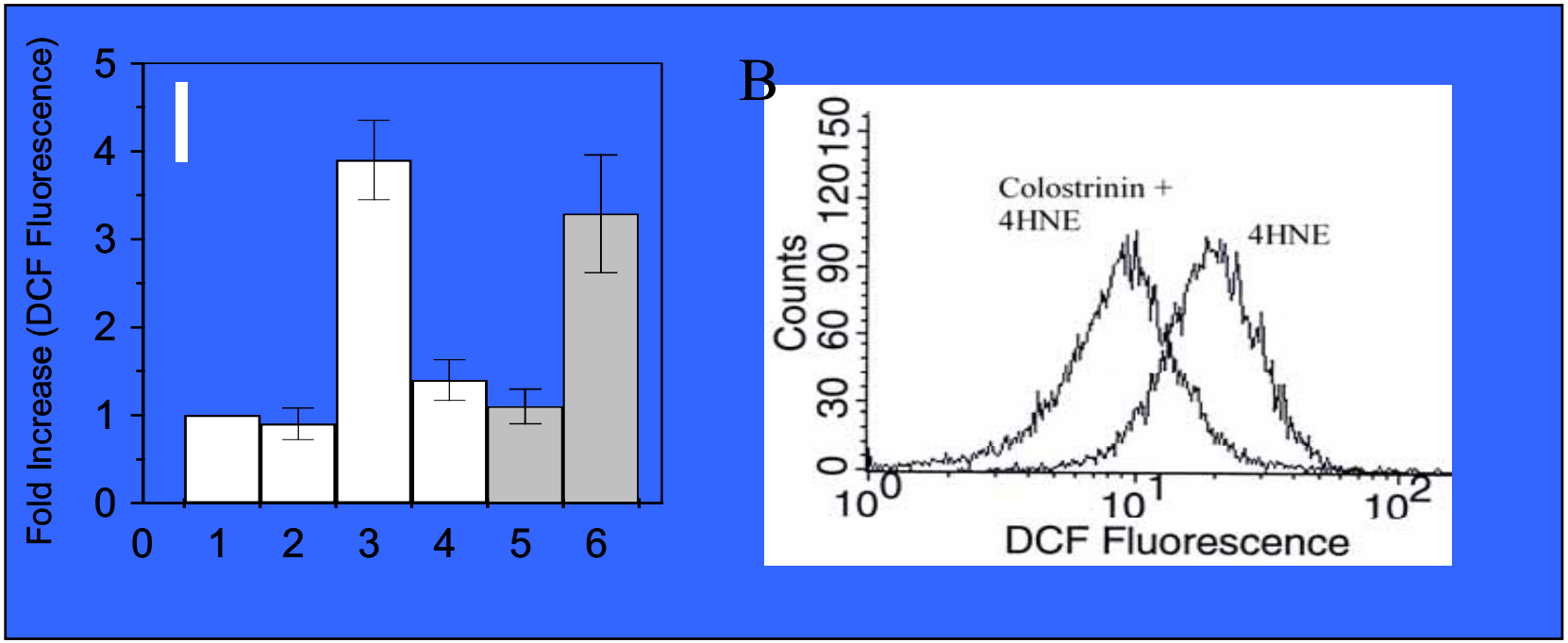
Iron-dependent Oxygen Metabolism



Colostrinin and Lipid Peroxidation

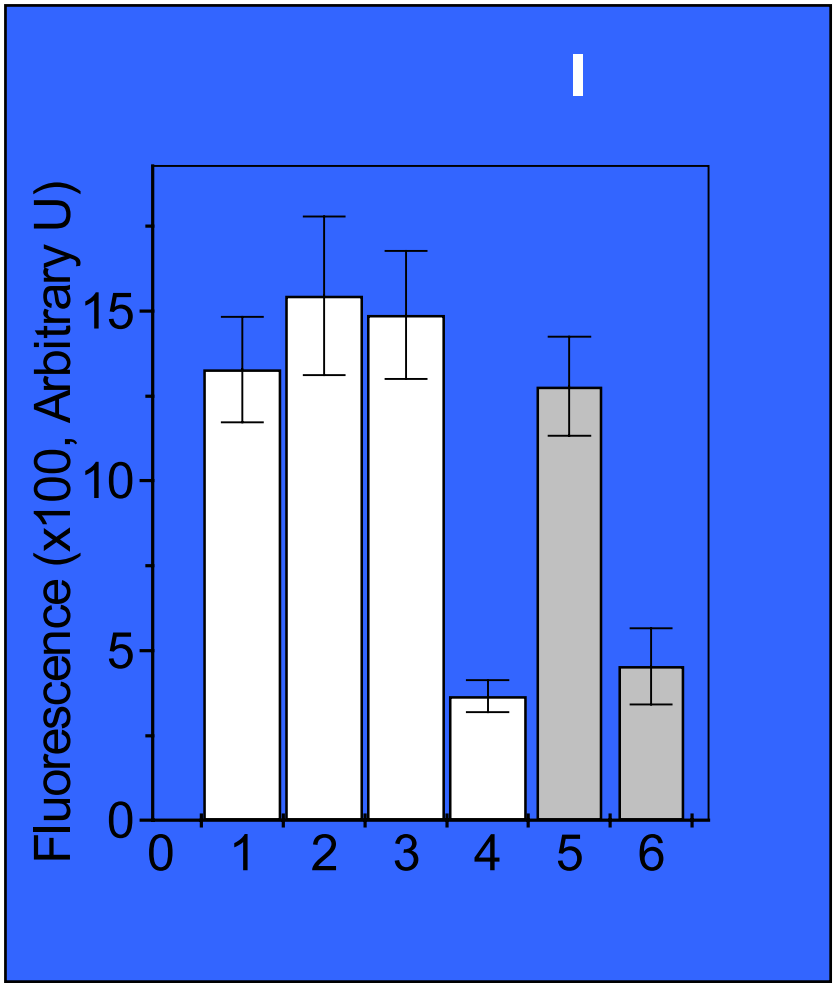
- 4HNE- mediated adduct formation
- Generation of reactive oxygen species (ROS)
- Glutathione metabolism
- Modification of signal transduction cascade: activation of c-Jun NH2-terminal kinase (JNK) and activation of p53

CLN Inhibits 4HNE-induced Oxidative Stress



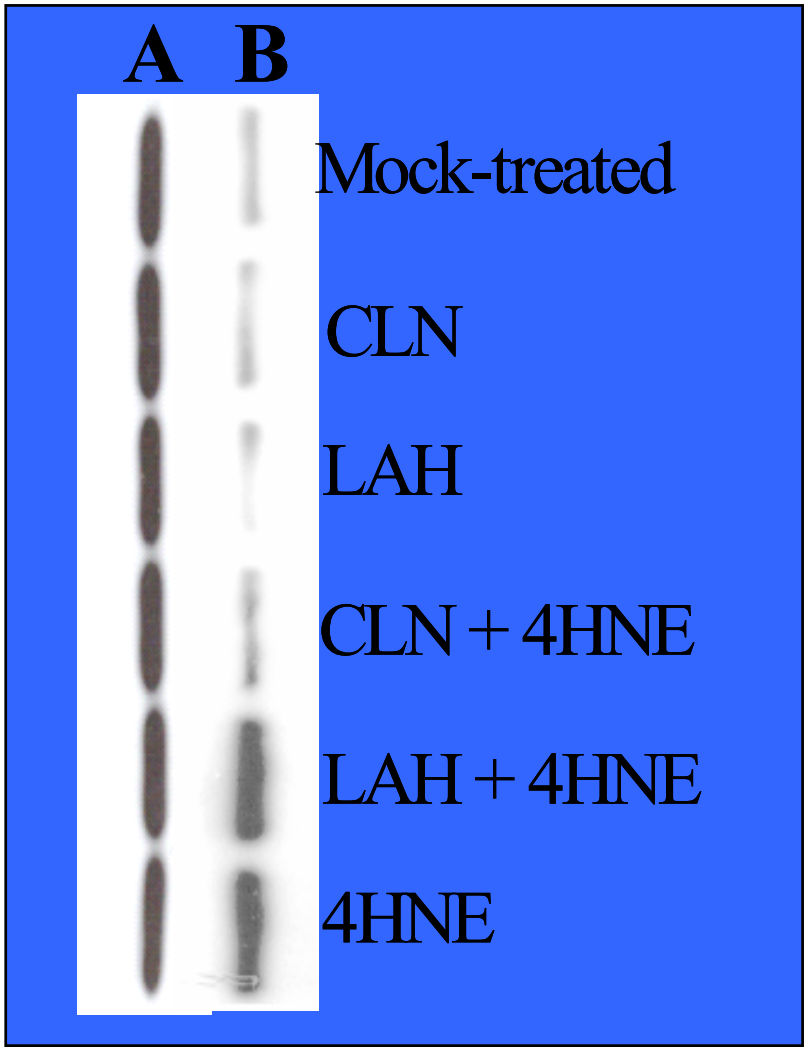
A: 1, control; 2, colostrinin (10 mg/ml); 3, 4HNE (25 nM); 4, 4HNE (25 nM) plus colostrinin (10 mg/ml); 5, lactalbumin hydrolysate (10 mg/ml); 6, lactalbumin hydrolysate (10 mg/ml) plus 4HNE (25 nM). **B**: A representative FACS histogram of fluorescence of cells treated with 4HNE (25 nM) and CLN (10 mg/ml) plus 4HNE.

CLN and 4HNE-induced Reduction of Intracellular GSH



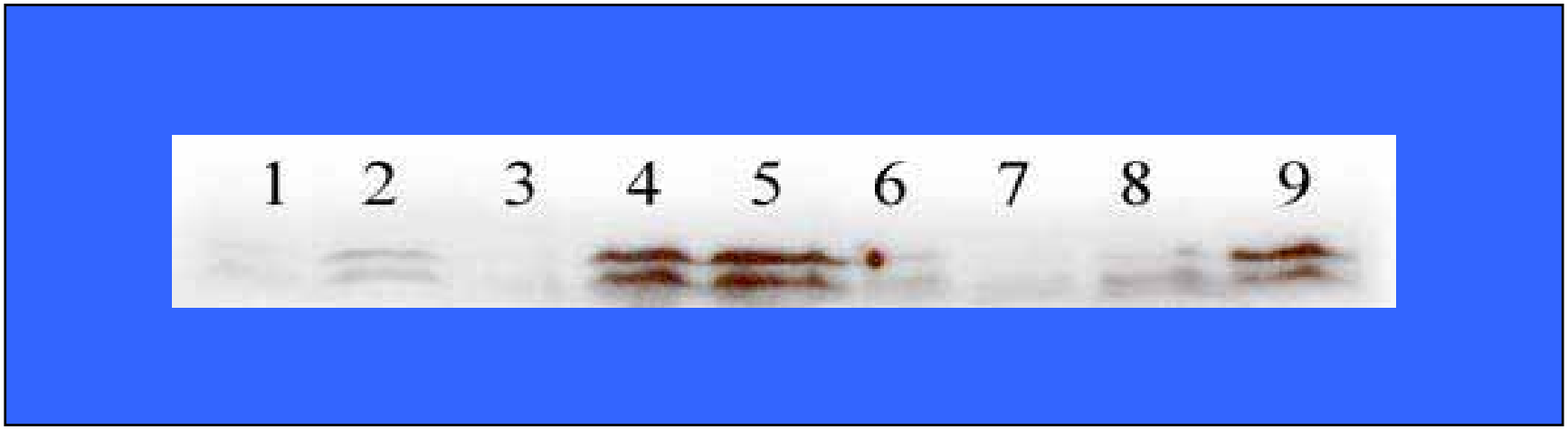
Cells were mock- or treated with CLN (or LAH) and/or 4HNE for 30 min, and o-phthaladehyde-mediated fluorescence was determined. Open column: 1, mock-treated; 2, CLN (10 mg/ml)-; 3, LAH (10 mg/ml)-, 4, 4HNE (25 nM)-treated. Filled column: 5, CLN (10 mg/ml) pre- and 4HNE (25 nM)-treated for 30 min; 6, LAH (10 mg/ml) pre and 4HNE (25 nM)-treated for 30 min.

CLN Reduces 4HNE-Mediated p-53 Activation



PC12 cells were pre-treated with CLN or LAH and exposed to 4HNE. Three hours after treatment cell lysates were analyzed by Western blot analysis. **B**, p53; **A**, corresponding alpha tubulin. 4HNE (25 nM), CLN (10 μg/ml), LAH 10 (mg/ml).

CLN and 4HNE-Mediated Inhibition of JNK Induction



Equal amounts of protein (50 µg) were fractionated, blotted and probed with anti-phospho- (Thr-183/Tyr-185) JNK antibody. Lanes 1 and 2, mock-treated cells; lane 3, 8-(4-chlorophenylthio)-cAMP, an inhibitor of JNK activation; lanes 4 and 5, 25 nM 4HNE; lane 6, CLN (10 mg/ml) alone; lane 7, 25 nM 4HNE plus 10 µg/ml CLN; lane 8, 25 nM 4HNE plus 1 µg/ml CLN; lane 9, 25 nM 4HNE plus 0.1 µg/ml CLN.

CLN and the Signal Transduction Mechanisms

Future Studies:

Functional proteomics and genomics with focus on various gene activation/signaling, anti-apoptotic and cell differentiation pathways

Clinical Studies

Tim Shilton
Development Manager

Clinical Studies

Pre-ReGen/non GCP

Consistent indication of efficacy (MMSE maintained/improved) and well tolerated

- Toxicity and dose-ranging (5 and 6 subjects)
- 12m/db placebo/selenium-controlled, 45 subjects/15 on Colostrinin (13 up to 28 months)
- Open trial, 27 subjects (20 up to 16 months)
- Open trial, 9 subjects

Findings/RG-010
Efficacy

- 15 weeks Colostrinin shows clear benefit vs Placebo (ADAS cog, p = 0.02; IADL, p = 0.018)
- ‘mild’ subjects show better efficacy than ‘moderate’ (ADAS cog, p = 0.01)
- ‘Overall Response’ analysis shows that approximately 40% subjects derived benefit after 15 weeks Colostrinin and 33% continued to benefit after 30 weeks

Findings/RG-010
Safety

- No drug-related concerns at any time during study
- 3 patients in PCP and 4 patients in OL with SAE's
  - All 3 in PCP were on Placebo
  - All SAE's in OL were assessed by clinicians as no relationship or unlikely to be related to Colostrinin
  - Behavioural disorder (unlikely), ventricular cancer (none), heart murmur + pericarditis (none), stroke (unlikely)

ReGen - Study RG-010

Conclusions

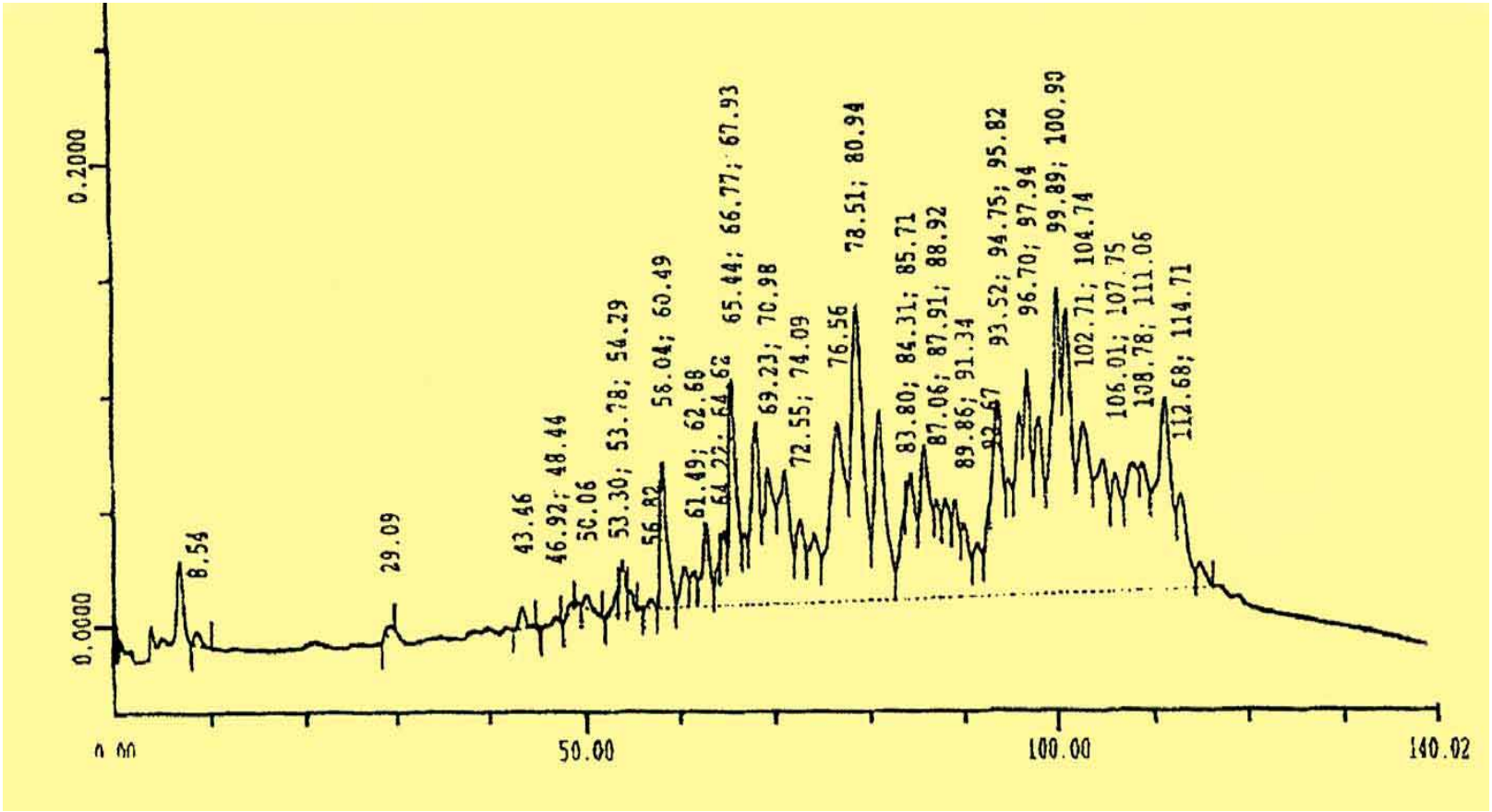
- Colostrinin shows evidence of efficacy over 30 weeks; better outcome in milder disease
- Objective of validating short-term ‘clinical activity’ met
- Further development warranted
- Achieved with very low drug exposure (6 mg/30 weeks) and without safety concerns
- Impact of higher/longer dosing needs to be evaluated

Manufacturing

Colostrum/Colostrinin™

- Colostrum is the mammal's first milk after birth which is known to offer protection to the newborn against infection
- Colostrinin™ is the name given to a proline-rich polypeptide complex derived from ovine colostrum
- The science leading to Colostrinin™ was developed over a period of 20 years at the Polish Academy of Sciences

COLOSTRININ™ COMPLEX: HPLC



Specification

- Cytokine induction (g IFN) in PBL's
- SDS – Characteristic pattern (<25KDa)
- Amino-acid analysis (20-30% proline)

Development Plan

Colostrinin

2003 - 2004

Situation Analysis

- ‘Clinical effect’ – positive but may be sub-optimal
  - due to low dose/discontinuous regimen
  - current potency assay may not best represent clinical activity
  - optimised formulation?
- No sign of intolerance
- New extraction methods - may be quicker, simpler, cheaper, higher yielding
- Bovine colostrum may be a more commercially attractive source

Next Clinical Study
Pharmaceutical or nutraceutical?

- Dose-ranging study
  - Higher dose/more convenient regimen
  - Earlier stage disease (MCI/mild)
  - Longer duration/longer placebo comparison
  - Most relevant endpoints

Preparatory Activities

Stage 1

- Select/develop quantitative bioassay and animal model (dose-response/therapeutic index)
- Minimise variation in raw material/finalise analytics and specification

Stage 2

- Complete process development/scale-up (GMP)
- Supplemental pharmacology/toxicology

Potential Activity Assays

- Eight alternatives under evaluation
- Covers all activities associated with Colostrinin™
- Several collaborators
- May lead to simplification of the product

Animal Models

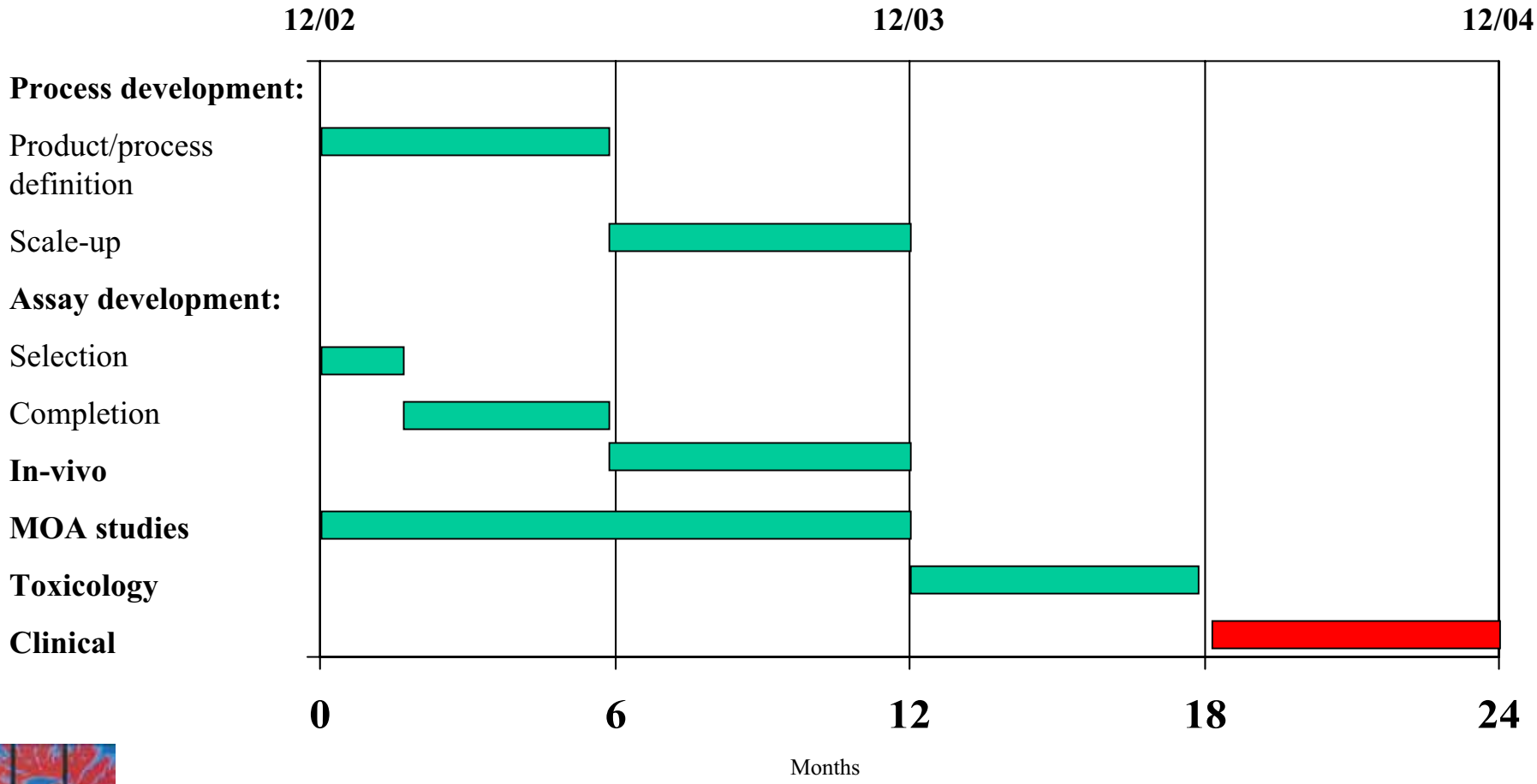
(Choice to be made on basis of in vitro results)

- Effect of Colostrinin on cognitive function
- Lipid peroxidation
- Transgenic mice
- Senescence-accelerated mice (SAM)

MOA Studies

- Investigation of molecular mechanism of cell differentiation (SH-SY5Y) induced by Colostrinin/role of p53 - UTMB
- Effect of Colostrinin on brain AD markers (including neurotransmitters) in normal and senescence accelerated (SA) mice - OU
- Functional genomics/proteomics to identify specific cytokines and intra-cellular signalling molecules or receptors up/down-regulated by Colostrinin

Development Timeline/Costs



Nutraceuticals

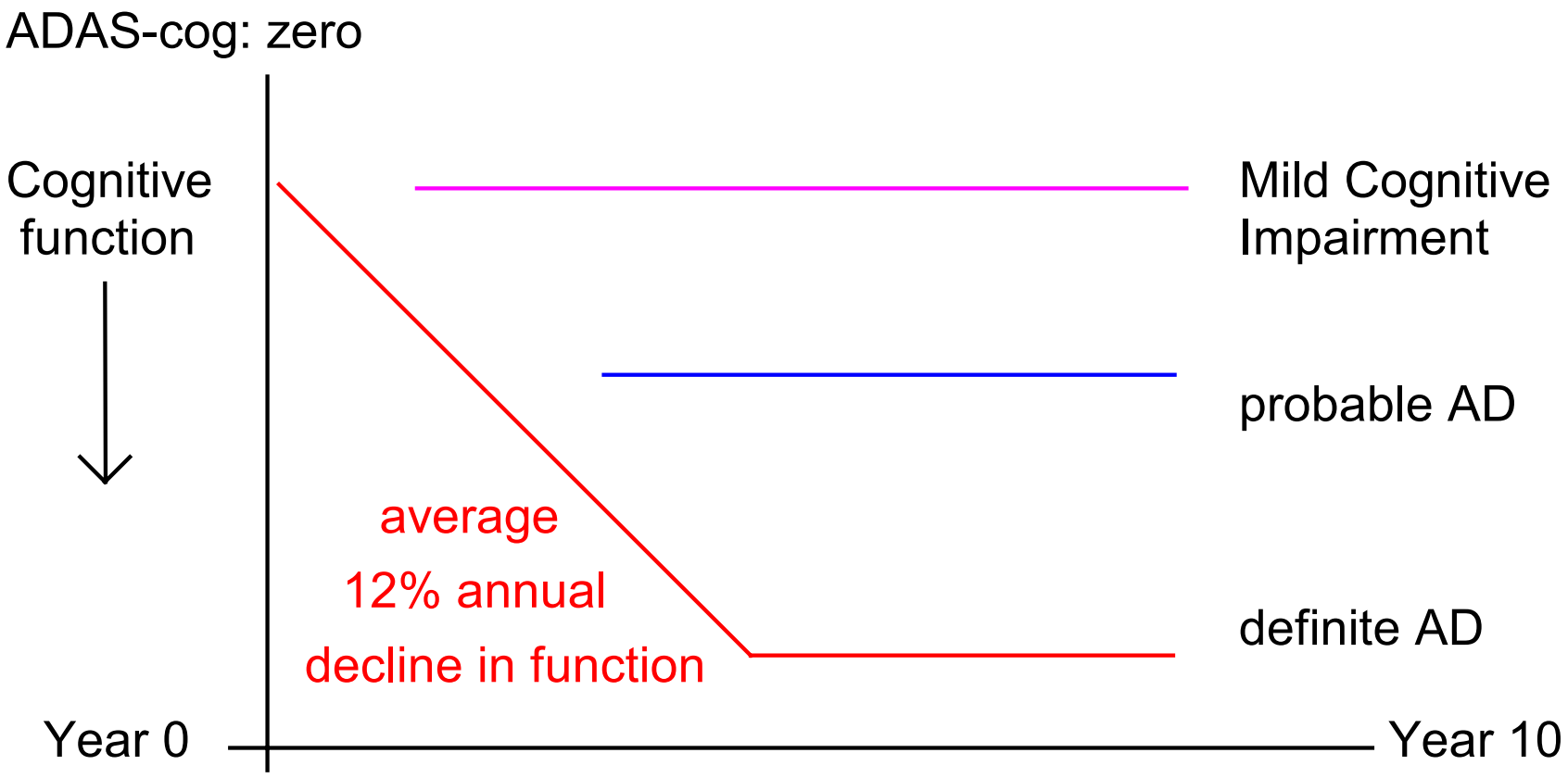
Martin Small

General Manager

HOW?
Can the potential product range of ReGen be expanded?

- Pharma companies with launched AD products now investigating therapeutic indications for early-stage AD and Mild Cognitive Impairment
- Potential for new indications made possible by improvements in earlier poor side-effect profile
- Any new products likely still to be prescription drug preparations, as improvements or derivatives of existing drugs will have an ongoing need for side-effects to be monitored.

Cognitive Impairment – Natural History



Theoretical model of progressive loss of function in AD

HOW?
Can the existing business of ReGen be expanded?

- Colostrinin™ will continue to be developed as a pharmaceutical for the treatment of AD

- A separate market exists for the treatment of early forms of cognitive impairment using a nutraceutical version of Colostrinin™

WHAT?
Is a nutraceutical

- A term adopted by the food marketing industry to describe a product isolated or purified from foods, generally sold in medicinal forms and demonstrated to have a beneficial, functional or physiological effect or to provide protection against chronic disease
- Examples include isolated nutrients, dietary supplements, specific diets, GM foods, herbal products and bio-engineered vegetable foods

WHY?
Is the nutraceutical market attractive

- Potentially a wider target market than that for prescription-drugs aimed at Alzheimer's disease
- Significant recent growth throughout sector expected to continue
- Already many "major players" involved
- Existing well established distribution & sales networks in the market
- Products aimed at animals, as well as humans, also possible

WHY?
Develop a nutraceutical version of Colostrinin™

- Nutraceutical could reach the market and generate revenues much sooner than the pharmaceutical version
- Already held encouraging discussions with major industry players
- Independent validation that nutraceutical avenue, in parallel with the existing pharma-route, worth investigating

WHAT?
Makes Colostrinin™ an attractive nutraceutical proposition

- Derived from a natural source and shows a good safety profile
- Nutraceutical manufacturing process essentially the same as the pharmaceutical process and can be developed in tandem at relatively modest additional cost
- Anticipated that regulatory requirements acknowledge variations of natural products.

HOW?

Might a nutraceutical version of Colostrinin™ be developed?

- Define the manufacturing process
- Optimise the nutraceutical form, dose and method of presentation (tablet, powder etc)
- Conduct limited patient trial
- Contract with manufacturing, marketing and distribution partner(s)

WHEN?

Might a nutraceutical version of Colostrinin™ be developed and start to generate revenue?

- Project planning, manufacturing process definition and process scale-up: 2003

- Proving trial, partner discussions and potential income from license deal: 2004

- Pre-launch marketing, product launch and revenue generation: 2005

SUMMARY

COLOSTRININ™ AS A NUTRACEUTICAL

- Discussions with major industry players have been encouraging and suggest that a nutraceutical version of Colostrinin™ is worth investigating
- Fast growing industry sector
- Potential revenue generation from sales during 2005 and possibility of earlier income from partner licensing deals
- Potential revenues ease future funding requirements of the Company

Finance

Norman Lott
Finance Director

Spend Analysis

	4 Yrs to 12/01 £(,000)	Yr to 12/02 £(,000)	18 m to 6/04 £(,000)
Overheads	3,338	1,260	1,200
Development	3,381	620	2,300
% Development	50.32	32.98	65.71

Overheads/Cash burn

	2001	2002	2003
Overheads	1.5m	1.25m	0.8m
Cash burn per month:			
Overhead	125k	100k	65k
Overall	200k	160k	150k
Liquid funds		750k	

Overall Summary

Percy Lomax
Executive Chairman

Summary

- Focussed action plan
- Build on three legs
- Raise money

Cash Requirement

- Completion of current plan - £3.75m
- Liquid resources - £750K
- Funding gap - £3m

Cash Raising

- By share issue for cash
- Further Investment Trust issue
- Cash generation from acquisition
- External partnering sources

The Vision

- By 2006 to have a self sustaining profitable Healthcare Business

Thanks for your attention

Q and A